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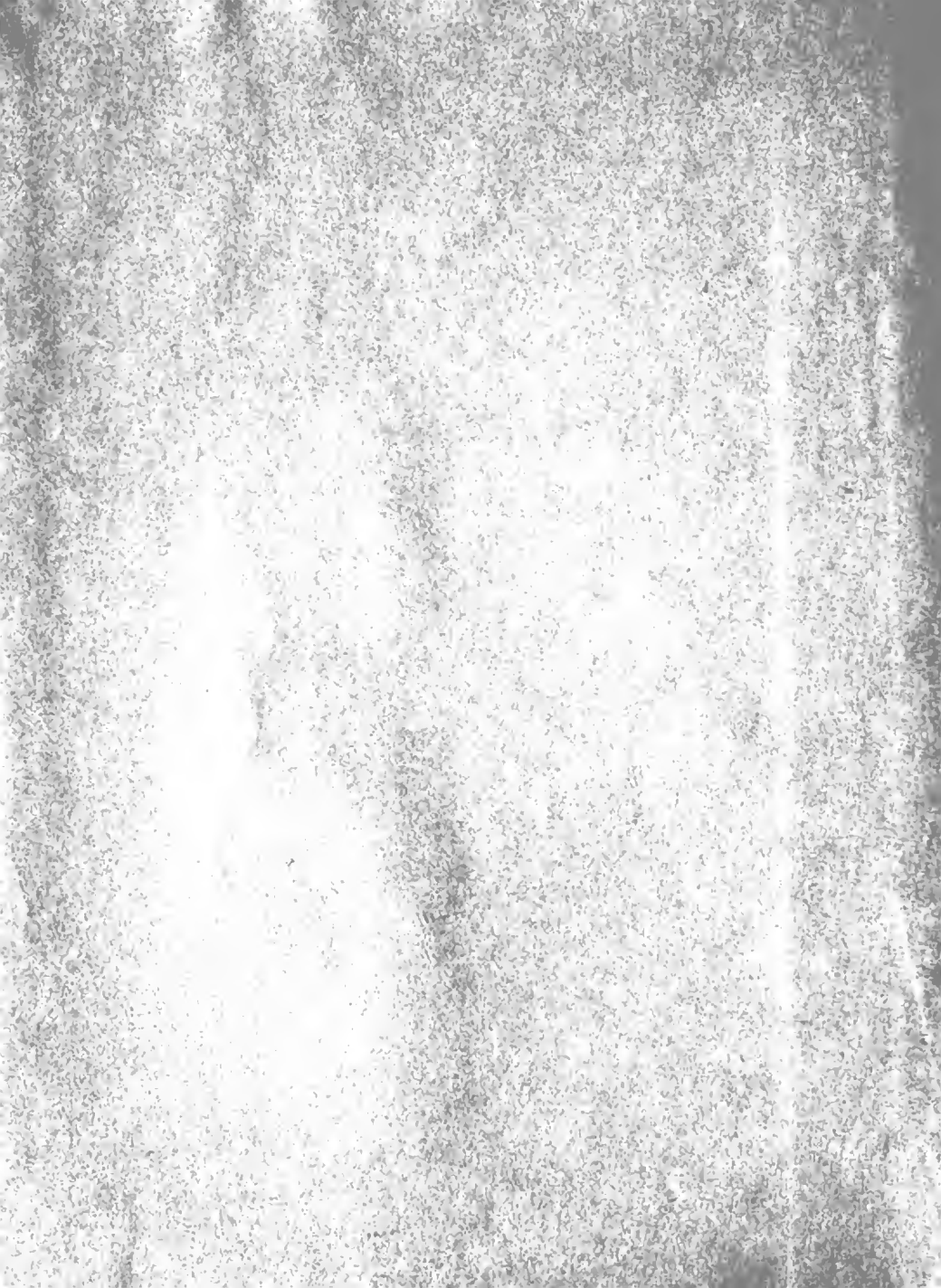
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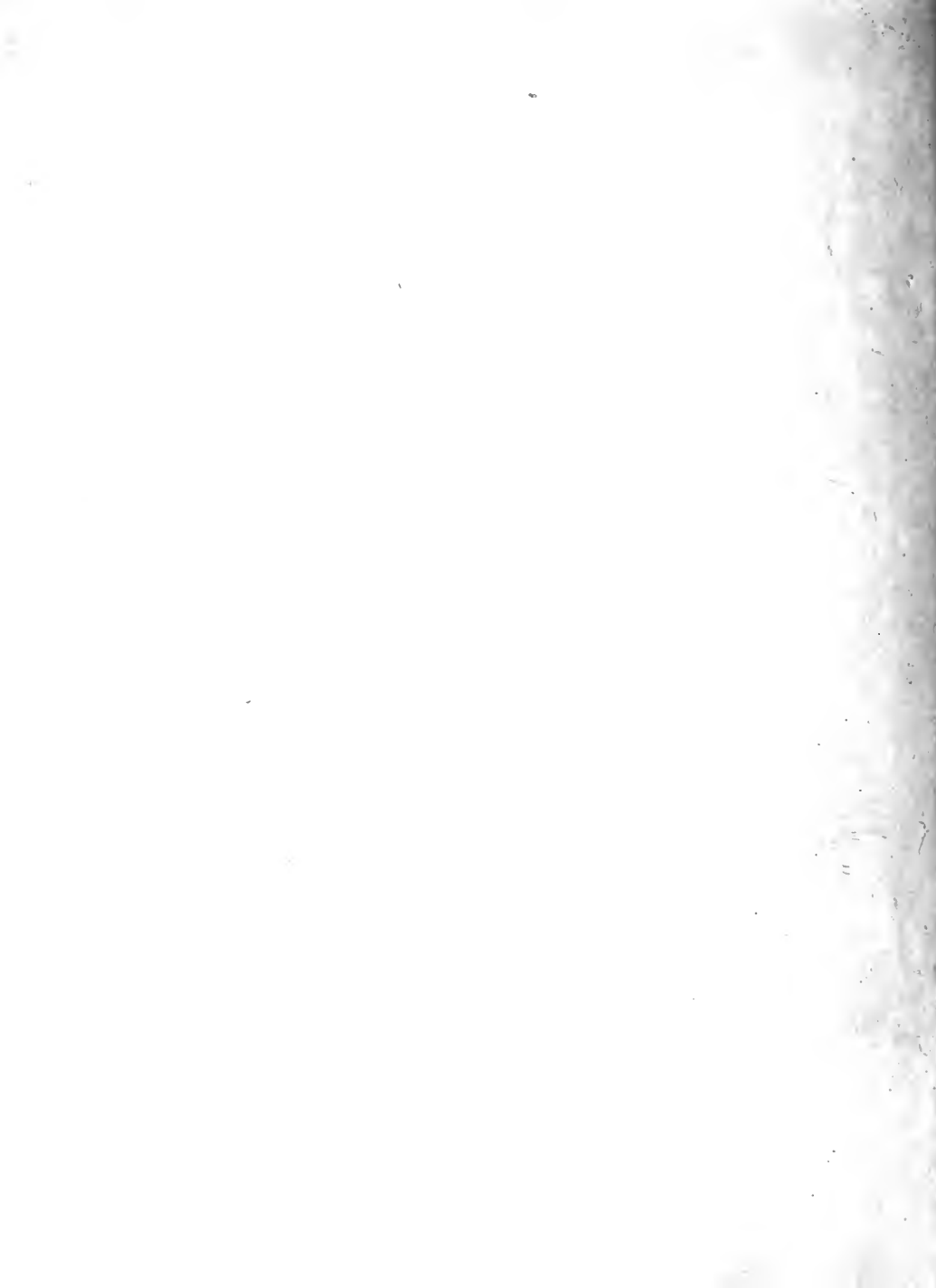
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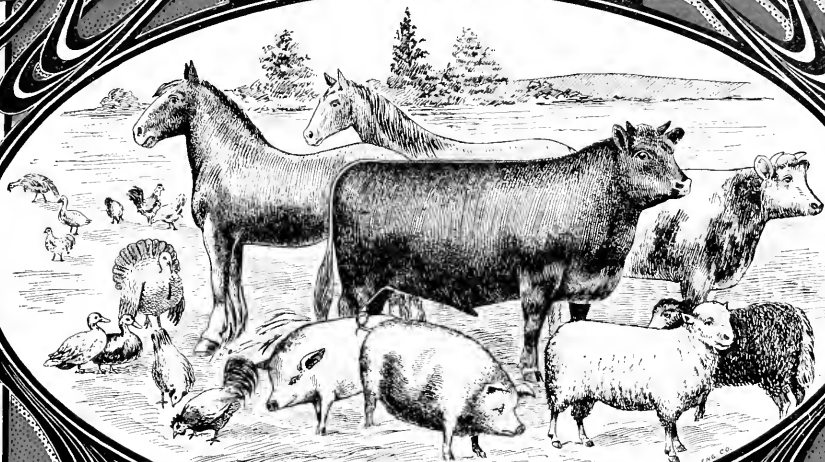


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# SOUTHERN PLANTER

JANUARY 1903



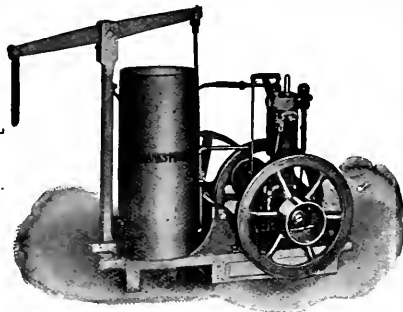
DEVOTED TO  
AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK  
AND THE  
FIRE SIDE.

The  
SOUTHERN PLANTER PUBLISHING CO.  
RICHMOND · VIRGINIA

## The GASOLINE ENGINES which make such Engines famous.

The Engine which the farm-hand can handle. Success beyond question and merit above all others. If you think we say so because we sell them, ask some of those who have bought them. There is nearly as much difference in Gasoline Engines as there is between a Locomotive and an Ox Cart.

ALWAYS READY TO  
START, SAW WOOD,  
PUMP WATER, SHELL  
CORN. From 1½ Horse  
Power to 50 Horse Power.  
Mounted on Wheels or  
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IF YOU DO NOT OWN  
A GASOLINE ENGINE  
IT MUST BE BECAUSE  
YOU HAVE NEVER  
KNOWN WHAT THEY  
ARE, WHAT THEY  
WILL DO, AND HOW  
NECESSARY THEY  
ARE.

A few who have them: Harper Dean, Henrico Co., Va.; E. B. Addison, Richmond, Va.; S. E. Pender, Greenville, N. C.; W. I. Everett, Rockingham, N. C.; E. B. Howie, Manchester, Va.; Geo. D. Thaxton, Henrico Co., Va.; W. C. Reed, Keswick, Va.; Jno. C. Robertson, Forest Hill, Va.; Jos. P. Garrett, Ridgeway, Va.; S. W. Anderson, W. Va.; Edward Scott, Warren, Va.; William and Mary College, Williamsburg, Va.; T. W. Wood, Virginia; W. H. Parry, Dinwiddie Co., Va.; J. E. Cox, Ashland, Va.; Thos. S. Martin, Scottsville, Va.; James H. Dooley, Richmond, Va.; Henry Clay Inn, Ashland, Va.; and any number of others.

RICHMOND ENGINE AND PUMP COMPANY, Richmond, Va.

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—USE—

“STAR  BRAND”

# GUANO,

IT'S THE BEST.

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—MANUFACTURERS.



# The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK AND THE FIRESIDE.

Agriculture is the nursing mother of the Arts.--XENOPHON.

Tillage and pasturage are the two breasts of the State.--SULLY.

64th Year.

Richmond, January, 1903.

No. 1.

1903.

In our opening article in the issue for January, 1902, we remarked that a new era was opening up for the farmers of the South, and commenting on this said: "This era has in it more promise for the future than any which has preceded it since the country was first settled. The South, in the near future, is to become not merely the producer of raw staple crops as in the past, but the manufacturer of these raw staples into finished products in the shape of cotton cloth, beef, mutton, hog meat, milk, butter, and the high priced luxuries of the table in the shape of fruits and vegetables. We shall have at home a market for a large part of these products, and we shall also have manufactured at home and largely from home produced materials, the mills, machinery and means for the making and transport of our surplus products. To the farmer, this development of our resources means a call for a higher degree of intelligence, a more perfect understanding of the laws governing the successful production of crops, and the profitable conversion of those crops into the finished products; and above all, it means the conversion of the farmer into a successful business man. It means the utilization of all the products of the soil in the most economical manner, so that that which is produced with labor, which means cost, shall return its cost back to the pocket of the producer with the largest profit capable of being realized. To accomplish these results, it will be necessary for the farmer to understand much more thoroughly the laws governing the growing of crops and the feeding of the same, so that they may be made to yield maximum returns; and it will also require that the

science of live stock husbandry shall be better understood than ever in the past. The farmer of the South, in order to meet the demands which this development of her manufacturing industries is going to entail, will require to understand how to breed and feed the thousands of fat cattle, sheep and hogs, which the workers in her mines and factories are going to consume, and how to secure from the cows the milk and butter which the households of these workers are going to demand. In the past, the North and the West have largely supplied even the requirements of the farmers themselves in these respects, and have met practically the whole demands of the cities. The result is seen in the wasted character of most of our lands and the constant complaint of thousands of farmers that "farming does not pay."

Every day that has passed since these words were written has only tended to confirm and emphasize what we then said. The marvellous development of Southern prosperity, the constantly increasing number of our manufacturing plants, and the daily increasing numbers of our people, who find highly remunerative employment in these plants, and to obtain which leave the country and take up their residence in the cities and towns, has worked almost a revolution in the condition of agriculture in the South. Thousands who were producers of agricultural staples are now consumers of these articles, and with their increased prosperity are, together with the long-time residents of the cities and town, consumers, not only of the staples but largely of the luxuries of life. In the era now past a very large proportion of the staple necessities of life for the people of the South, in the shape of beef, mutton, bacon, lard, butter and cheese, have been up

pled from the North and West, and the opinion has been held that the South could not produce these necessities profitably in competition with the North and West. The wonderful prosperity of the whole country and the changed conditions of the West, where the area of free range for live stock has been so much curtailed by settlement and conversion of the lands into enclosed farms, has completely changed the conditions affecting the production of the staple products of the West, and caused them to so advance in price as to render it beyond question that the South can well afford to produce these articles, and in addition many of the luxuries of life, if only our farmers will equip themselves for the task. This equipment means not merely the establishment of herds and flocks to supply the beef, mutton, bacon, milk and butter which the people need, but the knowledge to enable them to make the change in their system of farming which these herds and flocks will entail if their management is to be profitable. The census returns go to show that the acquisition of live stock in the South is already making considerable headway and creeping up gradually in numbers to those which existed in the South before the West was opened out to settlement, and when the South, East and North made their supplies at home.

In 1850 Virginia, including West Virginia, had 217,619 dairy cows. In 1870, this number had been reduced to 188,471. In 1890, the number had increased to 281,876. In 1850, Virginia had 758,658 other cattle. In 1870, this number had been reduced to 323,272. In 1890, the number had grown to 543,636. In 1850, Virginia had 1,310,004 sheep. In 1870, the number was 370,145. In 1890, the number had grown to 392,125. In 1850, Virginia had 1,829,848 hogs. In 1870, the number was 674,670. In 1890, this number had grown to 946,443. North Carolina had in 1850 221,799 dairy cows. In 1870, the number was 196,731. In 1890, this number had increased to 233,178. In 1850, North Carolina had 471,711 other cattle. In 1870, this number had been reduced to 324,431. In 1890, this number had increased to 391,340. In 1850, North Carolina had 595,249 sheep. In 1870, this number had been reduced to 463,435. In 1890, the number was 208,812. In 1850, North Carolina had 1,812,813 hogs. In 1870, the number had been reduced to 1,075,215. In 1890, the number had increased to 1,300,469. South Carolina had in 1850 193,244 dairy cows. In 1870, this number had been reduced to 98,693. In 1890, the number had increased to 126,684. In 1850, South Carolina had 584,442 other cattle. In 1870, this number had been reduced to 150,610. In 1890, the number had increased to 216,214. In 1850, South Carolina had 285,551 sheep. This number has decreased each decennium until in 1890 the number was only 52,436. In 1850, South Carolina had 1,065,503

hogs. In 1870, this number had been reduced to 395,999. In 1890, this number had increased to 618,995. Coincidentally with this increase, there has undoubtedly been a great improvement in the quality of the animals kept.

This improvement has been much more marked in the last decennium than in any other period, and it would not probably be an exaggeration to say that the average increase in weight of the carcasses of beef, mutton and hogs has been increased nearly one fourth, and in productive capacity in milk and butter of the dairy cows of nearly the same quantity. The South is yet a long way behind the West and North in the average quality of the stock kept, and, as a consequence, a long way behind those sections in the average profit made in handling stock. To overcome these drawbacks has been one of the objects which *The Planter* has kept steadily in view ever since it came into our hands. We have striven month by month to bring before the farmers of the South the necessity for attention to live stock husbandry and the importance of this factor in the improvement of our lands and the economic condition of the farmers. To secure this end, we have striven to encourage the reading habit amongst farmers by reducing the cost of this journal to a minimum and by making it the medium through which the experts and master minds in live-stock husbandry should popularize their teachings. We have in this way sought to overcome the prejudice so deeply rooted in the South against so-called "book farming," and by making the journal the exponent of practical as against theoretical farming have endeavored to evoke an intelligent and understanding comprehension of the science of agriculture, so that instead of working by "rule of thumb," farmers may work in the light of the rules of science and practice. This issue we have made a special live stock number, and illustrated it with pictures of some of the leading breeds of live stock adapted to Southern conditions. The articles accompanying these pictures are written by leading experts in the particular lines which they treat upon, and we are satisfied that the information to be found in this issue will be of constantly increasing value to every reader. It is our intention during the year to continue our monthly talks on "Work for the Month," and our replies to questions through the "Enquirers' Column," and to make each department of the journal as full of information on the particular specialty therein dealt with as our limits will allow. We appeal to our friends to give us their assistance in increasing the circulation of *The Planter*, assuring them that our whole concern and thought will be to advance the prosperity of Southern farmers.

Mention the *Southern Planter* to your friends.

## Farm Management.

### WORK FOR THE MONTH.

The higher range of values for all agricultural products which has now continued for more than two years still holds good; indeed, in respect to some of these, prices have still further advanced during the year just closing, and this satisfactory condition of affairs for the farmer will, we think, be not likely to soon come to an end, certainly not so long as labor continues to be so well employed as at present. The consumption of all the staple products of the farm, and of most of the luxuries, some of which, like tobacco, we produce largely in the South, is enormous, and it would require an immense over-production of these to seriously affect market values whilst business continues good. Whilst we have had large wheat and oat crops, and an immense corn crop, yet these, and especially corn, came at a time when there was no large surplus held over from previous years; indeed, in the case of corn, when there was an immense deficit caused by the failure of the crop a year ago. The supplies of fat stock of all kinds are short, and are likely to continue so for years, as the great source from whence these come—the West—was compelled a year ago to sacrifice, in a half fat or store condition, immense numbers of animals which should have been held over for this and next year.

Until the deficit thus caused is made good, which will be a slow process whilst consumption continues so large as during the past year, prices must remain good. When prices are high, the temptation to sell stock which should be held over either for breeders or for better finishing is too great to be resisted, and hence the progress of recuperation of stocks is a slow one. Dairy products have advanced in price since the unfair competition of oleomargarine has been destroyed or largely curtailed, and this advance is likely to hold and make further progress. With such a prospect before them, we see no reason why farmers should not prepare to make large crops during the year now commencing, and especially so with those crops which are to be converted on the farm into meat or dairy products. This is the true line on which farmers should seek to develop their resources, as it will not only result in the securing of a better return for their labors, but will also result in continued improvement of the fertility of the farm. The one difficulty which largely confronts Southern farmers is the labor question. Thousands of colored hands have left the country districts, and found employment in the large cities and towns, and on the railroads, and this exodus of labor is going to continue so long as trade continues good. The only way to meet

it is to turn large areas of arable land into permanent grass and meadows and to make use largely in the working of the arable land and of the meadows, of the labor saving machinery which has been invented and put on the market at such reasonable prices. With this machinery hands can be dispensed with and better work be done and crops be made and saved at less cost than ever in the past. Another means of saving cost must be found in the production of larger crops on the same area of land. This will be found easy when the crops are largely converted into meat and dairy products on the farm, resulting in a larger production of home-made manure, which is the best and cheapest fertilizer which a farmer can use, and which, if supplemented where needed with commercial fertilizer, will easily result in doubling our present crops without adding one acre to the land under cultivation. The cost of making and saving a crop of 40 bushels of wheat, or of 50 bushels of corn to the acre, will be found to be very little more than that of making and saving our present meagre crops of 12 or 15 bushels of wheat and 15 to 25 bushels of corn to the acre. The secret of this increased production to the acre will be found in better preparation of the land before planting, and in the use of farm-yard manure and the leguminous crops to supply humus to the soil. The profitable conversion of these crops into money lies in the use of better bred live stock, which will mature in half the time required by the present scrub stock, and which will make meat and dairy products always commanding the top figure on the market. In this issue we have brought together a large mass of information as to these better bred animals with pictures of typical specimens of the breeds. We bespeak for this matter the careful study of our readers. It means thousands of dollars in the pockets of Southern farmers and a complete change in the appearance of thousands of acres of land.

The work that can be done on the land during the present month is usually small, as it is the one month in the year when, if we are to have any winter we are pretty certain to get it; yet in the majority of years there are days even in this month when plowing can be done and the clearing up of land intended to be cropped can make progress, if only labor can be secured. The New Year's holiday, however, largely prevents any reliance being placed on the hands till towards the close of the month. It is well, therefore, not to attempt much beyond seeing that abundant supplies of feed are kept on hand at the barn

convenient for feeling, so that if any hard weather should set in there will be no fear of the stock suffering. If the weather be mild and the land dry enough, plowing should be done, so as to lessen work later in the spring. Let this work be done thoroughly. Plow deep, and where possible and the subsoil is a good clay one, subsoil as well. In plowing land deep so as to add depth to the soil, do not turn the furrow slice completely over, but leave it on edge, so that the new soil may be mixed with the old soil in working. New soil brought from the bottom of the furrow will not produce large crops until thoroughly aerated and disintegrated by the action of the weather, and this takes time; hence, this deep plowing should not be done late in the spring. The mixing of the old and new soil tends to hasten the fitting of the soil for crop production, and hence the importance of so plowing as to admit of this. The value of subsoiling where the subsoil is a good one, is not half appreciated as it ought to be. It breaks loose the hard pan nearly always to be found where shallow plowing has been the rule for years, and renders this permeable by the rainfall where the water is stored for the use of the crop in the summer. It makes largely available inert plant food in the shape of phosphoric acid and potash, which is always present in the soil in more or less abundance, and only requires the action of the atmosphere, water and humic acid supplied from decaying vegetable matter to be come available for the necessities of the crop. Our own experience has convinced us that in every case except where the subsoil is sandy or leachy, subsoiling may be done with profit.

Whenever the land is dry enough to haul on, get out farm-yard manure and top-dress wheat, oats or grass land, or apply it on the land newly plowed and which is to be put in crop in the spring. The mineral fertilizers, acid phosphate and potash, may be applied along with the manure on the plowed land without fear of loss, and then the whole can be worked in together later in the spring, and thus much time be saved. Farm yard manure is much better on the land than leaching away in the farm-yard and pens.

Clean up land intended to be cropped which has laid untilled for years. Whatever is done in this way let it be done thoroughly. Get out all stumps and haul off all rocks. Left on the land they only serve to harbor weeds, briars, insects and fungoid diseases, and are a constant hindrance to good cultivation. Use the rocks to repair the roads. Let all fences be repaired and make them straight. An old worm fence which is insufficient to turn stock, will often supply rails sufficient to make a new straight fence capable of turning any stock. Set posts the length of the rails

apart and fasten four or five rails to these posts, holding them in place by running a piece of plain fence wire from the bottom to the top of the post on one side. Fasten the wire to the post with staples, making loops to hold the rails in the proper places.

All wet places should be drained and ditches be cleaned out so as to give a quick fall to the water and a good outlet. In putting in drains put them in deep; three feet to three feet six inches is little enough. It is the underlying water which requires to be got rid of. The surface water will soon enough find its way off the land when there is no underlying strata of water to keep it on the surface.

Fill the ice-house at the first opportunity. The first opportunity is often the last in the South. Use plenty of sawdust in packing the ice. It is the surest preservative against waste.

On wet and stormy days clean up, repair and paint all tools and implements. Time spent in this way will be money saved.

#### RANDOM NOTES,

Pecans—Sorrel—Timothy in South Carolina—  
Alfalfa—Lettuce Growing, Etc.

*Editor Southern Planter :*

Your types in the December number make me say just what I did not intend to say. I meant to say that I agreed with you in not advising the planting of pecans *outside* the cotton belt.

Mr. Knapenberger is right in saying that the presence of acid plants, like sheep sorrel, is not necessarily an indication that the land is sour. The acid in the sorrel does not come from the soil, but is one of the results of the assimilative action of the green leaves, and comes from the air. But there is no doubt that some plants can abide acidity in the soil, while others cannot. The soil that grows sorrel may be acid, and if this is the case, it will not grow clover well, for the microbes that live on the clover roots cannot thrive in an acid soil. Then, frequently the best means for banishing the sorrel is to introduce, through liming, the conditions favorable to the clover, and thus smother out the sorrel. If I had land infested with sorrel, I would test it for acidity with blue litmus paper, and if found to be acid, I would have a short road to banishing the sorrel. Get a heavy growth of clover on the land and the sorrel will have no chance.

I think that your correspondent in Lexington county, S. C., will find that timothy will make but one crop there after seeding, and the summer will kill it out.

He had better use red top and meadow fescue, and get far better results than from timothy in his climate. The fescue will make the main part of the first cutting and the red top will give him a late mowing. I saw a beautiful piece of alfalfa the past summer at Athens, Ga., on a mellow red clay loam, and was told that it was cut five times during a season. At Occoneechee Farm, near Hillsboro, N. C., Colonel Carr has a large field of alfalfa on red clay upland which has been productive now for a number of years. There is no doubt that as the conditions for success are better understood in the South, alfalfa will be largely grown, and with plenty of hay from alfalfa and the cow-pea, we may hope to see stock feeding grow in importance in the cotton country.

I had rather have strychnine and a good shot gun for sheep-killing dogs than any dog law that was ever put on the statute books.

My frame lettuce is rapidly being destroyed by the stem-rot fungus. It is largely due, I believe, to the use of heavy applications of fertilizer in which the nitrogen came from cotton seed meal. Where none of this was put I have no rot. Then, too, I made the mistake of not changing the soil in the frames, but planted the same soil that was used last winter. The result is, that I shall lose fully half the crop, and as I am now getting 75 cents a dozen, this means quite a loss. Old lettuce soil and cotton seed meal fertilizer have been responsible. Hereafter we will get nitrogen for our lettuce fertilizer, either from fish scrap or dried blood. Stable manure seems to have the same effect in promoting fungus that the cotton seed meal has.

That potato yarn Mr. Jeffers reports where four potatoes weighing 3½ lbs. filled a barrel, is rather thin. It takes 150 lbs. of sweet potatoes to make a barrel. We had one that weighed a fraction over 9 lbs., and it would have been a small barrel that four such would have filled. The quince Mr. J. tells about is probably the Chinese quince. It is too tender for the North, but should be grown largely from Maryland, southward.

W. F. MASSEY,

*Editor of Practical Farmer.*

## FERTILIZERS DO NOT REPLACE TILLAGE.

*Editor Southern Planter:*

A most common mistake of farmers is to expect too much of fertilizers, due to no little extent no doubt to the extravagant claims made by many fertilizer dealers. Fertilizers are simply a form of concentrated manure, and their use arose largely from the fact that not enough farm-yard manure can be made on the average farm to keep the soil in good condition. Careful tillage is just as important with fertilizers as with farm-

yard manure. It is true that fertilizers do not stock up a soil with all kinds of weed seeds, but keeping the soil pulverized and porous and the maintenance of the earth mulch is not the less important on this account.

Farm yard manures are more or less a complete manure; and while it is true that the potash and phosphates contained in same become available as plant-food much less rapidly than the nitrogen, still a large proportion ultimately become serviceable to growing plants. This is the point too generally overlooked by farmers in buying fertilizers. Figured on a fertilizer formula, manure contains equal percentages of potash and nitrogen, and half as much phosphoric acid. Fertilizers need not follow these proportions closely because the nitrogen is needlessly large when we consider the enormous quantities stored in soils by plants of the clover family. So far as the mineral plant food elements are concerned, and by mineral plant food is commonly meant potash and the phosphates, it is very probable that farm yard manure represents closely the actual needs of average crops.

This is the point to establish clearly before we go on the subject of tillage. If the fertilizers are unsuitable for the crop, tillage of itself can do nothing. The correct balancing of the plant-food in fertilizers must be studied with reference to the actual needs of crops in plant food, and the largest crop it is hoped to make. A well balanced fertilizer for 20 bushels of corn per acre, for example, cannot make 40 bushels. Farmers must read and study out these points for themselves. The problem is neither intricate nor difficult, simply a matter of studying the composition of crops, being particular to take the whole crop growth into consideration, for plant-food is as much required to make the roughage as to make the valuable sale portion, and the one cannot be grown without the other.

The function of tillage is to prepare soil conditions favorable to the germination of seed; that is, to keep the soil open and porous, and well pulverized, and even. It also serves to conserve moisture by the well known earth mulch, by keeping an even soil texture, and by keeping down the growth of weeds which use moisture thus robbing the valuable plants. The function of fertilizer is the same as that of manure of all kinds. It simply supplies plant food—nitrogen, potash and phosphoric acid. Plant food can do little without tillage, tillage can do nothing without plant-food. These are things to keep in mind.

As mentioned before, the composition of the fertilizer is important, for plants must have certain proportions of the three elements, and no great excess of any one, or of any two for that matter, can make up for the scarcity of any one of them. On this account, it is of first importance to study the composition of the fertilizers used.

P. J. CHRISTIAN.

### ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter* Richmond, Va., not later than the 15th of the month, for replies to appear in the next month's issue of the *Planter*.

#### Utilization of Dead Animals,

Please describe in your answers to queries some easy and practical way by means of which the farmer can utilize the bodies of dead animals as fertilizers, and not turn them over to the dogs and vultures. A large quantity of nitrogenous material is wasted in this way each year on every farm.

Lackawanna Co., Pa. THOS. A. KAY, M. D.

The only means of utilizing the dead carcasses of animals so that they may be effectually converted into fertilizer without becoming offensive or a nuisance, is to put them into a tank and pour sulphuric acid over them. This will dissolve the flesh and bones, and the resultant matter can then be mixed with dry soil and be then applied to the land. There is, however, considerable risk in thus dealing with them, as the handling of the acid is dangerous work unless provided with proper appliances. Some farmers dispose of carcasses by placing them in a pit and covering with quick lime and soil. This process is slower than with the acid, but much safer. Probably the easiest and safest way to dispose of animals which have died from disease, is to burn them. In this way all traces and germs of the disease are destroyed and the resulting ashes can be used as a fertilizer. In any event, dead carcasses should not be left about the farm for dogs and buzzards to consume. The practice of thus disposing of them is the prolific cause of the dissemination of disease amongst animals. We have had positive evidence of hog cholera being thus carried from one farm to another by buzzards. We would like to see a law passed making it compulsory to destroy every buzzard in the country. If we had no buzzards, farmers would bury or burn their dead animals and danger of the spread of disease would be lessened.—Ed.

#### Fall and Winter Plowing.

1. I notice that *The Planter* is an advocate of fall plowing on general principles, but as there is a diversity of opinion as to how far fall plowing should be practiced, I would ask the Editor if, in his opinion, such plowing should be done in all cases.

2. A field on which wheat is grown is covered in the fall with weeds and grass which will make a mulch through the winter in case one doesn't care to put in grain to farm a mulch, would it be best to plow under the trash in the fall or leave it as a mulch, at least till late winter?

3. Another piece of rather heavy land of low fertility, having a tendency to run together and wash, is covered with a light coat of grass and weeds, enough to

prevent washing. Would this land be benefited by fall plowing, in case no grain crop is sown?

As the above described fields are typical of large sections of the South, with slight variations, consideration of the subject will no doubt prove helpful to others as well as myself.

Surry Co., Va.

J. A. MOORE.

1. There is, no doubt, a diversity of opinion as to the wisdom of fall and winter plowing of land in a country where the winter is usually mild, but our own opinion is strongly in favor of the practice for reasons which we have fully explained in numerous articles. Wherever the work can be done early enough to permit of the sowing of a winter-growing crop we would always seed such a crop because of its value as a conservator of fertility and maker of humus, which almost all Southern lands need even more than fertilizer.

2. We would turn down the grass and weeds before they seed in order to lessen the plague of weeds which make so much unnecessary work and rob the soil. If allowed to remain on the surface until winter they will have shed their seed and make work and rob the soil of fertility. Weeds consume plant food and moisture just as surely as profitable crops, and make no return for what they take.

3. The way to cure this land of its tendency to wash and run together, if both conditions can exist simultaneously, which is doubtful, is to plow it deeply and get it filled with humus. Therefore it should be plowed deeply early enough to seed, in a winter growing leguminous crop to be turned down in the spring.—Ed.

#### Service of Sow.

I notice your reply in the December number of the *Planter* to G. W. B., of Middlesex county, with reference to the number of times a sow may drop a litter of pigs within ten months. You said that a sow will usually accept service within a week after dropping pigs. You will please tell us in the January number of the *Planter* how she is brought in heat so soon.

Mecklenburg Co., Va.

A SUBSCRIBER.

The sow (like a mare) will naturally accept service within a week after farrowing. There is no necessity to use any artificial means.—Ed.

#### Canada Peas.

Having read the article in the December issue of the *Planter* about Canada peas sowed for hogs, I have ordered 3 bushels to plant on a trial basis.

How do you prepare them for feed? Do you turn the hogs in on them while in a green state, or cut them like oats and feed them? How many bushels per acre is a good crop of them?

Baltimore, Md.

S. D. JONES.

This crop is usually grown for a hog pasture, in which case the hogs should be turned in as soon as the peas are about half grown in the pods. They will then

consume both the vines and pods. If grown for hay, of which it makes a fine quality, cut when the peas are fully formed but before they commence to ripen and then the vines can be saved with the leaf on them. Always have the crop off the ground before the hot weather sets in or it will likely be lost. The crop may be cut for green feed like Crimson clover or oats, if desired.

It is not a suitable crop to grow for seed in the South, as before the peas ripen the hot weather causes mildew to attack it, and when this starts the whole crop is soon lost.—ED.

#### Grazing Wheat.

We are asked as to the advisability of grazing wheat. Wherever wheat has made a strong growth early in the winter it is a good practice to graze it with calves and sheep whenever the land is dry during the winter and up to about the 1st of April. It should not, however, be grazed too close. The effect of grazing is to make the plant tiller and spread over the field.—ED.

#### A Dark Cow Barn.

A lady in Patrick county, Va., writes us that her husband has built a barn in part of which he has a cow stable, but has made no provision for lighting the stable except a small hole into each stall. She says the cows object to go into it, and one can scarcely see how to milk them. She wants to know if this is a proper place for cows.

In reply, we would say that such a place is no more fit to keep cows in than it would be for a human being to live in. Sunlight, daylight and plenty of fresh air are as essential to the health and well-doing of live stock of any kind as they are for mankind. Cattle kept in such a barn as this can never long be healthy. The surest destroyer of all disease germs is sunlight.—ED.

#### Lightening a Clay Soil.

I have some clay galls I am going to cover with rot ten sawdust and plow under, and then apply ground silica, harrow and sow in cow peas, or soy beans.

1. How much silica would you advise to put to the acre?

2. Would you sow before or after plowing?  
Cleveland, Tenn. HENRY D. AYRE.

1. As the only effect of the silica will be a mechanical one, you may apply such a quantity as, in your judgment, you think will sufficiently lighten and disintegrate the clay, so as to make it more of a loamy nature.

2. We would apply after plowing and harrow it into the clay soil.—ED.

#### Lame Horse.

I have a horse that is lame in one of his hind legs. It seems to be hip joint lameness. Can you give me a remedy for it? I have tried several liniments, and nothing I have tried has relieved him. There is no swelling or enlargement anywhere on the leg, but he is lame when he trots. It does not affect his work only in driving.

King and Queen Co., Va.

R. J. VAUGHAN.

If the trouble really be in the hip-joint, it is doubtful whether any treatment will be of service now. To prevent permanent lameness from hip joint injury the remedy should be applied at once after the injury, and even then the result is doubtful. A long period of rest is absolutely essential. A shoe with high heels should be fitted, and hot water fomentations should be frequently applied to the part, and mercurial ointment be well rubbed in.—ED.

#### Pasture Grasses for Light Land.

I have some rather steep land that is loose and inclined to wash, which I want to set in grass next spring for pasture. What variety of grass do you recommend? How would Johnson grass do? Is it a good pasture and hay grass? I want something that will make a good sod and prevent the land from washing.

Bristol, Tenn.

SUBSCRIBER.

Plow the land deeply, and thus make it possible for the water to get down into the subsoil instead of washing off the surface soil. Work fine, and then seed in March or April or in August or September a mixture of the following grasses: Orchard grass, perennial rye, Virginia blue, meadow fescue and Hungarian brome. Sow at the rate of three bushels to the acre. Johnson grass is not adapted to such land as this. It should be sown on level loamy land, where it can remain permanently and will not encroach on other arable land. It makes good hay when cut before maturity, and also good grazing. It is closely related to the sorghums, and grows much like them, but makes long jointed underground stems like wire grass.—ED.

The two most potent factors in a country's progress are roads and schools. And they are inseparable, where one is really good the other will not long remain bad, and where one is neglected the other is not found much in advance.—*Southern School and Home*

If I had some magic gift to bestow, it would be to make our country youth see one truth, namely, that science as applied to the farm, the garden and the forest has as splendid a dignity as astronomy; that it may work just as many marvels and claim as high an order of talent.—*John Graham Brooks.*

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

Not much work of any kind can be done in the garden or orchard during this month, except completing the clearing up and breaking of land which has been in late fall crops. Let this work be done effectually. Leave no trash, weeds, or wasted vegetables or stalks on the ground, but burn them up and thus remove all winter hiding places for insects, and destroy their eggs and the fungus spores, which are so prolific of damage in summer. Break the land deeply and leave it rough, so that the frost and weather can penetrate it. Farm-yard manure can with advantage be hauled out on to the land after it has been plowed, and phosphate and potash fertilizers may be spread on at the same time with out fear of loss from leaching. A good dressing of freshly slacked lime—say, 50 bushels to the acre—will on land which has been long used for growing vegetables be found of more help to it than manure, but lime and farm-yard manure should never be applied at the same time. Apply the lime now and manure may be applied in March or April.

The composting and mixing of farm yard manure, leaves, sods and other vegetable matter, should receive attention. This will be required in February and March for the hot-beds and frames and later for the crops in the open ground. Turn over and mix well two or three times during the winter, so that it may be sweetened and uniform in quality.

In Tidewater Virginia and Eastern North and South Carolina, English peas may be sown for the early crop if the ground is dry and in nice working condition. A field that grew Irish or sweet potatoes last year makes the most desirable land for the pea crop, as peas do not want fresh manure or too rich soil. If any fertilizer is needed it will probably only be phosphoric acid. This may be given by using 300 or 400 lbs to the acre of acid phosphate. If any potash is needed apply 50 to 75 lbs. to the acre of muriate of potash. English peas should be put in deeply—say, with a cover of 4 or five inches of soil. Sow in drills two feet apart, putting the peas in the bottom of the drills in a wide row—say, 3 or 4 inches wide, and scattered pretty thickly. Tread into the soil and cover.

Towards the end of the month small sowings of radishes and lettuce may be made in the above sections, in sheltered situations or where protection can be given by mats or sash.

The pruning of orchards and vineyards should be continued in mild, dry weather.

### GARDEN AND ORCHARD NOTES.

January is usually regarded as a "rest month" by the farmer. He feeds stock, builds fires, and eats of the things he spent last summer and fall, growing and storing away. It is a time when the Virginia farmer usually "turns over the new leaf," tries to balance accounts, and matures plans for next year's work.

These occupations, however, really make it one of the most important months of the year to the farmer, since he draws conclusions from the past year's experience, and decides upon plans to be followed during all the next twelve months. If these plans are not good, the year's work will be largely a failure, hence the very great importance of well matured plans.

What variety of apples should be added to the orchard; when and how should they be planted; when and how should the pruning be done. (We prefer to do most of this work in February and March, and expect to give full instructions along these lines in the February and March issues of the *Planter*.) Where should the potatoes be planted, Irish and Sweet? Are the prospects favorable for growing an early crop for the near by markets? Should a late crop of cabbage be grown for shipment to the Gulf States during the later part of summer and early fall? Do the garden fence and gates need attention?

You may prune the grape vines between now and the middle of March. How should they be pruned? What fertilizers should be used on the crops next year? How can a good home-made fertilizer be made? These are some of the many things the farmer should consider during this, the first month of 1903.

Put a winter mulch on the strawberry plants at once if not already done. Is there a real farmer in the Southern States who has no strawberry plants in his garden? If so, he is missing something in this life. His more fortunate neighbor should invite him over to see the large, luscious, crimson colored berries peeping through the rich green foliage of the plants early in June. Let him gather some berries and sample them with a liberal sprinkling of sugar and cream, and then watch his enthusiasm rise to 105 degrees. This kind of horticultural teaching will bear fruit both for the pupil and for the teacher.

But I am wandering from what I started to say. How should the mulch be applied? Take straw, pine needles or any similar material, that has no weed seed in it, and cover all the strawberry ground with it



after the ground has frozen an inch or more. Hold the plants in the frozen bed till you want them to grow in the spring. Judging from my own experience along this line, I agree with Mr. Blacknall, who stated in the December issue of the *Planter* that it was doubtful about winter mulching being beneficial to strawberry plants in the Gulf States. Later on, I will tell how I obtained good results by summer mulching in the dry climate at the Texas Experiment Station. It is more important in the Gulf States to know how to carry the plants through the summer in a strong, healthy condition than it is to know how to take them through the winter. But I believe, from my own experience, that winter mulching is advisable in all that section of Virginia west of Piedmont. I have seen excellent crops of strawberries grown at the Virginia Experiment Station by winter mulching (in fact, I helped to grow them), while the near by crops that were not mulched were almost failures. In fact, I believe, by careful winter mulching, other conditions being favorable, that a good strawberry crop can be grown over a large portion of Virginia and Tennessee with more certainty than a wheat crop. As to profits, there is no comparison.

Besides the strawberry, which is the first fruit to ripen, the farm should not fail to have some good Black Cap Raspberries growing to follow the strawberry closely. Put this fruit down on your list for planting in March. What varieties should be planted. There are a number of good black cap varieties sold by nurserymen, but the farmer can frequently get good raspberry plants along Old Virginia worm fences that will cost nothing but a little time to go after them. Many people like to get something for nothing. Here is a chance. The berries are not usually as large as the cultivated varieties, but the flavor is frequently better. Better have these than none. Let the boy take his first lesson in horticulture by setting them out and taking care of them. Let him see how they propagate by branching in the fall and taking root at several places at the tips. Each one of these tips may be taken up the following spring and be used to start a new plant. The plants should have been marked while in fruit for transplanting, but had better be done now than not at all.

Then there are currants, gooseberries, pears, peaches and quinces to follow later on.

What kind of literature are you reading these winter evenings?

Do you read the bulletins issued by the United States Department of Agriculture? If not, why?

Are you deriving any benefit from the State Department of Agriculture? Have you read the bulletins

issued by the Commissioner of Agriculture, Richmond, Va. If not, why not?

Are you deriving any benefit from the Virginia Agricultural Experiment Station, Blacksburg, Va. ? If not, why not? Is your name on the mailing list for the various bulletins issued to farmers free. If not, write a postal card row to any of the three departments mentioned above and ask to have your name and address placed on the regular mailing list for free bulletins. As my farm is only ten miles from the Virginia Experiment Station, I may have more to say about this institution in a future issue.

Have you left any of the tools out in the damp winter weather. If so, they will help to bring on a good crop of farm mortgages. I believe, as a rule, more tools rust out and rot out in Virginia and other Southern farms than are worn out. I know this is a strong statement, but according to my own experience as a Virginia farmer and my observation in extensive travel over the Southern States, this conclusion has forced itself upon my mind.

Take those tools in out of the wet. Repair them. Give the wood work a coat of paint and the iron and steel parts that go into the ground, on such tools as shovels, hoes, plows and cultivators, a good coat of linseed oil. This will help to keep rust away and thus enable the tools to shed the dirt better in the spring. Clean tools will save the temper of the man.

Clean up the gardens. When harvesting some cabbage and turnips from my garden in November, I noticed many lice on the roots of the turnips and on the heads of some cabbage. I will not leave a single plant for these pests to winter on. An attempt will be made to starve them out in the dead of winter. All the weed seed that I can get together will be burned. The idea being that it is easier to burn a weed seed or an insect egg in the winter than it is to pull a weed up during a hot summer day or feed the progeny of an insect. Of course, an attempt was made to prevent these parasites multiplying during the summer, but the warfare must be kept up by the farmer.

R. H. PRICE.

This Department will have contributions each month from Prof. R. H. Price, of Montgomery county, Va., who has had much experience as a practical farmer and horticulturist in this State, as well as having had charge of the Horticultural Department of the Texas Agricultural Experiment Station during the past ten years.

When corresponding with advertisers mention the *Southern Planter*.

## VIRGINIA STATE HORTICULTURAL SOCIETY.

## Report of Annual Meeting.

The Annual Meeting of the Virginia State Horticultural Society was held in the Masonic Hall, Lynchburg, on December 2nd and 3rd, with a large attendance. A most interesting programme was presented, and discussed in a spirited manner. Local members brought specimens of apples, pears, peaches and some very fine vegetables. The Society had purchased a box of the highest grade Pacific Coast apples to be had in New York market as a comparison with our own, and also to show the Pacific Coast methods of packing and grading. These apples were of the Spitzenberg variety and sold in New York for \$3.75 per bushel box. They did not compare with the Virginia fruit on the tables in either appearance or flavor. Mr. Collingwood, editor of the *Rural New Yorker*, who was present as one of the speakers, said publicly that this was his first visit to Virginia, and that he had for years been attending meetings of various Societies in the Northern States, but that with the single exception of one exhibit in Maine he had never seen such fine apples; they were perfect; and he expressed surprise that the people of Virginia did not let those outside the State know what fine fruit they had. He said it was our duty to advertise ourselves.

The Society passed a resolution urging the passage of a bill for an appropriation for St. Louis Exposition by the Legislature, and binding members of the Society to do all in their power to get petitions signed and forwarded from their respective counties to members of the Legislature.

President S. B. Woods urged the necessity of good roads, and the proposal to form an Appalachian Forest Reserve by the Federal Government in Virginia, North Carolina and South Carolina, which were endorsed by the Society.

Mr. H. P. Gould, of the United States Department of Agriculture, read an interesting paper on "Why Some Orchards Fail," and referred to the progress in development of the fruit industry, from the first orchards which were planted merely for cider. He impressed the necessity of cultivation, spraying and intelligent pruning. The subject of shipment of peaches and pears to Europe was taken up by Prof. W. A. Taylor, of the United States Department of Agriculture, whose remarks were interesting and illustrated by statistical charts.

Dr. M. L. McCue, a prominent and successful orchardist in Albemarle county, read an able paper on "Care of Orchards," describing methods from planting to bearing stage. Prof. Alwood and Senator Lupton, of Winchester, gave an illustrative lecture on

packing and grading fruits; samples were shown of how apples should be graded, and various kinds of packages were exhibited.

Mr. A. T. Todd, of Crozet, took up the subject of packing peaches in a similar manner.

Mr. O'Rork, of Staunton, talked about the by-products, evaporating, &c., showing the best means of utilizing what has usually been wasted.

Prof. Alwood talked on canning, showing samples of product.

Mr. Collingwood, editor of the *Rural New Yorker*, spoke on Handling Fruit for New York markets. He is a most pleasing speaker, and during his long and interesting talk held the close attention of his audience. His method of illustrating the points he desires to impress by humorous anecdotes was greeted with hearty laughter. His description of life in New York flats, with 1,600 people to the acre and twice that number in the tenement districts, gave an insight into an existence altogether unusual to his hearers. He showed how, under these conditions, the tendency was to smaller packages of fruit, and advocated the use of bushel and half bushel boxes instead of barrels for apples. He instanced the profitable business accomplished by California under these conditions. He said if they could buy our Winesap instead of the Ben Davis they now got they would appreciate red apples instead of shunning them as at present.

A lengthy discussion followed Prof. Alwood's remark of San José scale work. Some members contended that the law had not been properly administered by the State Inspector, and the general feeling was that in its present condition it was not far-reaching enough, and also unworkable.

A committee was appointed to present the views of the Society to the members of the Legislature and urge amendments in the law to make it meet the exigencies of the case, it being pointed out that if scale were discovered on our fruit in the larger markets, especially New York, they would immediately quarantine against all Virginia fruit.

Mr. W. Whately, of Crozet, secretary and treasurer, in his report, showed that the Society was making steady increase in membership each year, and showed a satisfactory balance in hand in his financial statement.

The election of officers for 1903 resulted in Mr. W. W. Otey, of Pulaski county, taking the place of Mr. W. A. Francis, of Salem in the list of vice-presidents, the other officers being continued in office. Mr. Whately desired to resign the office of Secretary-Treasurer, but was unanimously voted in, and bowed to the will of the members.

Interest in the meeting held to the last, the final session lasting up to 11 P. M., Mr. Collingwood giv-

ing a second talk, which was as popular as the one earlier in the day.

Prof. Van Deman, who is always a favorite with Virginia horticulturists, was in attendance, and was several times a speaker, his remarks receiving the usual attention accorded to them.

The Society was requested to meet at Charlottesville, Lynchburg, and Pulaski next year, the claims of each being warmly advocated, and after a spirited friendly contest, the members from the Southwest gained the victory they deserved, and Pulaski was decided on as the place of next meeting.

The report of proceedings that will shortly be issued will be of even greater interest than its predecessors, which is saying a great deal. All members obtain copies free, and no horticulturist can afford to be without it. Annual membership being only \$1.00 for each year, any one may be placed on the list by remitting this amount to Mr. Whately, Secretary-Treasurer, Crozet, Va.

### PECANS IN VIRGINIA.

*Editor Southern Planter:*

Believing your statement in the November issue, that the pecan is unsuitable for planting anywhere in Virginia, is a mistake, which you would gladly correct, when convinced that you are in error; as well for the benefit of any of your subscribers who have planted the pecan, or may be contemplating doing so, I enclose under another cover a copy of the *Daily Advertiser*, published here (Lynchburg), which contains facts in a leading editorial that somewhat combat your views as to the pecan. I will add that I lived at a place here on which was flourishing a pecan tree, that I believe is the largest tree of any kind in the city to day; and it has large crops of nuts each year. My boys sold most of them to Mr. Samuel A. Boyd, who was then, and had been for many years, the leading confectioner here, and he told me on several occasions that he preferred them to any he could buy on any other market because of their superior flavor and their shells, which were generally filled with sound kernels.

Lynchburg, Va.

J. D. PENDLETON.

In the article referred to, the editor of the *Lynchburg Advance* says:

Our Georgia exchanges are having much to say about nut culture in that State, especially pecans. Experiments have proved that the pecan tree flourishes admirably in Georgia and produces profitable crops. Groves have been planted in various localities, and some of them have already come into bearing, bringing handsome returns to the owners. It has been sug-

gested that the tree would flourish in Virginia, but the *Southern Planter* discourages the attempt to grow them in the State, believing that the climate and soil are not suited to them. In the December number of the *Planter*, two correspondents take issue with that journal and tell of flourishing pecan trees in the counties of Prince William and Norfolk. In Norfolk county, there are two immense trees seven feet in diameter near the ground, which make admirable shade and produce nuts worth from \$75 to \$100 annually. The *Planter* replies that climatic conditions in Eastern Virginia may suit this tree, but they will not thrive in Piedmont Virginia. Now, we can tell the *Planter* of several flourishing pecan trees in Lynchburg, one of them, two and a half feet in diameter, has been bearing abundant crops for years. The other two are younger, and not so large. There is another big tree in the country, not far from the city, which has been bearing good nuts for years—so the tree will grow in Piedmont Virginia. But we agree with the *Planter* that it is not its proper habitat, and it would not be well to go into the business of raising pecans here.

### NUT-GROWING IN VIRGINIA,

*Editor Southern Planter:*

I was much interested in reading the experience of your correspondents who have attempted the raising of nuts.

If of interest, my experience is as follows:

Some twelve years since, I purchased from a New Jersey nurseryman ten trees of each of the following varieties: Japan Chestnut, Pecan and English Walnut. Three of the Pecans are alive to day—one 20 feet, one 15, one 8 feet high—but none have ever set fruit, although they are strong hardy trees.

Of the English walnuts, five are living, one of which is ten feet high; the others have made but little growth, although all are apparently thrifty, but no fruit has set on any of them.

Of the Japan chestnuts, six are living, several of which have made a satisfactory growth, and two of them have been bearing for several years. One of these produced a gallon of nuts last season.

As for filberts, I imported with other trees some 30 years ago two trees from England. They send up shoots from the root, but have never matured a fruit.

All of these trees were planted in fine rich soil, and, after a year or two, the blue grass was allowed to grow about the trees, as they were planted in the house grounds. My farm is four miles north of James river at Scottsville.

Altamare Co., Va.

W. G. M.

Mention the *Planter* when corresponding with advertisers.

## Live Stock and Dairy.

### THE DAIRY BREEDS OF CATTLE.

*Editor Southern Planter :*

In naming the dairy breeds of cattle, as distinct from beef breeds and dual or general purpose cattle, those races only should be considered which have well established reputations for the profitable production of milk. Other desirable qualities may be ignored. As thus defined and known in America, the dairy breeds are the Ayrshires, Guernseys, Holsteins, and Jerseys. If other parts of the world were searched, a few additional breeds might be found having claim to recognition in this list. Representatives of some of these are occasionally seen in this country, but none have made any serious impress upon our dairy industry, and they are not likely to do so. Their reputation is limited, and however meritorious they may be locally, there is not sufficient cause for describing them in this connection.

The four breeds named all produce thrifty calves

tained fixed characteristics of great dairy excellence. They are medium sized cattle, muscular and active, the best of foragers, and accustomed, in their native country, to subsisting on pasturage in summer and almost exclusively upon hay and straw in the winter. Ayrshire cows may be fairly said to excel the other dairy races in earning their living under difficulties and giving a profit upon the roughest forage. They are naturally hardy and admirably adapted to grazing over wide ranges of broken and rugged pastures. While they respond to good care and pay well for it, they are comparatively indifferent to exposure and inclement weather. Bred to abundant air and exercise, they soon show the ill effects of too close housing and crowding in ill ventilated stables. No breed is hardier if rationally treated, and none succumbs sooner to unsanitary conditions.

The general form of the Ayrshire is the wedge-shape—regarded as typical of cows of dairy excel-



when properly treated, and, although some of them are small, they make good veal. Steers from them can be raised at a profit, but not as economically as from other breeds. Young bulls and young females, non breeders or dairy failures (the "black sheep" which occasionally appear in every flock), can be readily turned into excellent beef. But aged animals, which have served their purpose as breeders and dairy producers, cannot be profitably fattened. None of these side issues should be depended upon for income. If entitled to be called dairy cattle, the cows should be capable of such profit during their years of dairy production as to render other considerations insignificant, except the rearing of enough selected calves to maintain the composition of the herd.

#### AYRSHIRES.

The Ayrshire breed has been developed within a century in the southwestern part of Scotland and at-

lence—and they are short legged and fine boned. The face is usually rather long and straight, but clean and fine, with a full growth of horn which curves outward, then inward, and turns well up, with tips inclined backward. This gives an upright and bold appearance to the whole head. A black muzzle is the rule, although white seems to be no challenge of purity of blood. The eye is peculiarly bright, with a quick movement indicating extreme watchfulness. The whole appearance is of a highly nervous temperament. The prevailing color of the body is red and white, variously proportioned and in spots, not mixed. Probably three fourths of all this race of cattle can be thus described in color. A generation ago the dark markings predominated, but there has lately been a strong trend towards more white, especially in Canada. The red is sometimes bright, but often of a rich, sherry brown, like the shell of a horse chestnut.

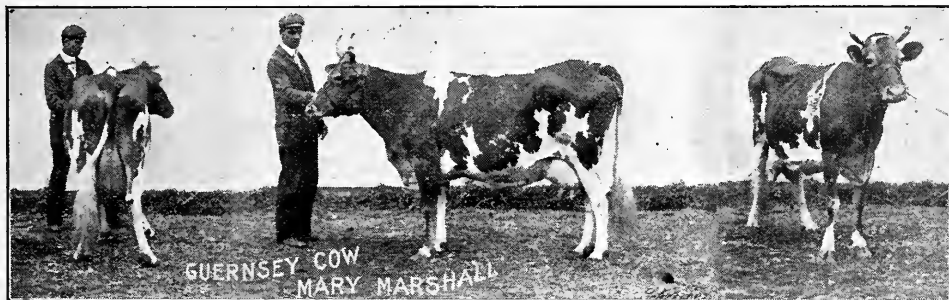
sometimes the color is a dull brown, and occasionally a brindle appears. Nearly all the good animals of the breed have broad, flat, well-arched ribs, giving room for capacious digestive apparatus. The udder extends both forward and back, is held well up, has a broad attachment to the body and a level bottom line. It is a snug, compact organ, admirably fitted by its shape and elasticity for the elaboration and storage of milk, and when the glands are at rest, it occupies but little space. The teats are small and cylindrical rather than cone shaped. In many cases the teats are too small for comfortable milking, but careful breeders have remedied this defect, and whole herds can be found with superb udders and teats of good size.

The Ayrshire cow is a large and persistent milker, although she usually demands a dry season of six to eight weeks before calving. A yield of 5 500 lbs. a year as the average for a working herd is often realized. Records of eighteen well managed herds, collected from different sections and averaging twelve

special reputation which this breed has enjoyed as superior cheese makers is not sustained by the facts. In the hands of capable makers, Ayrshire milk will make little if any more cheese from a given weight than will the milk of other breeds. Yet, the uniform distribution of fat is an advantage, and there is less liability to lose fat in converting this milk into cheese than in the case of richer milk with fat globules larger and more irregular in size.

#### GUERNSEYS.

Guernseys originated upon and are imported from the second in size of the Channel Islands, lying between England and France. The early importations to this country were not well distinguished from the Jersey, and all these island cattle were indiscriminately and incorrectly called "Alderneys." About thirty years ago the Guernseys became recognized in America as a distinct breed. Since that time there have been importations nearly every year, and the breed has steadily increased in numbers in this coun-



cows each, show an annual average product of 5,412 lbs. One noted herd, averaging fourteen cows in milk, has an unbroken record for twenty years with an average yield of 6,427 lbs. a year to the cow. One year the average was 7,000 lbs. Single cows have produced 10,000 and even 12,000 lbs. of milk. Butter records are not numerous, but the milk of the herd referred to averages over 4 per cent. of fat, and the cows from 244 to 512 lbs. of butter each, with an average of 353 lbs. There are single authentic records of over 600 lbs. of butter in a year. The milk of this breed is not exceptionally rich, but rather above the average of cows, or  $3\frac{1}{2}$  to 4 per cent. fat for mixed herd milk throughout the year. The fat globules are small and very even in size, so that cream rises slowly; it has comparatively little color. The Ayrshire is therefore not a first class butter cow, but its product is admirably suited for market milk, safely above legal standards, uniform and capable of long transportation and rough handling without injury. A

try and as steadily gained in favor wherever introduced. There are now just as many Guernseys as Ayrshires on this continent, rough estimates placing the number of each at 25,000.

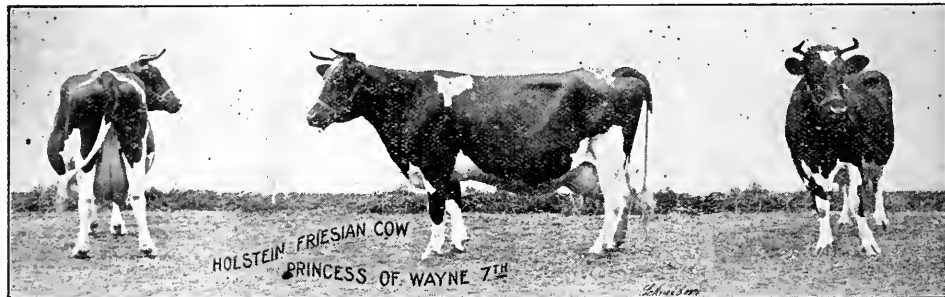
The Guernseys are a size larger than the Jerseys, with which race they can best be compared, and are stronger boned and coarser in appearance. But the cows are generally handsome and attractive to the dairyman. They are claimed to be harder and larger milkers, but both these points are stoutly denied. The one hundred best Jerseys in the United States are undoubtedly the equals as dairy animals, in every respect, of the hundred best Guernseys. But the latter have been selected for importation with better judgment, and it is probably true that the average Guernsey cow in this country to day is a better producer than the average Jersey. In other words, there are many more poor Jerseys than poor Guernseys.

The head of the Guernsey is rather long, the neck slender, the body large, deep and rangy, the rump

prominent, the flanks thin, thighs incurved and twist open and roomy. Altogether, the animal is at once recognized as businesslike and belonging to the pronounced dairy type. The breed is almost always light in color, yellow and orange predominating, with considerable white, usually in large patches. Darker shades, approaching brown, are found upon some cows and often upon bulls. The muzzles are almost invariably buff or flesh colored, surrounded by a fillet of almost white hair. Occasionally a black nose is found, showing the influence of some distant ancestor from Brittany, or suggestive of more recent exchange of compliments between the Jersey and Guernsey isles which have undoubtedly although rarely occurred. The horns are small, curved, fine, thin shelled and waxy in appearance; they often show a deep, rich yellow for a third of their length from the base. A characteristic of the breed is a very generous secretion of yellow coloring matter which pertains to the whole skin, but is seen especially where the hair is white, in

stated, in natural color. They may be especially recommended as butter cows, as well as for market milk where quality secures a relatively high price. They demand good treatment and liberal feeding, but are noted for rich production combined with economy of food. From 5,000 to 6,000 lbs. of milk per year should be expected and upwards of 300 lbs. of butter. One herd of over one hundred cows of all ages in this country gave 5,317 lbs. of milk and 318 lbs. of butter. Single cows have ranged up to 10,000 and 12,000 lbs. of milk a year and a few still more, producing 500 to 750 and even 900 lbs. of butter. The mixed milk of this breed is often found to average 14 to 15 per cent. of total solids and 5 to 6½ per cent. of fat. The globules are large and the cream separates easily.

Guernsey bulls have proved extremely satisfactory in grading up a herd with fairly selected dairy cows of no particular breeding; the offspring usually make very acceptable dairy stock. Guernseys have not yet been largely introduced in the South, and will deserve



HOLSTEIN-FRIESIAN COW  
PRINCESS OF WAYNE 7TH

the ears, around the eyes and about the udder. The bright golden undertone of the white parts of the body, when in strong light, is often very noticeable. This gives a distinctive "richness" to the animal, and causes the milk and butter produced to be of a higher color at all seasons of the year than that of any other breed. A single Guernsey cow will give color and attractive tone to the milk and butter of a dozen cows of kinds deficient in this respect. The udder and teats are large and well shaped and placed in selected specimens, but these and other dairy markings do not appear to be as uniformly fixed throughout the breed, as in the case of Jerseys, which have been subjected to a larger course of careful breed development. The cows possess a highly nervous temperament, and yet are extremely quiet and gentle when properly handled. Much less trouble is reported in the management of aged bulls than with Jerseys of like age.

The cows of the breed produce liberal quantities of milk, of uncommon richness in butter fat, and, as

more attention in this section.

#### HOLSTEINS.

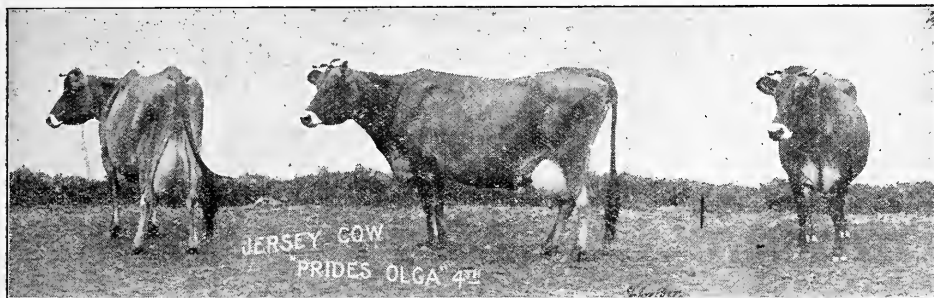
Holsteins is the popular name for the strongly-marked black-and-white cattle of North Holland and Friesland, although the herd-book title is Holstein-Friesians. They constitute one of the very oldest and most notable breeds of cattle. Holland has been famous for dairy products for at least a thousand years, and the great bicolored beasts upon which this reputation has been gained have been slowly but surely developing their present form of dairy excellence.

The large frame, strong bone, abundance of flesh (particularly in the males and all young), silken coat, extreme docility and enormous milk yield of these cattle, result from the rich and luxurious herbage of the very fertile and moist lands upon which the breed has been perfected, the close housing and uncommonly good care given them for half the year, and the intimate association of people and cattle. The striking

features in the appearance of this breed, are the color markings and the great size of both sexes. The shining jet black contrasts vividly with the pure white—the fine silky hair being upon a soft and mellow skin of medium thickness. In some animals the black predominates and the white in others. Black has been rather preferred among American breeders, yet a few noted animals have been mainly white. The average animal carries more black than white, and the markings are extremely irregular. The black and white are never mixed, the lines of demarcation being usually sharply drawn. The Holsteins are much the largest of all the dairy breeds. The big, bony frames are well filled, and the chest, abdomen and pelvic region fully developed. Cows range in weight from 1,000 to 1,500 lbs., with an average of 1,200 or more. Bulls at maturity often exceed 2,500 lbs. in weight.

The head is long, rather narrow and bony, with bright yet quiet eyes and large nostrils and mouth. The horns are small and fine, often incurving and fre-

above their own live weight in milk monthly for ten or twelve consecutive months. There are authentic instances of daily yields of 100 lbs. or more for several days, and 20,000 to 30,000 lbs. of milk in a year. Cows giving 40 to 60 lbs. per day are regarded as average animals, and 8,000 lbs. or more per year is depended upon as a herd average. One herd record for four years, gives twelve cows an average of 8,805 lbs. a year. The milk of the large producers is often thin, low in percentage of total solids, and deficient in fat. The cows have been favorites for the milk supply business, but it is frequently found expedient to mix in more or less milk of Guernsey or Jersey blood, to add color and meet standard requirements. There are families of Holsteins, however, and single animals are numerous, which give milk of average richness and are large butter producers. Cows have frequently made 15 to 25 lbs. of butter a week, and 30 lbs. in a few cases, with even 1,000 lbs. or more in a year. The milk of the breed is characterized by fat globules of



quently white with black tips. The ears are large, thin and quick in movement. The neck is long, slender and the upper line often concave, in the cows. The back line is usually level, particularly with the males, and the hips broad and prominent; some have well-rounded buttocks, but a drooping rump is not uncommon. The legs appear small for the weight carried, and are quite long; the tail is long and fine and a white brush is required. The udder is often of extraordinary size, extending high behind but not always well forward, with teats well placed and very large, sometimes uncomfortably so. The milk veins are prominent and in some cases remarkably developed. In temperament, these animals are quiet and docile, the bulls in particular. They have great constitutional vigor, in their capacity as feeders and in their large size at birth and very strong and thrifty growth of the calves.

Holstein cows yield milk in conformity to their size; they are famous for enormous production. Records are numerous of cows giving an average

small and uniform size, separating slowly by the gravity method of creaming and having a very pale color.

Holsteins have done well in the South where, instead of depending upon pasture and with much exposure to the sun, they have been kept stabled and generously fed. A cow bred and raised in Texas, when five years old and 1,350 lbs. in weight, made a record of 707 lbs. of milk in seven days, which produced 22 lbs. of butter, and in one month, 2,958 lbs. of milk containing fat equivalent to 86 lbs. of 80 per cent. butter.

#### JERSEYS.

Jerseys were built up into a distinct breed, from a foundation of French cattle, by a long course of skillful breeding, upon the largest and most southern of the islands of the English Channel. Early in the eighteenth century steps were taken to prevent outside cattle coming to Jersey, and in 1779 a law was made, which is claimed to have been rigidly enforced ever since, prohibiting under heavy penalties the land-

ing upon the island of any live animals of the bovine race. Jerseys have, therefore, been purely bred for a longer time than any other breed of British origin. They were brought to the United States first from fifty-five to seventy years ago as "Alderney cattle," and this name is still somewhat used. But it is wholly wrong; Alderney is an insignificant little island with no breed of cattle of its own. There is really no such thing as an Alderney cow.

Jerseys are the smallest in average size of the four dairy breeds. The cows range from 700 to 1,050 lbs. weight and the bulls from 1,200 to 1,600, and some times 1,800 lbs. Yet there are herds which, by careful management, have been brought to an average of over 1,000 lbs. for mature cows. In color, this breed varies more than any other. For a time there was a craze for "solid-colored" animals in this country, and some persons have the idea that no pure Jersey has white upon it. This is a great mistake; all of the earliest imported were broken in color, and there have always been such among the noted cows. Pure Jerseys are of all shades of brown to deep black and of various shades of yellow, fawn and tan colors to a creamy white; also mouse color or squirrel gray, some light red and a few brindles. With all these colors and shades, there may be more or less white, in large patches or small and on any part of the animal. Bulls are darker in color than cows of the same families. There are always signs or markings about a pure Jersey, or a high grade, irrespective of its color and hard to describe, by which the blood is plainly shown.

The head of the Jersey is small, short, broad, lean, and the face generally dished. The muzzle, including under lip, is black or a dark lead color, surrounded by a mealy fillet of light skin and hair. Occasionally a buff nose is found, but objected to as showing a probable infusion of Guernsey blood, although perhaps very distant. The eyes are wide apart, bright and prominent; the horns small, waxy, with thin skulls, often tipped with black and much crumpled. Ears small and delicate; neck clean; legs fine and short; body well rounded with capacity for food and breeding; tail long and fine with a full brush often reaching the ground, and black, white or mixed. The skin is mellow or loose, with fine, silky hair. The udder is of good size, more pendulous than in the Ayrshire and with quarters more distinctly defined. Teats sometimes small and conically inclined. The square, close, "Ayrshire udder" is also found, well-nigh perfect. Milk veins are frequently highly developed, tortuous and knotty. This breed is second only to the Guernsey in the abundant secretion of coloring matter, which shows itself on the skin on different parts of the body, makes the fat of the carcass a deep orange, gives a rich tint to milk and cream and

a golden hue to the butter. But this attribute is by no means as pronounced or as general in the breed as with Guernseys, and in some Jersey families it is deficient. Jerseys are irregular and sharp in outline, being picturesque rather than symmetrical, with the spare habit of flesh which is deemed favorable to dairy quality and enough muscular development for healthy activity and full digestive force. They are light, quick and graceful in movement.

For generations Jerseys have been bred almost exclusively for butter. In America, breeders have succeeded in increasing the milk yield while maintaining its high quality. Three and four gallons a day are common yields—not infrequently five; and these cows are noted for persistence and great evenness of product through a long season. Dairy records are numerous. Ten herds selected as having average dairy farm conditions, include 140 cows and cover six years; the annual milk product per cow was 5,157 lbs., yielding 293 lbs. of butter. One of three herds had twenty-five cows of all sizes with a continuous record of seven years; the annual average was 5,668 lbs. of milk and 342 lbs. of butter per cow. Several herds for shorter periods show averages of 6,000 and 7,000 lbs. Single cows are on record as producing 10,000, 12,000 and several over 15,000 lbs. of milk in a year. The characteristic of the milk of this breed is a high percentage of total solids, with 4 to 5 per cent. of fat as usual, and higher in many instances. The butter globules vary in size, but a great proportion are large and the cream separates readily. Butter records are correspondingly large; good herds yield 350 to 400 lbs. for every milking animal. Individual cases are authenticated by the hundreds of cows making 15 to 20 lbs. of butter a week, with numerous records of 25 to 30 lbs. Several yearly tests have resulted in 800 to over 1,000 lbs. of butter from one cow in twelve months.

Jersey cattle are of the nervous order of temperament, highly developed. They are excitable for cause, but the females are very placid and docile when properly treated. The bulls have the reputation of being fractious and difficult to handle after attaining maturity; this is largely a matter of early training and judicious management. The cows of this breed are heavy feeders with great capacity for assimilation. They have strong constitutions, and will bear forced feeding for long periods uncommonly well. In the good animals all the extra food is converted into milk. The Jersey cow is essentially a machine for producing milk and butter, responds readily to varied treatment, and is remarkably adaptable to widely different conditions. The breed has been generally distributed in the South, and has done well in every State. Yet, there are far too many kept solely because of purity and pedigree, and without profit; the



dairy performance of such animals does not justify their existence or reproduction.

#### GRADE COWS.

Grade cows of all four of these breeds are eminently satisfactory as dairy animals. Any herd of mixed blood, with fair dairy qualities, can be rapidly built up and improved by the use of a well selected, pure-bred bull from any one of the four. They all seem to cross advantageously upon what is called "native stock" and upon females having a perceptible grade, or more, of Shorthorn or Durham blood. Guernsey and Jersey grades are especially satisfactory as dairy cows. But the pure animals of these strongly-bred races do not generally cross well among themselves. The Holsteins are very prepotent, and stamp their characteristics upon all their grades and crosses, yet they seldom "nick" well with pure animals of the other three breeds. The Guerneys and Jerseys mix well, but without improvement upon the parents of either side. The Ayrshire sire does not cross well with any of the others. A very superior dairy animal is, however, the usual result of crossing a good Jersey sire with an Ayrshire dam.

It is gratifying to note that while the creation or development of these four breeds of dairy cattle must be credited to foreign countries, every one of them has been improved under the conditions and management which they have received in the United States. With the possible exception of the Ayrshire, all have been subjected and made adaptable to far greater variations of climate, food and general environment than in their native countries, and have here made records of dairy performances exceeding anything known among their progenitors or the cotemporary non-imported animals of their respective breeds.

#### COMPARISONS OF COWS OF DIFFERENT BREEDS AT PUBLIC TESTS.

I.—SUMMARY OF RESULTS OF NINETY DAY BUTTER TEST AT THE WORLD'S COLUMBIAN EXPOSITION, CHICAGO, JUNE, JULY, AUGUST, 1893.

Cows in Test.	Milk Produced.	Fat in Milk.	Butter Credited.	Proceeds of Butter.	Cost of Feed.	Net Gain.
	Lbs.	Lbs.	Lbs.	Dollars.	Dollars.	Dollars.
25 Jerseys.....	73,489	3,516	4,274	1,747.37	587.50	1,323.81
25 Guerneys....	61,782	2,785	3,360	1,355.14	484.14	997.64

II.—SUMMARY OF RESULTS OF SIX MONTHS TEST, SHOWING PROFIT ON BUTTER PRODUCT, ESTIMATED FROM FAT.

PAN-AMERICAN EXPOSITION, BUFFALO, MAY 1-OCT. 31, 1901.

Cows in Test.	Lbs. Milk Produced.	Estimated L. S. Butter.	Value Butter at 20c. per lb.	Cost of Feed.	Profit in Six Months.
	Lbs.	Lbs.	Dollars.	Dollars.	Dollars.
5 Ayrshires.....	32,996	1,431	\$358.59	\$139.84	\$218.75
5 Guerneys.....	27,167	1,459	367.21	136.86	230.35
5 Holstein.....	19,249	1,501	375.1	164.14	211.02
Friesians.....					
5 Jerseys.....	36,985	1,454	361.21	137.74	225.47

NOTE.—The Holstein Friesians and Jerseys were Canadian cattle, and not furnished or endorsed by the regular American Associations of breeders.

#### III.—AVERAGE COMPOSITION OF MILK OF DIFFERENT BREEDS.

[From a Report of the New York Agricultural Experiment Station, 1891.]

Breed.	Number Analyses.	Water.	Total Solids.	Solids Not Fat.		Fat.	Casein.	Milk Sugar.	Ash.	Nitrogen.
				Protein.	Carb.					
Ayrshires.....	252	86.95	13.06	9.35	3.57	3.43	5.33	698	543	
Guerneys.....	112	85.39	14.60	9.47	5.12	3.61	5.11	753	570	
Holstein.....										
Friesians.....	132	87.62	12.39	9.07	3.46	3.39	4.84	735	540	
Jerseys.....	238	84.60	15.40	9.80	5.61	3.91	5.15	743	618	

HENRY E. ALVORD,

Chief Dairy Division, Bureau Animal Industry,  
Spring Hill Farm, Fairfax Co., Va.

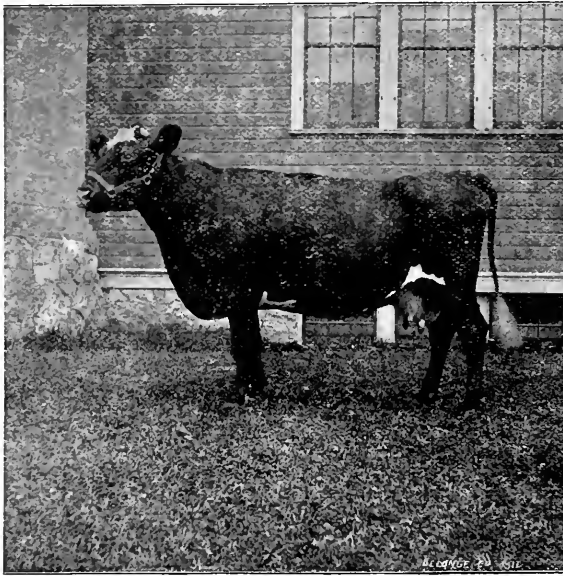
NOTE.—In preparing the foregoing, much has been taken, in a somewhat condensed form, from Farmers' Bulletin No. 106, of the U. S. Department of Agriculture, by the same writer. It is neither easy nor desirable to describe the same thing twice without largely making use of the same language.

#### THE DUAL-PURPOSE BREEDS OF CATTLE.

Editor Southern Planter :

The term "dual purpose breeds" of course means the two purpose breeds—that is to say, breeds which are adapted to the production of both meat and milk. In the current agricultural literature of the day, for the two decades subsequent to 1880, the place for such a cow on the farm was said not to exist. This at least was true of nearly all the agricultural literature produced in America. It was true also of nearly all the platform teaching on agriculture during the same period. The very idea of a place for the dual-purpose cow was only mentioned to be held up to ridicule. The dual purpose cow, or, as she was then called, the general-purpose cow, was denounced as a "delusion, a myth, and a snare." To try to get milk from such a cow was compared to hunting prairie chickens with bull pups or seeking a winning trotting horse in a Norman.

Ex Governor Hoard was a leader in this crusade, and the signal ability as an advocate shown by this splendid man gave great impetus to the acceptance and extension of the unfortunate heresy. This flood of false teaching was greatly accelerated in its progress by depression in the prices of meat. The result was that many of the best herds of dual-purpose cattle in the land were so crossed with dairy blood that the ability to produce beef was greatly weakened, a blunder which the owners are now trying to rectify by using bulls of the dual types. It would be interesting could the facts be ascertained to know how many tens



GRADE SHORTHORN COW DUCHESS.

Weight in fair flesh .....	1,550 lbs.
Milk in one year.....	9,628 lbs.
Butter in one year.....	439.83 lbs.
Average test.....	4.4 per cent. butter fat.

This cow ate during the year \$33.93 worth of feed, and her products were valued at \$101.00, leaving a profit of \$67.07. The average cost of each pound of butter produced during the year was 7.7 cents.

of millions of dollars this false teaching cost the farmers of this country.

The faith of the writer on this question is as follows: I believe in a special dairy cow. She includes the Holstein, Dutch Belted, Ayrshire, Guernsey, Jersey, French Canadian and Kerry of the pedigreed breeds in America. Her place is on farms where cattle are kept almost entirely for the dairy products which they furnish, or in the stable of the individual who keeps but one cow. I believe in the special beef cow. Her place is on the range, or on the large farm where circumstances forbid the milking of the cows by hand. Her domain in America has probably more than attained a maximum, since large farms are being divided. I believe in the dual-purpose cow. Her place is on the arable farm, where the farmer is not a dairyman in the special sense, and where production is sufficiently ample to justify the rearing of steers for beef. This means that there is a place for her on probably two-thirds of the farms of the United States, and that on these she can be reared more profitably than either of the other two classes of cows.

There are in America five pedigreed breeds of dual-purpose cows. These are the Shorthorn, the Polled Durham, the Brown Swiss, the Red Poll and the Devon. Each of these will be considered below. In the meantime, it may be said that the dual-purpose cow is at present far more numerously represented in the graded than in the pure bred form. In the grade form, she may be possessed of various blood elements, but by far the larger number of grade dual-purpose cows are grade Shorthorns. This is due in part at least to the fact that Shorthorns in the pure form are far more numerous relatively than any of the other dual-purpose breeds, and they have been in the country for a much longer period.

These grade dual purpose cattle may be known by the following indications as to form: 1. Medium to large size for the breed or grade. 2. Good length and depth in the coupling, especially in the females. 3. Good development of udder and milk veins. 4. Good constitution as indicated by good width through the heart. 5. Head and neck inclining to long and fine; and 6. Ribs of medium spring, open spaced and cov-

ered with a good handling skin. In the pure form, these cows have essentially the same characteristics as to form, but with some differences pertaining to breed peculiarities. The more minute indications of correct form and function in detail cannot be given within the limits of this paper, but the reader who wishes to pursue further this phase of the question will find such details stated with considerable fulness in the book, "The Study of Breeds," by the writer.

#### SHORTHORNS.

The Shorthorns of one hundred years ago were good milkers. They were generally good milkers. This cannot be said of them to-day, but it can be said of many of them. That they are not generally good milkers is not the fault of the breed, but of the breeders. In America, the practice has been general of rearing the calves on the dams, a practice which, if long continued, will injure the milking qualities of any breed. Notwithstanding, the average milking capacity of the Shorthorn is unquestionably higher than the average of what are known as the distinctive beef breed. In Great Britain are some herds noted for the abundance of milk production which they possess. They have been milked for successive generations. In the United States are a few such herds, and in coming days these will be multiplied. But few doors stand so widely open as the present time and are so full of promise as that which forms the avenue to the breeding of milking Shorthorns.

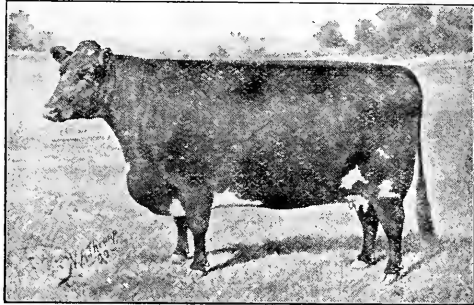
In the grade form good milking cows, essentially Shorthorn, can be found in almost any of the States north, east and west in considerable numbers. A good judge of the dual form can pick them up with safety, even though he should not be able to find out particularly about the breeding. The owners of such cows will not part with them unless paid a higher price than they would ask for other cows in their herds, and this shows very clearly the estimate in which they hold them.

The testing of Shorthorn grades in this country as to their milking capacity has only been attempted by a limited number of experiment stations. Foremost among these are those of Iowa and Wisconsin. The results in both instances were extremely satisfactory. It was found that Shorthorn grade cows not only produced as much butter per year as the best dairy cows obtainable, but they also produced it about as cheaply; and while thus producing milk they gave birth to calves which were grown into beef of the finest quality, and which brought top prices in the market. The particulars relating to these investigations may be obtained by writing to the stations which conducted them. It is to be hoped that those tests will be continued at the stations named; and that other experiment stations will take up the same line of testing.

No more important line of work could be engaged in by these institutions.

#### POLLED DURHAMS.

As is generally known, the Polled Durhams are of two distinct lines of ancestry. One of these is pure Shorthorn; the other is essentially Shorthorn—that is to say, it is the outcome of successive crosses of pure Shorthorn bulls upon muley cows of good size and form, and on their hornless progeny. These muley



POLLED DURHAM.—Goodness 15th, bred by J. H. Miller, Peru, Ind.

cows, when the crossing was begun some thirty years ago, were possessed of good milking properties, or at least many of them were. The former are Shorthorn in all characteristics except that they have no horns. The latter are essentially Shorthorn, and do not differ from the former in essential characteristics except in so far as their milking qualities are superior, because of inheritance of the same from the old muley ancestry on the side of the dams. To these general statements there will be some exceptions caused chiefly by the way in which the herds have been bred and handled. Where the herds have been milked, the milking qualities of the muley foundation have been improved upon rather than injured.

#### BROWN SWISS

Brown Swiss cattle are pretty uniformly good milkers. They have borne this character for generations. They are also good for beef production, but not quite so good, relatively, as for milk production. They are of good size, and they grow quickly. The steers attain to good weights, but the bone is a little strong for best results in beef making; and yet, for this purpose, they answer far better than any of the straight dairy breeds. On the continent of Europe, it would probably be correct to say that this breed of cows is more popular than any other. They have only been in the United States for about three decades, and yet they are now found in a majority of the States.

The breeders of Brown Swiss cattle in the United



BROWN SWISS COW MORTO.

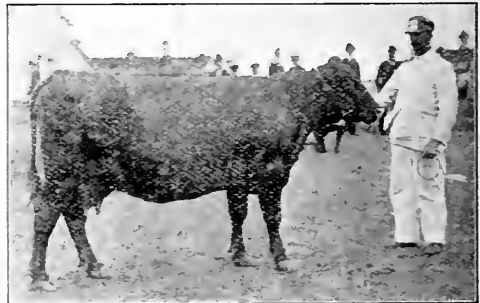
States have not, in many instances, paid that attention to the maintenance and improvement of the milking qualities of their herds which should have been given to this feature. Many of them have committed the egregious mistake of suckling the calves upon the dams, a process which, if long continued, will injure the milking qualities of any breed. In the United States, milk records have not been kept of the performance of herds in milk production to the same extent as with the Red Polls and some other breeds; and where these have been kept, comparatively little effort has been made to place the results before the public. The breeders will say that they rely upon the merits of their cattle to do this, but they forget the important truth when they talk thus that merit properly placed before the public will accomplish much more for a breed than merit hidden in various little corners. The Brown Swiss cow Brienz No. 168, in a public test in Chicago, 1891, produced 245 pounds of milk in three days, which contained 9.32 pounds of butter fat. Good herds of Brown Swiss cattle will easily average 6,000 pounds of milk in a year.

#### RED POLLS.

The Red Polls originated in the counties of Norfolk and Suffolk, England. Their introduction into and diffusion through the various States has been chiefly made through the last three decades. They are rapidly growing in popularity. There is unquestionably a fine future before this breed in the United States. They are already found in a large majority of the States in the Union.

Red Polls are not so large as Shorthorns, but are somewhat larger than the Devons. The average of a mature cow would be somewhere in the vicinity of 1,200 pounds. They are of sufficient refinement in form, and, as the name implies, are red in color and polled.

The dual quality in Red Polls has been more clearly established than in other breeds of the dual types—that is to say, the records of milk and meat produc-



RED POLL COW BABY RUTH, No. 8324.

tion are more ample from which to draw conclusions. In England are many herds in which records have been kept of all the cows in the same for many successive years. Data is also accessible relating to the performance of many animals on the block and in the fat stock shows. Whole herds, in some instances exceed-

ing 100 animals, have averaged from 5,000 to 6,000 pounds of milk in a year. In several instances, cows have produced more than 10,000 pounds per annum. From these same herds steers have been sent, from time to time, which have been winners at the Smith field in competition with steers of the strictly beef-producing types.

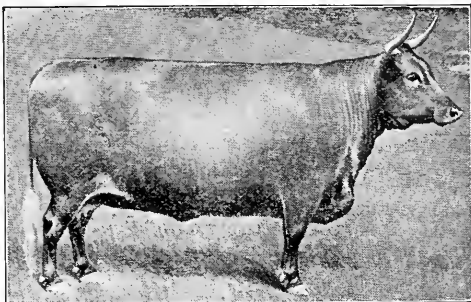
In the United States also in several instances Red Polled cows have produced more than 10,000 pounds of milk per annum. Notable among such producers was the cow Mayflower 12th in the herd of Captain V. T. Hills, Delaware, Ohio. In this herd the famous cow Mayflower 11th No. 2955, produced 52,858½ pounds of milk in five years, a record that is probably unrivalled in the annals of milk production by one animal. It has also been found that Red Polled high grade steers properly fattened command top prices at the stock yards.

Red Poll sires are also very satisfactory when used in grading by crossing them on common stocks. The progeny are polled, and the inheritance shows most strikingly the prepotent character of Red Poll transmission. This crossing should answer well on farms in the Atlantic and Southern States, as well as those North and West, since the Red Polls are somewhat less in size than Shorthorns.

#### DEVONS.

The Devons are a tidy little breed of cattle, which, as the name implies, originated in Devonshire, England. They were noted for meat and milk production more than a hundred years ago. They are the smallest in size of all the dual-purpose breeds, and yet the average Devon cow matured and in good flesh should weigh about 1,000 pounds. They are a whole red in color, usually a dark red, and are neat in form. Compared with Shorthorns, they are less massive, some what finer in bone, longer relatively and finer in the nose, and have longer, finer and more upturned and spreading horns. They are also more active on foot. In New England, there are some fine herds of milking Devons in the pure and also in the graded form. The same is true of Pennsylvania, Ohio and some other States. Some of these average more than 6,000 pounds of milk of good quality per year. Many of the herds on the other hand have been grown only for beef and for successive generations. The milking qualities of these are not a little impaired. There is no question of the fact, however, that Devon cattle fatten readily and make an excellent quality of beef. They kill well—that is to say, the dressed meat in a carcass is relatively large. Owing to the want of massiveness in the frame, and to the active habits of the Devon cattle, they have peculiar adaptation for broken and somewhat rugged pastures, and for condi-

tions where production is not of the very best. There should be a large field for Devon cattle in the Southern States. Mr. W. C. Edwards, of Rockland, Ontario, Canada, has one of the best herds of Shorthorns in



DEVON.

Canada. He keeps them on productive land. He has also a good herd of Devons. He keeps them on rugged, hilly and rocky land. He told the writer some time ago that while the Devons did well under those conditions, he was satisfied that under the same conditions the Shorthorns would not be a success.

It has been shown that there is a wide place for the dual purpose cow. It has been shown that we have dual purpose cows in the grade form and dual purpose breeds in the pure form. It has also been made apparent that because of well meant but misleading teaching, during the last two decades the dual element in grade cows has gone backward rather than forward. Now that public sentiment is coming in like a flood in the opposite direction, how is the farmer to proceed who desires to build up a herd of dual-purpose cows? The plan is simple if the material can be found. Let him purchase dual purpose cows of correct form wherever they can be found. He need not be much concerned about the blood elements if he can get cows of sufficient size and correct form. If these are considerably mixed, it will be no detriment to the work which he is trying to do. In making such purchases, the only outlay is for the animals. Nothing additional has to be paid for blood. Thus far the work is easy.

The next step is more difficult. It is not so easy to get suitable bulls. They should be chosen from the dual purpose breeds, and should invariably be purely bred and of good individuality. If from dams and grandams of superior milking capacity, the writer would not object, though they should have a preponderance of leaning toward the beef form—that is, to the form that guards stamina and vigor. Any tendency toward undue fleshiness in the female progeny

can be counteracted by selection. Continue to choose males thus, and from only one breed, and the result will be dual-purpose cattle.

But it may be objected, will not a good many of the progeny be unsuited for retention in the herd? Certainly, that is true of all breeding, but it may be expected to lessen as this style of breeding, wisely conducted, progresses. Unsuitable animals will appear in all herds every season, no matter what the style of breeding, and when they do they must of course be sent to the block. These undesirable variations will decrease in proportion as line-bred and vigorous males are used.

In the principles that govern the breeding of dual purpose cattle, there is nothing essentially difficult. In the practice, there is, at the present time. Suppose the individual fixes upon the Shorthorns, the Polled Darhams or the Devons from which to draw his bulls. In the United States it is not easy to find such bulls in these breeds, owing to the general trend of the breeding during recent years. But some of them can be found, and their relative numbers will increase since more and more attention is going to be given to the breeding of this class of cattle in the future than in the past. The breeding of the dual type of Shorthorns will unquestionably have an important future in this country. It has had an important past in England, and it has an important present.

In answer to the statement that dual-purpose cattle cannot be bred as such, the existence of the Red Poll and Brown Swiss breeds furnish sufficient evidence regarding its falsity. Here are two breeds that have possessed the quality for a long time, inasmuch that it is stamped upon them as a characteristic. If dual types can be bred in one breed, they can also in another. And because of this fact, linked with the great demand for such animals, the day is near when they will overshadow other types of cattle in this country on the arable farms.

THOS. SHAW,

*Recently Professor of Animal Husbandry at the  
University of Minnesota.*

## SPECIAL BEEF BREEDS FOR SOUTHERN FARMERS.

*Editor Southern Planter :*

### INTRODUCTION.

Cattle may be classified in one of two ways—either as natives, common or graded, and pure breeds, or as special beef, special dairy, and general or dual purpose. A half century ago the predominating type of cattle in the country was the native or scrub, but during the past few years the introduction of pure bred sires has so changed and improved the quality of our cattle that the larger part of them may be properly

classified as graded stock ; that is, containing one or more crosses of the pure-bred sire on the original native cows. Pure bred cattle are those entitled to registration by reason of their long lineage in which no admixture of foreign blood appears. This classification is, of course, defective in that it does not distinguish the qualities, or better, the functions of the several kinds of neat cattle.

In the United States we have a trifold interest in breeding cattle in that we raise them for the production of milk and butter ; hence the distinct dairy type ; for beef ; or for the purpose of combining both beef and milk, so far as possible, in one and the same animal. This classification is very satisfactory in many respects, though it is a question sometimes to know where to place certain of the milking strains of Shorthorns, Red Polls and other animals of the dual-purpose type.

### BEEF BREEDS IN THE SOUTH.

Following the above classification it appears that there are five principal types of pure bred beef cattle scattered over the South, and well adapted to that portion of it comprised in the Appalachian region which is sometimes called the middle South. These breeds are the Shorthorn, Hereford, Aberdeen Angus, Galloway and Sussex. Of course, there are some other well known beef breeds in the United States, and several well-established ones, that might be introduced from foreign countries, but as they have not been tried in the South, their adaptation to our conditions is simply a matter of conjecture, while the purpose of this article is to discuss briefly the qualities of some of the breeds which have been resident long enough in the country to enable a fair estimate of their value to be safely made.

### ORIGIN OF THE BREEDS.

Strange as it may seem, all the five breeds mentioned originated in Great Britain ; the Shorthorn, Hereford and Sussex in England, and the Aberdeen Angus and Galloway in Scotland. The oldest of these breeds is the Shorthorn or Durham, the latter name being taken from the county in which they originated. They are a cosmopolitan breed, their first improvers being the Colling Bros., of Ketton, England, who commenced their work previous to 1780. Among other distinguished fanciers of these cattle were Messrs. Bates, Booth and Cruikshanks, men who have stamped their ideals on the strains which bear their names. It is interesting to note that the first importation of Shorthorns in America is said to have been made by Messrs. Goff and Miller, of Virginia.

The Hereford originated in Herefordshire, and references were made to them by Speed and Marshall in 1627 and 1788. Benjamin Tompkins and John Price were the two most celebrated improvers of this breed

which is first supposed to have been imported into the United States by Hon. Henry Clay, of Kentucky, in 1817.

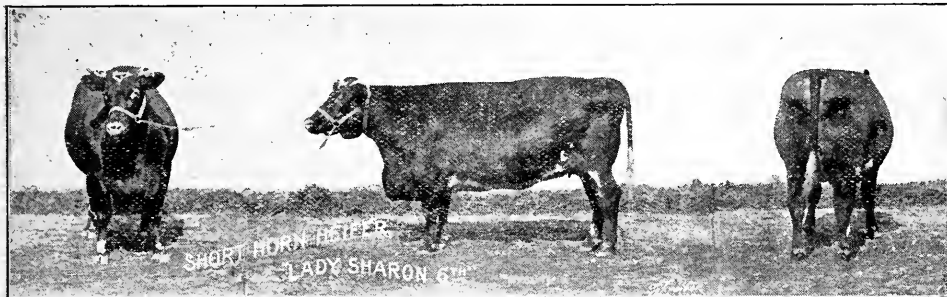
Aberdeen Angus cattle originated from the native stock of the country, and the most notable improver of the breed was Hugh Watson, who established the Keillor herd in 1808. This breed was first introduced into the United States in 1873. Wherever it has gone it has made ready friends for itself, owing to the splendid feeding qualities of the animals and their uniform appearance and kindly disposition.

The Galloway cattle originated in the district whose name they bear in Scotland. Being reared in a cold, bleak country, frequently 1,500 feet above the sea level, they are a hardy, aggressive breed, and have been celebrated for many years for the high quality of meat they produce. They were first introduced into America by Graham Bros., of Vaughan, Ontario, Canada, in 1853. Since then they have found favor in almost every section of the United States.

numbers in America. It is a very difficult matter to discuss the relative merit of these different breeds, because there are splendid individuals in all of them, and the success of a breed is more frequently measured by environment, and the skill, care and treatment given it by the owner than by any other factor. It is impossible to discuss the relative merits of the five breeds here mentioned in detail, but in order that the reader may get a fair idea of their many excellent qualities, the following table has been prepared, which gives a fair idea of their relative merit. To study them intelligently, it is first necessary to consider their special qualities, contrast their strong and weak points, and so ascertain their value for special locations.

#### WHY PEOPLE FAIL WITH IMPROVED STOCK.

One reason why so many people have become disgusted with improved breeds of stock is due to the fact that they have selected their breeding animals without regard to the environment from which they came and to which they are naturally best adapted.



The Sussex cattle originated in Sussex county, England, and were supposed to have been cotemporaneous with the Devons at an early date. They made fine records at the Smithfield Fat Stock Show in London many years ago, though a Sussex herd book was not established in England until 1860. They were first imported into the United States by Hon. Overton Lea, of Nashville, Tenn., in 1884, and while they are a most excellent breed, they are not widely disseminated in the United States, owing to the comparative newness of the breed and the small number of persons who are interested in their production.

#### A COMPARISON OF THE "QUALITIES" OF THE SEVERAL BREEDS.

This, then, will give the reader some idea of the origin of the principal beef breeds introduced into the South. As our forefathers all came from Great Britain, it is easy to understand why the special types of beef animals developed so successfully across the water, have found so much favor and increased so largely in

Then, after purchasing the animals, they have failed to realize that improved qualities are engrafted and maintained by reason of the greater skill exercised in the care and feeding, breeding and management of the stock. Animals brought up under favorable conditions, and suddenly removed from these, will surely deteriorate in the direction of the scrub. Considering the vital interest beef husbandry should have for our people, it is very important that they familiarize themselves with the qualities of the various breeds of stock before purchasing them, else they may choose animals unsuited to their environment, and so reap a harvest of thorns instead of shekels, though, in the long run, their own carelessness is the cause of their final misfortune.

The Shorthorns give their best results on good pastures and on arable lands. They also do well on the range, the Shorthorn grades being the predominating type of graded cattle found in every part of the United States. Probably they have given better results on

## A COMPARISON OF THE QUALITIES OF THE SEVERAL BREEDS.

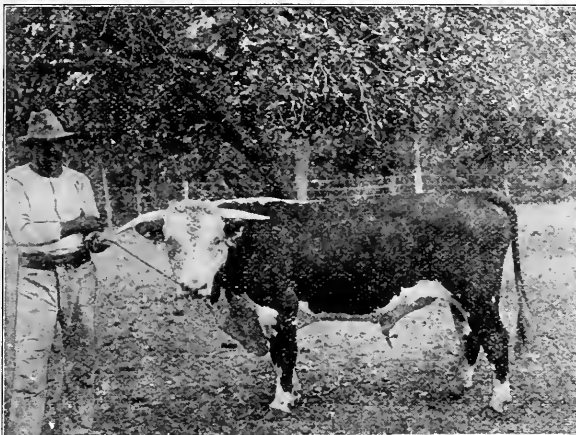
	SHORTHORN.	HEREFORD.	ABERDEEN ANGUS.	GALLOWAY.	SUSSEX.
<i>Dissemination</i> .....	All over U. S. and in many foreign countries.	Widely distributed in U. S. and Canada, also in S. A. and Aus.	Bred in many States and in many foreign countries.	Found chiefly in Mo., Ill., Kan., Minn. and Canada.	Limited to Tenn., Mo., Ill., Ind., Okl., Tex., Kan., Colo., Canada.
<i>Martitude</i> .....	Good, predominate on ranges all over country.	Best results on ranges of south and southwest.	Medium.	First class.	Fair.
<i>Conformation</i> .....	Rectangular, blocky, symmetrical outline and graceful carriage.	Rectangular, compact body; smooth outline; docile.	Low, sturdy, smooth, cylindrical in outline.	Low set, sturdy, robust, coat curly, features fine.	Smooth and symmetrical.
<i>Color Markings</i> ...	Red, white or roan mixed indiscriminately.	White chiefly on face, breast belly and back; red on neck, side and quarters.	Black.	Black.	Red.
<i>Registration</i> .....	367,950 U. S. H. B.	95,000 A. H. B.	32,500 A. H. B.	14,491 A. H. B.	No U. S. record book.
<i>Appreciation</i> .....	The most cosmopolitan and best known breed.	Second only to Shorthorn.	Not so well known as some other breeds; great favorites where introduced	Not so well known as breeds previously mentioned.	Popular where known
<i>Adaptation</i> .....	Very wide; best on arable, level lands.	Wide adaptability; splendid rustlers for range country.	Temperate climates; arable, undulated lands.	Fine for range purposes, especially in northwest.	Best for temperate climates and rich pastures.
<i>Size</i> .....	Largest.	Practically equal to Shorthorns.	Nearly equal to Shorthorns and Herefords.	Do not scale quite so well as other breeds mentioned.	Larger in frame than Galloway, though smaller than other breeds.
<i>Maturity</i> .....	Unsurpassed — 24-30 mos.	Equal to Shorthorns.	Equal to Shorthorns and Herefords.	Under "forced feed," early.	Not quite equal to Shorthorn and Hereford.
<i>Grazing</i> .....	Excellent on good pastures.	Unsurpassed.	Fair.	Unsurpassed.	Excellent.
<i>Feeding</i> .....	First class.	About equal to Shorthorn. Inclined to patchiness under forced feeding.	First class; unexcelled	Take on flesh smoothly; good feeders.	Put on flesh rapidly and distribute it well.
<i>Meat</i> .....	High per cent. of good meat; excellent quality.	Kill well; produce fine juicy meat.	Marbling of meat slightly better than Shorthorn or Hereford; kill well.	Finely marbled and very delicate in flavor.	Excellent quality, bone a little coarse.
<i>Milk</i> .....	Amount small; quality good.	Quality good; quantity deficient.	Quality good; quantity deficient.	Quality good; quantity deficient.	Excellent, but deficient in quantity.
<i>Utility for Cross</i> g	More largely used in past than all other breeds.	Good on natives and on Shorthorns and Galloways.	Excellent on common stock and Shorthorn grades.	Excellent on common stock; remarkably prepotent.	Not been used extensively for this purpose.
<i>Weaknesses</i> .....	In some instances weak constitution due to in-and-in breeding; tendency to sterility.	Poor milkers, large dewlap, light in thigh.	Indifferent milkers—somewhat lacking in scale.	Poor milkers; slightly deficient in scale.	Dissemination too limited to enable a correct estimate.

the ranches of the West and Northwest, and in the Appalachian region of the South, than some other breeds. The Shorthorn grade is still regarded by the majority of American breeders and feeders as the best general-purpose animal that has ever been produced.

The Herefords are well adapted for rustling and hunting their food over wide areas. They have given

the most excellent results on the ranches of the South and Southwest, where they have increased wonderfully in numbers in the past few years. In fact, the Hereford stires have been so largely used on some ranches that the type of the native has entirely disappeared and given place to the popular white face and red markings of the Hereford breed. As rustlers for range pur-





Hereford Bull at the head of the "Herbert Domain Herd of Tennessee."

poses, especially in the Southwest country, the Herefords have something of an advantage over any of the other improved breeds at the present time.

The Aberdeen-Angus, on the other hand, has not been tried for that purpose so extensively as either of the other breeds. Naturally, they are more like the Shorthorn, and give better returns on arable lands and good pastures. For stall feeding purposes, they are probably unexcelled, taking on flesh and fat more rapidly and uniformly than any of the other breeds, and being short in the leg, compact in conformation, and cylindrical in appearance, with a jet black coat, they finish up in the most superb form when placed on "forced feeding."

The Galloway, on the other hand, is well adapted for range purposes. It does well on the Northwestern prairies, where the winter is particularly trying. It has a long, shaggy, curly overcoat, with a thick, fine undercoat, enabling it to stand the cold weather with comparative impunity.

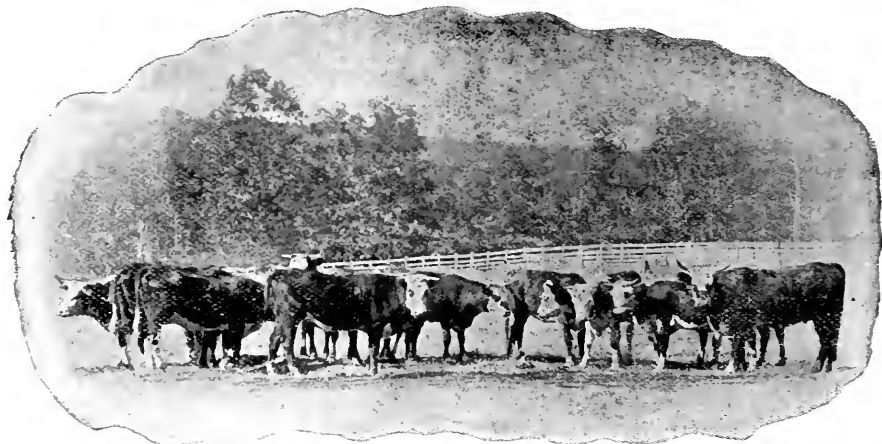
The Sussex are more of the type of the Shorthorn and Aberdeen-Angus, and will give their best results when placed under a similar environment.

In the diversified country of the Appalachian region, the animals best adapted for range purposes will be the grade Shorthorns, Hereford and Galloway. Those best adapted for maintenance on the rich valley lands or the excellent pastures that prevail over wide areas of this section, or for winter feeding on surplus corn and cotton products of the rich river bottoms, are the Shorthorn, Angus and Sussex.

#### MAINTAINING IMPROVED STOCK.

The next question that arises is as to the quality

and quantity of food the various improved types require. It is impossible to answer this question specifically, for it is a matter that has not been worked out experimentally. While individual animals vary, the breeds as a whole do not differ materially as to the amount of food consumed for a pound of gain. In sections where white clover or blue grass, or other tame pastures can be established and utilized for the entire summer and partial winter grazing as well, there will be no difficulty about maintaining any of the above breeds, while for the supplemental feeds required for the winter feeding, or for the finishing of the grades of these breeds, there will be still less difficulty. The whole area is well adapted to the cultivation of corn. On improved lands, even of upland types, 30 to 40 bushels of corn can be raised under intensive culture, while on the bottoms it will frequently go to 100 bushels. Cotton is raised more or less in all parts of the region under consideration, and cotton seed meal, combined with corn meal, forms a perfect concentrate for the maintenance of breeding animals or for the winter feeding of the grades. In addition, Soy beans do well, and will produce from 25 to 40 bushels per acre under proper treatment, thus adding another concentrate of the highest feeding value for the purpose mentioned. Pea hay can also be produced in large quantities at a moderate cost. Corn stover can be had in abundance. Silage, containing from 15 to 25 per cent. of cow-peas, can be made from sorghum or corn at a cost of about \$1 per ton, while yields of 12 to 15 tons per acre show the readiness with which the soil will yield suitable crops for the winter feeding of beef cattle when given proper culture and fertilization. There is thus no difficulty



Grade Hereford Calves in the "Herbert Domain" Herd, showing the result of crossing a pure bred sire on native cows.

in the way of maintaining either the improved breeds intact, or the grades on the range in the summer or "on feed" in the winter.

If there is any difficulty in the way of introducing or handling improved stock by reason of the scarcity or high prices of suitable food stuffs, it is certainly the fault of the farmer, because nature has done her part in that she has provided an environment in



Miss Stuffle, Lady Nosegay French and Baron Rosegay, types of Aberdeen-Angus cattle, owned and bred by A. L. French, of Fitzgerald, N. C.

which the most desirable crops for the maintenance of cattle can be grown to perfection, whether the end in view be cheap fodder or hay or rich concentrates.

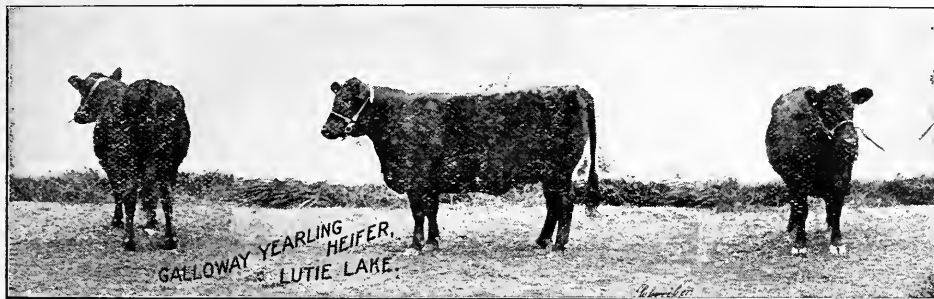
#### STOCKMEN NEEDED.

A little study and forethought will overcome the difficulties of the feeding problem, but there is another obstacle which may prove more serious, and that is the lack of generations of training in the man

agement of improved stock. While education will make a live, up to date stockman, the process is often slow with inexperienced and untrained laborers. Men who have learned to till the fields, or to cultivate cotton, do not take kindly to what they term the drudgery of the live stock business, an idea that loses caste very quickly when one becomes well acquainted with the live stock business. The man who would be a successful feeder and breeder must know his animals individually; he must study their needs each day in order that he may supply their varying wants promptly. He must grow up with his animals, as it were, and they must become a part of his being. This does not require personal sacrifice to the real student of animal production, yet it constitutes the principal essential of success in a stockman. The man who enters into the breeding of live stock should have an inherent love for animals, and be willing to devote his time and attention, his thought and his energies, to the development of animals of unequalled excellence, for this should be the object of every successful stockman.

#### NEED OF A FENCE LAW.

Another and most serious difficulty in the way of introducing improved stock in the Appalachian region is due to the need of an adequate fence law in many sections of the country. In other words, the owner of a farm must fence his land to keep out his neighbor's stock. This certainly seems to be wrong, and is one of the most serious drawbacks to stock-husbandry at the present day. It is a drawback because it permits the slothful and indifferent man to turn loose upon the community males of the most in-



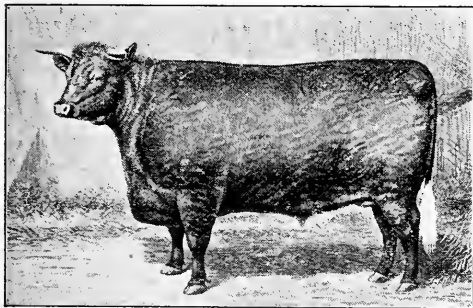
different quality, which not only prove a menace to the highly bred stock of the progressive farmer, but also seriously interferes with the legitimate development of his business. The present system of fencing, as it exists in some of the States of the Appalachian region, is altogether wrong, and must be righted before our live stock will improve as rapidly as the natural conditions now warrant. The sooner the live stockmen can get together in a grand co operative movement, and see that this unjustifiable nuisance is abated and properly regulated by law, the better it will be for every agricultural interest of the South,

as in many other sections of the country. In the summer time, the large number of running streams provide an abundance of pure water, and in no section of the United States do trees grow more vigorously or lend more grateful shade during the heat of the day. In the winter time, snow rarely falls, and if it does, stays but a day or two, while it is a matter of common remark among "the oldest inhabitants" when the thermometer goes below zero. Even then it will only be a temporary matter, lasting for two or three days.

ANDREW M. SOULE,

*Vice Director and Agriculturist.*

*Experiment Station, Knoxville, Tenn.*



SUSSEX STEER.—Rosewood, Champion Yearling, Fat Stock Show 1888, the property of Mr. Overton Lea, Nashville, Tenn.

for there is no interest more widespreading in its influence, or which needs to be developed more consistently and rapidly for the greatest good of our farmers than our animal industries.

#### A SUPERB CLIMATE.

Some have urged that the Southern climate is hot, and that the heavy beef breeds will of necessity not do so well. There is nothing in this contention so far as it applies to the Appalachian region. The elevation of the country above sea level is sufficient to provide the most equable climate, both in summer and winter. Extremes of heat and cold are not met with

#### FOOT AND MOUTH DISEASE IN CATTLE.

*Editor of Southern Planter.*

Secretary Wilson's appeal to Congress for an emergency appropriation of \$1,000,000, to enable the Department of Agriculture to suppress the foot and mouth disease that has broken out among cattle in New England, should meet with the hearty approval of every American farmer.

In my visits to Germany and Switzerland I have been frequently struck with the ravages of this disease, despite the unceasing activity of the governments and local authorities, as well as of agricultural societies, live stock insurance companies and private individuals. In my foot tours through the Swiss Alps, last summer, I noticed a large number of roads and paths leading to infected districts that were closed and guarded. Both of these countries have adopted every known precautionary measure, and are well provided with very capable veterinarians, but still the "Maul- und Klauen seuche" holds its own.

In Germany it is quite probable that a new stock disease law will be enacted at this session of the Reichstag or the old quarantine law amended, as it has been shown that quarantining foreign cattle on the German frontier has not been able to prevent the spread of the disease.

SAM'L ROLFE MILLAR.

*Warren Co., Va., Dec. 10, 1902.*

## BREEDS OF SHEEP FOR THE SOUTH.

*Editor Southern Planter :*

Sheep fill a most important position in advanced agriculture. The presence of a flock, on any farm, may be taken without question as an indication that it is in the hands of a wise and successful farmer. There are several reasons for this. The mere feeding of sheep is conducive to profit. There is no other animal kept on a farm which returns so much income directly, and no other which exercises so useful a result on the land by its mere feeding. It is an omnivorous feeder, and the larger part of its feeding is made up of what would otherwise be wasted. It gleans the fields, it picks up all the small residues of other animals feeding, and it turns its food into three different sources of income to the farmer. Moreover, by its needed demands on the farmer it forces him to practice the most economical methods of working his land, and growing crops. Let us give at this point one single example. There is a fodder plant of the turnip family known as rape. Two pounds of seed sown on an acre at the last working of the corn crop, or on any other convenient otherwise idle part of the farm, will feed thirty sheep from the time the corn is cut to the snow fall, or even later, as conditions may permit. The rape will renew its growth early in the spring, and contribute still more feed until the next crop, which is usually oats, is sown; and then after it is harvested the growth on the stubble will contribute still more feed. This is only one instance, mentioned in the outset of this article, among many which go to show the simple and easy manner of supporting a flock on any farm under common methods of culture. And in this manner the feeding of the flock will come in a sort of rotation with other uses of the land, every one of which is conducive to economy, profit, and improvement of the soil by which other parts of the farm management may be increased in productive value. There is no difficulty about it. The only single thing to be done is to go and do it by whatever easiest method it may be. And as soon as one season has given the needed experience, the work will be easier and simpler, and the owner of a flock will be amazed that he did not fall into the habit earlier. We are not just now studying the methods by which the flock may be supported and managed all through, but only the kinds of sheep which are best suited to the conditions of agriculture in the South; indeed, everywhere in fact; for the special circumstances by which the Southern farmer is surrounded and controlled are varied very little by his special environments. In fact, his circumstances make it an easier business to him than to any farmer in other localities, and one single thing only need be mentioned to make this very plain. This is,

that in the South sheep may live every day in the fields, and gather their subsistence on what in other localities might go to waste as far as making money profit out of it; and a flock may be so managed as not only to subsist itself with ease but at the same to so improve the soil by the improved conditions—growing out of the feeding of the flock, as that each acre of land may soon double its produce without any other addition to the resources of the farm.

And in thus adding to these resources it matters little what kind of sheep is kept. A sheep is a sheep, in this respect; and it is only a matter of convenience and fancy which breed is chosen for this use. Yet the fancy goes a long way in regard to the pleasure and profit of keeping a flock. Tastes differ in this respect; and so the kind of sheep chosen should please the fancy of the owner; for what we love best in this respect we make the most successful and profitable.

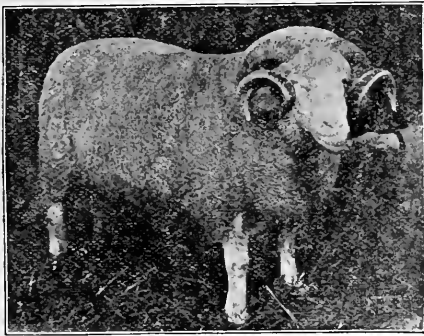
## BREEDS OF SHEEP MOST SUITABLE.

Sheep may be distinguished as fitted for the farm or for the range, and some for the special purpose of rearing lambs for the early markets, when there is a demand for tender lamb of two or three months' growth, which has been increased to the greatest extent by skillful feeding. On account of the favorable climate and nearness to the best markets for them, those sheep most eminently fitted for this use in the South should be first noticed. Sheep, indeed, are the most easily adapted to varying conditions of all domestic animals; but while this is so, and by a little education a flock may be trained to bring the lambs at any desired time, yet there is a breed which has been so trained for many years as a special business that lambs may be had at any time of the year, or in fact twice in the year, if it is desired. This special breed is known as

## THE DORSET BREED.

In our description of the best sheep for the South this one we choose first, both for the ease of its management and its value. In addition to these special qualifications, it has the advantage of having been reared in a warm climate, very much similar to the average of the Southern States; and, which is a most important consideration, the principal great consuming markets for the lambs are in close proximity to the most convenient and suitable localities for the breeding and rearing of them.

The Dorset sheep is a horned breed, which is a native of the county of Dorset, in the south of England, of which the climate is mild and pleasant, having no severe weather in the winter, but the flocks are able to pasture out the whole year. The climate has its special features repeated in several localities of the South, especially on the sea coast and adjacent lowlands, with the low ridges further west. Both rams



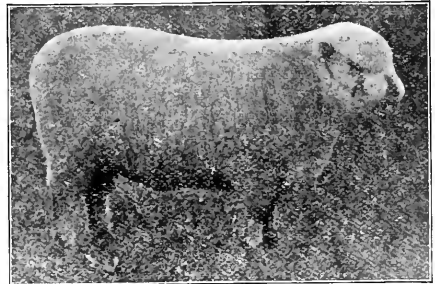
DORSET.—Sweepstake Ram at the great Omaha Exposition. Bred and owned by R. Stuyvesant, owner of the Tranquility Stock Farms, New Jersey.

and ewes are horned; the face is white, broad, and neatly formed, the horns curving spirally on each side, giving a solid, stately and substantial figure to the whole animal. This breed is able to maintain itself in defense against dogs, which in the South are really the only serious obstacle to the success of the flocks; for the other conditions, as the weather, the soil, the climate and the feeding, are more favored by nature than in any other part of the whole Union. In fact, we have everything in favor of the shepherd's industry, and our especial conditions of agriculture all go to make sheep keeping not only profitable in itself, but advantageous to the whole culture of the soil, under our greatly varied system of agriculture. This useful sheep is exceedingly hardy, and less subject to diseases which arise from neglect than any other breed. It yields a fleece of five pounds of pure, white, medium fine wool, most favorably adapted for the smaller kinds of home manufacture common in the South. The wethers, when fed for market at two years of age, yield a dressed weight of eighty pounds of excellent mutton. On the whole, we may very justly give this breed the first place in the list of sheep best adapted to Southern conditions. Its long and careful breeding has given it a strong constitution and a remarkably successful ability of the ram to impress its character on the native sheep, so that nearly every half bred lamb is horned like its sire.

#### THE SHROPSHIRE.

For several good reasons this sheep enjoys the reputation of being the most desirable of all the breeds. It has been bred everywhere, and from Florida to the far Northwest among the great range flocks, it maintains its reputation for hardiness in cold or heat, under spare or luxurious living, and as the mother of strong hardy lambs. It is one of the medium-sized breeds

which are most suitable to the conditions of the Southern farmer; quite as well as to those prevailing in the far West and Northwest, where the flocks range over the dry ranges, and have to contend with the fierce storms which the Eastern shepherd is unable to realize even in his dreams. It is one of the oldest breeds, and one of the first to be brought from its English home, on the most fertile farms of that well farmed country, and it has maintained here its character for hardiness, good feeding, healthfulness, and its value for its mutton and wool. Its fleece is well adapted to the conditions peculiar to the South, especially for the use of the local country mills, and is marketable at the highest prices anywhere. The wool is between fine and coarse, and the fleece varies in weight as its keeping may have been, from six to eight pounds for ewes, and proportionately more for wethers and rams. It will yield over twenty pounds to the quarter of the very best of mutton, when in moderately good condition, after a reasonably good feeding. It fattens easily, and for domestic use may be taken from the pasture any day in the year, and furnish the best of meat. Its habits are quiet; it is not given to wander from its pasture or its home. It is an attractive sheep having a dark face, varying from black to a light smutty or brown color, all over, or in patches. It is an excel-

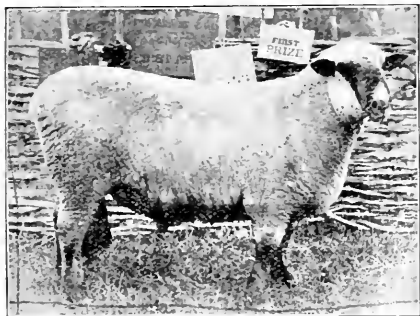


SHROPSHIRE.—First Prize Shearling Ram at the Royal Show, owned by R. P. Cooper.

lent dam for the early market lambs, and when bred to a Dorset ram, or when the ram of this breed is used with the common native sheep, the lamb will easily reach a weight of fifty pounds at ten or twelve weeks age. The Shropshire ram is the best animal to cross on our common native Southern ewes, and two crosses will produce sheep which will easily go for purebred. It may be said, that with the exception of the Merino ram, it is by far the best kind to cross on our common Southern ewes for the purpose of improving a flock.

#### THE HAMPSHIRE.

This breed of sheep was introduced into Virginia by George Washington, and until its complete destruction



HAMPSHIRE.—Cambuscan, First Prize Hampshire at the Royal Show, owned by J. G. Massey, of Colorado.

in the war, was quite common and conspicuous by its dark face and large size on the best of the Southern farms. Since the prostration, as may be said, of Southern agriculture by the barbarities of war, it has disappeared except in a few localities, but even there and under partial care it is now what it should be by its nature, the finest of those dark faced breeds commonly called the Down breeds. It is a native of the Hampshire downs, or rolling meadows of the South of England, and is one of the most ancient of the English breeds. It is a large sheep and has a heavy fleece of wool longer than that of the Shropshire. An average fleece should weigh eight pounds, and the wool is commonly over six inches in length. But it is most valuable for its mutton; the flesh is tender and well mixed with the fat, and more live weight of carcass is made in proportion to the food by this breed than by any other. A well fed yearling wether of this kind will easily make a dressed weight of eighty to ninety pounds. The Hampshire ram is the most valuable of all breeds for crossing on the small native sheep, although its size and weight might seem to be unsuitable for this use. The size of the ram, however, does not interfere with the progeny in any injurious way; for it is the ewe, and not the ram, which gives the size to the new-born lamb. The ram gives to the lambs the habit and ability to make growth after birth, and it is the fact that the most growth from the same allowance of food has been made by this breed in every test made; and this ability to make rapid and profitable growth is not equalled by any other breed, even under ordinary conditions of the farm. This characteristic is the most important for the consideration of the farmer who is rearing sheep for profit. For the same feed this breed gives more wool and more flesh than any other, and thus the farmer who desires profit may well choose this for the means to be used.

### THE SOUTHDOWN.

This sheep is universally considered by all experts to be the most beautiful animal of the kind in the world. At the exhibitions of live stock the pens occupied by these sheep are the most observed and frequented, and the beautifully formed, smoothly woolled, and generally attractive animals in the pens set apart for the Southdowns attract the attention and the admiration, even of the children. Its beauty of form; smooth, clean, round body, short legs, clear fine head, and broad saddle, combine to attract those who never owned a sheep, as well as every observer who has or does. Its history justifies this praise. For, during nearly two thousand years this sheep has existed and furnished industry and wealth to the English farmers in that part of that fertile and beautiful isle commonly known as the Downs. This breed has been used for improving nearly every other. The Shropshire, Hampshire, and other so called Down breeds, all owe their finest points to the infused blood of the Southdown, while most of the more than dozen breeds, bred in England—the home of all our American sheep except the Merino—have been improved by the mixed blood



SOUTHDOWN.—Champion Shearling Rams at the Royal Show, 1902, owned by the King of England.

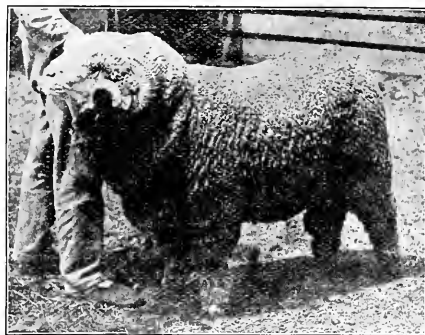
of this beautiful sheep. One becomes in love with this sheep on sight; and if sheep were kept only for their beauty, this breed would be the only one in existence. But it is not only beautiful, but is good as well. That this should be so consists with the value put on it as an improver of every one of the so called Down breed; and not only of these, but several other breeds, have been refined by the mixture of Southdown blood in them. For itself alone it is the choice of every wealthy sheep farmer in the South, whose lawn is ornamented as well as made useful by being made the pasture of a flock of these sheep. It is chosen to ornament the parks of the great cities of the North, and it is not only beautiful but it is as good as it is beautiful. Its carcass furnishes the very best mutton in the most

desirable and economical form, such as the saddle of mutton, the leg, and the shoulder; while every other part of the animal is economical for use on the table on account of its fine bone and the liberal covering of sweet, juicy meat. For this natural excellence it has been adopted as the general improver of other breeds, and even now a cross of it is found desirable by breeders of the other so called Down breeds. For this refines the gradually increasing coarseness of the others, and so adds to the value of the flock so improved. There is no other sheep which in so many points deserves general admiration; but yet it is not by any means the most popular. This test of value is owned by the Shropshire most of all the coarse wool breeds; and the Southdown has several other successful competitors. Its lamb by a Merino ewe is the plumpest and fattest of its age of all other kinds; but yet the coarser, heavier breeds are more popular as sires for the market lambs. For ornament on the lawn of any farmer who can afford to sacrifice a dollar or two to gain satisfaction in this way, or for their beauty in a well kept meadow, there is no other breed equals this; and as well as its beauty, it supplies the best of all mutton, although at a little higher cost. For the farmer who is not wholly in pursuit of profit all the time, and is desirous of sacrificing a few possible dollars for the sake of pleasure, this beautiful sheep cannot be excelled. It is not meant that it is not a profitable sheep, but that it may not be as profitable as some of the other breeds described; and yet it may be so under special circumstances, for one will always do the best with what he loves the best, and so this sheep may really be the most profitable because, on account of its beauty of form, it will attract not only the care and attention of its owner, but his love and admiration as well. When used as the sire of market lambs by a Merino ewe, the produce will easily bring a dollar a head more than that of any other sire; but in general the size and weight of a lamb goes with the multitude before mere quality, this qualification being most popular with the fewest purchasers. And yet for love of this beautiful sheep the writer would make this sacrifice, and commend this disposition in his readers. Its wool furnishes the best material for the finest blankets and the softest clothing material; its flesh is the sweetest mutton, but it requires, as all other excellent things do, the very best material for the making of it. It delights in a short, thick, bluegrass pasture, and is by no means a coarse feeder. A well fed two-year old will make eighteen pounds to the quarter, but the light weight is compensated for somewhat by the finer lighter bone. Two thirds of its live weight of salable meat of the best quality is the ordinary product of a sheep of this breed. It will not do well on coarse keeping, and thus is not the right sheep

for a careless farmer. But in the right place, it will well repay the keeper for all his care. As an improver of every other breed, and as a refining influence, it has a special value for the most intelligent and enterprising shepherds.

#### THE MERINO.

By far the most numerous breed of sheep now in existence is the Merino. It is the most numerous in our own country, while in some other countries it is practically the only breed kept. This is due to the value of the wool, which is the staple clothing wool of the world. But of late sub breeds of this valuable sheep have been produced, which have generally improved the race, and have made some kinds of these as valuable for mutton as any of the so called mutton sheep. The only objection made to the meat of these sheep is the "sheepy" flavor of the meat, as much in



RAMBOULLETT.—The great ram in the German Empire in 1902, now owned by Beaver Stock Farm, North Dakota.

the same way we call the flesh of the goat strong in a peculiar flavor. The special flavor of the meat is really an advantage, as when once used to eat mutton this peculiarity of the flesh becomes decidedly agreeable. But, actually, as the common sheep kept is more of a Merino than anything else, and this is the staple supply of the markets at the present, and has always been in the past, the Merino of any of the varieties is equally as excellent for mutton as any other kind of sheep. This breed of sheep is most remarkable for the large quantity of yolk and oil in the fleece, and as this is secreted by the skin, of course there is at all times more or less of it in the pores of the skin, but it is by no means necessary that the flesh should be tainted in the least by this special odor of the sheep than that the flesh of the hog should be so affected by the special odor of that animal. Indeed, the woolly flavor of the home dressed mutton is simply due to mistake in dressing the carcass. It does not come from the skin, but from the interior of the ani-

mal, and if the carcass of a sheep is emptied of its contents quickly, and the removal of the skin is left until the interior of the animal is freed from its contents, from which this special odor is derived, the mutton is then free from any odor whatever, and is as sweet as the meat of a young lamb.

Thus the various sub breeds, as they may be called, of the Merino may be as valuable for mutton, in spite of the oiliness and the yolk of the fleece, as any other kind of sheep; and even with the little care taken in dressing a sheep, and by skillful cooking, the mutton of a Merino of any kind may be really as good and well flavored as that of a Southdown.

The best of the Merinos is the French or Rambouillet; an exceedingly valuable sheep and a very great improvement on the small old-fashioned Merinos, as much so as the big Shorthorn cattle are on the common scrubs. This class of sheep, however, is kept mostly for fleece, which consists of the finest kind of wool used for the most costly kinds of clothing; and the enormous quantity of wool of this most valuable kind borne by this sheep gives it a special value for the farmer's flock. It is exceedingly hardy, and makes quite as much of the best meat as the favorite Southdown; the only difference being one cent a pound in the value of the legs alone, all other parts bringing in the market as high prices as the best of all other breeds. It is the form of the animal by which its value to the butcher is made; and while the Merino is a little deficient in its finished weight altogether, yet, in regard to the Southdown, the Merino exceeds it in the value of the ribs and loins, parts which we all know go to make up the most value of a meat carcass.

For crossing on the common native sheep, there is no question of the excess in value of the Rambouillet Merino, commonly called the French Merino, and this variety is to be commended and recommended for the use of the farm, both for its most valuable fleece as to quantity and the market price of it, and next only to the best of all other breeds for its mutton.

We wish to say a few words in regard to the value of the flock as improvers of the soil. The sheep's foot is golden, is a very ancient proverb, and its history from the most ancient time to the present proves the truth of the adage. The sheep lives well on the surplus of the farm, which for want of it will go to waste. It returns in the manure more value from its food than any other animal. It gives to its feeder three profits—its fleece, its growth, and its lamb. It is the gleaner of the wastes otherwise lost. It makes more profit, too, in its early maturity for market, and its lambs, costing actually only a few cents, when two or three months old, bring over twice as much as any two-year old sheep will. Quick returns make big profits, and

there is no quicker profit in anything made than in a three-months old lamb, which sells for twice as much as its dam will. Every where, the best farming is accompanied by, and really is a result of, a well-kept flock.

Macon Co., N. C.

HENRY STEWART.

## DEVON CATTLE.

*Editor Southern Planter:*

These cattle, with reference to whom Youatt said "The very best are the best in the world," have many staunch admirers, and without a mention of them even a holiday number of the *Planter* would be shorn of an attraction in the eyes of lovers of the somewhat small but perfect type of North Devon. The old type of North Devon has been studied and most carefully conserved in its original habitat, and most of the stock in the United States traces not only to the best recorded ancestry, but to the best reputed herds in existence long prior to registration, and its impression is necessary for character and quality in Devon herds grazed on richer land and more liberally fed, which naturally develop larger and heavier frames in course of time. The writer has been a Devon breeder for over twenty years, and finds these hardy red cattle well adapted to his surroundings, which are not good enough for Shorthorns and Herefords. The Devon thrives well on short grass, quickly responds to any extra feed, and when fat weighs uncommonly well. His ability to stamp his good qualities of shape, thriftiness, color and docility on any breed of any color he may be mated with makes him a most valuable animal to the stock-grower on moderately fertile land. As a dairy animal, the Devon can hold its own, and for the production of oxen for the yoke stands pre-eminent for strength, quickness and powers of endurance. In my experience the only weak point in the Devon is that he does not mature until three or four years old; indeed, I have known oxen fed at seven years old make considerable growth up to that time. In these days of "baby beef" and early maturity this is quite a drawback. If the Devon was as precocious as the Angus or Galloway he would easily be monarch of all he surveys, and no other beef animal would be grazed or fed.

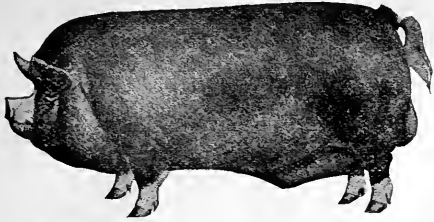
The Eastern States have from early days carried the biggest proportion of Devon cattle, but now there are many fine herds to be found in the South and Southwest.

I can hardly close without referring to Dr. Morris, of Chester county, Pa., who has done the State, and the Devon interest particularly, some service by importing those rare good bulls "Taurus" and "Duke of Molland," who, I believe, trace back through the "Famons" family to "Long-horned Curly," the most valuable of all Devon foundation pedigrees.

Orange Co., Va.

E. J. F.





BERKSHIRE.—IMPORTED HIGHCLERE TOPPER 51934.

### THE BROOD SOW.

*Editor Southern Planter :*

Since a good brood sow is a *sine qua non* for successful hog raising, I do not know of any section of this industry that should be of more general interest. I will commence with a few chief requirements which go to make a sow profitable to the raiser of fat pigs for the market. First of all, these are, roughly, size or development, combined with good formation and a certain matronly appearance that is hard to describe, a rangy roomy sow without being loose or leggy and that promises to make a good milker. Not coarse in the shoulder, but with all the depth of sides possible, and good deep and wide hams, and strong, straight, and even slightly arched back as indicating good condition and vigor; ample heart and lung room, and at least twelve teats of even size, should all be looked for. I say of even size, for occasionally a sow will have some of the teats blind, and this is, of course, a serious defect, and one which is certainly hereditary. The number of pigs which a sow will have in a litter is also largely hereditary, some females being much more prolific than others. For this reason, sow pigs which are to be kept for breeding from should be selected out of large and even litters.

As a general thing, insufficient attention is given to the fact that sows will vary largely in the amount of milk they produce, almost as much as cows, and there is, therefore, a correspondingly quicker or slower growth of the pigs. I will not go so far as to say one ought to look for dairy type in a brood sow, but it comes very near to this. There is a certain type of short coupled and necked and heavy shouldered naturally rounded all over sow that in nine cases out of ten will not make a first-class milker, and it is unfortunately a fact that the show sow, which cannot be beaten in the ring, is not always the producer of the most thrifty litter unless she is prepared and fed with great care for a long time beforehand, and even then it is very uncertain.

Disposition is another hereditary trait. An excitable, ill-tempered beast is not worth fooling with, as the odds are in favor of her get being the same way,

and she will certainly give undue trouble to the attendants during and just after farrowing. As this article is more in the interest of the production of pork on a small scale than breeding thoroughbred animals, I will say nothing about such points as good feet, formation of head and ears, setting on of tail, etc., all of which are not necessary in this case and less important than the above. However, there are none of these except color, placing and shape of ears and setting on of tail but what are founded upon practical requirements, and every owner of a few pigs can certainly lose nothing by studying over the score cards of the different breeds and trying to figure out the reason for the division of points.

As to the sow's breed, she is, I hope, a grade and not a scrub. One cross, at least, or two crosses, by a thoroughbred boar of some of improved breeds upon a razor-back hog, will work wonders both in early maturity, increased value of sides and hams, and quick fattening at very little cost. I am, myself, naturally in favor of the Berkshire grade. They are certainly good grazers, average well for the number in litter, and the blood is so very prepotent owing to the length of time during which Berkshires have been bred pure that one cross will do a great deal, I think more than any other breed when used on the scrub or razor-back. The Tamworth just now has been creating some attraction, but the breed is only about one-third the age of the Berkshires; moreover, the sweepstakes at the Birmingham Fat Stock Show (a strong place for the consideration of fancy bacon and ham points), was this year won by the Berkshire, and the sweepstakes for the car load of fat hogs at the Great International at Chicago this year was also won by the Berkshire. So, apparently, both sides of the "pond" have come to the same conclusion.

The tendency and the greatest profit for the last few years has been for marketing young pigs, especially since so many have realized that it costs far less grain and time to make a pound of pork in a young pig that is under one year old than it does afterwards. In other words, the first two hundred pounds is the cheapest. After that, every pound that is added increases in cost. Moreover, these young pigs of medium weight bring the highest prices in the market. The farmer, therefore, must breed his sows to satisfy the economy of his farm. If they are bred to come in the first of the year, and I think in the Southern climate this is the best time, they are then fat and ready to kill in November or December, and by this means the greater part of the fattening process can come on during warm weather at a time of the year when the greatest number of pounds can be secured from a bushel of corn, and when this yield can be still more increased by feeding it in connection with suitable

pastures. If sows are to farrow any time before April, farrowing pens must be provided. These, however, can be of very cheap construction so long as they can be kept clean and dry, and, above all, are open to the south. I would rather have a litter of pigs under a pine brush roof, so long as it is water tight and open to the south, than have to winter them in the best possible building that was located as I have seen many. There is hardly an animal more subject to rheumatism and other ills if they are raised in cold, damp buildings than is a pig during its early days.

The feeding of the sow before and after farrowing would take more to go into than my entire space would allow. The main point is to let them come in in good condition, but not fat, and not feed on heating foods and not to start the milk with warm slops until all the inflammation, or danger of inflammation, is over, as a good milking sow, like a cow, is much more apt to suffer from caked teats than the poor sow.

There are quite a variety of feeds that can be drawn upon for succulent feed in winter. The Irish potato (I have had no experience with sweet but they are very favorably reported upon) is the favorite. Potato raisers can use their small and cull potatoes very profitably and easily. Probably the quickest way to prepare them is to steam them by cooking in a large iron boiler that can be tightly covered, with two or three gallons of water only in the bottom. A small fire will soon boil the water and after a time the steam will bring the whole mass to such a heat that it only requires to be left covered up to complete the process. The excess of water, however, should be poured off before mashing the potatoes, as it is supposed to extract the poisonous substance from the potato skins, but I have never cared to make the experiment as to whether it is so or not. Mangels, another root that is both cheap and serviceable for furnishing a suckling feed during the winter (although English breeders object to feeding them to sows soon due to farrow, but we have fed them off and on here and never noticed the slightest injurious effect). Pumpkins are another most valuable suckling feed, but are not raised in the South as much as they should be. Among the grains, the standard is a mixture of bran and shorts, but it is frequently economical to use instead of the bran Brewers' Grains when the market price makes this the cheapest feed. However much corn on hand this should be reserved for the fattening process and the mixture of bran and shorts fed as a slop to the brood sow and her young litter. If the lucky breeder can add skim milk he will then push them along with the greatest possible rapidity. In lieu of this there are very favorable reports upon the use of dried blood.

At the present market price of pork it certainly pays to go to the trouble and expense of giving a little

extra attention and feed to the sow and her young litter. The proposition, of course, is a very different one, if she farrows later on and can be turned out on clover and alfalfa fields or an old meadow. There are some most valuable experiments as to the value of growing good red clover or alfalfa when marketed in the way of pork. There is certainly no cheaper way of growing a pig, and with the present markets there is no reason why every farmer, however small, should not have a certain area in one of these crops which he can market through his pigs.

For a late fall and winter run for hogs many feeders have found it pays well to put in special crops, allowing the hogs to gather them, and feeding at the same time their corn or other fattening ration in connection. Sweet potatoes, chufas and artichokes lead the list in popularity. A woodland run is of great benefit during the late winter months, as a hog doubtless enjoys rooting and certainly picks up a little varied diet which does much towards keeping the digestive organs in tone. I think that one of the commonest faults in fattening hogs for the market is insufficient varying of the feed, often confining it to the staple article corn.

Finally, it is a mistake to breed from immature animals. A sow is hardly in condition to take care of a litter before she is a year old, and a boar should not be used for service under nine months. While a sow can be made to bring three litters a year, it is difficult and certainly not profitable. Two litters in one year is all that should be asked from her if pigs that will grow off quickly and with plenty of vigor are desired. The diseases met with are not many and are caused chiefly by bad feeding, dusty and dirty quarters, and are chiefly met with in the shape of colds, bowel complaints and the parasitic worms with which many lots are infected and which attack the young litters very early, lodging in the bronchial tubes and lungs.

Hog cholera, the most dreaded of all diseases and certainly the most contagious, has, in the end, been a good thing for the breeders of thoroughbred hogs; as, whilst many herds are almost wiped out of existence the market is increased for the others; but this is even worse as there is no indirect profit in the case of the man raising pigs for pork. Careful quarantining of all animals that have come in from outside on some outstanding farm, or as far away from where the permanent pigs are kept, is the only way to keep this out of the herd, and even with every care it will sometimes break out. I am glad to say that I have had most favorable reports of an anti-toxin treatment which is certainly the most rational and the first preventive that recommends itself as based upon sound principles.

Buncombe Co., N. C.

G. F. W.

## The Poultry Yard.

### FEEDING EXPERIMENTS.

At the West Virginia Experiment Station, a series of experiments has been conducted with different foods as sources of protein so essential for laying hens, and also with ground grain as compared with whole grain and mash fed in the morning and at night for laying hens.

In the first series of experiments, high-grade beef scraps were obtained from one of the packing houses in Chicago. Milk albumen was supplied by a company which manufactures milk sugar. Fresh meat and bone was obtained from a local butcher and ground as required.

Three pens of fowls were employed in the test, each pen containing ten White Leghorn pullets, ten two-year-old hens, and two roosters. They were fed the same grain ration, and in addition during the first period pen 1 received beef scraps, pen 2 milk albumen, and pen 3 ground fresh meat and bone, while during the second period pen 1 received fresh bone, pen 2 beef scraps, and pen 3 milk albumen. During the experiment an attempt was made to feed as nearly as possible the same amount of protein to each pen.

At no time during the test were the fowls fed heavily for egg production, as many of the eggs were used for hatching. This was especially true during the second period, when, in order to secure fertile eggs, very little mash was fed.

The fowls were confined in the houses. One of the runs belonging to each house had been sown to rye in the fall of 1901, and the other runs were sown to oats in the spring, thus providing an abundance of shade and green food. Water, mica crystal grit and granulated bone were supplied *ad libitum*, and the whole grain which was fed was scattered in the litter in the scratching room. The experiment began November 1, 1901, and was divided into two periods of 120 days each.

In this experiment, more eggs were laid by the fowls when fed beef scraps than when they received either ground fresh meat and bone or milk albumen. The health of the fowls remained uniformly good throughout the test, and the low egg yield was due partly to the fact that the houses in which the fowls were kept were not constructed warm enough for economical egg production during the winter, and partially to the fact that the fowls were not fed heavily at any time for egg production, as many of the eggs were incubated, and strong, vigorous chicks were desired.

In experiments made at other Stations, having the same objects in view, the general results obtained point to the conclusion that the dried and ground material, when pure and untainted, is equally as valuable as the ground fresh meat and bone. The beef scraps, further, possess the advantage that a supply sufficient for several months can be obtained at one time, while with fresh meat and bone there is always considerable trouble and expense connected with obtaining the supply regularly and grinding it.

In the second of the experiments conducted at the West Virginia Station, comparing ground grain with whole grain and mash when fed in the morning and at night, the object was to arrive, if possible, at some

definite conclusion on a point upon which there is much diversity of opinion.

On most poultry farms, it is the custom to feed to laying hens in the morning a mash in which corn meal, ground oats, wheat bran, steamed clover, beef scraps, or other feeding stuff are incorporated in various proportions. Toward evening, whole grain is usually scattered in the litter, and the fowls are thus obliged to scratch vigorously for their evening meal. On the other hand, some poultrymen strongly advocate the practice of feeding the whole grain in the morning and the mash at night, claiming that by so doing the hens are kept busy during the entire day, and that they consequently take more exercise, resulting in an increase in the egg production.

The experiment was begun April 23, 1901, and was divided into two periods of sixty days each. Five pens of fowls were employed. Each of pens 1, 2 and 3 consisted of twenty White Leghorn hens and two cocks, nearly one year old at the beginning of the experiment. Pens 4 and 5 contained the same number of White Leghorn hens and cocks about four years old.

The grain ration consisted of corn and oats, ground and unground. Beef scraps were fed dry to those fowls which received the whole grain ration, and in the other cases it was mixed with the mash, which was made by moistening the ground feed and scraps with water at the ordinary temperature. At the beginning of each period the food for each pen was weighed out in bulk and stored in boxes in the scratching sheds. The fowls were fed liberally, and each lot was fed as nearly the same amount of food at each meal as could be done by measure. At the end of each period the food remaining in the boxes was weighed, and thus the total amount of food consumed was determined.

The fowls were supplied at all times with granulated bone, mica crystal grit and water, and each flock was allowed the use of two runs, one of which had been seeded to rye, furnishing shade, and the other sown to oats, thus providing a liberal supply of green feed.

### CONCLUSIONS.

1. In this experiment the egg production was practically the same when the mash was fed in the morning as when fed at night.
2. With both young and old fowls better results were obtained when about one third of the grain ration was fed ground and moistened than when all of the grain was fed whole and scattered in the litter.
3. During the test the average food cost of the eggs laid by the young fowls was 5.8 cents per dozen, while with the other hens the cost was 6.4 cents. In this connection it should be remembered, however, that these fowls had a very restricted range, and that all of the food that they received was charged to them at full market rates. On the other hand, on the ordinary farm, where the fowls have unrestricted range, much of their food consists of bugs and worms and grain which is scattered here and there and which otherwise would go to waste. Under these better conditions, the real cost of the food would only be a fraction of that stated above.

## The Horse.

### HACKNEYS STILL IN DEMAND.

A well-known Virginia breeder of Hackneys writes us that he recently sold a three-year-old colt for \$10,000. Hackneys and Hackney crosses on Virginia-bred mares having a good dash of thoroughbred blood are always wanted at paying prices. They should be bred out of good-sized mares to give them size and weight enough to handle the heavier carriages now in use.—Ed.

### NOTES.

At the Acca Farm track, W. L. Bass is wintering some fifteen head of trotters and pacers, all of whom are doing quite nicely. Those with records are Joyful Maiden, 2:19½, pacing bay mare, by King Nutwood, dam by Petoskey; Fern, 2:21½, pacing bay mare, by Petoskey, dam Mannie, by Ajax, Red Light, 2:21½, chestnut mare, by Red Wilkes, Jr., dam Moonlight, by Twilight; Eliza Ingram, 2:21¼, chestnut mare, by John R. Gentry, 2:00½, dam Blondette, dam of Governor Holt, 2:15, by Leland; and Marie, 2:30½, bay mare, by Jolly Friar, dam Parker Holland, by Sam Purdy, while those that have no marks are Medinwood, full sister to Firewood, 2:17½, by King Nutwood, dam Medina, by Middletown; Maxie K., bay horse, by McZeus, dam Miss Bird, by Young Jim, a bay filly, by McZeus, dam Louise, sister to Branchwood, 2:22¼, by Woodburn Hambletonian, and a couple of good looking bays, one a gelding, 5, and the other a mare, 6, both of whom were sired by Omar Pasha, full brother to Mosul, 2:09½, and are owned by Congressman Rixey, of Culpeper. The foregoing list, however, does not include a nice-looking bay colt, foaled 1891 and sired by a son of Red Wilkes, recently purchased by Bass from James A. Graham, who owned the dam, the great brood mare Remembrance, the daughter of George Wilkes that produced El Banecia, 2:17½; Virginia Jim, 2:12½, etc. This colt is good gaited, and acts as if he would go fast and increase the list of performers and producers to the credit of his dam.

Mr. S. F. Chapman, of Gordonsville, will stand for public service, during the season of 1903, the large, handsome bay stallion Wealth, 2:37½, by Gambetta Wilkes, dam Magnolia, by Norfolk, the sire of Miss Nelson, 2:11¼. Breeders and owners of desirable mares in that vicinity who wish to mate them with a richly bred and fast trotting bred stallion can make no mistake in patronizing Wealth. Gambetta Wilkes is one of the finest looking and most successful sons of the immortal George Wilkes. As a sire of new standard performers, he leads all others, having seventeen of his get enter the list, among them being Wealth; whose record of 2:17½ does not indicate his speed limit by long odds, as he was timed separately in a race in 2:08. Wealth will stand for service during 1903, at the very moderate sum of \$20 the season with return privilege, or \$25 to insure.

At the recent Fasig Tipton Company's big New York sale of trotters and pacers, J. L. Justis, Parkesley, Va., secured a well bred three year old in the bay filly Miss Penn, 2:29, by William Penn, 2:07¼, dam Sister Willing, by Willing, son of Wilton. She fell to his bid of \$230. D. S. Jones, of Newport News, was also on hand, and paid \$300 for the bay yearling filly, by Oakland Baron, 2:09½, dam Minnie P., 2:10½, by Earnest, son of Volunteer. Oakland Baron got the famous blind trotter Rhythmic, 2:08, and this filly is entered in the Hartford Futurity, \$10,000. At the same sale the Eastern Shore of Virginia breeders, the Floyd Brothers, of Bridgetown, secured a likely prospect for speed and race horse quality in the Texas-bred colt, Red Oliver, foaled 1901, by Electrite, 2:28½, out of the great brood mare, Lady May, dam of six in the list, by Port Leonard. Red Oliver is a full brother to the fast trotter Blondie, 2:13½, and is well engaged in stakes, among them the Hartford and Kentucky Futurities. This colt was purchased to place in the Stud, and his speed will be developed by the Messrs. Floyd, who look for him to make a sire of note.

In the bay stallion Great Stakes, 2:20, by Billy Thornhill, dam Sweepstakes, by Sweepstakes, W. H. Nelson, 1416 E. Franklin street, Richmond, Va., offers for service a trotting sire of tested capacity as a sire of speed. He was a trotter himself and good race-horse along with it, while in the Stud he has gotten good performers like Captain, 2:16½, pacing; Foxhall, 2:19½; W. H. N., 2:23½, and others able to get out and win money. For several years Great Stakes headed the Foxhall Stud, Norfolk, Va., where a number of his get are still owned and thought highly of. Great Stakes will stand for mares during 1903 at a service fee of \$25 the season.

In the Christmas issue of "The Horseman," which is attractive in design and full of interesting reading matter, is a cut of the twin stables of E. E. Smathers and the former Richmonder, A. B. Gwathmey. The buildings and land cost these gentlemen over \$100,000, while the trotters and pacers kept for road driving represent a tidy sum as well. Among the horses owned by Mr. Smathers is the famous Lord Derby, 2:05½. Mr. Gwathmey has among others Tiverton, 2:12½; Tudor Chimes, 2:13, and Senator Mills, 2:29½, a son of Electrite, bred in Texas. The Senator has trotted quarters in 30 seconds—a two minute gait—and will be driven on the Harlem River Speedway.

The services of the Hackney stallion Heidrick, by Imp. Danegett, dam Imp. Heroine, are offered breeders during 1903 at the moderate sum of \$10 the season, or \$15 to insure, by Messrs. C. J. and Joseph Button, Laurel Hill Farm, Walker's Ford, Va. This horse is a nice bay in color, sixteen hands high, and richly bred, while he has great natural action and should sire grand looking harness horses. He has a nice disposition with an even temper, and these, along with soundness and fine size, are transmitted to the foals sired by him.

The Orange Horseman's Association, whose annual Horse Shows are held at Orange, Va., met there recently and elected officers. The success of the Association since its organization has been remarkable, as after paying for improvements to their new grounds a nice balance remains in the treasury, and the outlook for the season of 1903 is of a most encouraging nature. Good men are at the helm, and the affairs of the Association have been wisely managed from the beginning. The following gentlemen were elected officers: President, W. W. Sandford; Vice-Presidents, William Dupont, R. C. Booten, W. G. Crenshaw, Jr.; Secretary and Treasurer, L. S. Ricketts; Directors, C. C. Taliaferro, F. B. Perry, H. A. Willis, J. T. Lightfoot, William C. Williams, H. D. Holladay, Jr., J. W. McComb and L. S. Ricketts.

Mr. W. W. Sandford, the new president of the Orange Horseman's Association, is well calculated to fill the position, as, aside from his business qualifications, he is an able Judge of form, and as the proprietor of Woodley Stock Farm, Orange, Virginia, he is widely known as an owner, breeder and exhibitor of hunters, jumpers and harness horses.

Mr. Harry Hogshead, a well-known druggist and breeder, Staunton, Va., is wintering his trotters near there, and reports them in good shape. He has the large, handsome and well bred stallion Prince Redwood, trial, trotting, 2:16½, by Prince Eugene, 2:21½, out of the great brood mare Speedy Fanny, dam of Sady M., 2:13½, etc., by Black's Hambletonian, and the brood mares Fanny Keystone, by Keystone, and Psychine, formerly known as Hilpa, by Wilkes Boy. The latter dropped a nice colt this year by Howson, son of Red Leo, and was bred to Prince Redwood, as was Fanny Keystone.

The well known North Carolina horseman, George M. Harden, of Raleigh, is wintering his stable of trotters there, and among them is the young stallion Sweet Rector, by Director, 2:17½, dam Sweet Alca, by Alcazar; also the fast chestnut mare Petronel, 2:19½, by Expedition, 2:15½, dam Petronel, by Onward. The latter made her record at Savannah this fall. She has shown a trial in 2:14½, going the latter half in 1:05½. The brown gelding Rubico, 2:23½, by Pamlico, for several seasons a good bred winner of the Harden stable, has been exchanged with T. M. Arrasmith, of Greensboro, for the Tennessee bred pacer John T. Moore, a bay colt, foaled 1899, by Hal Woodriddle, dam by Locomotive, second dam by John Dillard. Mr. Harden also owns the good brood mare Bertie Wilkes, by Red Wilkes, dam Bertie Amos, by Blue Bull, and her foal of 1902, a bay filly by Sweet Rector.

The black gelding General Johnson, by Lynne Bel, dam Miss Mack, by Fairlawn, son of Nutwood, bred and formerly owned by Mr. Charles Sharp, Norfolk, Va., was one of the thousand and odd horses that passed through the Fasig Tipton Company's "Old Glory Sale" in New York, and John McGuire got a bargain in him at \$700. The black son of Lynne Bel was consigned by W. L. James, of Baltimore, who has raced him for two seasons past and drove him to a record of 2:12½.

C. A. Pusey, the veteran trainer and driver, who in the eighties won in grand circuit company with the Blue Bull mare Lona Griffin, 2:23½, and who during more recent years scored victories with Mosul; Bustler, 2:15½; Little Betz, 2:23½, and others, is now jogging a stable of well bred youngsters and a few older horses for S. P. Clay, the well known railroad contractor, whose place is out on Church Hill. Mr. Clay has recently purchased some good prospects by successful sires of speed, and Pusey hopes to get a few of them at least ready for the races another season.

Algernon Daingerfield has sold to John E. Madden, Lexington, Ky., the chestnut mare Lady Scarlet, foaled 1886, by Strathmore, dam Pappoose, sister to Parole, by imported Leamington. Lady Scarlet is a half sister to Mirthful, dam of Aceful. Mr. Daingerfield has recently sustained quite a loss in the death, which occurred in Virginia, of the bay filly All Saints, 4, by St. Saviour, dam imported St. Cypria, by imported St. Gatien. The former Virginian, Algernon Daingerfield, now assistant secretary of the Washington Jockey Club, and who divides his time between Washington and Lexington, Ky., was married on December 7th to Miss Margaret Duncan, daughter of Mayor Henry T. Duncan, of Lexington.

Mr. Robert Neville, Welbourne, Va., has recently purchased and added to his stud, the black horse Black Dick, foaled 1898, by Sir Dixou, dam Merdin, by Hludoc. The horse was purchased at public auction, and \$1,550 was the price paid.

W. C. Daly has sold to C. Mack the Virginia-bred gelding Alsike, a bay, foaled 1896, by Flatlands, dam Lucky Clover, by Bersan. Alsike is a product of the Fort Chiswell Stud of J. H. McGavock, Max Meadows. BROAD ROCK.

## SEEDING GRASS.

*Editor Southern Planter:*

A method of seeding grass seed adopted by a few farmers in my neighborhood, may interest many of your readers who fall in getting a stand of grass.

The quantity of seed for an acre (and it should be liberal), is thoroughly mixed with a quantity of fertilizer required for the same amount of land. It is then bagged and taken to the field and placed in the drill to be delivered with the wheat or oat crop or by itself, as the case may be. Two advantages are gained by this method. The grass seed, whether orchard grass, clover, timothy, or other, comes in direct contact with the fertilizer, and it is put deep enough to come in contact with moisture without dying for lack of it, as it frequently does when placed near the surface.

W. G. M.

*Albemarle Co., Va.*

Mention the *Planter* to your friends.

## Miscellaneous.

### FENCE LAWS IN VIRGINIA.

We are glad to notice that a member of the House of Delegates of Virginia (Mr. D. H. Leake) has introduced a bill having for its object the changing of the present law as to fences in this State. At present, an owner of land in Virginia must fence out his neighbor's stock if he desires to have full and peaceful enjoyment of that property which he has bought and paid for. If the bill becomes a law, as we most heartily hope that it will, this obnoxious and unjust position will be at an end, and each owner of land must fence in his stock and keep it from trespassing on any other man's property. This object we sought to accomplish in the suit which was carried to the Court of Appeals two or three years ago, in which it was contended that the present system was unconstitutional. The Court decided against this view in a judgment which we have always regarded as a most shallow one reached by arguments which could not stand the test of careful consideration and based much more on sentiment than reason. The patron of the bill has promised to send us a copy of it as soon as printed, when we will publish the same. Meanwhile, we would ask farmers everywhere in the State who desire to have the peaceful and full enjoyment of their own property to write their representatives in the Senate and House asking them to support Mr. Leake's bill and assist its passage in every way possible. Until such a law is passed, we can never make that progress in live stock husbandry which means so much to the State.

### IRRIGATION.

*Editor Southern Planter :*

Accepting your invitation contained in the last issue of your valuable journal, to say something on the subject indicated above, I would say to "*Greenhorn*," "Be not discouraged at the ridicule your ideas in this regard may excite among your neighbors. I am a native Virginian myself, as were my fathers for seven generations before me, and know how hard it is for them to see any better way of farming than the methods pursued by their fathers before them. Take heart; you may be in error as to details, but you are on the right track."

There was in my father's library an old geography, written by a man named *Morse*, and published about the year 1810, in which, in alluding to the climate of Virginia, the writer stated that the greatest drawback to agriculture in the State was the fact that, as a rule, drought cut short the crops. That this is true is beyond question, notwithstanding the abundance of rain

in the State during the last two years. When crops fail, such failure cannot be charged to the soil or to other climatic conditions; but may be generally traced to the lack of moisture at some period of their growth. The past summer and autumn have been exceptionally wet and seasonable, and the result is that, in my section of country, no such abundant crops have been seen for years. That irrigation would, where the conditions are such as to enable the farmer to practice it properly, be of vast benefit here, cannot be doubted. If irrigation pays in the arid parts of the West, as a matter of course it would pay here when moisture is needed by the crops. It is practiced in the State of Utah, because no rain is expected. It is not practiced, as a rule, here, because, no matter how dreadful the drought, the farmer hopes and prays for "the early and the latter rains." But if he was prepared to irrigate his arid fields, and the rains did come so as to render his artificial means of supplying water unnecessary, he would be as well or better off than the man who depends entirely upon irrigation.

Now for seven years I have practiced irrigation upon a very small scale, not as an experiment, but because I have found by experience that it was one of the most interesting, satisfactory and paying institutions within my reach.

In 1895 I formed a garden on a meadow, through which ran a never falling brook. It was a flat piece of land in the shape of a parallelogram, about one hundred yards long from east to west and about seventy yards wide. The brook approaches it from the west, the fall being east. On the south side a ditch conducts the stream along the side of the garden, and a dike on the south and west sides protect it from high water in time of freshets. It is also ditched on the other two sides, and thoroughly underdrained. The rows of vegetables run lengthways—from west to east—the direction of the fall, and the cultivation is mainly done by horses, the rows being about one hundred yards long. When irrigation is needed, by a simple and inexpensive contrivance, water is brought to the upper end, and run down the rows of the vegetables to which it is desirable to apply it until the ground is sufficiently soaked, when it is shut off—the surplus water escaping into the eastern ditch. The result has been a wealth of vegetation I have never seen elsewhere; and by this method I have succeeded in doing what I could never do before—namely, raise enormous crops of celery and late cabbage, and have English peas and spinach during the entire summer. Even last summer there were occasions when I resorted to irrigation with excellent results—e. g., when I planted celery, late beans, etc.

In dry seasons, when neighboring gardens were parched and dry, this one revelled in luxuriant verdure.

That irrigation would be far more successful when applied to grass lands in Virginia cannot be doubted. *Goochland Co., Va.* M., OF NORTHSIDE.

### IRRIGATION PROBLEMS IN VIRGINIA.

*Editor Southern Planter :*

The article in the December number of your journal, entitled "Irrigation Problems in Virginia," deals with a question which this office has been studying for several years, and it may be that our experience will be of some service in helping to answer the inquiry of your correspondent.

Speaking broadly, the investigation of this office to determine the value of irrigation in the humid portions of the United States has shown that there are few sections where, at some time during the growing season, the ability to apply water, if for a brief period only, would not secure largely increased yields; but no general answer can be returned as to whether or not this kind of irrigation will pay. It depends in part upon the outlay required to provide a water supply, the character of the water, the soil to which it is applied, and the kinds of crops grown. The best results thus far secured have come from the irrigation of crops having a high acreage value. Irrigation of small fruits has almost always proven profitable. The irrigation of rice in Louisiana and Texas and enormously advanced land values and transformed the industrial conditions of a large portion of the Gulf Coast. Prof. Waters, of the State Agricultural Experiment Station of Missouri, believes that in that State an outlay of \$200 an acre can be profitably made for the purpose of irrigating nursery stock. Ability to irrigate young trees during the midsummer drouth of that State enables them to be marketed a year sooner than would otherwise be possible, and makes them larger and of better form, so that they command a higher price.

The irrigation of small fruits has proven generally profitable in New Jersey, and the market gardeners around Boston are nearly all equipped with facilities for irrigating their more valuable crops.

The invention of the gasoline engine and the improvements made in pumping machinery are making it possible to supply water for small tracts at a less outlay and with greater assurance of success than was possible ten years ago. Hence, the number of irrigators east of the Mississippi river is rapidly increasing. The greatest progress which is being made is in the South, and it is here that the conditions promise the most satisfactory results. During the past year this office furnished advice, and in some cases prepared

plans for installing a considerable number of pumping plants by farmers, and there are a number of requests on file for assistance of this kind in the spring of 1903.

The following extract from the report of an irrigation plant, installed last summer, may be of interest to your inquirer and others. This report was furnished by Mr. Hamilton Yancey, of Rome, Georgia, who is pumping water from the Coosa river for about 400 acres of land. This pump is driven by a 35 horse-power engine, lifts water 30 feet, and has a capacity of 2,000 gallons per minute. It was not completed until July 25. The season was unusually dry, and on July 25 a field of corn planted in June was not over 4 to 8 inches in height, bleached almost white, and apparently dying. On the evening of July 25 and succeeding day this field was irrigated by running water between the rows, a considerable portion of the field, however, being flooded. Without irrigation there could have been no crop. This single irrigation produced a yield of between 50 and 60 bushels to the acre.

Another field of early corn had reached the earing stage when the pump was completed. It was suffering severely for water, the tassels bleached and the corn in twist. Four to six hours after the irrigation, the stalks gave evidence of reviving, and a good crop of corn and heavy yield of fodder were harvested. Other fields near by were cut for forage only, no ears appearing on the stalks.

Mr. Yancey writes as follows about his oat crop :

I may add, for the first time in my planting experience and knowledge, my full oat crop, after reaching a fine growth of straw, failed to make seed from the absolute want of moisture. Had I been prepared to give one good irrigation to this field of oats in the early part of May last, the yield would have practically paid for the installation of my plant.

It is believed that there are few sections in the South where it will not pay farmers or gardeners to provide for the irrigation of from one to ten acres of land. Whether or not it will pay for the general field cultivation of crops can only be determined by the conditions of each particular case. In the case of your correspondent, much will depend on the character of the soil. I question whether irrigation will produce as great an increase in yield on a Virginia farm as on the lands of the arid region. These lands are very rich in the mineral elements of plant life, because the arid climate has prevented their fertility being leached out. All that they need to become enormously productive is water. As a rule, water does not supply the elements which make land productive. It simply makes them available. If the Virginia lands are not fertile to begin with, water alone will not make them so, and I doubt whether the benefits of the silt spoken of will be as great as anticipated.

Another question which would need to be looked into would be the drainage of these lands. If there is good natural drainage, the results will be much more satisfactory than if this is lacking. The amount of water mentioned would be sufficient, and if the soil conditions are favorable, I see no reason why the irrigation of hay land would not both increase the yield and the quality of the product. Meadows are being irrigated in Italy and England at a profit, both countries in which the rainfall is equal in amount and as well distributed as in the South.

Bulletin 119 of this office contains the reports of studies of irrigation in the humid sections for 1901. It can be had on request.

Sincerely yours,

ELWOOD MEAD,

Chief of Irrigation Investigations.

Department of Agriculture, Washington, D. C.

### IRRIGATION.

*Editor Southern Planter:*

In your December issue, your correspondent from Hanover county, under title of "Irrigation Problems in Virginia," states his case in terms identically parallel to my own, even down to the ridicule of my neighbors for entertaining the "foolish notion."

Every season finds some one of my crops cut nearly half in two for want of moisture. This fact keeps the thought alive in my mind, but I still lack the "nerve" to brook all opposition and go ahead and irrigate.

My situation is: The floods and freshets in times past have graded and leveled off over 100 acres of my farm ready for the irrigator. A lift of 20 feet will put the water over the bank, and gravity ditches will carry it all over the land. I can install a plant for pumping the water with link belt elevator giving 600 gallons of water per minute for something like \$200. I have on hand the engine and wood to run it. I estimate that at a cost of 25 cents I can pump one inch of water over one acre of land. If three good floodings will make a crop in the West, where they have little or no rain to help out, it ought to make a crop here. Two inches of water at a flooding would mean six inches for the season, costing \$1.50 per acre.

Heat, light, food and water are the essentials for a full crop. The food and water are in man's power to supply. If the water is deficient, so is the crop, even though the heat, light and food be present. The question is, if \$1.50 per acre will give you six inches of water, is there not a big profit in supplying it?

Let your answer be yea or nay. I am aware that there is a great deal in the "know how" to irrigate; what it takes experience to tell when and how much water to apply. It is along this line that the Eastern Irrigator, I fear, will experience his greatest troubles. Let on the light, particularly at this point, as well as on the entire subject.

ANOTHER GREENHORN.

Rockingham Co., Va.

### OUR ILLUSTRATIONS.

We had hoped to have illustrated the live stock articles in this issue with pictures of some of the fine stock kept by Southern breeders, many of whom are our subscribers. In response to our appeals for photographs, we received very many pictures, but regret to say that they were uniformly of such a defective character that our engravers could not use them to make plates from. They were almost invariably small pictures taken with Kodak Cameras by amateurs, and it is impossible for satisfactory plates to be made from such work. We were therefore compelled to resort to other outside sources. The pictures showing cattle in three positions have been reproduced from photographs made at the Buffalo Exposition for the Department of Agriculture by one of the best animal photographers in the country. The single column pictures are from photographs or plates made for the owners of the animals, or from plates kindly supplied to us by the Secretaries of the different Breed Associations, to whom our acknowledgments are due and tendered for their courtesy. The pictures of the sheep are from photographs most kindly supplied by the proprietors of the "American Sheep Breeder," Chicago, to whose courtesy and ready response to our appeal for help we desire to tender our warmest thanks. We believe no such perfect pictures of fine stock as appears in this issue have ever before been published in any Southern journal.

### THE INTERNATIONAL STOCK SHOW, CHICAGO, 1903.

Since our live stock forms were made up and printed we have received reports of the premiums awarded at the greatest stock show ever held which has just closed at Chicago. We take the following comment on these from the *Breeders' Gazette*:

"It was a 'black year' at the show. The grade Aberdeen Angus bullock was dominant. Whether in the pavilion, in the pens or in the slaughter test, the color was 'black and all black.' Never has a breed accomplished such sweeping victories at a fat stock show. Two out of three of the breed championships by ages, the grand championship of the show, the grand champion herd and reserve for the herd, fell to the blacks within the building, while in the pens the carload lots made almost as sweeping a victory. On the block it was repeated, as five of the ten prizes for carcasses fell to the 'blackskins,' together with the championship."

The Short horns, Heretofore, Galloways were close followers of the Angus in quality in the order mentioned, and each breed was represented by remarkable exhibits. The Red Polls also made a good showing.



# THE Southern Planter

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Subscribers failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

The Date on your Label shows to what time your subscription is paid.

We invite Farmers to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

No anonymous communications or enquiries will receive attention.

Address— THE SOUTHERN PLANTER,  
RICHMOND, VA.

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A Neat BINDER for your back numbers can be had for 25 cents. Address the Business Office.

### PUBLISHER'S NOTES.

#### To Correspondents.

Notwithstanding the fact that we have largely increased the space which we usually give to communications from correspondents, we are compelled to hold over a number of interesting articles for which we have no space. The matter published will, however, we hope, be found so full of interest and instruction as to compensate for that omitted. In our next issue we will endeavor to find space for the matter held over and for such further communications as may reach us before the 20th of the month. We cannot undertake to publish any communications which do not reach us before the 20th of the month previous to the date of issue.

### A Word of Acknowledgment and Thanks.

In sending out the first issue of the 6th volume of *The Planter* we desire to offer our warmest thanks to the farmers of the South for the support they have accorded us during the year just passed. We have added more subscribers to our list than ever before were added in any single year of *The Planter's* long life, and we have received an innumerable number of letters from readers of the journal complimenting us on the work we are doing for the farmers. It would require a volume nearly as large as the year's issue of *The Planter* to publish even a selection from these letters. It is very gratifying to us to receive these commendations, and imparts a stimulus to us to endeavor to do still more for our readers in the year now beginning. We promise that no effort on our part shall be wanting to make *The Planter* still more useful to Southern farmers. We think that this issue will be evidence of this. We believe we are correct in saying that never before has any South-

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Seedsmen, - Richmond, Va.



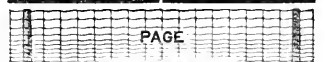
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Toledo, O.

WALDING, KINNAN & MARVIN,  
Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all druggists. Testimonials free.

Hall's Family Pills are the best.

ern agricultural journal published such a fine series of pictures of live stock as appears in this issue. They are true to the breeds represented, and finely bring out the points emphasized in the articles to which they form pendants. We trust the effect may be to arouse in readers a desire and determination to have better bred live stock, and this will certainly result in greater profit. Although we have so much to be thankful for, yet, like Oliver Twist, we still "ask for more." We want each reader of this issue to see his neighbor or friend, and show him *The Planter*, and tell him of its merits, and secure if possible a new subscriber for us. Ask him to give you 50 cents, and send the same to us with his name and address, and you can rest assured that he will, when he has read *The Planter* a year, thank you for having done him the greatest kindness, whilst we shall feel ourselves under a deep obligation to you.

**Read the Advertisement**

In this issue will be found the advertising matter of most of the well-known business houses with whom farmers have need to have dealings. We ask for these advertisements the careful attention of all our readers. We can assure our friends that there is not to our knowledge an advertisement from any house or merchant in this issue with whom

YAGER'S LINIMENT CURES PAIN WHEN NOTHING ELSE WILL.

**YAGER'S**  
**CREAM**  
Applying to RHEUMATIC JOINTS  
TRADE MARK  
Applying to SPRAIN  
**LINIMENT**  
**FOR**  
**MAN OR BEAST**  
**POPULAR**  
**SOOTHING & EFFECT**  
**QUICK HEALING POWERS.**  
IN THE TREATMENT OF DISEASES REQUIRING AN EFFICACIOUS EXTERNAL REMEDY.  
**BEWARE OF IMITATIONS.**  
PREPARED ONLY BY  
**GILBERT BROS. & CO.**  
SOLE PROPRIETORS  
**BALTIMORE, M. D.**  
U. S. A.  
REGISTERED AND PATENT OFFICE

YOUR DEALER SELLS YAGER'S LINIMENT FOR 25 Cts.

EXACT SIZE OF BOTTLE.

**TAKE NO SUBSTITUTE.**

any farmer need have any doubt whatsoever as to dealing. We exercise the greatest care at all times in keeping out of our columns the advertisements of all "fakirs" and dishonorable firms, and positively refuse to carry any advertisements of an immoral tendency, and we make it part of our duty to see that no one whose advertisement appears in our columns takes any unfair advantage of any of our subscribers. While we cannot guarantee that stock or any other article offered comes up to the full requirements of what such stock or other article should do according to requirements of any standard, yet we can and do require that it should reasonably satisfy such requirements, and if it fails to do so we do not hesitate to publish the facts and expose the advertiser, and will not in future carry his advertisements. We do not intend that any purchaser through our columns shall be imposed upon by any advertiser, and will use every means in our power to prevent this.

#### FISTULA AND POLL EVIL.

Both Fistula and Poll Evil are far more prevalent throughout the Southern States than in the North, and most forms of treatment that have been recommended have either failed entirely or cured only in occasional cases. A remedy that can be relied upon to cure these diseases is capable of saving hundreds of thousands of dollars annually to Southern horse owners. Fleming Brothers, a firm of chemists located at the largest live stock market in the world, manufacture a line of veterinary remedies that are unique in that they are made to cure the most difficult diseases and hemishes known to veterinary science. One of these remedies is Fleming's Fistula and Poll Evil Cure, which they guarantee to cure any case of either disease, no matter of how long standing. Another is for the cure of Lump Jaw in cattle. Still others cure Bone Spavin, Ringbone, Curb, Splint, Sweeney, etc. A cure for Knee-Sprung in horses is their latest achievement in the veterinary field, and this, like all their other preparations, is backed up by a positive guarantee. Readers of this paper who will write to Fleming Bros., No. 22 Union Stock Yards, Chicago, Ill., stating the kind of a case they have to treat, will receive two instructive booklets free.

When corresponding with advertisers, kindly mention that you saw their advertisement in the *Southern Planter*.

FOUNDED  
1802.

GOLD MEDALS:  
Paris, 1900. Pan-American 1901.

# Thorburn's Seeds

For over a hundred years have been universally recognized as the standard of excellence. They received the GOLD MEDALS (the highest award) both at the Paris Exposition of 1900 and at the Pan-American, 1901.

## Our Catalogue

—the 102d successive annual edition—contains a more complete assortment and fuller cultural directions than any other seed annual published. It is beautifully illustrated, not with highly colored exaggerations, but with the finest half-tones from life photographs. It contains 128 large size pages, and in addition 16 full page half-tone plates, and is in every respect and without exception the most complete, most reliable, and most beautiful of American Garden Annuals. We will mail it free on receipt of 10 cents in stamps, which amount may be deducted from your first seed order.

## Market Gardeners

are invited to send for our special price-list of high-class vegetable seeds for truckers and large market growers. It contains all sorts of approved merit.

**J. M. THORBURN & CO.,**  
36 Cortlandt Street, NEW YORK.



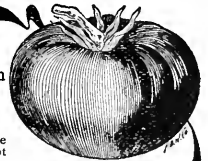
## The Tomato

never has been produced that can equal in  
flavor and fine form our

### NEW CENTURY TOMATO.

Bred and trained for years, this tomato is extra large and heavy, hardy, early, free from blight, and will not crack nor scald. Pronounced by growers remarkably solid, full fleshed and free from seed. The right size and color to bring the price on the market, it pleases the eye and brings most money. Ships and keeps unusually well. 800 bus. per acre is the record for this tomato and the seed is all controlled by us. Write to-day for our new illustrated catalogue, showing our New Leader Cabbage, Dark Fortune Cucumber, Ruby King Radish, Rocky Ford Cantaloupe, Alaska Peas, Valentine Beans, Gradus Peas, and all of our big line of garden and field seeds. It is free. Write now.

**J. BOLGIANO & SON, Dept. P 7, Baltimore, Md.**





It is easy to plant, but something more to properly care for a garden. The amateur gardener, the flower gardener and the market gardener who grow vegetables for profit will each find in this

"Planet Jr." No. 12 Wheel Hoe the best and most efficient garden tool ever offered the public. Cultivates all vegetables astride or between the rows; deep or shallow; kills all weeds; breaks up the top crust after rains; saves the soil moisture, plows, opens furrows, etc. Adjustable to various width rows. One man can do more work with it and do it easier and better than six men can do with common hoes.



They are so easy to handle that many boys and even girls operate them successfully.

This is but one of the fifty seeding and cultivating implements which we make. The list includes plain and combined Seed Sowers, Wheel Hoes, Hand Cultivators, Walking Cultivators, and One and Two-Horse Riding Cultivators, Special Sugar Beet Tools, etc. Our new 1916 Catalogue is just published. It contains over 100 illustrations with full descriptions and prices. It costs a nothing and will make you money. Write us for it.

S. L. ALLEN & CO.,  
Box 1107-X, Philadelphia, Pa.



## STEEL ROOFING

### FREIGHT CHARGES PAID BY US



Strictly new, perfect, Semi-Hardened steel sheets, 3 feet wide, 6 feet long. The best Roofing, Siding or ceiling you can see. No experience necessary to lay it. An ordinary hammer or hatchet the only tools you need. We furnish nails free and paint roofing two sides. Comes either flat, corrugated or "W" shaped. Delivered free of all charges to all points in the U. S., east of the Mississippi River and North of the Ohio River.

## AT \$2.25 PER SQUARE

Write to see prices on application. A square means 100 square feet. Write for free Catalogue No. 106.

CHICAGO WOOD WRECKING CO., W. 35th and Iron Sts., Chicago

## OUR LOW HITCH DISC HARROW



Best, simplest, strongest and most durable. Disc Harrow made of all steel. Double levers. Low hitch. Center draft. All sizes. With or without seeding attachments. Write for circulars and prices.

TOLEDO PLOW CO., Toledo, Ohio

## SEND YOUR NAME

for our special 15 day trial proposition of the **DANDY GREEN WINE CUTLER**. It is the most successful wine-making machine. It will produce you one gallon. Price \$10.00.

STRAITON Mfg. Co., 601 7th ERIE, PA.

## YOU CAN KEEP WARM WHEN OUT DRIVING AT A COST OF TWO CENTS PER DAY.

Who has not heard of the Lehman heater? The man who uses, during the winter, an open buggy or a closed carriage can make himself comfortable by its use. The cold weather is now about to visit us, and a demand for some handy and unobtrusive appliance to obviate the frigidity of the winter climate is apparent, and the less cumbersome and more useful the article the more acceptable it is. The achievement has been reached by the Lehman heater. It takes up but little room, is always ready and for two cents will keep a carriage warm for twelve hours in the depth of winter.

Twenty years ago the bulk of the people slept in a cold room, waking and dressing in it, and went forth into a practically cold house, breakfast being generally over before the inadequate furnace arrangement of those days sent heat through all the house or apartments. The consequence was that injury to health ensued. As above stated, the Lehman heater fills the bill. It should be more generally known. It is made in the solidest fashion and should be in the hands of every man who uses a horse conveyance.

There are 175,000 in use by horsemen, etc., who speak very highly of them. You cannot enjoy your ride in cold weather without one. Don't fail to write for circular and price list to Lehman Bros., manufacturers, 10 Bond street, New York, or J. W. Frringer, general Western sales agent, 297 Wabash avenue, Chicago, mentioning the *Southern Planter*.

Duane H. Nash, of Millington, N. J., who is the long time advertiser and manufacturer of the famous Acme Pulverizer Harrow, Clod Crusher and Leveler, goes further to meet the purchaser on the sale of his implement than any manufacturer we have any knowledge of. Mr. Nash will send the Acme Harrow to any man anywhere who orders, and will give him ample time to make a thorough test of its good qualities. The preparation of any kind of soil, under any and all conditions, and for any crop.

If the Harrow is not found to be entirely satisfactory in every way the purchaser may return it at Mr. Nash's expense. That is a simple, straightforward business proposition which must commend itself to the mind of any fairly disinterested man. It is further, a strong and indisputable evidence of the faith of the manufacturer in the high quality and utility of the implement which he is manufacturing.

It is not necessary, however, for us to dwell upon the quality of the Acme Harrow. It has long been advertised in these columns, and we doubt not but that hundreds of our readers have bought and are now using them with success. In all these years we have never heard a single complaint either against Mr. Nash or the Acme Harrow.

These Harrows are delivered free on board at distributing depots conveniently located, and can therefore be shipped promptly.

Write the manufacturer for prices,

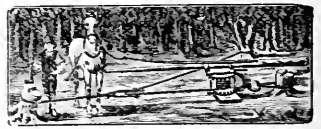
## THE IMPROVED SCREW STUMP PULLER

Write to Prices



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

# STUMP PULLERS



All Sizes and Prices. Catalogue Free.  
**MOHLAND & COMPANY,**  
BURLINGTON, IOWA.

## STUMP PULLER



Most Powerful, Handiest and Strongest Built in the World.

We make a kind to meet to suit all needs and of any desired strength. Saves time and does the work right. The operation of pulling stumps and trees by our methods is simple and easy. Send for Free Catalogue.

CHICAGO STUMP MACHINERY CO.,  
128 La Salle Street, Chicago, Ill.

## HERCULES STUMP PULLER



Clears an acre of heavy timberland each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

## FREE



From anxiety over what day you will use a **OLLEY QUEEN WASHING MACHINE**. We guarantee it to be the best. A trial machine sent at factory price. Agents wanted for exclusive territory. Write for catalogue with full description. We will surely please you.

**LYONS WASHING MACHINE CO., Lyons, Mich.**

## PREPARE FOR WAR IN TIME OF PEACE!



Whatever you intend to do about **SPRAYING** prepare for it during the winter. Order your Spraying outfit and material now and you are prepared for war.

**Knapsack  
Sprayers,  
Barrel Pumps,  
Bordeaux Mixture  
Insecticides,  
Fungicides, &c.**



**LENOX SPRAYER & CHEMICAL CO.,**  
Dpt. 11. **PITTSFIELD, MASS.**  
SEND FOR OUR BOOK ON SPRAYING

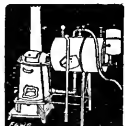
printed matter and terms of trial. Kindly say, in writing, that you saw this in our journal.

### DECEMBER EGGS.

With the cold snap of December the egg supply usually drops off; not altogether, however, from the actual cold as from change in the feeding trial of the hens. At this time more than ever, poultry needs a liberal supply of animal food to take the place of the insects and worms the hens get on the range in summer time.

The Stratton Manufacturing Company, Erie, Pa., have just issued a very attractive book, entitled "More Money From Your Hens." It goes into the question of winter feeding very thoroughly and describes in detail the Dandy Bone Cutter, a well built, substantial machine for reducing green bone to poultry food. The manufacturers make a very strong claim of excellence for the Dandy, and sell every machine with a warranty to take it back and refund every cent paid for it should it prove unsatisfactory in any way after the purchaser gives it a fair trial. It is sold at a very reasonable price and is manufactured in a variety of sizes and styles. We know that every reader of *The Southern Planter* will be interested in the Dandy catalogue. It is sent free.

### RIPPLEY'S FEED COOKER AND HEATER.



The subject of this illustration and paragraph is familiar to most of our readers. It is the combination feed cooker and heater manufactured by the Rippley Hardware Company, of Grafton, Ill.

The advertisement setting forth its uses in brief appears in another column. No reason is apparent why a machine fitted to cook food for stock might not easily be made to go a step farther and furnish heat for stock buildings. The Rippley Company seem to have caught the idea in a very comprehensive manner. The farmer would frequently use heat in the dairy, poultry and swine buildings if it could be supplied without great expense, or by connection with a fire in operation and doing duty in other lines. This Rippley Cooker, considered merely as a cooker, is one of the most practical and useful on the market. It takes on a double value when it is employed to heat water in stock tanks two or three hundred feet away; to heat dairy, poultry and other buildings; to furnish steam for such necessary uses as grinding, separating cream, churning, etc. It can be used in the yard or set up and attached to a chimney in any building. Though small and compact and easily handled, one of its special strong points is that frequent removal is not necessary, it being able to perform its numerous duties equally well at any reasonable distance. Those of our readers who are interested in feed cookers or heaters should send for the Rippley catalogue. It is mailed free on application.

## Wagon World Awheel.



Half a million of these steel wheels have been sent out on our wagons and to fit other wagons. It is the wheel that determines the life of any wagon, and this is the longest lived wheel made. Do you want a low down Handy Wagon to use about the place? We will fit out your old wagon with Electric Wheels of any size and any shape tire, straight or staggered spokes. No cracked hubs, no rotten felts, no resetting. Write for the big new catalogue. It is free.

**Electric Wheel Co., Box 146 Quincy, Ills.**



## TOP BUGGY

DIRECT TO USER

**\$33.50**

Hickory Springs, best steel wheels and Axles. Guaranteed fully.

Send for catalogue or call.

**CHAS. C. CLARK & CO., 26 S. Main St., St. Louis.**

## Get the Best

A Good Spray Pump earns big profits and lasts for years.

### THE ECLIPSE

is a good pump. As practical fruit growers were using the common sprayers in our own orchards—found their defects and then invented **The Eclipse**. Its success practically forced us into manufacturing on a large scale. You take no chances. We have done all the experimenting.

Large fully illustrated catalogue and prices on spraying—FREE.



**MORRILL & MORLEY, Benton Harbor, Mich.**

### The Beming Field Sprayer



A model implement for acreage work on Potatoes, Strawberries, Small Nursery Stock, etc. Sprayer of great utility and adjusts for wide or narrow rows.

**One Man Can Operate.**

Can be attached to any barrel sprayer and fitted to any wagon. Fitted with famous Bordeaux or Deming's emulsion nozzles. We fit everybody's needs in bucket, barrel, knapsack and other sprayers. Write for free spraying catalogue.

**THE BEMING CO., Salem, Ohio.**  
Henson & Hubbell, Western Agts., Chicago, Ill.

## SPRAY PUMPS

SAVE MONEY

BY BUYING ONE OF OURS.

They will do as much work, being all brass are lighter to handle and are more durable, will generate a higher pressure thereby making them the easiest pumps to operate on the market. Write for catalog and get the one on spraying free. Agents wanted. Mention this paper. J. F. Givford, Successor to P. C. Lewis Manufacturing Company, Catskill, N. C.

Mention the *Southern Planter* when cor-responding with advertisers.

To make cows pay, use Sharples Cream Separators Book "Business Dairying" & Cal. 305 Free. W. Chester, Pa.;

## WATER CLOSET COMBINATIONS,



Parcelin Bowl, Hardwood Seat and Tank, Nickel Plated flush and supply pipes, complete, each \$11.00.

Cast Iron Roll Rim Bath Tubs, length 6 ft. Complete with full set of nickel plated fittings, each \$11.00.

They are new goods, ask for free catalogue No. 166 on plumbing and building material.

**Chicago House Wrecking Co., W. 35th and Iron Sts., Chicago.**

### BOSTROM'S IMPROVED FARM LEVEL

Pat. U. S. 1792.

WITH AND WITHOUT TELESCOPE



Is no MAKESHIFT, but the best one made for Terracing, Ditching and Drainage. Price \$5 and \$10, including Tripod and Rod. Send for descriptive circulars and Treatise on Terracing, etc., Free.

**Bostrom, Brady Bldg. Co., 31 1/2 W. Alabama St., Atlanta, Ga.**

**LATEST** (Newton's Patent)

### Every Dehorner Guaranteed

**IMPROVED** THOUSANDS IN USE.

Ask your hardware dealer for them or write **G. H. BROWN MFG. CO., DECATUR, ILL.**

**Take Your Choice**

The **CONVEX**—very simple, quick and powerful Y-knife made. Sent on trial. Call Dehorner and other supplies. Send for catalogue. Western orders filled promptly.

**CEO. WEBSTER**  
Christiana, Pa.

## A Kant-Klog SPRAYER

We want to send into every town and county a sample of our new self-operating Kant-Klog Sprayer. No farmer, fruit or vegetable grower can afford to be without one. They increase crops both in quantity and quality, and double your yearly profit.

**TO AGENTS: \$20.00 A DAY** is what you will get with this machine. Another has sold and delivered 600 machines and has 100 more sold for later delivery. With this complete and detailed instructions we send our agents a man of ordinary ability can do as well. For further information address,  
**Rochester Spray Pump Co., 21 East Av., Rochester, N. Y.**

### Incubator Results

are what you seek. The machine is a means to an end. Poultry raisers have no other concern about machines than to get results.

### PETALUMA INCUBATORS and Brooders

are the oldest and most reliable machines on the market today. Hatch uniformly high in all climates, under all conditions. Self regulating and self lighting, supplying moisture where needed. Copper and red lead in the materials. Freight paid all over U.S. Free late catalogue of incubators and brooders. Write for it.

Petaluma Incubator Co  
Box 46, Petaluma, Cal.  
or box 46,  
Indianapolis, Ind.



### The Automatic SURE HATCH INCUBATOR

with new automatic, direct action regulator, is the best hatcher on earth. Sold at fair price on **30 Days' Trial**.

Don't experiment with untried machines. Get a Sure Hatch and be sure. New catalog, full of illustrations and valuable information.

SURE HATCH INCUBATOR CO.,  
Clay Center, Neb., or Columbus, Ohio.



### IT COSTS YOU NOTHING

to make a trial on your own premises and find out what the

#### Reliable Incubator

can do. Return it if it does not suit you. That is the guarantee we give you. It is the many special features, machinery, construction, and regulating, etc. poultry book, No. 116 for the postage. Reliable Incub. and Brooder Co., Box B-11 Quaker, Ill.

110  
Yards Poultry.



The PRAIRIE STATES 342  
KEEP AT THE HEAD. FIRST PRIZES  
More made-more sold- more prizes won than  
ALL OTHERS combined.  
Send for catalogue—just out—finest  
ever issued. Mention this paper.  
PRAIRIE STATE INCUBATOR CO.  
HOMER CITY, Pa., U.S.A.

### VICTOR INCUBATORS

Hatch every fertile egg. Simplest, most durable, cheapest first-class hatcher. Money back if not positively as represented. Write for circular. Circular free; catalogue \$1.00. Reliable Incub. and Brooder Co., Chicago, Eriol. Co., Quincy, Ill.



### WROUGHT IRON PIPE

Good condition, used short time only, new threads and couplings, for Steam, Gas or Water; sizes from 1/2 to 18 inch diameter. Our price per ton \$10.00 to \$12.00 on 1 inch 40. Write for free catalogue No. 100.

CHICAGO HOUSE WRECKING CO.,  
W. 8th and Erie Sts., CHICAGO.

### Krausers' Liquid Extract of Smoke

Smokes meat perfectly in a few hours. Made from hickory wood. Delicious flavor. Clean and odorless. No smokehouse needed. Send for circular. E. KRAUSER & BROS., Milton, Pa.



### IN THE INTEREST OF THE WHOLE PEOPLE.

Our readers will remember the Marvin Smith Company as having been the largest exclusive farm implement house in the country. Their well-known reliability and responsibility in this direction induced their many friends and patrons to write them from all sections of the country, sending in orders for goods which they did not then carry. It was this constant demand which induced them to add departments of hardware, tools, builders' supplies, builders' hardware, gentlemen's clothing all kinds, of hosiery, all kinds of underwear, gloves and mittens, cook stoves, ranges and heaters, sewing machines, tin and enamel ware of all kinds, lanterns, household supplies, trunks, valises, etc.

In looking over the catalogue, one cannot help express both surprise and wonder at the remarkably reasonable prices at which the various articles are sold. For instance, take their new High Art Colonial Cabinet, Ball-bearing Sewing Machine. The price is only \$18.95, a much better machine in every way than we had to pay \$35 to \$40 for elsewhere. Then there are such other cases of quality and value as the following: Men's full fleeced-lined heavy winter underwear at the ridiculously low price of 45c. per garment; ladies' part wool underwear, jersey ribbed winter weight with all the latest and newest conveniences and methods of making at 50c. per garment; these same goods are usually sold at 75c. or more per garment in our home stores; a boy's split buckskin fleeced-lined work or school mitten for 25c. per pair; men's split back glove, all seams welded, fleeced-lined and with patent string fastening, at 35c. per pair; ladies' dressed kid gloves in medium weight, very fine and dressy, at \$1; just about such a glove as the stores usually charge \$1.50 for.

By all means, send to these people for their latest catalogue if you have not already done so. The book is almost certain to save you money on every article which you wish to buy.

Some idea of the Incubator business is gained when it is known that over 100,000 incubators were sold last year. The use of the incubator and brooder in poultry-raising is no longer an experiment. One of the firms that got a goodly share of this business is the Hawkeye Incubator Company, of Newton, Iowa. They were well pleased with their business of last year, but to say they are feeling good over prospects for the coming season is to put it mildly. Their advance sales for 1903 already exceed the entire output of last season. The Hawkeye is used in every State in the Union, and in Canada, and in many foreign countries. No wonder, for this Company guarantees every machine to give entire satisfaction or money refunded. They even sell on 30 days' free trial, giving the purchaser an opportunity to complete a hatch before accepting his machine. By all means, write to them for their catalogue if you are thinking of buying an incubator or brooder. Address Hawkeye Incubator Company, Newtown, Ia. Mention this journal.

..ELMWOOD NURSERIES..

## ASPARAGUS

100,000 2-yr.-old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for BARR'S, PALMETTO, CONOVER.

## APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

### Splendid Assortment of Ornamental, Shade and Fruit Trees.

Splendid lot of POLAND-CHINA pign ready for shipment. Also pure BARRED PLYMOUTH ROCK, BROWN LEGHORN, BRAHMA fowls at \$1 each.

WRITE FOR OUR CATALOGUE.

### J. B. WATKINS & BRO., Hallsboro, Va.

MARK YOUR STOCK.  
Use the  
**KENTUCKY ALUMINUM EAR LABEL.**  
Made by F. H. JACKSON & Co., Winchester, Ky. Write to them for free samples.

## GRIFFITH & TURNER SEEDS

Grown strictly by ourselves for the North, South, East and West, each variety in the section which secures its highest development. We aim to have everything the strongest and best of its kind.

### WE PRACTICE NO DECEPTIONS

We do not offer \$1.00 worth of seeds for 10c, but we do give the largest and best value for the money. Our line of

FARM, GARDEN, SUPPLIES, DAIRY, POLITEY, is large and the most complete. Write for handsome new Catalogue No. 10. Sent FREE.  
Griffith & Turner CO., 205 Pa. St., Baltimore, Md.

## WINESAPS

I have for sale several blocks of the finest two-year old Winesaps Apple trees ever grown in the State. The trees are well branched and measure from five to eight feet in height. Trees are dug from the nursery the day they are shipped.

8c. each for the finest lot under 100.

7c. " " " " " " " " over 100.

6 to 7c. wholesale.

CHAS. F. HACKETT, Manager,  
Bonavista Nurseries,  
Albemarle County, Greenwood, Va.

## ..ELMWOOD NURSERIES..

# ASPARAGUS

100,000 2-yr.-old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for BARR'S, PALMETTO, CONOVER.

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WRITE FOR OUR CATALOGUE.

### J. B. WATKINS & BRO., Hallsboro, Va.

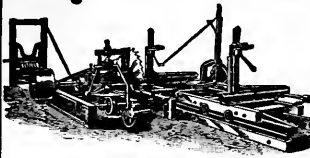
MARK YOUR STOCK.

Use the

**KENTUCKY ALUMINUM EAR LABEL.**

Made by F. H. JACKSON & Co., Winchester, Ky. Write to them for free samples.

# FARQUHAR VARIABLE Friction Feed SAW MILL,

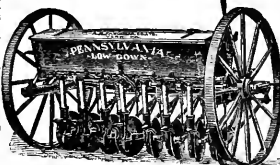


with patent feed, patent dogs and set works is the most convenient, durable, perfect in operation, and the cheapest high-class mill on the market. There are more of these mills in use than any other make, because they combine all the latest improvements. The sawyer standing in one position, controls the engine sets the log and regulates the feed of the carriage. The carriage is moved forward and backward by means of the Reamy patent feed and backing device.

**ALL ABOUT THEM IN THE CATALOGUE.**

# Pennsylvania Disk or Hoe Drill.

This Low-Down Disk Grain and Fertilizer Drill is mounted on a steel frame, giving it great strength and lightness. Each disk works independently and has an adjustable coil spring pressure of its own—enables the disk to cut its way through corn stalks, stubble, weeds, grass, etc. It is sure to put in the seed every time. Chain drive force for grain, grass or phosphate. No gear—Davis feed power from center of main axle. No bolt—saves horses' necks. Accurate grain, grass, phosphate, and land measure.



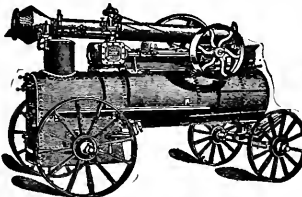
**LOW DOWN, EASY TO FILL.**

Here is a name

# "FARQUHAR"

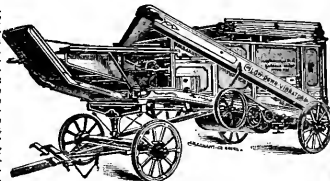
that stands for merit.

## "IMPROVED" AJAX THRESHING ENGINE.



This portable Engine is made most carefully of the best material. The Boiler is made of the best grade of boiler steel, tensile strength, 55,000 to 65,000 pounds. The steel fire boxes are strongly riveted and tested at double the strain they will ever be required to use. No Farquhar Boiler ever exploded. The engine parts are of the most improved patterns, and of the best material known. You ought to know about this engine.

## FARQUHAR LOW-DOWN VIBRATOR SEPARATOR

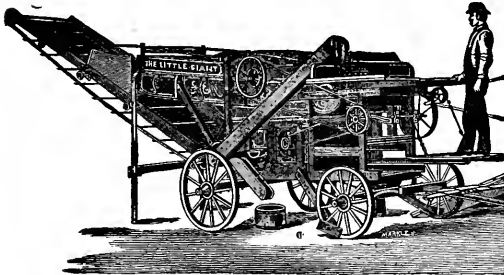


threshes more rapidly, saves all kinds of grain and chaffers in better condition than any other made. No cracking or wasting of grain. The separating capacity is very large and the machine cannot be crowded. It will easily take care of all the grain that can be put through the cylinder without wasting power. We build separators of seven different sizes, all described in the catalogue. We also make Clover Huller Attachment.

All these things fully described in the catalogue. It is free. Also full line including all kinds of farm machinery.

**A. B. FARQUHAR CO., (Limited) YORK, PA.**

The most popular Machine in use for Peanut Picking and Grain Threshing are the



# HEEBNER'S, LITTLE GIANT AND PENNSYLVANIA

Machines, and they have splendid improvements for 1903. They are built in first-class manner, and are strong and durable. The price is within the reach of all. We guarantee them to do the work satisfactorily. We will mail catalogue and testimonials, and quote prices on application.

**RUBBER, LEATHER and GANY BELTING.**

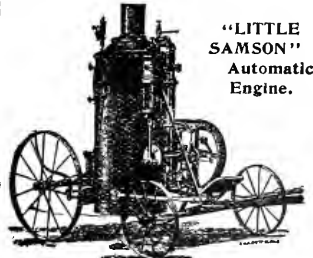
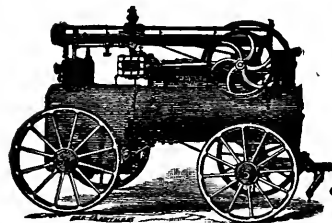
**FRICK'S "ECLIPSE" ENGINES and BOILERS.**

**ERIE ENGINES and BOILERS.**

THE CELEBRATED "CHASE" SAW MILLS

and

"DE LOACH" MACHINERY.



"LITTLE SAMSON" Automatic Engine.

This cut shows our 5 and 7 h.p. "Little Samson" Vertical Automatic Engine, for running threshers, peanut pickers, cutting feed, sawing wood, etc. Larger sizes also furnished.

**STRATTON & BRAGG, 20 and 22 N. Sycamore St., Petersburg, Va.**

# THE AGONY OF INDIGESTION

## How a Virginia Woman Was Cured.

Mrs. S. P. Thompson, of Rodophill, Va., suffered terribly with indigestion for years. Every mouthful of food was a martyrdom. Every meal was a repetition of agony—until she heard of YAGER'S SARSAPARILLA WITH CELERY. From the first bottle there was an improvement. Food began to do her good instead of injuring her health. Mealtime became a pleasure instead of a time of suffering. YAGER'S SARSAPARILLA changed the whole aspect of life for Mrs. Thompson, it has done the same for hundreds of others in similar situations. Her gratitude to the medicine does not stop with simply appreciating it—she has told her friends and neighbors of it, and of the wonderful cure it has effected in her case.

YAGER'S SARSAPARILLA WITH CELERY is working astounding cures in hundreds of towns to day. Every mail brings notable additions to the great volume of evidence already accumulated as to the curative power in all diseases of the nerves, blood and functional derangements. It is sold by all druggists, 50c. a bottle. Made by Gilbert Bros. & Co., Baltimore, Md.

## The Baby Had Croup

—one of the children had a cold; father had bronchitis; mother had a touch of pleurisy. They all took Honey Tolu, and were cured. Sold by all druggists, &c. a big bottle. Made by

GILBERT BROS. & CO.,  
BALTIMORE, MD.

HAVE YOU EVER USED  
**GLEASON'S**  
HORSE AND CATTAE  
**POWDER?**  
TRY A PACKAGE. ■

## FARMERS' BOYS AS BASE BALL PLAYERS.

It is the Farmer Boy who takes the lead in the Base Ball and Foot Ball teams of the present day, who from early childhood has gained brawn and bravery through hard work upon the farm; yet he rarely gets the credit of it, for the success of a team is usually attributed to the city lads, when, really, it is due to one or two rough farm boys who pull them through.

The fact is established by the following little story of actual occurrence:

A wail of despair arose in one of the principal Academies of the State when its base ball team was organizing for its spring work. The trouble was that young Hal Hayseed, who had been Captain of the team the previous session, had not returned, and his place could not be successfully filled. After much debating and consultation, it was decided to send a committee of three, one of the teachers and two of the boys, to visit old Farmer Hayseed, who lived not far away, and persuade him to send his son back, making him liberal offers for his tuition and advancement in study.

As they approached the farm, they found young Hayseed busy ploughing for corn in the field, dressed in his rough farm suit.

"What a pity that such a fine fellow should be thus working among the clouds," exclaimed one of the boys as they drove up.

"Yes, and to lose such valuable time from his studies," said the teacher.

"O! we must get him away from here, for our team cannot do without him," cried the third.

Young Hayseed saw the approach of his former companions, so dropping his lines, he came forward smiling and greeted them heartily.

There was no abashment in his face at being found in such menial work, but, with a manly voice, welcomed them to the farm, and took them to the house to see his father.

They found the old man busy in his garden planting seeds; he saw the approach of the young gentlemen, and guessed their errand; and though shaking his head ominously, yet he dropped his work and greeted his young visitors kindly.

The old gentleman listened respectfully to their praise of his boy, and their wish to do him great good; he was touched and surprised at such liberal offers to supply his son's place on the farm by other help, but he quickly saw that their chief object was to place him on their base ball team.

The old man now spoke plainly.  
"Young gentlemen, my son is all the help I have on the farm; if you take him, I am helpless, for I cannot supply his place; I wish to give him an education and profession, but do not intend to part with him for base ball or foot ball playing; now, ask him which he prefers, to work for me or play ball."

It was a great temptation and allurements to Young Hayseed, as presented by his gay and festive companions; and too, a great compliment to his skill at ball playing,



300  
pounds  
per acre more  
Wheat, Oats,  
Rye or Barley  
may be raised  
for each 100  
pounds of

## NITRATE OF SODA

used as a Top Dressing on the soil. Frequent trials at Agricultural Experiment Stations the world over fully prove this to be so.

Your address on a Post Card will bring you our free Bulletin "Practical Hints for the Profitable Application of Nitrate of Soda as a Fertilizer," and others full of interest to farmers.

WILLIAM S. MYERS, Director,  
12 John Street, Room 148 New York.

## SAN JOSE SCALE and other insects can be controlled by using Good's Caustic Potash Whale Oil Soap, No. 3.

It also prevents Cur Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide. 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50. Half barrels, 270 lbs., at 85c. per lb.; barrels, 425 lbs., at 85c. Large quantities, special rates. Send for circular.

JAMES GOOD,  
939-41 N. Front St., PHILADELPHIA, PA.

## FRAZER

Axle Grease Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 times any other brand. Not affected by heat. Get the Genuine.

FOR SALE BY ALL DEALERS.

## AGRICULTURAL and BUILDERS' LIME

Send for Circulars and Price-List.  
FELLSWORTH LIME WORKS  
REEVES CATT, Agent,  
Bodley, Augusta County, Va.

## S. B. ADKINS & CO.

4 and 6 Governor Street,  
RICHMOND, VA.

## EXPERT BOOKBINDERS

and Commercial Printers.



Few young men could resist such an offer, for he knew the good times and high praise his team would have in many a contest over the State; so it was some moments before he spoke after his old father had turned to him and said, "Say, my son, what is your wish?"

Drawing himself up proudly, he replied—"No, boys, I cannot leave the farm; I have begun the crop and will go through with it; I would like to be with you to struggle for the championship on the ball team, but my father needs me, and my duty is here."

His handsomely-dressed companions were silenced for a moment, and then turning in admiration of him, the teacher shook his hand heartily as he said—

"You are right, and we honor your decision, though regretting deeply you cannot be with us," so saying they drove off with rather sad countenances, while young Hayseed returned to the field and took up ploughing again.

There was a loud wail in the school when the boys saw the committee return without Hal Hayseed, and the exclamation went up—"What shall we do?"

Hal, too, felt grievously disappointed that he was necessitated to stay on the farm, yet he felt he was doing his duty and stuck manfully to his work, planted and cultivated his little crop of corn thoroughly, and it being a good season, his heart was made glad when at last he saw the crop safely housed, and was complimented by his neighbors on his success; and his satisfaction was still greater as he saw the beam of joy and gratitude upon his old father's face.

The autumn days had come, and his work laid by, and now he made a visit to his former schoolmates to see how the foot-ball team was progressing.

At the sight of Hal, the boys raised a great shout of joy, for they had just received a challenge to a foot ball contest, and were in a quandary how to fill it; but at the sight of Hal's smiling face they felt that he could help them out of the difficulty.

"Yes, boys," replied Hal to their eager question, "the corn crop is housed, and I am now free to help you. My farm work has only served to harden me for the gridiron, and I have not forgotten how to play."

It is needless to say, the challenge was accepted. Hal was given the chief position and by his skill and prowess they easily won the game.

Hal Hayseed now received many encomiums from his old schoolmates, who admired him all the more, not only for helping them, but for sticking to the farm and helping his old father first in the needs of the family. How many farmers boys are now doing the same?

Albemarle Co., Va. E. C. M.

The annual report of the Secretary of Agriculture is one of the most interesting reports ever sent out from the department. It bears evidence of being the work of a man thoroughly competent and fully conversant with all the details of agricultural life and deeply imbued with the importance of the application of science to the practical work of the farm. Every farmer should send for a copy of the report.

## Feed Your Land

with fertilizers rich in Potash and your crop will crowd your barn. Sow Potash and reap dollars.

A Fertilizer Without

# POTASH

Is Not Complete.

Be good to your land and your crop will be good. Plenty of Potash in fertilizers spells quality and quantity in the harvest.

## Our Five Free Books

are a complete treatise on fertilizers, written by men who know. They are useful to every man who owns a field and a plow, and who desires to get the most out of them. Your name on a postal will do.

## GERMAN KALI WORKS

93 Nassau Street, New York

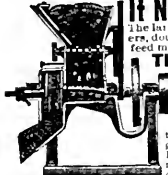


# FEED MILLS.

## EVERY MAN HIS OWN MILLER.

The latest improved. Does all kinds of work. Most durable; has ground over 15,000 bushels without repair or expense. The fastest grinder; has ground 300 bushels in 4 hours. Lightest draft and lowest price. The World's Best! Send for prices to the manufacturers.

N. M. FIELD MFG. CO., St. Louis, Mo.



**It Never Chokes**  
The latest improved, uniform rollers, double set of burrs and force feed make  
**The KELLY DUPLEX GRINDING MILL**  
the model for grinding all grains and unshucked corn. It feeds regular and irregularly more easily and faster than others. Makes excellent meal. It is most substantial, free to any grinds feed to any fineness. It most substantial, free to any power. Free catalogues you of its superiority. Write for it.  
**THE O. S. KELLY CO., DEPT. L SPRINGFIELD, ILL.**

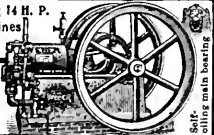
### The Old Reliable Anti-Friction, Four-Burr MOCUL MILLS.

No gearing, no friction. Thousands in use. Four-horse mill grinds 60 to 80 bushels per hour. We make a full line of feed mills, best ever sold, including the famous Iowa grinder No. 2, for \$12.50. Send for free cat. Manufactured and sold by the Iowa Grinder and Steamer Works, Waterloo, Iowa



**FRENCH BURR and ATTRITION MILLS**  
grind corn cobs and all kinds of grain. Make the best meal. Guaranteed greater capacity than any other make of mill.  
**Fifteen Days Free**  
In prova superiority. Many demands in use. Make no mistake. Get our free catalogue and price list before buying.  
**FRUIT, WALDRON & CO., Box 30 Macon, Pa.**

**The WEBER 14 H. P. Gasoline Engines**  
for cutting grinders, shredders, cutters, threshers, etc. Free catalogues give all sizes. Weber Gas & Gasoline Engine Co. Box 122 Kansas City, Mo.



**TRY IT BEFORE YOU BUY IT**  
We believe we have the best feed mill in the world. We are willing to let you prove it.  
**DITTO'S**  
Triple Gearing Ball Bearing FEED GRINDER  
is most on trial. If it is not the largest capacity, easiest running, don't buy it.  
**C. M. DITTO, Box 44, Joliet, Ill.**

**ENGINES, BOILERS AND MACHINERY.**  
When you want good reliable machinery at bargain prices, write for our catalogue. No. 166. We carry all kinds of engine (gas, gasoline and steam power), boilers, pumps, and mill supplies in general.  
**CHICAGO HOUSE WRECKING CO.**  
West 36th and Iron Sts., Chicago.



WITH THE ADVERTISERS.  
This issue contains the advertisements of the leading business firms of the country, and we bespeak for them the liberal patronage of our readers.

The Lenox Sprayer and Chemical Co., of Pittsfield, Mass., are advertising their well known Bordeaux Mixture and Sprayers for applying same, in this issue.

The famous Elk Garden herd of Short-horns is offered by Mr. H. C. Stuart. Sp. n. did chance for some good Shorthorn blood.

Polled Durhams are advertised elsewhere in this issue by Mr. J. L. Humbert, University of Va.

Look up the advertisement of the Buc-her & Gibbs Plow Co. Their Imperial Plows are already well known to numbers of our readers.

Oak Ridge Farm is offering some nice Red Polls, at right prices.

The Miller Manure Spreader is offered by the Newark Machine Co., of Newark, Ohio. Send for circulars and prices of this labor-saver.

Messrs. C. M. Armes & Co. are advertising an excellent old Virginia plantation in this issue.

Baker's Jack Farm has 150 Jacks and Jennets for sale.

Spectacles, Optical Goods and Cameras are advertised by the S. Galeski Optical Co., of Richmond, Va.

Messrs. J. M. Thorburn & Co., Seedmen, J. M. Thorburn & Co., Seedmen, 102nd Annual Catalogue to our readers. Look up the advertisement.

Mammoth Bronze Turkeys crossed on Wild Turkeys are advertised by Mrs J. J. Franklin.

The Merchants National Bank of Richmond, Va., makes a splendid showing in its annual statement published elsewhere in this number.

The Iowa Grinder and Steamer Works are new advertisers in this issue. They have a good feed mill, about which they would like to inform our readers.

C. C. Clarke & Co., St. Louis, Mo., offer buggies, etc., in another column.

Knight & Jetton, Murfreesboro, Tenn., offer Jacks and Jennets in another column.

The Biltmore Farms advertise their annual Brood Sow sale in this issue. Look up the advertisement and write for a catalogue.

Mohand & Co., Burlington, Ia., are advertising Stump Pullers in this number.

The Ohio Carrige Mfg. Co., Cincinnati, Ohio, begin the season's advertising with a card in another column.

Biltmore Standard Poultry is offered in a half-page advertisement on another page.

The Sydnor Pump and Well Co., Richmond, Va., are new advertisers in this issue. Gasoline Engines are prominent in this month's advertisement.

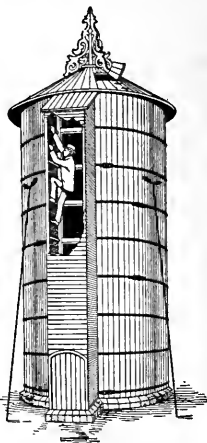
A splendid Weeder is advertised by the Keystone Farm Machine Co., York, Penna.

The Roderick Lean M'fg Co., of Mansfield, Ohio, are advertising the celebrated

# THE "LANSING" PERFECT TUBULAR SILO

IS THE BEST SILO MADE.

Continuous Doorway. Have no other.



Insist on having the Lansing. IT WILL SAVE YOUR ENTIRE CROP.

A. M. D. HOLLOWAY, Builders' Exchange, Phila., Pa., U. S. A.

Write for Catalogue and price.

**RODERICK LEAN FARM Implements**  
Made Since 1868

Made by experienced workmen of special material. Acknowledged by farmers superior to all others.  
**SOLD ON THEIR MERITS.**  
Spike Tooth Harrows. Spring Tooth Harrows. Disc Harrows. Land Rollers. Hand Carts.  
Write for catalogue.  
**RODERICK LEAN MFG. COMPANY.**  
Mansfield, O.

Wheels or Shoes on Pear.

## WANTED TO RENT

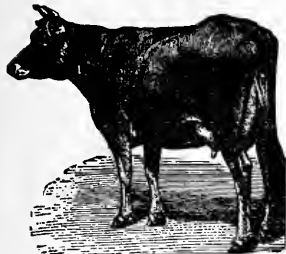
### A 2 OR 3 HORSE-POWER GASOLINE ENGINE.

Want it for 1 or 2 years, with privilege of buying. Must be as good as new.  
Address JNO. W. MARTIN Greenwood, Va.

**SHIP YOUR FURS**  
AND SHEEP PELTS TO  
**McMILLAN FUR & WOOL CO.**  
Minneapolis, Minn.  
**WRITE FOR CIRCULARS**

**READ FURS.** Write for free price-list. Read FUR AND WOOL, only paper of its kind in the world. Copy free.  
**J. E. MANLOVE, Bingham, Ill.**

# BARREN COWS



## Cows That Will Not Get With Calf.

About one cow in ten is barren. Usually large milkers have this trouble. The common cause is a weakness of the private organs, making the animal either refuse to mate at the regular time, or, if she will mate, the desired result will not be obtained. The loss from one barren cow will eat up the profit of at least five paying ones. For this trouble we recommend

## Kow-Kure

FOR COWS ONLY

Thousands of barren cows have been made to breed by the use of this great cow medicine.

HADLEY, Pa., Dec. 13, 1900.

### DAIRY ASSOCIATION:

Genlman.—I had a cow, the best one on the farm, which I could not get with calf. I fed one box of Kow-Kure and she caught the first time I drove her. Yours, A. E. McDOWELL.

Kow-Kure is in powder form, to be given in regular feed. It cures abortion, barrenness and scours, removes retained afterbirth and caked udder, strengthens the appetite, purifies the blood, vitalizes the nerves, and prevents disease. It increases the milk. It is a medicine for cows only, made by the Dairy Association, Lyndonville, Vt. Price 50 cents and \$1.00.

## The RICHMOND, FREDERICKSBURG and POTOMAC R. R. and WASHINGTON SOUTHERN R'Y

Form the Link connecting the  
Atlantic Coast Line R. R.,  
Baltimore and Ohio R. R.,  
Chesapeake and Ohio R'Y,  
Pennsylvania R. R.,  
Seaboard Air Line R'Y  
and Southern R'Y.

Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.

Lean Harrows and Roller in another column.

The Prairie State Incubator, well known to many of our readers, is offered by its makers in this number.

Nursery Stock, Strawberry Plants, etc., are advertised by W. T. Hood & Co. W. F. Allen, Franklin Davis Nursery Co., H. Lightfoot and others. Get catalogues before making up your list.

The Eureka Mower Co., Utica, N. Y., advertises a splendid line of implements in another column. Look up the advertisement and write for prices on what you need.

The Davidson Harrow Co., Utica, N. Y., which is among the largest makers of Harrows in the world, has an advertisement in this issue.

Yager's Sarsaparilla with Celery is advertised as usual in this issue. Ask your druggist for a trial bottle.

The J. A. Salzer Seed Co., La Crosse, Wis., starts the season's advertising with a advertisement in this number.

Look up the advertisement of the Standard F. C. Incubator in this issue.

Morrill & Morley, Benton Harbor, Mich., make the Eclipse Spray Pumps, and are advertising them elsewhere in this issue. It is interesting, and it gives one confidence in their goods to know that this firm were originally, as they still are, one of the largest growers of fruit in this famous section, and in using the best spraying apparatus obtainable at that time, found all open to objection as not doing perfect work. They set to work and made a machine after their own ideas, which gave such satisfaction that neighboring growers insisted on duplicate outfits. Actual test by the most practical people in the country has developed a high degree of efficiency in the Eclipse, and has made its makers one of the largest manufacturers of spraying machinery in the country.

Write for their catalogue, which embodies valuable information about spraying, and mention seeing advertisement in this journal.

### FOR BIG HATCHES.

The Reliable Incubator continues year after year to lead the world in sales, both in this country and abroad. It has long ago proved its worth. Experienced poultrymen know exactly what they can count upon when they start it; they run no risks. The Reliable is built by practical poultrymen who devote all their time and energy to the poultry and incubator business and keep constantly improving their product. The long years of experience which they have had is worth thousands of dollars to poultry raisers. A part of this experience is incorporated in the new catalogue they have just issued, and we know that every one of our readers will find it of great interest and practical value. Don't fail to send for a copy, enclosing 10 cents for postage. Address, Reliable Incubator and Brooder Co., Quincy, Ill.

Mention the *Southern Planter* when corresponding with advertisers.



Warranted to give satisfaction.

## GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Kingbone and other bony tumors. Cures all skin diseases of Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

USE FOUTZ'S HORSE AND CATTLE POWDER

A medicine which makes sick animals well, the diseased whole, the weak strong and the thin fat. It will restore lost Appetite, excite Wozms and cure Chronic Cough, Heaver, Influenza, Distemper, Hiccough, Indigestion, Constipation, Flatulency and all Stomach and Bowel troubles.

The finest of all animal vitalizers and tonics and the only one which increases the efficiency of digestibility of grain.

Get the Genuine on send us, Perchill No. 1 Free.

Sold by All Dealers.

DAVID E. FOUTZ, BALTIMORE, MD.

PRICE 75¢ PER 5 LB. CAN \$1.00 PER 10 LB. CAN \$1.75 PER 20 LB. CAN \$3.00 PER 40 LB. CAN

## Fistula and Poll Evil.

You can treat these diseases in yourself and cure them in 15 to 20 days. Fleming's Fistula and Poll Evil Cure is easy to apply, perfectly safe to use, and your money is promptly refunded if it should ever fail to cure.

### Interesting Booklets Free.

We have two booklets to send you. One tells about Fistula, Poll Evil, Spavin, Kingbone, Curb, Splint, Knee Sprung, Lump Jaw, etc., with instructions how to cure them.

The other proves that you can cure them. Write to day.

FLEMING BROS., Chemists, 22 Union Stock Yards, Chicago, Ill.

DEATH TO HEAVES GUARANTEED

Newton's Heave, Cough, Dis-temper and Indigestion Cure A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1 per can. Dealers, mail or Express. Newton's Heave & Cough Co. (T) Toledo, Ohio.

## An Old VIRGINIA PLANTATION FOR SALE CHEAP.

410 ACRES of the finest land in the State of Virginia, lying four miles north of the City of Roanoke, in the very best section of Roanoke county. This land has been worked a little but could easily be brought back to its one high state of cultivation. It sold before the Civil War, without any bid bids for \$100 per acre. There is upon it an old fashioned Virginia Mans or (rick), with ten rooms, which cost the owner when built, some thirty years ago, \$20,000. The dwelling is slightly out of repair, but a few hundred dollars spent would make it one of the finest farm houses in the State of Virginia—in fact, equal to most city mansions. Good barn, and all necessary out-buildings. The land is all level and in fairly good till, good orchard, and a well of water as cold as ice at the back door. With a couple of thousand dollars spent on this place, it can be made one of the finest farms in the State of Virginia. Owing to the fact that it must be sold in order to wind up an estate, it is offered at the remarkably low price of \$18,000.

TERMS: One-third cash, balance in one and two years. Possibly easier terms can be arranged. Any one wanting an ideal old Virginia country home will buy this property if they once see it. Write us or come and let us show you this property.

If you have any real estate for sale, no matter where located, send us description and price. We can sell it. If you want to buy real estate anywhere in the United States, write us. Your wants will be supplied.

No. 119. CHAS. M. ARMES & CO.,  
No. 213 Jefferson Street, - Roanoke, Va.

## HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.

## TO HOMESEEKERS.

### "THE BUSINESS OF FARMING IN VIRGINIA"

Is the title of a new pamphlet, issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHREER, Agt.,  
G. P. A., Lands and Immigration,  
Roanoke, Va.

## "COOLUMU" STOCK AND DAIRY FARM FOR SALE.

Large house; 100 acres land well watered and wooded, wood enough to bring the price asked for the place, 1 mile from the growing manufacturing town of Henderson, N. C. Price, \$3,500. One-half cash, balance in 1 and 2 years. Will sell cows with dairy if desired. Reasons for selling, can't look after my office and dairy job. Dr. G. TAYLOR, Henderson, N. C.

## I Can Sell Your Farm

no matter where located. Send description, title and price and we will sell it. Highest references. Offices in  
W. M. Ostrander, 1885 N. A. Bldg., Philadelphia

## MAGAZINES.

The "New Year" number of Lippincott's Magazine is a veritable mine of good fiction, containing a whole novel and nine short stories, besides several papers of timely interest, some choice verse, and fun galore in the department called "Walnuts and Wine."

The novel is "The New Heloise," by Mrs. Schuyler Crowninshield. In this there is new evidence that "Love Laughs at Locksmiths" and stone walls—even those of a French convent. There is a young probationer behind these walls seeking refuge in priestly garb from a distasteful marriage arranged by a too zealous stepmother. But he is not destined for such a life, and Love is waiting for him in the form of as charming a French girl as can be imagined. A candidate is lost to celibacy and happiness reigns supreme.

Edgar Fawcett's story, "The Resurrection of Edith," is an absolutely novel plot, both weird and fascinating. There are two Western tales: one by E. Boltwood called "A Bivouac de Luxe," and one by H. Giovannoli called "A Bull Mountain Pastoral." Both of them are so good it is difficult to pick the winner. Albert Payson Terhune contributes what may be considered his best effort, and his is a name well known in the story-writing world. It is entitled "The Man With the Shoulders." "Judith in Mackford's Entry," by Grace Rhys (wife of the English novelist, Ernest Rhys), is a pathetic story of a pretty Irish girl who was induced to go to London to better herself, and who was lured into the disreputable "Mackford's Entry." Ina Brevoort Roberts, the author of that popular novel published in Lippincott's entitled "The Lifting of a Finger," contributes a delightful tale entitled "The Decision." W. A. Fraser's story, "The Resurrection of P. I. G.," is both humorous and earnest. "A Stolen Day," by Harriet Clay Penman, is about a day's journey on the cars, with a physiological touch which is charming. Bernice C. Caughey contributes an attractive sketch called "A Fair Fee," in which a man shows how clever he can be to win the girl he loves.

The proper ripening and maturing of whiskey depends on the care and method of storage. The warehouses of the Hayner Distilling Company are of the most modern and improved style, constructed entirely of brick and steel, and equipped with the hot air system of heating and ventilating, which keeps the whiskey at a uniform temperature the year round. As a result, their 7-year old is as fully developed as 14 year-old aged in the ordinary old-fashioned way, and it's better, too, for an uneven temperature of extreme heat and cold destroys the quality and flavor.

During the entire process of manufacture, and from the time it is stored in barrels in their warehouses, until seven years later, it is bottled and shipped, Hayner Whiskey is under the watchful care of ten of Uncle Sam's government officials. It goes direct from their distillery to you, with all its original richness and flavor, carries a United States Registered Distiller's Guarantee of Purity and

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Apply to R. E. CREE, Crozet, Va.

Age, and saves you the enormous profits of the dealers. Read the Hayner Company's offer elsewhere in this journal.

### CATALOGUES.

T. W. Wood & Sons, Seedsmen, Richmond, Va. This old firm, which conducts the largest seed business in the South, has issued one of the finest seed catalogues which it has ever got out. It is replete with information of the greatest value to every farmer, trucker and gardener, and will be sent free to all who apply for it.

Prairie State Incubator Co., Homer City, Pa. This company has issued the finest catalogue we have ever seen gotten out by an incubator company. It is beautifully illustrated and got up in the finest style. It is really a work of art. All who desire information on incubators should send for it.

McCormick Division International Harvester Co. of America, Chicago, Ill., are sending out a beautifully executed pamphlet descriptive of their well-known machines. Farmers should send for this. Every detail of the machines is fully described and illustrated.

The Stover Manufacturing Co., Freeport, Ill., send out a fine catalogue of their well known grinding mills, of which they make the largest and most complete line of any company.

Aspinwall Manufacturing Co., Jackson, Mich. Catalogue of potato machinery. Every potato grower should see this catalogue.

John Lightfoot, Sherman Heights, Tenn. Catalogue of strawberry plants.

We beg to acknowledge, with thanks, the receipt of a copy of the Congressional Directory from Senator Mar. in.

The International Stock Food Company, Minneapolis, Minn., inform us that they have just purchased for \$60,000, the champion harness horse of the world, Dan Patch, 1:59! His permanent home will be the International Stock Food Farm, near Minneapolis, where his owners have built the finest barns and stables on any farm in the country. These stables follow lines which we have frequently suggested in these columns. They are practically detached from the barn and only one story in height and lighted from both sides.

Ignis Fatuus? A problem in Fuel, submitted by Edward Atkinson, Ph. D.

In this little pamphlet Mr. Atkinson suggests the possibility of the farmers heating the coal barons in supplying the fuel needed to keep the people warm and the wheels of industry revolving by so preparing corn stalks as to make them a feasible fuel. As the result of an examination by an expert, it is found that 20 tons of corn stalks and fodder is equivalent to about 14 tons of good coal. The problem is now to put this into good shape for handling on the market.

## Reg. HAMPSHIREDOWN SHEEP

Of the best breeding. One lamb weighed 145 lbs. at 5 mos. old. Prices right.

## SLATE TURKEYS

Are the most domestic, \$5 per pair.

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Fine strains and beautiful birds. Will be sold at reasonable prices. Farm bred birds and very healthy; 4 1/2 months old. A few Setter puppies a month old. For prices and particulars apply

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BERKSHIRE PIGS.

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The undersigned can furnish them in limited quantities at \$1 for 100.

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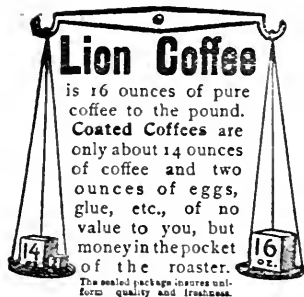
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For sale. Some from the prize-winning stock of Madison Square Garden Show 1902. Price Cocks, \$5.00; Hens, \$3.00; Pairs, \$5.00.

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Have the true Golden Hoof, and make Southern farmers more profit than any other stock. Write the Secretary of the Continental Dorset Club for information and lists of breeders.

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Bulletin 64. Sugar Cane Experiments in Cultivation.

Bulletin 67. Broom Corn—How to Grow and Cure it.

Bulletin 68. Home-grown vs. Purchased Seed.

Bulletin 69. Pecans.

Bulletin 70. Cane Borer.

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Bulletin 89. Commercial Fertilizers. University of Tennessee, Knoxville, Tenn. University Record, Agricultural Year-book.

Wyoming Experiment Station, Laramie, Wyo. Bulletin 55. The Birds of Wyoming.



**POTATOES \$2.50**  
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Largest growers of Seed Potatoes in America. The "Koral New Yorker" gives Baker's Early Wisconsin a field of 24 bu. per a. Prices dirt cheap. Minnesota seed book and sample of Tealotte, Speltz, Alacorn V. beat, 66 bu. per a. Giant Glazer, etc. also roots of 18c postpaid. JOHN A. BALZER SEED CO. La Crosse, Wis.

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1 and 2 years old, grown exclusively from imported seeds, at \$5.00 per 1,000

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By prize-winning imported sires and trained dams. Eligible. Fit for bench, ranch or farm. Price, \$10, either sex. Also a book on the care and training of the Collie for all practical uses. Price, 50c. Copy of book free to purchaser of Collie.  
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## HARRIER-BEAGLE PUPPIES,

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Registered P. Chinas  
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1 to 6 yrs. old. Fine Jacks a specialty. Write for what you want.

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## FINE JACKS.

Mules are equal to Gold Dollars, from "youth to old age." Several nice ones and 2 very fine Jennetts for sale. Buy Jack now and get him ready for spring. Write your wants to

L. L. THOMAS,

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## 150 Jacks, Jennets & Mules 150



Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell two Percheron stallions at close figures.

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Fine Jacks A Specialty

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## JACKS.



Raise mules and get rich. 200 line Black Spanish Jacks for sale. 14 to 16 hands high. Good ones and money makers. Cheaper now than later on. Stock guaranteed.

Also some fine large Jennys and mules.  
Write for prices.

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## 70 EWES TO SELL, also 1 REC. DORSET BUCK.

The ewes are native grade Merinos, and bred to one of the finest registered Dorset bucks. They are all in fine condition and perfectly healthy, and none over three years old. Also 1 registered Dorset Buck, a very fine animal.

G. E. CONNELL, M. D., IRWIN, VA.

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OAK RIDGE, NELSON, Co., VA.

As Mr. T. F. Ryan wishes to make this a stock farm with thoroughbred cattle to benefit himself as well as afford a good opportunity to all Virginians to improve their stock. I wish to say that we have

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## Red Poll Bull Calves

For sale at reasonable prices. Their ages range from 4 to 11 months old. Write or come and see them.

AD. C. RUCKER, Sup't.

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Virginia (Hampton Institute), Hampton, Va. Nature Study Leaflet, No. 7. Beautifying School Houses and Yards.

Virginia Weather Bureau, Richmond, Va. Report for November, 1902.

West Virginia Experiment Station, Morgantown, W. Va. Bulletin 83. Poultry Experiments.

West Indian Bulletin, Bridgetown, Barbados. Vol. III, No. 3.

West Indies. Agricultural News, Barbados, November 22, 1902.

The Petaluma Incubator Co., of Petaluma, California, to keep pace with the enormous growth of its business, has within the last few weeks not only completed a large three-story brick building as an addition to its factory by which the capacity has been more than doubled, but has also opened a large store and warehouse at 33 Market Street, San Francisco. The latter move was made to not only aid in the sale of Incubators and Brooders but to enable them to better handle all the various lines of goods for which they are Pacific Coast and Export agents. Mr. L. C. Byce, President of the Company, is accredited with having done more to advance the poultry interest than any man in the world, and whose personal efforts has made Petaluma and vicinity the greatest poultry raising section in the United States.

The factory and main office at Petaluma is in charge of Mr. Byce, Mr. R. C. Gray, General Manager, Mr. H. R. Campbell, Manager of Poultry Supply Department, while the Eastern House at Indianapolis, Ind., is directed by Mr. E. S. Coming, the Vice-President, and Mr. C. H. Taft, Secretary of the Company, is in charge of the San Francisco business.

"PRINCE RUPERT" COMES TO  
"ANNEFIELD" FARMS, BRIGGS,  
CLARKE COUNTY, VA.

Mr. Ed. Gay Butler, proprietor of the above farms, has just purchased and brought home the splendid Hereford bull "Prince Rupert." This bull has for the past two years been at the head of the prize-winning herd of Mr. W. H. Curtice, Eminence, Ky. While Mr. Butler paid a pretty long price for him, we consider him fortunate in being able to secure him for his splendid breeding establishment in the Valley of Virginia. We hope to show a picture of him in our next issue and also give an extended pedigree and a record of his winnings. Look up Mr. Butler's advertisements of Berkshire and Herefords elsewhere in this issue.

Cannon Snow & Co., of Quincy, Ill., are advertising with us this issue their book of plans and instructions by which any one who is handy with tools can build an incubator of 200 egg capacity at a cost of about \$8.00. This is less than half the usual price and includes their furnishing the parts difficult to make, such as lamp, regulator, etc.

Now is a good time to begin, as the hatching season will soon be here. Write for full particulars. Address as above.

## DISPERSION SALE SHORTHORNS



OWING to pressure of business engagements in other directions, which will occupy me very closely for some time to come, I have decided to disperse the ELK GARDEN HERD of Shorthorn cattle, with the exception of two bulls and six or eight females. I do not care to hold an auction sale and therefore propose to offer my cattle at private treaty, either as whole or in lots to suit purchaser; preferring to close out on one buyer.

The herd now numbers about 90 head, consisting largely of straight Scotch families, such as Duchess of Gloster, Rose of Strathallan, Miss Ramsden, Mina, Lavender and other noted Scotch tribes. There are also some fine Scotch-topped and double Scotch-topped cattle founded on such valuable Bates-topped families as Young Mary, Renick Rose of Sharon, Kirklington Duchess, etc. My Scotch families were the pick of Canada. Our younger cattle are mainly the get of Knight of the Thistle 108636, and cows now in calf to the pure Scotch bull Elton Royal 108375, a splendid yearling of the Princess Royal tribe.

The cattle are in good breeding condition, having been on grass without grain since April.

H. C. STUART,

ELK GARDEN, - RUSSELL CO., VA.

## ELLERSLIE FARM

Thoroughbred Horses

AND SHORTHORN CATTLE,

Pure Southdown Sheep  
and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,  
CHARLOTTESVILLE, VA.

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## SHORTHORNS.

Choice bull and heifer calves for sale. Will make price very low for next 60 days.

JAMES F. CLEMMER, Summerdean, Va.

## "HORNLESS SHORTHORNS"

A POLLED DURHAM BULL is the Model De-horned. A FEW CHOICE BULL CALVES of this most popular breed for sale.

J. L. HUMBERT, Charlottesville, Va.

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Three pure-bred

## ANGORA BUCKS

Price includes crating and delivery on cars at Columbia, Va., C. & O. R. R. A good flock of Angoras can be built up by using pure-bred bucks in crossing with common does.

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ANGORA GOATS are handsome, hardy and profitable. For large outline address E. W. COLE & CO., Keaton, Ohio.

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In England or America.

Stock for sale at all times.

Correspondence Solicited.  
Inspection Invited.

EDW. G. BUTLER, Annetfield Farms,  
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# V. P. I.

## Farm Bulletin

We are offering some nice **BERKSHIRE PIGS**. Let us have your orders early. Choice stock; prompt attention.

D. O. NOURSE, Prof. of Agr.  
Blacksburg, Va.

## POLAND-CHINAS

Closely related to such famous hogs as Anderson's Model, Model of 97 and Hands Off. Pigs, boars, gilts and breed-stocks for sale. Also some good **SHORTHORN** bull calves and **SHROPSHIRE** sheep. Stock guaranteed as represented or money refunded.

F. DURRETT, Birdwood, Albemarle Co., Va.

## CHOICE Poland China

Pigs, both sexes, 3 mos. old, not akin, for sale, sired by "G. I. E. S. 8" son of "F. C. S. 2nd" and "MOORISH PERFECTION 3rd," grand-dad of "CHIEF PERFECTION 2nd" from "F. C. S. 2nd" and "FREE TRADE" sows.

Reg. **P. F. HERON FILLY** 3 yrs. old, in foal to line bred back Registered Brilliant Stallion—good size and style, good worker and sound.

THOS. R. SMITH, Lincoln, Loudon Va.

## Large ENGLISH BERKSHIRES

M. B. TURKEYS Very Fine.

B. P. R. Chicken Eggs in season.

HAWKLEY STOCK FARM,

J. T. OLIVER, Allen's Level, Va.

## Ayrshires, Berkshires and Oxford-Downs.

Ayrshire calves of both sexes, Berkshires pigs and boars, and 2 Oxford-Down Rams For Sale. MELROE CATTLE FARM,  
ENOS H. HESS, Manager, Casanova, Va.

## THE DAIRYMAN'S TRIUMPH.

The following is from an address delivered by Mr. John Gould at the recent meeting of the New York Dairyman's Association:

The farmer of a century ago was a cypher among the industries; now he is able to buy four times over, all the other industries combined. Some single States make butter enough in one year to buy all the gold mined in the United States in twelve months. The American farmer owns 400,000,000 acres, divided into 5,700,000 deeded farms, not including ranches valued at \$16,500,000,000. His buildings are worth \$4,000,000,000; machinery \$500,000,000; live stock, \$400,000,000. In 1900 he produced \$3,000,000,000 worth of farm produce, and has on deposit in savings and other banks of the country \$2,000,000,000, practically equal to the present money circulation of this country. On these 7,500,000 farms last year the farmer raised 91,400,000 acres corn, worth \$751,000,000; 40,000,000 acres wheat, worth \$323,000,000, while the gold and silver of the mills only yielded \$153,000,000 or 900,000,000 less than these two crops. The cotton crop was worth \$465,000,000, and the tobacco crop far beyond \$100,000,000. The dairyman's income was \$447,000,000 more than the output of the gold and silver mines. Besides, there are 18,000,000 cows, 18,000,000 horses, 61,000,000 sheep, 62,000,000 hogs, 50,000,000 other stock—one-fourth of all the domestic animals in the world. The wool clip last year was 162,000,000 lbs.; cotton made, 9,500,000 bales. Of our surplus exported \$844,000,000 from the farms, while from all other sources the exports amounted to \$556,000,000; in other words, for every \$100 we exported, \$63 came from the farms, making us a creditor nation.

The farmer, in addition to feeding himself with every farm food indigenous to the United States, eating 1,000,000,000 lb of butter and 540,000,000 lbs. of cheese, sent to the various nations of the earth \$8,400 worth of farm produce for each living inhabitant of the nation. Farming from 1853 went forward with a bound. Land values doubled; villages sprang up; the whole land was covered with a network of railways. It put machinery into every department of farm work; it made a net-work of telegraph wires overhead; it sent the over-populated East flying to occupy the great prairie lands of the West; the "wild cat" currency and "red dog" banks were driven into oblivion, and currency was made forever safe and good. This revolutionization had a beneficial effect on the dairyman who has basked in its golden sunshine ever since. His \$10 to \$15 cow became worth \$25 and \$30; his 3c. cheese—sold now green weight—for 5 and 6 cents cash—no more store pay—and he was placed in the way of invention, improvement and progress. Science and literature came to his aid, as did most profound and wise investigators and chemists. What was this force, this influence and expanding power? The discovery of gold in California. In the five years from 1849 that new province turned into the coffers of this land more

## FINE STOCK AT A BARGAIN.



One eight year-old brown mare, Hackney and Trotter cross, fine driver, gentle handsome and stylish, very fast; weight, 1,200 lbs. Price, \$175. Worth double that money on any city market.

One fine, reg. Aberdeen-Angus bull calf, six months old, very finely bred.

Nine head beautiful, reg. Angora Goats; One Buck; Price, \$20 Six Does; Price, \$12 each. Two Buck Kids; Price, \$10 each. Lump price of nine goats, \$100.

Two fine, reg. Dorset Ewe lambs, about 1 yr. old. Price, \$10, each.

One Scientific Grinding Mill, nearly new, made by Foss Manufacturing Co., Springfield, O. Price, \$25.

Address W. M. WATKINS & SONS,  
Cottage Valley Stock Farm,  
Randolph, Charlotte Co., Va.

## ABERDEEN-ANGUS

Bull calves, \$40 to \$80, heifers 5 to mos. old, \$75. Limited quantity

## NEW SIBERIAN MILLET

Seed at \$1.50 per bush; this millet will produce a crop of seed and a fair quantity of hay at the same time. It is fully two weeks earlier than the German millet, of finer quality, but will not yield quite as much.

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## ANGUS BULL CALVES

Registered and unreg. red. Stock first-class, and breeding the best.

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First class yearling rams, and ewes of all ages. Several FINE FARMS for sale.

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One Young  $\frac{3}{4}$  Guernsey Bull.

Age 2 $\frac{1}{2}$  years. Gentle; in good condition; a fine animal; weight about 1000 lbs. Also, over

## 20 EWES

From One to Three Years Old,

from my two Registered Southdown Rams, White Knight, No. 963; and Zeb. Vance, No. 1287, and one fine DORSET FWE 7883, RECO-D, and a few CROSS DORSET and SOUTHDOWN EWES, from my Registered Do. set Ram, No. 8006. For prices, particulars, etc., address, enclosing stamp,

L. G. JONES Bethania, N. C.

## FOR SALE.

Large English Berkshire Hogs, Bred Plymouth Rock Chickens

BEN. BOLT, 6077, 400 lbs. as a yearling at head of herd, 42 EGGS IN SEASON.

JOHN P. FOSTER, Noe creek, Ohio Co., Ky.



# HEREFORD CATTLE

ANNEFIELD HERD OF REGISTERED ANIMALS

HEADED BY

## Prince Rupert, No. 79539

Winner of the Grand Sweepstakes at Kansas City, 1901. Sired by the famous herd bull Beau Donald, No 58996. Grandsire Beau Brummel, No 51817.

The herd is rich in "ANXIETY" blood, the most desirable and sought after breeding to-day. Stock for sale at all times. Inspection invited. Correspondence solicited.

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SECOND LARGEST

## JERSEY HERD

IN AMERICA. FOUNDED 1832.

BULL CALVES and for the first time, Heifers bred to Imported Golden Peter, and Heifer Calves and a few aged Cows.

BERKSHIRES, all ages, bred by Imported Storm King, or Imported Esau 2nd, Size, good shape and large litters.

Visitors welcome. Address for Book of The Farm, or prices

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ASA B GARDINER, Jr., Manager

### Swift Creak Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

### JERSEY BULLS AND HEIFERS.

Note better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25 00 Heifers, same age, \$35.00. POLAND-CHINA PIGS, \$5.00 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

**FOR SALE—Special Bargain in Reg. HOLSTEIN-FRIESIAN BULL.**

To avoid in-breeding, I will sell Lord Fitch, No. 22855, H. F. H. B.

W. W. HARPER, - ORANGE, VA.

than \$270,000,000 in gold, and on its strength the nation took on a new lease of life. From that day we ceased to be a people of barter and exchange, and became one of cash on delivery. It was the dairyman's first triumph! After 1852 the dairy became an industry; before, it was a struggle. Even in the fierce war of '61 came the cheese factory. Hardly a State to-day but has its Dairy Association, and the best statisticians place the number of milk cows at 18,500,000, the income from these dairies being approximately \$600,000,000—double that of any other farm industry.

The dairyman and his brother farmer have possessed the land of this country and covered it with their flocks and herds and increased the producing power of the soil four-fold, so that while in 1850 they had only \$500,000,000 worth of live stock, in 1900 they were valued at \$4,000,000,000. This has forced the semi-dairy farmer to market surplus abroad, so that last year of our surplus we supplied nearly 30 per cent of the meat and 18 per cent of the grain Empire consumed outside of Russia.

Dairying has become a science and an art. Not a practice of 50 years ago now exists in the dairy, save hand milking. Four distinct lines of dairy breeds have been made prominent in our dairying, while 10,000 dairyman have mixed all the breeds together and produced the general purpose cow, whose purpose is to eat all she can lay lip to and give in return as little, aside from her company, as possible.

It is computed that we are now pro-

## READERS OF THE PLANTER

In want of a PIANO will find it to their interest to write to us. We assure them there is such a thing as buying an honestly made instrument at a moderate rate price.

We make CASH and TIME SALES, and are willing to take full payment in Stock and Farm Products.

Write and state your wishes.

F. W. WALTER & SON,  
STAUNTON, VA.

FOR SALE.

## JERSEY BULL.

A. J. C. C. Emperor Nero, No. 54171.

LEGHORNS, White, S. C. Brown, R. C. Brown.

WYANDOTTE COCKERELS. Price, \$1 00 per head, three for \$2 50.

Address

J. B. JOHNSON Clover Hill Farm, Manassas Va.

**RUPTURE** CURED while you work. You pay \$1 when cured. No cure, no pay. ALEX SPEITZ, Box 844 Westbrook, Maine.

Mention the Southern Planter when corresponding with advertisers.

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## Poultry Yards Department.

More than 50 matings of prize-winning standard birds from which we will ship a certain number of sittings. WRITE FOR SPECIAL EGG CIRCULAR.

**Plymouth Rocks,**  
White and barred.

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Golden, Silver and White.

**Leghorns,**  
S. C. White and Brown and lt. C. White

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**Light Brahmas,**

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**Black Minorcas,**

**M. Bronze Turkeys,**

**Buff Cochins,**

**Pekin Ducks,**

**Cor'sh Indian Games**

**W. Holland Turkeys.**

### **WE ARE FOR 1903**

On a larger scale than ever.

Sending out better birds at more reasonable prices.

More than ever anxious to please customers.

OUR YEARLY SALES for the last three years have nearly doubled themselves each year over that of the preceding year.

## **BILTMORE FARMS, - BILTMORE, N. C.**

### Headquarters for GOLDEN LAD JERSEYS,

Also get of TREVARTH and GEN. MARIGOLD. ❄ ❄ ❄

**GOLDEN LAD'S SUCCESSOR,** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



### BILTMORE POULTRY YARDS.



**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO BILTMORE FARMS, BILTMORE, N. C.

# Third Annual Brood Sow Sale,

## FEBRUARY 3, 1903.

# ***BILTMORE FARMS***

The demand for Biltmore Berkshires during the last year has made it almost impossible to reserve a sufficient number of high class individuals to make up a sale list. Therefore we decided rather than disappoint the many breeders that yearly select foundation stock and out-crosses from these offerings, to make a special importation for this sale.

This IMPORTATION represented nearly a month hunt over the whole of England, and we would willingly retain the larger part of the sows, but realize that this is impossible without hurting the sale.

All are choicely bred and guaranteed safe in pig; and moreover, this will probably be the last chance to select from so many Imported animals, as we hope next year to confine the sale to sows of our own breeding.

---

**The entire importation of 65 head will be sold without reserve.**

---

**They are the tops representing our first choice from the most successful English breeders.**

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**English Live Stock Papers say "this is the choicest, largest and most costly purchase of Berkshires that has ever left England."**

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**All guaranteed safe in pig to such great boars as Loyal Berks, The Duke Imported, Royal Carlisle (First Prize at the English Royal Show), Manor Faithful, etc.**

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**Every Sow either sired by, out of, or a producer of WINNERS.**

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Take a Winter Tourist's Ticket at  $1\frac{1}{2}$  fare for the round trip, to Asheville. Money refunded to all purchasers of \$125.00 worth of stock or more. If you cannot come send a mail bid to the Farms, or write for Mr. W. R. Harvey, one of the most noted expert judges of America, who will be present in person, to select you, in his opinion, one of the best bargains of the sale within a certain limit.

---

**CATALOGUES OUT SHORTLY AFTER JANUARY 1st.**

ducing 1,400,000 lb. of butter annual ly, and about 500,000 lb. of cheese, in addition to the milk trade, and are exporting practically a thing, while even in 1880 we sent abroad 127,000,000 lb. of cheese and 40,000,900 lb. of butter. Why this change? Because, with education and skill, with cold storage and better ways of handling, we are now making our butter and cheese so much finer that we are consuming it at home and saving freight and commission. It is safe to predict that we shall soon be importing no inconsiderable proportion of the butter and cheese we consume. At present, no market in Europe can pay Jamestown prices for these commodities.

To the dairyman, new influences outside of the dairy are coming to help him and make his country life one of higher attainments. The dairying of the whole country is in a rapid state of transition, not only in labor but in profit. The dairy man has now rural mail delivery, the telephone, the trolley; and, better and grander than all, with far wider-reaching influences, is the centralized country school, that gives the dairyman's boy and girl the best English education at their own homes and associated with home and rural influences—the very thing which makes for national morality and loyal citizenship, the stability that shifts the balance in our oft rocking ship of State, and again puts her on her course with level keel.

#### VERIFIES THE CLAIM.

WYTHEVILLE, Va., Feb. 1, 1902.

Newton's Heave and Distemper Cure is the best medicine I ever had in my stable. It does exactly what you claim. Others here say the same thing.

Yours respectfully,

M. M. SUTHERLAND,  
Dealer in Horses.

#### GRIND YOUR FEED.

We need not urge upon our readers again the importance of grinding feed for live stock. All farmers recognize its economy. We do want to urge, however, the importance of getting a good grinder of your own, and desire to call especial attention to the offer of G. M. Ditto, of Joliet, Ill., to send one of his triple geared, wall bearing grinders to any responsible farmer on approval. You try it before you buy it. The Ditto Mill is well and favorably known throughout the country, and we believe our readers will be interested in the attractive literature Mr. Ditto sends us out.

#### PRIZE WINNINGS

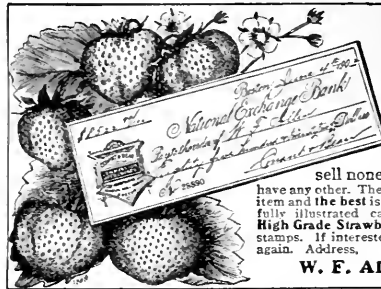
AT RICHMOND SHOW 1902

I received 1st on pen, 1st on hen, 1st and 2nd on pullets, 3rd on cockerel.  
Choice cockerels, \$2 to \$5. Hens and pullets, \$2 to \$5. Write me your wants, I can please you. Eggs \$2 per 15 in season.

C. G. M. FINK, 1409 W. Leigh St., Richmond, Va.

**WE PAY \$26 A WEEK** And expenses to men with rigs to introduce Poultry Compound.  
IN THE NATIONAL MFG CO., Parsons, Kan.

**\$24 WEEKLY** Paid to collect and collect near home. BULLUCK'S LEGAL BUREAU, Indianapolis, Ind.



## THIS CHECK

and several smaller ones

I received the past season for Strawberries (not plants). That was because I have only the best. It pays to get the best. I

sell none but the best. I can't afford to have any other. The cost of plants is comparatively a small item and the best is none too good. I will send my beautifully illustrated catalogue with lithographed covers of High Grade Strawberry Plants by return mail for two 2c stamps. If interested send to-day. This will not appear again. Address,

W. F. ALLEN, Salisbury, Md.

### SUNNY HOME HERD OF

## ABERDEEN-ANGUS CATTLE.

—SIRES IN SERVICE—

EULALIES LADDIE 41861 assisted by BARON ROSEBERRY, THE WESTERTOWN ROSE son of GAY BLACKBIRD (the sire of Gay Lad).

Most of the leading families of the breed—Coquet Queen Mother, Westertown Rose, Rose of Adno, Newsgay, Violets etc.—sired by such noted bulls as Gay Blackbird, Ermoor 18171, by Royal Eye; Eulalies Eye 13568, by Heather Lad 2nd; Bean Bill 13637; Baron Ida 20184; Dark Prince \*0693.

Quality combined with best of breeding, our motto.

No fancy prices, but business cattle at business prices.

Write for what you want.

A. L. FRENCH, PROPRIETOR, FITZGERALD, N. C.  
Rockingham Co., 24 miles south-west of Danville, Va. on D. & W. Ry.

### \* GLEN ALLEN HERD OF \*

## ..ABERDEEN-ANGUS CATTLE..

Headed by ALLENHURST KING IV 47199,

Assisted by VICTOR G., No. 37693.

I am now offering for sale a few choice young bulls of serviceable age, at a bargain. Any one wanting bulls from prize winning families at a moderate price, will save time and money by calling on or addressing

GLEN ALLEN STOCK FARM, W. P. ALLEN, Prop., Walnut Hill, Va.

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## Farmers Mutual Benefit Association.

A Fire Insurance Association, chartered by the State for the farmers of Virginia, under an amended and well protected plan.

Insuree, against Fire and Lightning, only country property—no stores or unsafe risks. Average cost per year for three years has been \$3.63 per \$1000, including dwellings, barns, produce, &c.,—about one-third the usual cost of insurance to farmers. Amount of property insured \$325,000. Estimated security in real and other estate, \$600,000.

For further information, address,

CHAS N FRIEND, General Agent  
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An open garden. Top small and flesh tender, juicy and mild. Color rich scarlet.

The Ideal Radish for either Gardener or Amateur.

Six cents will plant a 100 yard row. Write for our FREE illustrated catalogue, describing full line of Rocky Ford cantaloupe, Alaska Peas, Valentine Beans, Gradus Peas, Field and Garden Seed, Bulbs and Plants.

Write now. J. Bolgiano & Son, Dept. P. 5, Baltimore, Md.



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Don't be imposed upon by dealers selling implements made in imitation of the famous Iron Age brand. All the IRON AGE tools are MARKED WITH THE FULL NAME. The name is for your protection. It is a guarantee of best materials, best ideas, best workmanship, and all the merits that have made Iron Age tools popular with three generations of farmers and gardeners. Write for a FREE copy of the NEW IRON AGE BOOK, telling all about these marvelous labor-savers, and giving prices on Cultivators, Horse Hoes, Seed Drills, Wheel Hoes, Riding Cultivators, the Improved-Robbins Potato Planter, &c.

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### BOOKS AND PAMPHLETS.

A B C of Bee Culture. A Cyclopaedia of Everything Pertaining to the Care of the Honey Bee. By A. I. Root. Revised by E. R. Root.

We have lately received the 1903 edition of the A B C of Bee Culture, an illustrated encyclopaedia devoted entirely to the subject of bees. To all who are interested, or those who want to know more about bees, we are sure that this book will be a real help, and we are glad to recommend it as being many times worth its cost. Price, \$1.20, postpaid. It can be obtained from the publishers, The A. I. Root Co., Medina, Ohio, or we can supply it at the publisher's price.

Ginseng. Its cultivation, harvesting, marketing and market value, with a short account of its history and botany. Revised, greatly enlarged and brought down to date. Illustrated, 144 pages, 5x7 inches. Cloth. Price, postpaid 50 cents. Orange Judd Company, New York.

The impetus given to the American Ginseng industry, through the appearance of the first edition of the book, has been almost phenomenal. Ginseng growing has made such rapid strides and the demand for information has increased so greatly that a second and extended edition has become necessary. The information contained in the present volume, which is nearly three times as large as the first, has been culled from a largeness of material and is, decidedly, the best that has appeared since ginseng culture first attracted attention in America. Every detail bearing upon successful ginseng growing is fully and minutely elaborated; and the author is confident that ginseng culture will grow in proportion to the application of intelligence to it. To any one intending to embark into this industry this book must prove invaluable. We can supply the book at the publisher's price.

Coffee Planting, a short treatise compiled with special reference to the conditions of culture in Cuba and Porto Rico. By Joseph Hillman. Published by Wm. S. Myers, Director Chilean Nitrate Propaganda (nitrate of soda), 12 John street, New York.

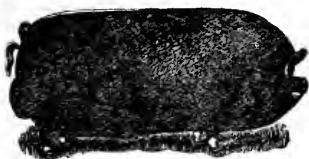
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## SIR JOHN BULL'S PIGS.

All testify to his prepotency, nor is

### UNCLE SAM

Unlike him in strong points of transmission or reproduction



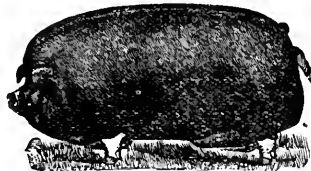
Every pig I ship has individual merit, aside from the purest English strain of LARGE BERKSHIRES that I could import from the most famous breeder in England.

**LET ME HAVE YOUR ORDERS PROMPTLY FOR FALL SHIPMENT, at Farmers' Prices.**

**HUNTING DOGS and PUPS FOR SALE.**

**THOS. S. WHITE, Fassfern Stock Farm, Lexington, Va.**

## POLAND-CHINAS.



TECUMSEH G. 49283.

Have sold out all pigs on hand and am now hooking orders for pigs from my spring litters. Have a limited number of **YOUNG SOWS** in pig **FOR SALE.** Address

**J. B. GRAY, FREDERICKSBURG, VA.**

**FOR SALE—Three Finely Bred**

## BERKSHIRE BOAR

**PIGS; ready the latter part of January.**

**FOREST HOME FARM, Purcellville, Va.**

### NO POETRY IN CATTLE BUSINESS.

"The cattle business does not offer opportunities for poetry now," said a sunburned Westerner to his Wall St. friend the other day. The two men were taking luncheon together at a downtown restaurant, and as the waiter spread the cloth the city man remarked:

"What could a poet ever do out in your wild West, except be a tenderfoot and an easy mark, as we say now-a-days?"

"Well, what I meant was that ranching is not such a romantic and picturesque business now as some writers paint it," was the reply. "There was a time, before I was baldheaded, about thirty years ago, or perhaps less, when the cattlemen had no fences to their pasture grounds. They simply branded their cattle, and once a year they went out and rounded them up. Each man then singled out the cattle of his mark, and then came a long drive to the railroad. These early ranchers thought that they owned the prairies by divine right.

"About fifteen years ago a change came. Hundreds of thousands of emigrants came pouring in, the great majority of whom were from Scandinavian countries. The opening up of the Indian lands of Oklahoma and its division into smaller farms took away many a hundred square mile from the old pasture lands. At the present time a cattle-raiser must fence in his property, own it or lease it, and by irrigation get as much vegetation out of it as possible. His cattle are carried away from his barns by express trains, in refrigerating cars, and everything is systematized as in a department store."

"Well, I shouldn't think a poet could get very fervid over refrigerated beef," was the answer, as the Wall St. man drank a glass of iced spring water.

### UNDERGROUND WATER.

In the Eastern part of the country the value and extent of underground waters are illustrated by the enormous quantity used in the city of Savannah, Ga. In 1888, the entire supply of the city was drawn from wells yielding 5,850,000 gallons a day, a total for the year of 2,135,842,000 gallons. In the course of time, this supply somewhat diminished, and it was suspected that the flow was obstructed in its entrance to the wells. The pipes were accordingly flushed by forcing into them water under high pressure, and the flow was markedly improved.

The study of underground water in its relation to the effective water supply of the country is one of the most important departments of the work of the United States Geological Survey. It is carried on in the arid regions, where water for irrigation is of the greatest value; in the Middle West, where grazing and successful farming largely depend on it, and in the East, where an unpolluted supply for domestic and municipal use is yearly becoming a more serious problem.

One of the greatest triumphs for an ambitious young man is to learn to be contented, to be satisfied with doing a good honest day's work; to be contented to live humbly, if necessary, while his neighbors roll in wealth.—*Success*.



## TWO CROP ESSENTIALS

are cultivation and keeping down weeds. More important than deep cultivation is keeping the surface stirred, breaking the crust due to rains, and allowing the light, air, moisture and warmth to penetrate quickly to the roots of the growing plant. For doing just these things the ideal implement is the

## KEYSTONE Adjustable Weeder and Shallow Cultivator.

It kills the weeds at first showing, the top soil is pulverized and kept mellow, the plant roots are not disturbed and the moist soil is not brought up to dry in the sun. Adjustable in width. Narrow to 30 inches, widens to 7½ feet. Strong, runs steady, no cumbersome shafts. Furnished either with round teeth or with flat to suit different soils, as we are licensed by the Hallock Weeder Company to use their famous flat teeth. Weeder booklet mailed free. We also make 10 styles Corn Planters, 12 styles Cultivators, 20 styles Corn Shellers, hand and power, Harrows, Field Rollers, Feed Cutters, etc. Write for catalogue C.

KEYSTONE FARM MACHINE CO., 1554 N. Beaver St., York, Pa.



## EUREKA MOWER CO.

MANUFACTURERS OF

**MOWERS, CULTIVATORS,  
CORN PLANTERS, POTATO PLANTERS,  
WEEDERS,**

And other implements. Send for Catalogue and Prices.

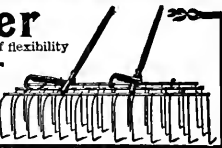
UTICA, N. Y., U. S. A.

## A Perfect Weeder

in all soils, under all conditions. The all important feature of flexibility of teeth is near perfection in the **YORK IMPROVED**.

Made of square spring steel with round points, and set staggered in strong but flexible angle-iron frame. Wide clearance, no clogging, teeth too strong to break. Multiplies producing qualities of soil and does not whip or bruise growing plant. Adjustable handles and shafts. Write for free descriptive circular.

Spangler Manufacturing Co., 501 Queo Street, York, Pa.



## CISMONT DORSETS..

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices reasonable.

G. S. LINDENKOHLE, Koswick, Albemarle Co., Va.

## HOLSTEINS THAT PAY.

Purchasers are offered selections from our herd, both male and female; our cows are of the leading strains, including De Kols, Pauline Pauls, Mechthildes Hengervelds, Nether and, Aggies, etc., etc. They are all well bred and milking from 40 to 65 lbs. per day. Herd headed by Ury ALWINA Count Paul De Kol and DeKol 29 Butter Boy 3rd No. 2.

THOS. FASSITT & SONS, Ury Stock Farm, Sylmar, Md.

# THE BUCHER & GIBBS PLOW CO.,

CANTON, OHIO.

MANUFACTURE A FULL LINE OF

**PLOWS** in all sizes; **SPIKE-TOOTH, SPRING-TOOTH** and **DISC HARROWS**; **ONE-HORSE CULTIVATORS**, and **LAND ROLLERS**.



This popular Plow is made strong and durable. Gives satisfaction to the farmer.

Our full line of goods for sale by



**THE IMPLEMENT COMPANY,**

Catalogue Free.

General Agents, 1302-1304 E. Main St., RICHMOND, VA.

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## Cardwell Machine Co.,

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# AGRICULTURAL IMPLEMENTS AND MACHINERY.

THRESHERS, HORSE POWERS, CORN PLANTERS, CORN SHELLERS, SMITH WELL FIXTURES, GENUINE SMITH STRAW CUTTERS, PEANUT MACHINERY, BALING PRESSES.

**Tobacco Machinery, Trucks, Screws, Elevators, Hand and Power, for Stores, Factories and Warehouses.**

Successors to J W. CARDWELL & CO. and H. M. SMITH & CO.

### WHAT WOMEN CAN DO FOR THE PUBLIC SCHOOLS.

You can first visit the school and see that the house is clean before the session opens; that there are enough seats and hooks, or nails, for hats, wraps and lunch bags; that there are a pail for water, drinking vessels, basin, towels and soap; that the yard is clean, and some shrubs and trees planted, with vines to screen out-buildings. If the yard is muddy, and especially if it be the red mud, be sure to have a walk made, and a few boards will help a great deal. Place on the walls one or more good pictures. Copies of the world's master pieces can be had for a penny each, and large pictures for from five to twenty five cents each. But do not degrade the school-room by filling it with trash; better a perfectly bare room than one filled with tawdry decorations covered with dust. Start a library.

I have been in many comfortable homes where the only books were a few old school-books, the Bible, and the Almanac, and it is no wonder that we have suffered at the hands of the historians when this is true. Help the teacher by aiding in and arranging for social evenings and entertainments at the school house. Visit the school and interest others in doing so. The women of the State can do for the school-houses a work similar to that which they have done for every church, and the hopes of all good women will be realized just in proportion to the rational development and the steady progress of the civilizing work of churches and schools. — Mrs. C. D. McIver in an Address to North Carolina Federation of Women's Clubs.

### LATEST GOVERNMENT MAPS OF NORTH CAROLINA.

Two excellent maps of portions of North Carolina have recently come from the press of the United States Geological Survey. One of them, that of the Williamson quadrangle, shows a section of Bertie, Martin and Pitt counties and that portion of Roanoke Valley between Hamilton and Williams'ons. The other, that of the Cranberry quadrangle, shows the extreme northwestern portion of the State in the heart of the Blue Ridge, and includes portions of Mitchell, Caldwell, Watauga, Ashe and Wilkes counties, N. C., and of Carter and Johnson counties, Tenn. Grandfather Mountain, with an elevation of 5,964 feet, is the highest represented on the sheet, but many others are seen to reach the 5,000-foot elevation.

Both these maps are unusually accurate in detail, showing all roads and trails and even indicating the locations of dwellings in the country districts. They employ contours, or lines of equal elevation, to indicate the topography, which gives vivid impressions of the shapes and slopes of hills and mountains, and especially in the Cranberry quadrangle.

### INNOVATION.

It was Communion Sunday in a church where little Dorothy had never before attended. On the way home she said to her mother:

"Well, mamma, that is the first church I ever was in where they served refreshments." — *January Lippincott's Magazine.*

# ORDER EARLY

If you want to get a new buggy and want to have it made to your order you should send for the mammoth catalogue of our

**SPLIT HICKORY VEHICLES**

at once. It will tell you about our 100 exclusive styles of vehicles made of second growth split hickory—split, not sawed—any of which will be made as you want it

**30 DAYS' FREE TRIAL**

and send you on returnable after trial if not just as you expected. We have satisfied thousands and can satisfy you.

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is the biggest buggy bargain in the world. Described in full in our catalogue. Send for that catalogue before you lay down this paper.

**OHIO CARRIAGE MFG. CO.,** Station 41 Cincinnati, O.



## CASTALIA HEREFORDS...

The breeding cow and herd bulls at "Castalia" have been selected with one aim; **THE BEST, REGARDLESS TO COST.** Herd headed by the \$3,000 imported **SALISBURY**, assisted by **LAWS, JR.** I have now for sale a very fine bunch of bull calves by these bulls, also a few females. Visitors are welcome and met at station.

Write your needs.

**MURRAY BOOCOCK,**

**Keswick, Va.**



## BACON HALL FARM.

# HEREFORD REGISTERED CATTLE

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no Sale.

**E. M. GILLET & SON,** - Glencoe, Maryland.

**C. C. Taliaferro,**  
**NASONS,**  
**VA.**  
**1902**

**"MOUNT SHARON REGISTERED HEREFORD CATTLE"**  
**"BRONZE TURKEYS & MUSCOV DUCKS"**  
**"STOCK FARM."**  
**REGISTERED SHROPSHIRE SHEEP**  
**REGISTERED POLAND-CHINA PIGS.**




**NOW OFFERS FOR SALE**

**HEREFORD CATTLE.**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "St Edward" \$25 to \$40.

**SHROPSHIRE SHEEP.**—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 and \$12. Ewe Lambs, July delivery, \$8 and \$10.

**POLAND-CHINA PIGS.**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, 6 or 8 months and over, \$15 to \$20.

**ST. BRONZE TURKEYS.**—Toms, \$4. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

**MUSCOV DUCKS.**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25; trios, \$3.

**BARRER PLYMOUTH ROCKS.**

**ROUEN GEESE.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.00.

**WILLIAM L. JR., No. 2166, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.**



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in Richmond, the BEST MARKET for all grades of Tobacco. It is the home of sun and air cured Tobacco and headquarters for flue-cured and shipping types. Here are located the head offices and stemmeries of all the large corporations, Regie representatives and the largest number of independent factories and buyers in the United States.

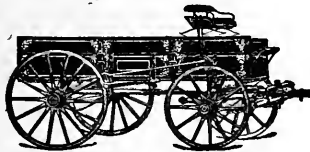
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Has the largest lighted space, insuring equal attention to every pile. Ample accommodations in every way for all our customers.

Correspondence solicited.

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RIGHT HERE  
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The HUGHES BUGGY CO.,  
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These vehicles are guaranteed to be as good as can be bought elsewhere; material and workmanship unsurpassed; all sizes and styles, prices low. We can save you time, money and freight by purchasing our vehicles. Send for our illustrated catalogues. Drop in our warehouse and inspect our stock. Inquiries cheerfully answered.

**RICHMOND BUGGY & WAGON CO., 1433 E. Main Street, RICHMOND, VA.**

**J. T. DUNN, Manager.**

## A RELIABLE SEED HOUSE.

We trust that none of our readers will overlook the seed advertisement of the Griffith & Turner Company of Baltimore, Md., which is running in our columns. We believe it contains a suggestion which cannot but be helpful in selecting seeds for the new crop. Aside from the imperative necessity of changing seeds from time to time, bringing something new to the same old soil which constitutes the farmers' plant for a generation, it must appeal to every one as being the wise thing to procure the seed from that particular region of country where that particular kind of seed reaches its highest development. Right here is where the Griffith & Turner people come in. They make a study of seeds and seed-growing in connection with climate and from the region there any particular kind reaches its best form, in that region they grow and bring their supply to their Baltimore house, and are thus enabled to furnish to patrons in any part of the country what is certain to be the most profitable seeds to plant. This policy has been a most advantageous one to the company, resulting in recent years in a most rapid extension of their trade, particularly through the Northern regions. The firm is perfectly reliable and painstaking. Anyone writing for their catalogue, which is mailed free, may rest assured that he is about to deal with a firm whose chief concern is to supply seeds which will produce the very best results.

Every boy born in the world should be put in the way of maintaining himself in honest independence. No education that does not make this its first aim is worth anything at all. The being able to do something is of infinitely more value than the ability to answer questions.

More and more is it coming to be seen that the industrial hope of the South is in a wider dissemination of scientific, technical and manual education, in making universal, so far as may be, that knowledge of the forces of mechanics that will lead to the development and mastery of the material resources that still lie slumbering in the depths of our hills and fields and forests—this is the supreme need of our impoverished Southland.—*Prof. C. C. Thach, of Alabama Polytechnic Institute.*

## THE WORST PUNISHMENT.

"De punishment what Dives—de rich man—got down yonder is wasser than fire," said the colored preacher.

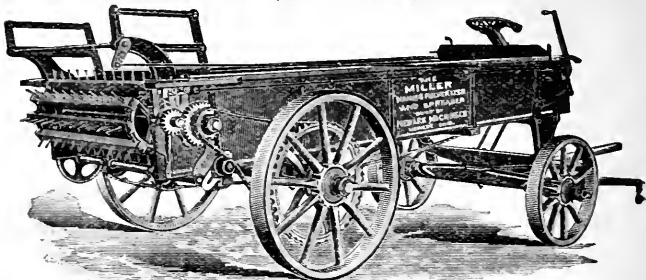
"How come dat, parson," asked a member of his flock.

"Disapp'intment," was the reply. "Ever' time he hear a rumblin' noise overhead, he 'low ter hissef it's thunder en it's fixin' ter rain en ter put de fire out; but Satan des chuckle ter hissef, en say ter 'im: 'Brace up, ole man!—dat ain't no thunder; it's only yo' frien' Latherus enorin' on Abraham's bozzam.'"  
—*Atlanta Constitution.*

A NEAT BINDER for your back numbers can be had for 25 cents. Address the Business Office.

## The Miller MANURE SPREADER and PULVERIZER

Is a machine every farmer should have. It will **SAVE YOU** its cost in a short while, IT MAKES FRIENDS WHEREVER SOLD.

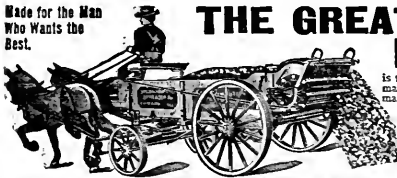


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THE NEWARK MACHINE CO., - Newark, Ohio.

Mention the SOUTHERN PLANTER when you write.

Made for the Man Who Wants the Best.



## THE GREAT WESTERN Manure Spreader

is the only Spreader **ENDLESS APRON** and made that has an endless apron and many advantages which it possesses. It always in place and ready to receive the load without any turning back either by hand or complicated, costly broken machinery. The front and rear axles are of same length, with the

**Broad Tires Prevents Rutting** of fields, meadows, etc. and makes

**LIGHT DRAFT. SPREADS ALL KINDS OF MANURE** wet, dry, frozen, light, chaffy, packed or caked. Spreads lime, plaster, wood ashes, cotton-seed and hulls, etc. Can be changed instantly to spread thick or thin while the machine is in motion—3 to 25 loads per acre. Has the only successful **END GATE AND BEATER AND HOOD PROTECTOR IN USE.** Made of best material in every way under a **POSITIVE GUARANTEE** as to quality, capacity and durability. All parts breaking within one year will be replaced without charge. Write for free Illustrated and Descriptive Catalogue—the best and most complete spreader catalog ever published.

**SMITH MANURE SPREADER CO., 59 N. JEFFERSON STREET, CHICAGO, ILL.**

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Berkshire Hogs, young boars ready for service, and Pigs in pairs or trios not akin. Large, young Bronze Turkeys. A few Plymouth Rock and Brown Leghorn Fowls. All the above stock ready for shipment now.

A FEW BEAUTIFUL FOX TERRIER PUPPIES AT \$5 EACH.

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## BLACK-LEG-INE

Pasteur Blackleg Vaccine ready for use. **EACH DOSE SEPARATE.**

Single Blacklegine (for common stock): 10 dose box, \$1.50; 20 dose box, \$2.50; 50 dose box, \$6.00. Double Blacklegine (for choice stock) \$2.00 for 10 doses, first lymph and second lymph inclusive. Blacklegine Outfit for applying Blacklegine, 50 cents.

## Pasteur Vaccine Co.,

CHICAGO - NEW YORK - FT. WORTH - SAN FRANCISCO.

## AGRICULTURAL CHEMICALS AND FERTILIZERS.

The ammoniate market is steady and firm. Continued inquiries from the South are being reported, but the business as yet has not developed very large proportions. Nitrates are inclined to be stiff, but quotations are generally unchanged. The demand for fish scrap and dried blood continues active, while the supply is not large.

### AMMONIATES.

Nitrate of soda, spot, per 100 lbs.....	\$2 05
Nitrate of soda, futures, 100 lbs.....	1 95
Cottonseed meal, ton, c. i. f. N. Y.....	28 00
Sulph. ammonia, spot.....	3 00
Sulph. ammonia, shipment.....	2 97 1/2
Dried blood, New York grades.....	2 47 1/2
Dried blood, Western, high grade, fine ground.....	2 60
Fish scrap, at New York.....	2 55 & 10c.
Tankage, per unit.....	2 60 & 10c.

### PHOSPHATES.

Acid phosphate, per unit.....	60
Bone black, spot, per ton.....	17 00
Ground bone, per ton.....	23 50
S. C. phosphate rock, ground, per 2,000 lbs.....	5 50
S. C. phosphate rock, undried, f. o. b. Ashley River, 2,400 lbs.....	3 25
do. do do. dried.....	3 50
Florida, high grade phosphate rock, f. o. b. Fernandina, per ton.....	7 60
Florida land pebble phosphate rock, f. o. b. Fernandina, per ton.....	4 50
Tennessee phosphate, f. o. b. Mt. Pleasant, domestic.....	3 50
do. do. do. foliage.....	4 00

### POTASH.

Kainit, future shipment, per ton.....	3 05
Keiserit, future shipment, per ton.....	7 50
Mur. potash, 50 p.c., future shipment.....	1 80
Double manure salt (48&49 per cent. less than 2 1/2 per cent. chlorine), shipment, per lb.....	1 00
Basis 48 per cent.	
High grade manure salt (90&93 per cent. sulphate potash) shipment.....	2 09
Basis 90 per cent.	
Manure salt in bulk, 20 per cent. per unit, O. F.....	64
Journal of Commerce (N. Y.) Dec. 29, '02. [Only highest prices quoted.—S. P.]	

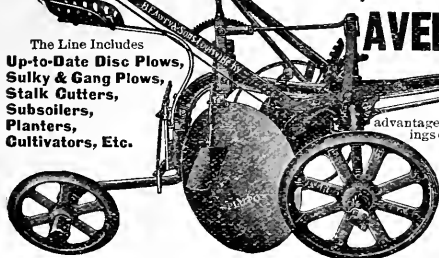
### THE GROWING WHEAT CROP.

On December 4, it was pointed out that while most of the recognized private authorities were indicating a wheat acreage smaller than last year, the actual area was probably not much short of that seeded last year, and much larger than that harvested. The report of the Department of Agriculture issued on the 10th, more than confirms this position, it placing the acreage seeded at 34,000,000 acres, against 32,000,000 seeded last year, and 27,000,000 harvested. This actual increase in breadth comes as a surprise and is at variance with all other information. The official estimate of area was certainly too low for the last crop, and it is quite possible that some correction of past figures is involved in the present estimate. To illustrate the difference that now exist in crop-reporting circles,

## 1903. Farm Right and Prosper.

The farmer's genius is shown and his prosperity measured by what he works with.

The Line Includes  
**Up-to-Date Disc Plows,  
Sulky & Gang Plows,  
Stalk Cutters,  
Subsoilers,  
Planters,  
Cultivators, Etc.**



## AVERY'S Labor-Saving TOOLS

have the modern idea, make your lands yield the most with least labor, give you such advantages as money makers in other callings enjoy. Write our nearest house about any Labor-Saving Implements you require.

**B. F. Avery & Sons,  
Manufacturers,  
Louisville, Ky.  
Memphis, Tenn.  
New Orleans, La.  
Dallas, Tex.**

## JERSEY CATTLE

Bred from high-testing St. Lambert Cows.

## LARGE YORKSHIRE HOGS.

The BACON BREED now leading all other breeds for making high-priced bacon.

**INDIAN GAMES**—The king of table fowls.

**WHITE WYANDOTTES**—The best general-purpose fowl.

**WHITE LEGHORNS**—All sold out.

Address

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## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

**Reg. BERKSHIRES** From noted strains, Imported Headlight, Lord Highclere and Sunrise.

## DORSET SHEEP.

**B. PLYMOUTH ROCK CHICKENS**, Fifteen Cockerels for sale.

N. and W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

## "THE OAKS" SHORTHORNS FOR SALE

2 Reg. Bull Calves; 2 Reg. Cows; 1 three-year-old Reg. Bull (immune) raised south of Petersburg, Va. All right in every particular.

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## RIPPLEY'S Improved Steam Cookers

Combination for cooking feed heating, Pottery, Hog and Dairy houses, heating water in stock tanks or cooking feed 200 ft. from Cooker. Are made of boiler steel; no fires to rust or leak. Can be used outside or in house. Safe as a stove. Will cook 25 bu. of food in 2 hrs. Used and endorsed by Wis., Ill., Va., Ga. and Ont. State Experiment Stations. First premium 50th Annual Trans. Exposition. Highest honors at Tex., Ill., Ind., O. Wis., N. H., Ia. and S. Dak. State Fairs. See sample catalogue sent them. We manufacture 5 styles, 15 sizes of Cookers. Prices \$5.00 to \$45.00. We pay freight on Steam Cookers. Cooker and Breeder's Supply Catalogues and prices mailed free.

RIPPLEY HARDWARE CO., Cooker Mfrs., Box 70 GRAFTON, ILLINOIS.



it may be pointed out that the Kansas State report shows wheat seeding 3.7 per cent. less than last year, while the bureau shows an increase of 8 per cent. Illinois reports 5 per cent. less, government 6 per cent. more, Missouri reports 10 per cent. less, government 11 per cent. more.

**SOUTHERN ARTISTS.**

MARY WASHINGTON.

After writing a series of articles on various Southern artists, such as Allston, Sully, F. Hopkinson Smith, and others, I received some belated intelligence of a few others of which I will make, as it were, a *codicil* to my former articles. One of these artists is Mr. J. D. Woodward, a native of Virginia, though he has been for several years a resident of New York, when he has not been in Europe, adding to his culture in art. His pictures are well known in the exhibitions in New York, as well as in other art centres, and he enjoys a very good standing in his own school.

Mr Woodward is a landscape painter, mostly in oil, but has done a great deal of work for the publishers in black and white, notably for the Appleton series of "Pictureque America, Europe and the Holy Land," besides contributing illustrations to a number of other publications.

Mr. Woodward's parents lived and died in Virginia, and his brother and nephew are still prominent merchants in Richmond.

Amongst the many objects of interest in the Confederate museum in Richmond, Va., may be mentioned a set of water-colored pictures (twelve in number), by Mr. Wm. Shepherd, a Richmond (Va.) man, illustrating the life of the Confederate soldier. The subjects are as follows:

- The Meas Boy.
- Running the Blockade on Chesapeake Bay.
- Newspaper in the Trenches. 1864.
- Sunday in Camp in 1861.
- Opening of Spring Campaign.
- Company O. Stragglers.
- News from Home.
- Wounded Comrade.
- Reveill e.
- A Last Parting.
- Equipment in 1861 (black and white).
- Then there is an oil painting of Mr. Shepherd's, representing an artillery fight, and called "Virginia."
- In addition to the artistic talent and skill Mr. Shepherd has put into these pictures, he has furthermore had the advantage of having had an intimate personal knowledge of the scenes he portrayed, by which means he was enabled to depict them in a far more life-like manner.

Richmond has also produced a female artist of talent, Miss Adele Williams, who is perhaps the best known Virginia artist of the younger generation. Her work ranks high, especially in pastel portraits.

I regret that I have only been able to procure such meagre information about the above-named gifted lady, but suffice it to say she is an artist who does great credit to the South.

# ACME Pulverizing Harrow

## Clod Crusher and Leveler

### SENT ON TRIAL

SIZES  
3 to 13 1-2 Feet.

Agents  
Wanted



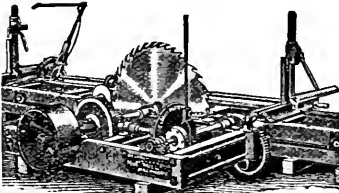
To be returned at my expense if not satisfactory. The best pulverizer — cheapest Riding Harrow on earth. We also make walking Acmes. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes. Made entirely of cast steel and wrought iron — indestructible.

Catalog and Booklet, "An Ideal Harrow," by Henry Stewart, mailed free. I deliver free on board at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, etc. Address DUANE H. NASH, SOLE MANUFACTURER — MILLINGTON, NEW JERSEY. PLEASE MENTION THIS PAPER.

## POPULAR TOOLS FOR MARKET GARDENERS

<p><b>SEE SEED DROP</b> In Plain Sight Double Wheel uniform and perfectly regulated depth disc-plate apart.</p>	<p><b>NEW UNIVERSAL</b> Double Wheel Single Wheel Hoe Hoe, Cultivator, Plow and Rake, for between row cultivation. Runs Easily.</p>	<p><b>NEW UNIVERSAL</b> Drill &amp; Cultivator The only implement made which can be used as seeder and cultivator. 1 or 2 rows. Quickly changed.</p>
<p><b>POPULAR PRICES.</b> 100 catalogues of latest styles now ready. Terms</p>	<p><b>NEW UNIVERSAL</b> High Arch Expansion Wheel combined. Adjustable to any depth of cultivation.</p>	<p><b>NEW UNIVERSAL</b> Wheel Plows. Three styles. For Gardeners and Builders.</p>

**AMES PLOW COMPANY, 56 MARKET STREET, BOSTON, MASS.**  
FOR SALE BY GRIFFITH & TURNER CO., BALTIMORE, MD.



## Farmers' \$125 Saw Mill.

Cuts 2000 ft. lumber a day with only 4 h. p.

Our large, handsome catalogue tells all about the famous DeLoach Variable Friction Feed Saw Mills, 4 to 100 h. p., \$125 up. DeLoach Saw Mill Machinery, Planers, Shingles, Lath and Corn Mills, Water Wheels, etc. Write for catalogue and price f. o. b. your depot. DELOACH MILL MFG. CO., Box 600, Atlanta, Ga. (Branch, 120 Liberty St., New York.)



# Japan Plums

And all other desirable standard and new varieties of PLUMS, APPLE, PEACH, PEAR and ORNAMENTAL TREES, SHRUBS, ROSES, Etc.

## HEADQUARTERS FOR TENNESSEE PROLIFIC STRAWBERRY.

The Most Reliable Variety Ever grown in the South.

Three hundred and fifty acres under cultivation. Write us if you contemplate planting Catalogue free.

AGENTS WANTED. WRITE FOR TERMS.

**W. T. HOOD & CO.,**  
OLD DOMINION NURSERY. RICHMOND, VA.

# Latest Improved FARM IMPLEMENTS.

## HAND POWER CUTTER.

These machines sell at sight. They have heavy fly wheels and make three cuts to each turn of the crank. They will cut hay, straw or fodder, and will cut from  $\frac{3}{8}$  to 2 inches. They are shipped K. D., securing the lowest possible freight rates.

## LITTLE GIANT CORN SHELLER.

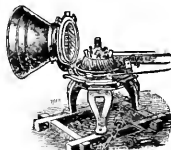
The frame is made of thoroughly dry hard wood. The joints mortised, tenoned and bolted. The bearings are bolted on to the frame instead of screwed. The iron work is made from the very best material, every piece is carefully inspected before being put on. This machine is high-grade all the way through. It is handsomely painted, striped and varnished.

## "SCIENTIFIC FEED MILLS, All Sizes."



### The SCIENTIFIC Grinding Mills.

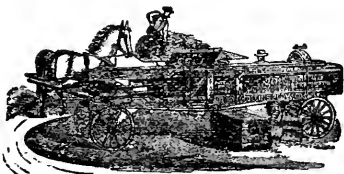
Are unequalled for grinding ear Corn, shucks on or off, Corn, Oats, Wheat and all other grains, single or mixed.



### POWER MILLS In Five Sizes, 2 to 30 horse power.

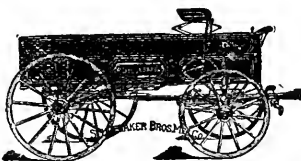
## "SCIENTIFIC SWEEP MILLS In Five Sizes."

Gearèd—plain and combined, with horse power.



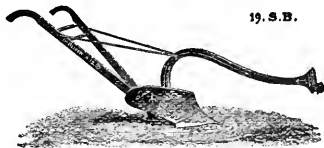
### ELI BALING PRESSES.

58 styles and sizes. For horse or steam power. Write for prices and catalogues.



Special prices given on Studebaker and Brown Wagons, Buggies and Carts.

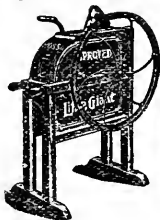
Studebaker Buggies, all styles, Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.



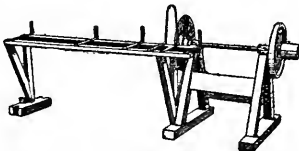
19. S. B.



Steel Lever Harrows.



Buckeye Force Pumps.  
Porcelain Wood Pumps.  
Wood and Steel Wind Mills.



Wood Saws for Long or Short Wood. Wood or Steel Frame.

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Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



Bennett's Improved Stump Pullers.

Three sizes and 10 styles. Write for catalogues and prices.

Write for special catalogues and price on any implements wanted.

Wood Harrows—All sizes.  
Disc Harrows—All sizes.  
Spring Tooth Harrows—All sizes.  
Acme Harrows—All sizes.  
Harrows of all styles kept in stock at lowest net prices.

**DON'T FORGET!** All the merchants in town who claim to sell Oliver Plows and Repairs only sell the Imitation, Bogus, Cheap Goods. The only place in Richmond, Va., to buy Genuine Oliver Plows and Repairs is at 1436 and 1438 East Main Street, from

**HENING & NUCKOLS,** Successors to CHAS. E. HUNTER, 1436-38 E. Main Street, RICHMOND, VA.

## CHRISTIAN SCIENCE.

A colored man, who worked for a white man who believed in Faith Cure, Christian Science, or whatever it is called, was an hour or so late reporting to work one morning. His employer, upon inquiry, was told that he was detained at home on account of the illness of his brother. The Christian Scientist ridiculed the idea of the brother's illness, and said:

"Henry, your brother is not sick. He just thinks he is sick. If he will just use his mind, exercise his will-power, decide that he is not going to be sick, and will have faith in God, he will get right up, and you won't have to use any medicine."

This was all new and strange doctrine to Henry, but he did not think it wise to get into any kind of argument with his boss, so he scratched his head and said nothing.

The third day after this conversation, Henry remained away from work the entire day. When he reported for work the next morning, his employer said: "Well, Henry, how is your brother today? Does he still think he is sick?"

The colored man replied: "No, sir; we buried him yesterday. I reckon by this time he thinks he's dead."—*SLAS X. FLOYD, in January Lippincott's Magazine.*

## A PRUDENT SALMON.

Kitty Collins is a Newfoundland fish-wife whose sharp tongue and dealings have made her a celebrity the length of the East Shore. The man or woman is yet to be born who can beat her on any trade which savors of fish.

She lives in one of the out-ports and brings her fish to St. John's to market.

Early one spring she brought the first salmon of the season to the house of the Bishop to sell. It was a fine salmon weighing eight pounds, and the Bishop was so pleased that he gave her not only the high price she asked for it, but a little extra to show his appreciation of Kitty's enterprise.

When the salmon was dressed it was found to be stuffed with about two pounds of gravel. The Bishop was angry that the fish-wife should dare try her tricks on him, and demanded that he should be notified when she appeared again.

Kitty was not long in making a return trip.

When Kitty stood before him, the Bishop, terrible in his righteous wrath, thundered:

"What do you mean, woman, by selling me a fish filled with rocks?"

"Oh, but, sir, your Grace," replied Kitty, smiling and unruffled, "don't you remember that last gale, sir? He took on ballast, your Grace."—*CAROLINE LOCKHART, in January Lippincott's Magazine.*

## PIT GAMES.

BLACK DEVILS and RED HORSES.

I have a choice lot of Cocks and Stags for sale cheap, write for prices, Figs. 21 per sitting. Guarantee satisfaction.

THOS. W. JARMAN. - Yancey Mills, Va.



## LET THE HAWKEYE INCUBATOR

### Pay Your Child's Way Thro' College.

A hatch of 60 to 200 chicks, according to size of machine, every three weeks will furnish ample means, and the whole process is simple and pleasant. To insure that the Hawkeye is the very best incubator, let us send you one on

### 30 DAYS' FREE TRIAL.

Get our Free Illustrated Catalogue, or send 10c and receive in addition a year's subscription to a leading poultry paper.

HAWKEYE INCUBATOR CO., Box 49, Newton, Ia.



### \* INCUBATORS ON 30 DAYS' TRIAL. THE WORLD'S BEST STANDARD HATCHER. \*

Thousands of these Incubators are in successful operation in the United States, Canada, South Africa, New Zealand, Sweden, England, Holland, and Germany. These machines operate to perfection and always bring off a large brood of strong, healthy chicks. Catalogue with full particulars free for the asking. THE STANDARD F. C. INCUBATOR CO., Dept. 5, Rochester, N. Y., U. S. A.



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# \* THE \* SEABOARD AIR LINE RAILWAY

## OFFERS PROFITABLE INVESTMENTS

TO \_\_\_\_\_

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**THE MANUFACTURER,  
THE STOCK RAISER,  
THE DAIRYMAN,  
THE FRUIT GROWER,  
THE TRUCKER.**

## WHERE YOUR LABOR IS NOT IN VAIN.

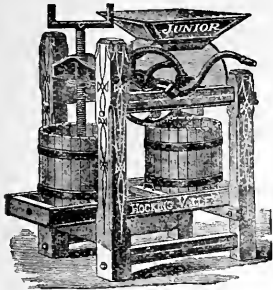
Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The **SEABOARD** Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

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Gen. Industrial Agt., Portsmouth, Va. Traffic Mgr. Gen. Pass. Ag., Portsmouth, Va.



# Agricultural Implements and Machinery



Cider Mills—with wooden crushing rollers.

**The Hocking Valley Cider and Wine Mills**  
Have crushing rollers made of wood, which impart no taste or discoloration to the juice.

**Buckeye Grain and Fertilizer Drill**  
With hoes or disc. Drills grain of all kinds, corn, peas, grass seed and fertilizers.

**Our Five-Hoe Drill**  
For seeding between rows of standing corn is a great success.

**Continental Disc Harrows,**  
Changed to straight or slanting tooth without stopping team.

**Ensilage and Feed Cutters.**  
Capacities from 600 to 16,000 pounds per hour.

**The Union Cutter.**  
Crushes the stalk after it leaves the knives—far superior to shredding.

**The Combined Feed Mill and Horse Power**  
Is indispensable to every farmer. Grinds corn, shelled or on cob, grain of all kinds, and is a first-class horse-power for any purpose. Three machines in one.

**The McCormick Corn Binder**  
Works like a grain binder, cutting and tying the corn and delivering in bundles.

**The McCormick Husker and Shredder.**  
The most complete machine of its class made. The very low price brings it within the means of all.

**Corn Shellers**  
For hand or power, separating corn from cob.

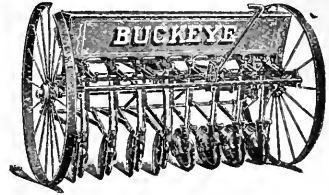
**Churns—Improved Buckeye Rocker.**  
Unequaled for cheapness, with simplicity, strength, durability and perfect work.

**Cane Mills and Evaporators.**  
Turned rollers, steel shafts, brass boxes, enclosed gearing. Made of special iron of great strength.

**Portable Evaporators**  
With furnaces. Pans of galvanized steel or copper.

**Cucumber Wood Pumps**  
With porcelain-lined cylinder, for wells up to 45 feet in depth.

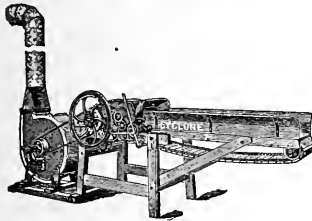
**The Hancock Disc Plow,**  
Improved for 1902. Will work in any land, and with less draft than any other disc plow.



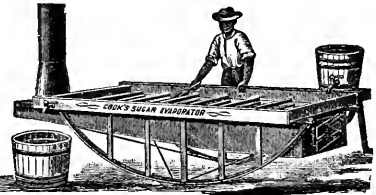
Disc Drill.



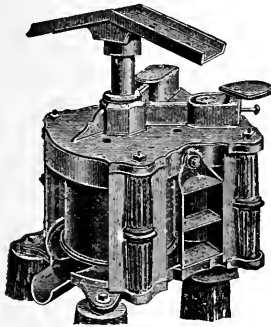
Feed Mill and Power.



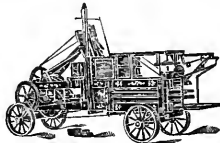
**CYCLONE**  
Feed and Ensilage Cutters. All Sizes.



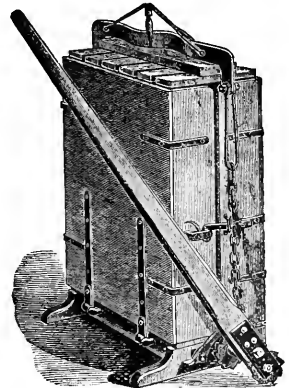
Portable Evaporator.



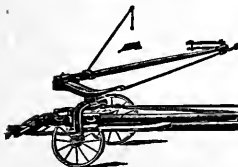
Cane Mill.



Halt Power Press.



Hand Power Press.



Full Circle Horse-Power Press.



**THE WATT PLOW CO.,** Franklin and 15th Streets,  
RICHMOND, VA.

## MARTHA'S SOLUTION.

A Washington housekeeper rejoices in the possession of a washerwoman of the olden style, and gets much amusement from the old woman's conversation. Recently, while counting over the clothes the housekeeper observed Aunt Martha gazing at herself in the mirror.

"What 'yo' think of this bonnet, Miss Molly? It's new."

"It's very becoming," said the lady, more politely than truthfully, "but, Annt Martha, I am afraid you are getting very extravagant. I am sure you are spending all you make in clothes."

"I certainly do that thing," said Aunt Martha seriously. "I certainly do. You see, I saved money once, and it was stole, and I said then, 'I'll spend ez I go, ez I go,' Miss Molly, 'and then I gets the good of it'"

"But, Martha, surely you are putting by a little money, just to bury you?"

"Not much, I ain't. I ain't got none of that foolishness 'bout me. I'll enjoy myself while I live, and I guess after I'm dead I can stand it above ground jes' as long as any one kin stand havin' me."—NINA E. ALLENDER, in *Lippincott's Magazine* for January.

## A LESSON TAUGHT AND LEARNED.

Not unlike some other great men, Chief Justice Mar-hall gave little attention to dress or to personal pulchritude, although his face was unusually handsome. A story is told of a young man who had recently removed to Richmond. This new comer saw in the market a rusty-looking old man making his way slowly through the entrance, and walking up to him abruptly, asked him if he would not like to make a ninepence by carrying a turkey home for him. The old man quietly took the turkey and walked behind the newly-arrived citizen without a word until the latter had reached his own gate.

"Catch!" said the young man, tossing a ninepence to his hiring.

The old man caught the ninepence, and as he turned to walk away a gentleman passing by bowed deferentially to him.

"Who is that shabby old fellow?" asked the turkey buyer.

"The Chief Justice of the United States," was the reply.

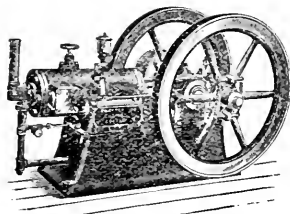
"Impossible," stammered the blunderer. "Why did he bring the turkey—why—"

"To teach you a lesson in good-breeding," interrupted the gentleman. "He will give the money away before he gets home, but I have no doubt he is enjoying the joke you have so condescendingly given him."—Z. Cocke, in *January Lippincott's Magazine*.

## BOWMONT FARMS.

We invite the attention of the advertisement of the Bowmont Farms, to be found elsewhere in this issue. The offering this month consists of Jerseys, large Yorkshire hogs and Indian game fowls. You will always get good stock and treatment from Col. Bowman, the proprietor.

A NEAT BINDER for your back numbers can be had for 25 cents. Address the Business Office.



# CHARTER

## Gasoline Engines.

ALSO ON WHEELS.

The N. C. Department of Agriculture uses this engine in the portable style on their Test Farm.

AS STEADY AND RELIABLE AS A  
GRANDFATHER'S CLOCK.

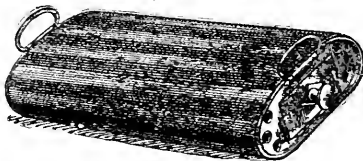
### SYDNOR PUMP & WELL CO.,

Box 949.

RICHMOND, VIRGINIA.

## COLD WEATHER IS HERE.

HAVE YOU A  
CELEBRATED



## LEHMAN HEATER?

The Greatest Comfort is to be Derived  
Therefrom in Cold Weather.

NO CARRIAGE OR SLEIGH IS  
COMPLETE WITHOUT ONE.

SALES ANNUALLY OVER 10,000. 175,000 IN USE.

For Booklet and other information address

LEHMAN BROTHERS, Mfrs.,  
10 BOND ST., NEW YORK.

JAMES W. ERRINGER,  
Gen'l Western Sales Agt.,

Mention *Southern Planter* when writing.

297 Wabash Ave., CHICAGO, ILL.

ASSETS, \$900,000.

# Virginia Fire and Marine

## Insurance Company, of Richmond, Va.

### Insures Against Fire and Lightning.

ALL DESCRIPTIONS OF PROPERTY IN COUNTRY AND TOWN, PRIVATE OR PUBLIC, INSURED AT FAIR RATES, ON ACCOMMODATING TERMS.

AGENCIES IN EVERY TOWN AND COUNTY.

WM. H. PALMER, PRESIDENT.

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## DAVISON HARROW CO.

ONE OF THE LARGEST MANUFACTURERS OF  
SPRING TOOTH HARROWS

IN THE UNITED  
STATES.

UTICA, N.Y., U.S.A.



# LEE'S PREPARED AGRICULTURAL LIME

**For COTTON** When used on land with a fair amount of vegetation or with COMPOST (which is better the crops are as good as from any Fertilizer. It prevents RUST and SHEDDING and keeps the plants green much longer in dry weather.

**PEANUTS** With the same conditions as above, it is a COMPLETE FERTILIZER for this CROP. Our customers say it is equal to the BEST FERTILIZERS ON THE MARKET.

**DARK HEAVY TOBACCO** Haul out your farm pen scrapings, plow under and broadcast 500 to 600 lbs. per acre (the earlier the better), and you will get a heavy crop of Tobacco and a fine crop of Wheat and Clover or other grass, and by proper rotation will have a rich lot for any crop.

**BRIGHT TOBACCO** Our customers say that 200 lbs. per acre in the drill with other Fertilizer will prevent the Tobacco from FIRING and giving it a GOOD BODY and increase its value \$20 per acre For Wheat, Oats, Clover and other grass it is exceptionally good.

It prevents RUST, SCAB and SMUT in WHEAT and all say it is the best thing for clover they ever used. Fruit Growers will find a WONDERFUL IMPROVEMENT by its use on their Orchards and Vineyards.

## Our EXCELSIOR TOBACCO FERTILIZER

Has been tested for six years and has proved equal to and in some cases superior to the high-grade ammoniated goods on the market. We put in no useless filler and the farmer gets the 2000 lbs. to the ton of valuable fertilizer for the crops and THE LAND. Hence they say their succeeding crops are much better than from other fertilizers

**Our SPECIAL CORN FERTILIZER** For land where there is not an abundance of vegetation is equal to any.

General agents for **BLACK DEATH BUG KILLER** for destroying Potato Bugs, Tobacco Worms and all insects injurious to vegetation; and Sifters and Insecticide distributors for applying it.

**PLAIN SHELL LIME**

Constantly on hand at lowest prices.

**No. 1 WOOD-BURNT LIME**

In car lots at lowest market price from kilns.

WRITE FOR CIRCULARS.

**A. S. LEE & SON, RICHMOND, VA.**

Pedigrees traced and tabulated. Catalogues compiled and circulars prepared. Special attention given registration matters pertaining to thoroughbred and trotting horses

.. N.Y.

**W. J. CARTER** (Broad Rock),

P. O. Box 929, RICHMOND, VA.

Representing the

RICHMOND TIMES, Richmond, Va.  
SOUTHERN PLANTER, Richmond, Va.  
SPIRIT OF THE TIMES, New York.  
KENTUCKY SPOCK FARM, Lexington, Ky.  
BREKEDER AND SPORTSMAN, San Francisco, Cal.

## AINSLIE CARRIAGE CO.,

Nos. 8, 10 and 12 Tenth St., RICHMOND, VA.

Building Carriages to order is our special business. Repairing and Repainting done, and best material used. A full line of all the latest styles. Orders for all classes of Vehicles solicited.

1903. IN THE STUD AT LAUREL HILL FARM. 1903.  
THE FINE HACKNEY STALLION

✦ HEIDRICK ✦

Bay horse, foaled 1898; 16 hands high. This horse has great natural action, and is capable of getting the highest class harness horses.

FEE, \$10.00 the Season or \$15.00 to Insure.

Address **G. F. & J. BUTTON, Walker's Ford, Va.**

1903. IN THE STUD 1903.

## WEALTH, 29579.

RACE RECORD, 2:17½, Pacing.

Timed separately in 2:08 in a race at Indiana State Fair, 1902.

Bay horse, foaled 1897; 16 hands high, weight, 1,200 lbs. Sired by Gambetta Wilkes, 2:19½, dam Magnolia, by Norfolk, 3:670, Wealth is grand individually and in appearance.

FEE, \$20 the Season with return privilege, or \$25 to Insure.

Address **S. F. CHAPMAN, Gordonsville, Va.**

## GREAT STAKES, 25521.

RACE RECORD, 2:20, Trotting.

Bay horse, by Billy Thornhill, 2:24, dam Sweetstakes, by Sweep Stakes, 298. Great Stakes has sired Captain, 2:16½; Foxhall, 2:19½, and four others in the list. He is handsome, well-formed and sires speed uniformly.

FEE, \$25.00 for the Season of 1903.

Address

**W. H. NELSON, - 1417 E. Franklin St, Richmond, Va.**

## THE NEED OF THE FARMER'S SON.

Although the farm keeps the balance of trade in the nation's favor, furnishes two-thirds of our exports, contributes to our manufacturing supremacy by providing cheap food for our mechanics, comparatively little has been done toward educating the farmer for his work. To be sure, the United States has done more for him than any other country. In 1862, Congress endowed agricultural colleges to teach the sciences relating to agriculture. In 1867, experiment stations were provided for where research might be made into the operations of nature.

But considering that Americans pay more money for public education than any other people on earth, a comparatively small proportion of the sum is devoted to stimulating and aiding that half of our population who cultivate the soil. The tendency of primary education has been to lead the country youth away from the farm instead of helping him in the study of those sciences relating to production. It would be politic and patriotic to incorporate into the farm youth's education some knowledge that shall bear more directly upon his future life and work.—JAMES WILSON, Secretary of Agriculture, in the *Youth's Companion*.

## A C A E N POINT.

Attorney Jacobi had just successfully defended Sim Walton, who was charged with stealing a watch. When they were outside the court-room, the lawyer asked Sim for the fee, which was ten dollars. Sim turned to him and said:

"Boss, I ain't got a cent."

"Well, haven't you something you can give me as security until you can raise the money?" asked Jacobi.

Sim replied: "I ain't got nuthin' but dat watch I stole. You is welcome to dat, ef you'll tek hit."—SILAS NAVIER FLOYD, in *January Lippincott's Magazine*.

St. Nicholas for January starts the New Year in the happiest way. Edwin L. Sabin, Louisa M. Alcott, Howard Pyle, Clara Morris, Malcolm Douglas, Harriet Prescott Spofford, Roy Benson Richardson, Virginia Woodward Cloud, Zitella Cocke, John Bennett, Clifford Howard, Sarah M. B. Platt, Albert Bigelow Paine, and Carolyn Wells are only part of the long list of writers and artists who contribute to the current month's feast for young folks. Really, the girl or boy who does not have St. Nicholas to read is to be pitied.

Notable among the stories in the January St. Nicholas is John Bennett's "Bobby's Newspaper," which has much of the charm that made the author's "Master Skylark" and "Barnaby Lee" immediate readers young and old. John Bennett has never visited England!

and Feeding")

Prof. Henry's Great Book for

and Stockmen,

vered anywhere for \$2.00

With the SOUTHERN PLANTER, 2.25

# Your money back

If you are not satisfied

DO YOU SUPPOSE that a company with a capital of \$500,000.00, paid in full, and the proud reputation of 36 years of continuous success, would make such an offer and not carry it out to the letter?

DO YOU SUPPOSE we would jeopardize our standing with the public and our chances of still greater success by failing to fulfil any promise we make?

DO YOU SUPPOSE we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods?

WE KNOW we can please you and save you money, for HAYNER WHISKEY goes direct from our distillery to you, with all its original richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE and saving you the big profits of the dealers. That's why it's best for medicinal purposes. That's why it's preferred for other uses. That's why we are regularly supplying over a quarter of a million satisfied customers. That's why YOU should try it.

Direct from our distillery to YOU

Saves Dealers' Profits! Prevents Adulteration!

# HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

4 FULL QUARTS \$3.20 EXPRESS PREPAID

We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? We ship in a plain sealed case; no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo. must be on the basis of Quarts for \$1.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

THE HAYNER DISTILLING COMPANY

ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.

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DISTILLERY, TROY, O. ESTABLISHED 1866.



# THE CALL-WATT CO.

Manufacturers of  
THE CROWN  
CRESCENT  
AND WATT  
PLOW

AND REPAIRS FOR PLOWS IN GENERAL USE.

Dealers in AGRICULTURAL IMPLEMENTS, MACHINERY AND VEHICLES,

NO 13 SOUTH FIFTEENTH STREET,

RICHMOND, VA.

BETWEEN MAIN AND CARY STS.,

TO THE PUBLIC: My connection with the corporation known as the Watt Plow Co. has been severed, and the manufacturing of the CROWN, CRESCENT and WATT Plows, and repairs for same, is now conducted solely by THE CALL-WATT CO., of which I am general manager. The new firm being owner of all patents for these plows, the trade-names which are duly registered under the trade mark laws, and having purchased from The Watt Plow Co. their entire stock of said plows and repairs, is prepared to furnish same promptly, and on liberal terms.

In addition to these special plows, we hope to supply the trade with the various plows and castings now in general use; also, AGRICULTURAL IMPLEMENTS, MACHINERY, VEHICLES and HARNESS for all purposes. All articles are guaranteed to be strictly as represented.

I take this occasion to tender my thanks to all my old friends whose patronage has been bestowed upon me during the thirty years in which I have been engaged in the manufacture and sale of Agricultural Implements in this city, and solicit a continuance of their favors with the new firm. They and the public generally are assured that all business entrusted to me will receive careful and prompt attention.

MANFRED CALL,  
Manager, The Call-Watt Co.

# If You Want YOUR GOOSE TO LAY "THAT GOLDEN EGG" FEED HER PROPERLY.

I mean buy your supplies right. You should lay aside a few Gold Pieces yourself, you might ask how it can be done—easy, dead easy—stop paying high, country prices. The mail comes to your home six times a week, I can get a letter from you every day.

## GET MY PRICES, I WILL BE GLAD TO MAIL YOU OR YOUR FRIENDS MY PRICES EVERY NIGHT.

The railroads almost pass your house. Uncle Sam spends millions yearly to give you mail and railroad accomodations. You need not come to town, let Uncle Sam do your shopping. He can knock the spots out of you in buying—just try him. No matter how small your order I will be glad to have it and ship promptly. Here is what your groceries will cost you

### JUST ONE-HALF WHAT YOU ARE NOW PAYING.

Arbuckle's Green Coffee.....	9 1/2	Cotton-Seed Meal, Nothing Finer.		Gibson's Fine Old Rye Whiskey; fit	
Granulated Sugar.....	4 1/2	510 Tons Cotton-Seed Hulls—an excellent Winter Food, Cheap and		for a king, get a quart.....	75
Best Family Flour.....	4 25	Nutritious, per hundred..	50	O'Grady's Pure Malt. Try a bottle	
Byrd Island—have no other.		This is as good as Coarse Meal for		of Malt for that hacking cough. It	
10,000 lbs. Nice Family Pork.....	9	stock.		is a sure cure. It is good for dys-	
7 Boxes Axle Grease.....	25	60,000 lbs. Rock Salt for Stock—try		pepsia. Indigestion it cures at	
800 Bbls. White Oil.....	12	a bag, keep it in the Trough, im-		sight. Warms the inner man;	
1,000 Bushels Seed Rye.....	68	proves Stock very much, \$1.00 for		makes new rich blood, and stimu-	
500 Tons Fine Timothy Hay, hundred		100 lbs.		lates the whole system. It has	
300 Tons Choice Clover Hay, hundred		Chalmer's Gelatine, 3 for .....	25	saved many and many a man and	
10 Large Cakes Fancy Soap.....	70	Seedless Raisins in Packages.....	9	his family. 75 a quart. The price	
Crysal Washing Soda, Light,		Cleaned Currants, per lb.....	8	is insignificant compared to the	
Smooth, and Durable, makes		New Citron for Fruit Cake.....	12	benefit it will do you.	
Washing Easy.....	30	Home Made Mince Meat.....	8	Country Cured Bacon Sides.....	1 1/2
Washing Powders, 8 for.....	25	100,000 lbs. New Mixed Nuts.....	8	100,000 bushels finest Oats.....	40
Fine Gun Powder Tea.....	40	Virginia Hams, Choicest of Meat. I		60,000 bushels fine Corn.....	56
Ben Mocha and Java Coffee Roasted		have a Nice Lot of Hams Made		Water-ground Corn Meal, made of	
Large Fat Mackerel in Nice Buck-		in Smithfield, Va.....	14	the finest White Corn, and ground	
ets or Kits, about 15 lbs.....	1 25	Fine Sweet Cider, per gallon.....	20	by one of the finest mills in Vir-	
New River Herrings, 750 fish in the		Home-Made Black Berry Brandy, 5		ginia. Bushel.....	72
barrel, Large and Fat.....	5 50	years old and nice.....		I have everything that is required	
New Cut Herrings, barrel.....	5 50	Family Tonic, quart.....	20	by a farmer from a 1,000 acre farm	
Finest Cream Cheese.....	15	Northampton Apple Brandy, 6 years		to a mouse trap. Write for my	
Baker's Chocolate—2 Cakes.....	25	old—pure—Apple Juice—nothing		price list that will give you more	
New Table Raisins—6 Lbs.....	60	finer made—gallon.....	2 00	information than a gossiping	
Fine French Candy.....	8	Clemmer's Fine Old Mountain Rye		woman.	
Pure Lard.....	9 1/2	Whiskey, double distilled, sweet		Clover Seed, prime Crimson Clover	
610 Tons Pure City Made Shipstuf,		and wholesome, quart.....	40	Seed.....	2 90
hundred.....	1 00	Juniper Gin, sure cure for bladder		Choice Crimson New-Crop Clover	
		and kidney troubles; relieves the		Seed.....	4 25
		cutting, stinging ache in your back,		Fine Winter Turf Oats (seed).....	75
		quart.....	45	Prime Winter Seed Oats.....	60

I have an immense stock of NEW YEARS' GOODS, CAKES, CANDIES. FRUITS of all kinds, and I will ship any quantity required.

**D. O'SULLIVAN, Eighteenth and Main Sts., Richmond, Va.**

but his quaintly delightful "Master Skylark" is on file in the reference library at Stratford on Avon, and devout Shakespeare pilgrims use it as a guide book.

The Review of Reviews begins a new volume with one of its characteristic numbers—a publication that could never by any possibility be mistaken for any other magazine in the world—128 pages as full of real "news" as the morning paper and yet as solid and well considered as the best of the foreign quarterlies. Venezuela is very much at the front at the opening of the New Year, and the Review not only gives space to a valuable editorial discussion of the British and German claims and the proposed modes of adjustment, but opens its pages to a full presentation of the case of the powers against the little South American State, as set forth by Mr. A. Maurice Low, a well-informed Washington journalist. The "man of the month" in international affairs is our Minister to Venezuela, Mr. Herbert W. Bowen. A character sketch of this typical diplomat of the American school, written, it is understood, by an intimate personal acquaintance, forms a noteworthy feature of the January Review. Among the subjects engaging the attention of Congress, hardly one can be named that is more important in its bearings on the public welfare than the question of protecting the grazing lands of the West, from which comes the national meat supply. This is the theme of the authoritative and judicious article from the pen of Dr. E. Benjamin Andrews, who has made a special study of the Western cattle situation. Dr. Andrews' article is accompanied by an exhaustive inquiry into the present advance in beef prices by Mr. Fred. C. Croxton, of the National Department of Labor. Another of the problems before Congress—that of the currency—is clearly outlined in a paper by Charles A. Conant describing the expedients recently resorted to by the Treasury to relieve the stringency in the money market. The rural free delivery service, the advantages of which were emphasized in President Roosevelt's message to Congress, is the subject of an illustrated article by Day Allen Willey.

#### THE TOBACCO MARKET.

Editor Southern Planter:

Our market will open up on Tuesday the 6th, and we look for good prices. No doubt it will be a good time to sell, as our buyers will want stock to begin work on. Receipts will be light, and we are inclined to think it will be advisable to sell what you have ready during the week, as receipts will be heavy again as soon as we have a good season.

We will be in a better fix than ever to handle your crop, having secured the services of Mr. A. O. Davis, of Wilson, N. C., as auctioneer, who is the best auctioneer to be found in the trade. We want you to come and hear him and judge for yourself. We believe he can put more life in the sale and get you better prices for your tobacco.

SILAS SHELburnE & SON.

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We wish to state to readers of this magazine and the public generally, that owing to the warm weather we have had this Fall, we were unable to dispose of our Stoves and Heaters which we bought in large quantities.

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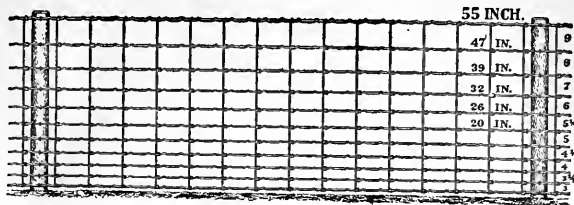
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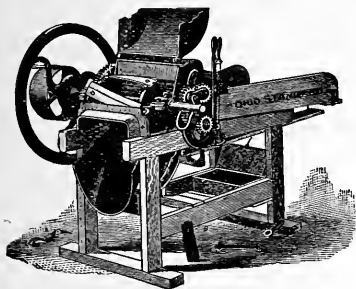
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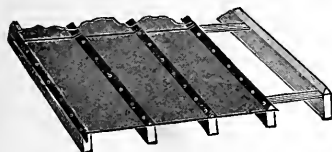
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UNITED STATES, STATE, CITY DEPOSITORY.

Comparative Statements for the Following Years.

**ASSETS.**

CLOSE OF BUSINESS ON.....	June 30, 1877.	June 30, 1882.	June 30, 1887.	June 30, 1892.	June 30, 1897.	June 30, 1902.
Time and Demand Loans.....	\$310,427 34	\$664,880 05	\$464,666 32	\$1,161,336 11	\$1,125,610 04	\$1,284,060 45
Real Estate, Furniture etc.....	1,886 50	1,825 42	60,000 00	69,138 77	83,236 07	74,088 24
5% Redemption Fund.....	2,230 00	11,800 00	3,400 00	9,000 00	9,400 00	10,000 00
United States Bonds.....	50,000 00	200,000 00	700,000 00	421,000 00	400,112 00	961,260 00
Premium on U. S. Bonds.....	5,000 00	.....	80,000 00	34,000 00	34,533 55	22,763 48
Miscellaneous Stocks and Bonds.....	25,455 30	23,501 49	56,208 06	69,636 21	174,076 44	686,430 48
Cash and Due from Banks.....	34,342 11	152,616 15	189,724 83	485,536 32	785,187 42	1,023,500 10
<b>TOTAL.....</b>	<b>\$489,361 25</b>	<b>\$1,054,623 11</b>	<b>\$1,559,599 15</b>	<b>\$2,249,767 41</b>	<b>\$2,610,775 52</b>	<b>\$4,062,108 85</b>

**LIABILITIES.**

CLOSE OF BUSINESS ON.....	June 30, 1877.	June 30, 1882.	June 30, 1887.	June 30, 1892.	June 30, 1897.	June 30, 1902.
Capital Stock.....	\$200,000 00	\$200,000 00	\$200,000 00	\$200,000 00	\$200,000 00	\$200,000 00
Surplus and undivided Profits.....	15,149 40	54,551 32	10,576 85	186,738 68	277,132 57	588,017 55
Circulation.....	45,000 00	180,000 00	180,000 00	177,500 00	176,400 00	200,000 00
Deposits.....	226,711 85	618,071 79	1,073,922 30	1,685,108 73	1,957,242 65	3,074,091 30
Re-discounts.....	2,500 00	.....	.....	.....	.....	.....
<b>TOTAL.....</b>	<b>\$489,361 25</b>	<b>\$1,054,623 11</b>	<b>\$1,559,599 15</b>	<b>\$2,249,767 41</b>	<b>\$2,610,775 52</b>	<b>\$4,062,108 85</b>

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# The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK AND THE FIRESIDE.

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Agriculture is the nursing mother of the Arts.--XENOPHON.  
Tillage and pasturage are the two breasts of the State.--SULLY.

---

64th Year.

Richmond, February, 1903.

No. 2.

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## Farm Management.

### WORK FOR THE MONTH.

At the opening of a new crop year it may be of interest and advantage that we review what was done in the way of crop production in the Southern States during the year just ended. Lessons may be learnt from a consideration of this question which may result in much benefit, and a comparison of these results with what has been done elsewhere may lead to efforts for greater results in the future. The past year, it may be remarked, was in the South, on the whole, a fairly normal one, so far as weather and climatic conditions were concerned, except in respect to the wheat and winter oat crops which suffered severely from very late seeding in the fall of 1901, owing to the wet condition of the land and also from severe weather in the early winter. The area planted in corn in Virginia in 1902 was 1,879,348 acres; the yield per acre was 22 bushels; the crop produced was 41,345,656 bushels of the value of \$21,499,741. The area planted in corn in North Carolina was 2,706,682 acres; the yield per acre was 13 bushels; the crop produced was 37,622,880 bushels of the value of \$22,573,728. The area planted to corn in South Carolina was 1,825,837 acres; the yield per acre was 10 bushels; the crop produced was 18,988,705 bushels of the value of \$13,102,206. The area planted in corn in Maryland was 628,982 acres; the yield per acre was 32 bushels; the crop produced was 20,379,017 bushels of the value of \$10,393,299. In Tennessee the area planted in corn was 3,337,047 acres; the yield per acre was 21 bushels; the crop

produced was 73,081,329 bushels of the value of \$34,348,225. The wheat crop of Virginia was grown on 637,806 acres; the yield per acre was 5 bushels; the crop produced was 3,635,494 bushels of the value of \$2,872,040. In North Carolina the wheat crop was grown on 867,558 acres; the yield per acre was a little over 5 bushels; the crop produced was 3,055,757 bushels of the value of \$2,811,296. In South Carolina the wheat crop was grown on 267,673 acres; the yield per acre was 5 bushels; the crop produced was 1,495,969 bushels of the value of \$1,528,948. In Maryland the wheat crop was grown on 757,000 acres; the yield per acre was 14 bushels; the crop produced was 11,129,223 bushels of the value of \$8,013,041. In Tennessee the crop of wheat was grown on 840,381 acres; the yield per acre was 7 bushels and the crop produced was 6,050,743 bushels of the value of \$4,598,565. In Virginia the oat crop was produced on 222,074 acres; the yield per acre was 17 bushels; the crop produced was 3,886,295 bushels of the value of \$1,632,244. In North Carolina the oat crop was produced on 238,143 acres; the yield was 12 bushels per acre; the crop produced was 3,024,416 bushels of the value of \$1,542,452. In South Carolina the oat crop was grown on 216,541 acres; the yield per acre was 13 bushels; the crop produced was 2,836,687 bushels of the value of \$1,673,645. In Maryland the oat crop was grown on 42,132 acres; the yield per acre was 26 bushels; the crop produced was 1,124,924 bushels of the value of \$427,471. In Tennessee the oat crop was grown on 180,071

acres; the yield per acre was 17 bushels; the crop produced was 3,219,028 bushels of the value of \$1,351,992.

When we come to compare the yields of these cereal crops with the production of the like crops in other States north and west, we find that not only do these Southern States fall in nearly all cases much below the average for the whole of the United States, but very seriously below the yield per acre in other States not nearly so naturally well situated for the production of the crop. Take for example the New England States in the matter of corn. There the yield runs from 21 to 31 bushels per acre. In Pennsylvania the yield was 36 bushels per acre, whilst in the great corn belt of the West the yield runs up as high as 39 bushels to the acre. Again, take wheat. Whilst the average for the United States was 14 bushels per acre here we only made 5 bushels, this being the lowest yield made in the South for many years, and about half the usual average. The average yield of oats in the United States was 34 bushels to the acre. Here we made less than half that yield. Surely such a showing as these crops make cannot be regarded with satisfaction by our people. There is no reason whatever, either in climatic or soil conditions, why the production of all these staple cereal crops should in the South fall so much below the average of the country and so greatly below that of other States not nearly so well situated. The great underlying cause for this bad showing is *poor preparation of the land before seeding*, and in the case of the corn crop careless, inadequate cultivation after planting. Sufficient effort is not made to secure deep, well broken land, capable of conserving the rainfall and moisture so much needed, especially in the South, nor is adequate consideration given to the necessity for filling our soils with vegetable matter—(humus). Many Southern farmers insist that the small yields of cereals here cannot be avoided on land which has been so long under cultivation as Southern lands have. That this conclusion is erroneous is shown by the average yields of the cereal crops in England, where the land has been under cultivation hundreds of years longer than in the South. The average yield of wheat in England was last year nearly 34 bushels to the acre, and for the last ten years the average is nearly 31 bushels per acre. The average yield of oats there last year was nearly 44 bushels per acre, and for 10 years nearly 40 bushels to the acre. Corn is not grown in that country, and therefore cannot be compared. It is time for the Southern farmers to take this matter of crop yield per acre into serious consideration with the determination that such paltry yields as are now made shall cease. There can be no profit in producing 20 bushels of corn or 5 or even 14 bushels of wheat, or 17 bushels of oats to the acre. What

is needed at the least is to double the yield per acre and this will be soonest brought about by halving the acreage planted or sown and giving the reduced area the extra working and cultivation which in the past has been expended on the larger area, and by planting leguminous crops on the abandoned area and feeding these to stock to make manure to feed the reduced area and make it rich and productive. The crop statistics issued by the Department of Agriculture, from which we have quoted the foregoing figures, in one particular refute strongly the commonly current idea that the South is not a section adapted to the production of hay. These show that Virginia devoted last year 472,913 acres of land to the production of hay and that the average yield per acre was 1.06 tons, producing a total crop of 501 288 tons of the value of \$6,807,491. In North Carolina the average yield of hay per acre was nearly 1½ tons. In South Carolina the average yield was nearly 1½ tons per acre. The average production of hay over the whole country was only 1½ tons per acre. In New York State, which grows the largest acreage of hay of any State in the Union, the average production was only 1½ tons per acre. In this respect, therefore, the South compares favorably with the rest of the country, and this fact should induce greater attention to this crop, which is one which conserves the fertility of the land, renders possible the keeping of a greater head of live stock, and thus provides the means for producing heavier crops without recourse to fertilizers. It is a crop also which is as readily salable, as corn on the market, and with our ability to produce the heaviest forage crops on the arable land, can often be wisely converted into a sale crop and its place be taken in feeding stock by the forage crops.

The production of tobacco in the South Atlantic States last year was in Virginia 136,769,250 lbs. grown on 182,259 acres. In North Carolina, 142,520,950 lbs. grown on 219,263 acres. In South Carolina 25,625,408 lbs. grown on 34,912 acres, with a small acreage in Georgia, Florida and two or three other States. The value of the tobacco crop in Virginia is put at \$12,309,232, in North Carolina at \$15,677,304, and in South Carolina at \$3,331,303. In Maryland the quantity produced was 31,300,625 lbs. grown on 34,081 acres, and of the value of \$1,491,044. With the exception of Kentucky, which produced 257,755,200 lbs. grown on 322,194 acres, North Carolina and Virginia are the largest tobacco-producing States in the country. The yield per acre, however, in these States is much below that of the New England and other Northern tobacco-producing States. In Virginia, the average yield per acre was 750 lbs., in North Carolina 650 lbs., in South Carolina 734 lbs. In the New England States, the average yield runs from 1,500 to 1,800 lbs.

to the acre, whilst in Pennsylvania the yield was 1,275 lbs., and in Wisconsin 1,340 lbs. to the acre. Much of this difference in the yield is no doubt to be accounted for in the different types of tobacco grown in the South, but there is, nevertheless, room for great improvement in the yield per acre here. We have known over 2,000 lbs. of tobacco to be grown on an acre here on several occasions, and something much nearer this figure than 750 lbs. ought to be grown of the dark heavy shipping types which are so largely produced in this State. The same cause lies largely at the bottom of this deficient production as of the deficient production of the cereal crops, and the same remedy should be applied. More *intensive* and less *extensive* farming.

The weather since the new year came in has been quite seasonable. We have had severe frosts, but little snow. We are always glad to have wintery weather in January. It is needed for the best interests of the farm. Insect and fungous pests are very apt to become serious troubles during the period of crop production unless we have sharp weather in January. If we do not get winter in January in the South, we are very apt not so get it at all, as the heat of the sun becomes quite an important factor in February. With sharp frosts in January, the ice crop can be secured, and this is quite an important feature in the South, especially on dairy farms. This year good ice has been secured right up to the Atlantic Seaboard. The frost and wet condition of the land when not frozen has put a stop to plowing, and it will take some little time of dry warm winds to fit it again for the teams. The long fine fall and early winter gave abundant opportunity for fall and winter plowing, and very much more land has been broken for crops than is often the case. Where this work was properly done, there is now a reserve of moisture in the ground, which, if carefully conserved, will do much to meet the needs of crops during the growing season. Land not already plowed should be given attention as soon as dry enough to break, but do not be in too great a hurry. Land plowed when wet never makes a good sed-bed, however much it may be cultivated. Land already plowed should not be allowed to dry out too much. As soon as it is dry enough to harrow down freely, put the harrows on it, and commence the preparation of the sed-bed. This will prevent the loss of moisture from the subsoil and conserve the water for the crop. It will also be the means of making available the inert plant-food in the soil. Even in soils said to be largely exhausted, there is always a great reserve of mineral fertility, which can be made available for the support of crops by frequent cultivation. Southern farmers have been in the past very remiss in this re-

spect. They will plow the land once and harrow once, and then proceed to plant the crop either without fertilizer or with just a small application, and then complain that the crop makes a poor yield. It cannot do otherwise, because of the mechanical condition of the soil. Even the fertilizer applied cannot be properly or fully available for the crop under such conditions. Experiments made in a number of States have shown conclusively that it is possible to make a profitable yield upon land said to be largely exhausted without the application of any fertilizer by frequent and perfect plowing and cultivation. Plowing too often fails altogether to fulfil its proper function. Good plowing is not merely the inversion of the surface soil—it is the inversion and *breaking* and *mixing* of the soil. It is impossible for the fine hairlike root fibres, which carry food to the plant to permeate and search out the plant food in the soil where it is full of hard lumps. The whole seed bed should be made as fine as possible, then these little fibres can thread their way in and out of the interstices of the soil and appropriate, by the aid of moisture, the food elements always more or less present. Another great purpose served in the fine breaking of the soil by repeated plowing and cultivation is that it permits of the free working and multiplication of the soil microbes, upon which largely depends the fertility of all soils. A hard lumpy soil is largely a dead soil, and a dead soil is an unproductive one. This necessity for microbic life in a soil is largely a new discovery in agricultural science, but the more fully it is investigated the more important appears to be its necessity. The presence of humus in the soil and an alkaline condition are found to be conditions precedent to this active microbic life. Hence the necessity for lime and leguminous crops in the development of soil fertility. The two great factors necessary to fertility are soil moisture and microbic life, and these are both encouraged and maintained by finely worked and broken soil. Where it is intended to apply mineral fertilizers to the land, such as acid phosphate and potash, these ingredients may be more profitably applied now than at the time of seeding the crops. They require time to become available and thoroughly assimilated with the soil. There need be no fear of loss by leaching. Where farm yard manure is to be applied, it should be got on the land at once and be spread and worked into the soil with harrow and cultivator.

Get out all farm and stable manure as it is made, and spread it on sod or arable land. It had much better leach out on the land than in the farm yard. The leachings there will not be lost, as is too often the case with those in the farm yard. If grass land, which is intended to be mown for hay or top-

dressed with manure from the yard, which is an excellent way in which to improve the soil, the manure should be got out at once and be spread evenly on the land. After it has laid a week or two, run over the land with a bush harrow and thus break the manure out finely and work it into the roots of the grass. Then follow the bush with a horse rake, and thus get off the long, strawy matter which, if left on, will mix with the hay and spoil the sample.

It is too early yet to seed any crop, except Canada peas and oats, in either Virginia or North Carolina. Further South, oats may be sown after the middle of the month. Canada peas and oats may be sown up to the end of the month in Middle and Eastern Virginia and North Carolina, and up to the middle of the month of March in Piedmont and the mountain sections of those States. This crop is better seeded in December and January than in February, and we advised attention to it in those months. We have, however, known good crops made seeded in February. It is a Northern climate crop, and requires to complete its growth before the hot weather sets in, or mildew will destroy it. Its value as an early forage crop for hogs, sheep and cattle is great, and it also makes fine hay. Sow 1½ bushels of peas per acre, and plow them down or put in deep with a drill; they should have a cover of at least four or five inches. Then sow broadcast three quarters of a bushel of oats and harrow in. If the land is poor, apply 300 lbs. of acid phosphate to the acre and work in with the harrow. When the peas and oats have commenced to grow freely, apply 75 to 100 lbs. of nitrate of soda to the acre as a top-dressing, and a vigorous growth will be assured. Where the land is in fair fertility and has grown peas before, the nitrate of soda will not be needed, as the peas will soon be vigorous enough to secure their own nitrogen from the atmosphere.

Grass and clover seed not seeded in the fall (which is the proper time all through the South, except in the mountain sections) if a good stand is to be confidently expected, should be sown during this month and in the first half of March. We have always advised against sowing grass and clover with a grain crop where a permanent stand of grass is desired; and each year that passes only adds to our certainty that we are right in this view. More money has been wasted on clover and grass seed seeded with grain than in almost any other way on the farm. The practice of so seeding was introduced from England, where climatic conditions are so different from our own. There, there is always an abundance of moisture in the ground, and none of the hot, burning weather which we have in the summer. Harvest time is much

later, and thus the shading of the young grass and clover is continued until the cool fall months. Here, lack of moisture in the land begins to be felt early in the summer, and the grain crops mature and are cut just at the time when the power of the sun is greatest. The result is, that the growth of the grass and clover is weak and spindling, and it is laid bare to the burning sun just when it most needs protection. Thousands of acres are thus lost every year. If seeded in the fall, a much stronger root growth is secured before the hot weather sets in, and the cutting of the grain may not result so fatally; but our advice is, whether seeding in fall or spring (but most certainly when seeding in the spring), never to seed along with grain. The grain crop is much more robust and quicker in growth than the grass and clover, and is thus better able to forage for support, and appropriates the moisture which the small plants so greatly need. Instead of a nurse crop, the grain crop becomes a robber crop, and the grass and clover is a failure. When seeded alone, the grass and clover is given a chance to secure what it needs, and being unshaded, becomes robust and hardy in growth and able to resist the power of the sun and rarely falls to make a good stand if soil fertility is sufficient; and if—and this is a great if—weeds are not so numerous as to smother it out. Weeds will beat even a grain crop in killing out a stand of grass and clover. Never seed grass and clover on land full of weed seed. It is only labor and seed wasted. If land is clean, then sow from two to three bushels of grass seed to the acre, with 10 or 12 lbs. of clover seed, and a fair stand may be expected. We believe in heavy seeding of grass. Our experience has convinced us that only in this way can a satisfactory sod be secured. The percentage of seed which is viable and will grow, is in grass seed always much lower than in the case of larger seeds, and much of that seeded never comes to a mature plant. Even if it sprouts, a large proportion has not vitality enough to resist unfavorable conditions of weather and soil. Let the land be well prepared and the seed bed be made as fine as possible before seeding, and do not spare manure and fertilizer. An application of 300 or 400 lbs. of bone meal to the acre will always be found profitable when seeding to grass. It gives up its plant food slowly, and thus the effect is long continued. After seeding roll the land if it is dry enough to roll without packing on the roller. This will do much to ensure quick germination. If a piece of land seeded with grass or clover in the fall has failed to make a good stand, this may be improved by harrowing lightly and then reseeding with about a half seeding of grass and clover, following with the roller. As to the kind of grass to be seeded: For a permanent meadow on good sound land, we would seed a mixture

of Orchard Grass, Tall Meadow Oat Grass, Herds Grass (Red Top), and Meadow Fescue. On low, damp land, we would seed Italian Rye Grass and Herds Grass—adding in each case from 5 to 8 lbs. of red clover. Timothy should be seeded alone. For a pasture, a much greater variety of grasses is best, as they mature at different seasons and thus lengthen the season of feeding. For this purpose sow on sound, loamy soils Tall Meadow Oat Grass, Meadow Fescue, Virginia Blue, Orchard, Perennial Rye, Red Top, and 2 or 3 lbs. of Red Clover. For moist bottom land, sow Red Top (Herds grass), Italian Rye, Meadow Fescue, Orchard Grass, Perennial Rye, and Alsike Clover.

Tobacco plant beds should be got ready and be seeded as soon as possible. See that the land is well burnt and all weed seeds destroyed and the surface soil made fine and rich, so that the seed, when it germinates, may be able to grow off quickly. Select land that is well filled with vegetable matter, so that it will not crust and pack hard, and mind that provision is made for drainage and for keeping the bed moist. Cover with plant-bed muslin.

After deciding the location and area of the different crops to be grown, make out lists of the seeds and fertilizers required and give your orders to the merchants at once, so that these articles may be on hand when wanted. Do not have to wait and lose the best opportunity for putting in your crops from inability on the part of the merchants to deliver goods just immediately when ordered.

#### "MANURE SAVING."

*Editor Southern Planter:*

By purchase we came onto a rather ancient and much abused farm. Its barn was on the old-fashioned plan of two log pens about 30 feet square with drive way through center under roof and a story above.

A shed about 12 feet wide was built all the way round and boxed up. After the first season's winter feeding in the face of fast and frozen blasts, laden frequently with sleet, snow and rain, we concluded the thing was too open and friendly in its disposition and that we would shut some more of the weather out. So cracks on north, east and west sides were all battened up tight, light studding was put up inside, covered with building paper (this only cost 75 cents for 500 square feet), then ceiled with rough lumber up to loft. Two heavy rolling doors were made to close up the drive way from the north, each 13 feet wide.

Having completed these cheap but most paying improvements, we thought of all the liquid manure

which had hitherto gone to waste on the dirt floor, even in spite of a liberal use of bedding. One could not read your paper long and continue to ignore the saving of this most available source of plant food for the thin places in his land.

A thorough investigation of stall plans seemed to indicate that the Van Norman would suit us best. With mill stuffs a cent and a quarter or half a pound, and even hay nearly a dollar per cwt., it was estimated to save its cost, extra over some of the simpler sorts, in feed during a single season. What's lumber here anyway. We bought two-inch hard wood for these floors and manure troughs at 50 cents per 100.

We find it almost impossible for a cow to waste a particle of either bran or roughness out of these feed troughs.

One shed on the south side of barn was taken up by the feed alley running next to the log wall, thus throwing all the droppings and walkway next the outside of barn. Through the outside of this shed we cut holes about 18 inches wide and 3 feet long, one to each two or three cows. The manure is thrown out of these directly from the fork into a second leanto, thus avoiding its handling twice and wheelbarrow rolling. This addition is merely a light framework running the full length of the barn or the south side with shingle roof and sides looking very much like a plank fence with the fence turned wrong side out. It is handy to load manure from along side, and as the manure thrown out is kept well covered with straw and the sun shines into the shed nearly the whole of a winter day, it makes a favorite place for the Shorthorns to lounge around, basking in the sunshine.

A weekly sprinkling of dry dirt or Tennessee phosphate or gypsum prevents the escape of ammonia whilst the tramping of other stock packs it down after the tearing up of hogs hunting waste grain. Heating is thus avoided. The beneficent influences of dry dirt and sunlight are not fully appreciated by the average farmer. We know from experience that stock do better when given the freedom of covered yards protected against north winds, and are of opinion that a better quality of manure is made thereby. Certainly less water is uselessly loaded and hauled to the fields than is the case when taken from manure cellars or the stalls themselves. With all sorts of feed stuffs \$1 per 100 pounds it is difficult to see much profit in stock feeding without counting in the manure. This is not unreasonable so long as we pay \$20 per ton for fertilizers. Manure carefully saved and wisely used will of itself pay a fair profit on the production of the feed. The feeder's *cash outlay* for concentrated feeds should be repaid otherwise.

"MAPLEHURST."

## WHEAT GROWING.

*Editor Southern Planter:*

In your November number, under the head of "Farm Management," you say, "A crop of wheat that can be well seen above ground before hard frosty weather sets in will almost invariably make a better yield than one which is two or three inches high at that time." This does not agree with the opinion of most of the practical farmers of this section. The aim is here to sow as soon as can be done and avoid damage by the "fly." There are some farmers who are willing to risk the fly in order to get their wheat in early, saying that late sowing has been more damaging than the fly. This has been a very favorable fall on the wheat. The land was or could be put in fine order, and the rains have come in right quantity and not washing. My neighbor, among many who sowed very early this season, started his drill September 9th. Mine was started September 22d. Both fields have a rank growth. His has been well pastured and mine grazed a little. There are those here who claim that wheat pastured by sheep will yield four or five bushels more per acre on good land. Still another successful farmer says he does not think wheat should be pastured, that he never saw any too rank in the fall. What I call a rank growth is from 6 inches to 12 inches high, varying according to the fertility of the soil.

What you say of a thorough preparation of the soil must be concurred in by every observing tiller of the land, but my opinion is that this should apply to all other crops. Tillage and clover is my motto in farming.

We are all anxious to learn more, and we would like to know, Mr. Editor, why you consider a short growth of wheat in the fall better than a larger one which has a chance to become well rooted before freezing weather commences?

Lexington, Va.

P. M. W.

In reply to the foregoing we would say that the opinion given was largely founded on personal experience in wheat growing. We have vividly in remembrance a crop grown many years ago which so forcibly impressed the lesson of too early sowing as to enure us permanently of the habit. In that year we sowed the first wheat on the 30th of September. We continued to sow as the land was ready all through the month of October, and finished seeding on the 5th of November. At Christmas the wheat sown on the 30th September was so tall and rank as to completely hide a hare in the field. The wheat sown on the 5th of November was nicely out of the ground—say 2 or 3 inches high. The winter was not a very severe one, but on the whole favorable for the crop. At harvest time the difference between the earliest and latest seeded crop was very marked. The earliest seeded had thousands of ears more per acre than the last seeded, but these ears were small and badly filled, whilst the last seeded were long and well filled. When thrashed the last seeded made more than twice the yield per acre of the early sown crop, and the quality of the grain was very much superior. This has also been our ex-

perience in other years. The effect of the early seeding is to cause the wheat to spindle up and tiller too freely, thus inducing a weakly growth very apt to fall down in wet weather and to stay down. The weak, slender straw does not carry sufficient food to the ear to make a good, plump long ear. Its root growth is defective. Whilst, therefore, experience has convinced us that reasonably late sowing is preferable to too early seeding we desire not to be set down as advocates for very late seeding. There is a proper time to seed, and this we believe to be neither too soon nor too late. In this section of the South we think October is the best time, and not before the 10th of that month. We like to have a sharp frost before we seed, and then we are reasonably sure that we shall not suffer from the fly. After the 10th of October there is plenty of time for wheat on well prepared land to make all the growth needed for it to go through the winter without serious damage, and it will then start off in the spring vigorously and with a strong root growth to maintain vigorous growth. There is considerable difference of opinion as to the grazing of wheat. If the land be dry and the crop has made a rapid fall growth we think the practice one to be commended as tending to induce root growth, but a weakly plant ought not to be grazed.—ED.

## CLEANING UP WASTE LAND IN EASTERN VIRGINIA.

*Editor Southern Planter:*

The longer I look around the more I become impressed with the fact that I need advice by the bushel.

There is a good deal of so called "waste land" on this place. The slopes, bends, gullies and low lands along a creek take up about 50 acres, including about ten acres that were in cultivation up to a few years ago. This ten acre patch I have plowed and sown to rye (with fertilizer) for early pasture. I hope the stock will leave enough standing so that I will not have to sow it again next fall, and can keep it seeded by plowing under what grain may be left over.

Part of the 50 acres is covered with tall grass, among which young pines have grown up here and there. I think this would make fair grazing by burning the old grass and cutting down the few pines.

Part is grown thickly with young pines. I presume there is nothing better to be done than to cut these down and wait until the stumps rot.

Part—about ten acres—is grown up so thickly with bushes and briars of all sorts that a dog can hardly get through. I have been told that it will cost not less than \$10 per acre to clear this land. Is there no other way than to grub out the bushes? If cut, will not the stock keep down the young growth?

I have enclosed this 50 acres, together with 10 acres of heavy wire grass, with twelve strand woven fence. Nearly all of the sixty acres are fairly good clay soil. Some places wash badly, and these I shall plant to

wire grass. Would plant wire grass all over but for the fact that it lasts only for such a short season. How would a mixture of native blue grass, red top and fescue do for the wet places and timothy, orchard grass, white clover, red top and, perhaps, a little Kentucky blue grass for the hillsides?

If I can get a nice green sod on this waste land, I shall consider it the most valuable part of the farm. But I have other waste lands, little corners cut off by ditches from the fields, river banks and corners of all sorts, that are either too small or not conveniently located to be attached to the pastures. The largest of these patches may be five acres, others are only a fraction of an acre; some are grown up to weeds, others to broom straw, others to scrub pines, and others to timber that is of little or no value owing to location. Some of this land is loam, some clay, and some gravel or sand. These waste lands are unsightly, bring no revenue, and add nothing to the value of the place. I have been thinking of planting a few acres to cedars to provide posts for the future, as I am clearing the better located woods for fields. Would it be advisable to plant young fruit trees, such as standard varieties of apples, plums and cherries? I might manage to give them one or two cultivations for a few years, but could not give much care to the trees. There are probably over 30 acres of corners on the place that are not easily accessible with wagons and machinery or accessible only during the dry months. I would like to put this land to some moderately profitable use. They are now eyesores and harbors for all sorts of vermin.

*Hanover Co., Va.*

"GREENHORN."

The work of cleaning up the odd waste patches and corners on a farm is one that is much too often neglected. Even if the direct profit resulting from the utilization of the land is not large, there is an indirect profit which is a large one. The attractiveness of the place is enhanced and value is added to it in the eyes of a prospective buyer. As breeding places for insect pests and fungoid diseases, and as nurseries for the growth and perpetuation of weeds, they are sources of never ending loss on the farm until cleaned up. We are therefore heartily in sympathy with our correspondent in his effort to get rid of these places on his farm. Wherever these places are covered with pines and other forest growth, not of sufficient value to make lumber, these should be cut down in the summer, and the stumps will then rot out in a couple of years. Where there is a heavy growth of reeds and coarse grass, these should be burnt off in the early spring, and if the patch is not large enough to cultivate in an arable crop, then Japan clover should be sown on it at the rate of 12 pounds to the acre. This will grow up with the grass, and in the end cover all the plot, and at the same time improve the land and fit it to carry a better sod. This clover will make only grazing in this section, but will be found a great addition in that respect, and will continually reseed itself. Where the patch is large enough and the soil good enough to carry a grass sod, we would break it with a

small harrow or cultivator, and the damp low lying places we would seed with red top (herds grass), meadow fescue, perennial rye and meadow grass. The drier land we would seed in the same way with orchard grass, tall meadow oat grass, Virginia blue grass and red fescue. Bermuda grass (wire grass) will also do well on the drier land and keep green in the hottest weather. If along with the Bermuda grass some Virginia blue grass, meadow fescue and perennial rye grass was sown, it would help to make a winter pasture. We could not advise the planting of fruit trees on these low lying lands, as the chance of a crop would be very doubtful. Frost is always more destructive to fruit blossom on these low lying lands than on the hillsides. The cold currents of air are there stagnated, and even late blooming varieties are made unfruitful. Besides, fruit grown in such places never keeps well. The idea of growing cedars for fence posts on part of the lots is one worth considering. We would suggest the growing of ca alpa trees on part of the lots for the same purpose. Several of the large railroad companies are now planting thousands of acres in catalpa for ties and fencing purposes. The tree grows fast, and makes excellent posts, rails and ties. The Department of Agriculture has recently issued a bulletin on this subject which it may be well to obtain. Wherever pieces of land are large enough and accessible enough to be put under cultivation, we would, as soon as the stumps are rotted out, put into a crop and work for at least a couple of years and then put down to grass. In no other way can a good sod of permanent grass be had. Whilst young cattle will browse on bushes to some extent, yet they will rarely succeed in so keeping them down as to ultimately destroy them. Goats will, however, do so, as they prefer to browse rather than graze. In an experiment recently made in one of the New England States, a few Angora goats cleaned up a piece of brush land thoroughly in a couple of years. We should be inclined to try this plan with some of the plots. The cost would not be great, and the goats would bring in some income, besides fitting the land for a better use, and at any rate making it more sightly.—Ed.

#### Planting Bermuda Grass.

Will you please tell me in the next month's *Planter* if it will do to plant Bermuda grass roots in the latter part of February and March. I planted in August, September and October, and did not get a stand.

*Tredell Co., N. C.*

O. E. SHOOK.

Yes.—Ed.

When corresponding with advertisers mention the *Southern Planter*.

## ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter* Richmond, Va., not later than the 15th of the month, for replies to appear in the next month's issue of the *Planter*.

## Grass for Pasture.

Please let me know through your Inquirers column the kind of grass seed to sow on a field of woodland which I have cut off. The land is a gray land with red clay subsoil. I want to coultter it up and sow it in February or March.

Orange Co., Va.

E. M. HARNSBERGER.

We presume that this is intended for pasture as no thing is said about having removed the stumps. We assume the land to be dry and light. On this we would sow 2 to 3 bushels per acre of a mixture made up of Tall Meadow oat grass, orchard grass, Herds grass, Virginia Blue grass, Meadow Fescue and Perennial Rye grass.—Ed.

## Nitrate of Soda on the Oat Crop.

Would you recommend the use of a nitrate of soda on oats and wheat? If you can, please state best time to use it, and how much per acre.

C. A. S.

See reply in this issue as to the use of nitrate of soda on wheat. Use in the same way on oats.—Ed.

## Canada Peas—Angora Goats.

I tax you for a sufficiency of your valuable time to answer the following questions:

Is it practicable to buy Canada field peas to sow this winter now, here in Louisa county, with no visble chance of getting them in the ground as early as you advise in a recent issue of the *Planter*? Seed quoted by a Richmond firm at \$1 65 a bushel?

Having 135 acres of land, nearly all thicket, just such as you find over much of this section unfit on account of growth for grazing cattle or sheep, would you advise the purchase of a flock of Angora goats to feed on this land; and if so, how many?

Would four strands of barb wire be a sufficient fence to enclose? Have fine, roomy barn, shedded on three sides on land, and land lies convenient to my farm. Please state comparative profit of goats and sheep, and also as nearly as you can, what first cost of goats per head would be.

Apple Grove, Va.

JAMES H. QUISENBERRY.

We have known a crop of Canada peas and oats, seeded in the first week in March in Chesterfield county, to make a fair crop; but the spring was a cold one. They should be got in earlier than this to give them a fair opportunity. If you can seed this month, the crop might be worth the cost, and the land would be improved for the cow peas to follow.

In this issue you will find a reply to a query as to Angora goats, to which we refer you. We are strongly of opinion that on such land as you describe, goats will be found profitable, both directly and indirectly. They will clean it up and fit it for cultivation cheaper

than in any other way. You should have at least fifty goats to get ahead of the brush growth on 135 acres of land. We think four strands of wire would enclose the goats.—Ed.

## Rotation of Crops.

I have been sowing wheat every other year after wheat—sowing clover with wheat in every instance, cutting only one crop of clover when I got a stand, and when I did not get a stand of clover, I sowed peas. Thus you see I got a clover or pea fallow each time I sowed wheat, using at time of seeding a heavy application of bone meal and acid, and my lands seem very much improved; yield of wheat increases every year. But now comes the question: Will they continue to do so with this mode of treatment and farming, or would you advise a rotation of crops? If so, please name crops in rotation that should be cultivated on these lands before they come to wheat again. These lands, when I started four years ago, were as poor as poverty; but not reasonably expect to more than get my seed back, but I now get from ten to fifteen bushels per acre.

C. L. DOGGERT.

Mecklenburg Co., Va.

Yes. Your lands will continue to improve under this system so long as you take care to supply every year, or every other year, a sufficient quantity of phosphoric acid in the shape of bone meal or acid phosphate to meet the needs of the crops raised and to balance the nitrogen gathered from the atmosphere by the clover and peas. It would be an advantage to use a dressing of, say 25 bushels of lime per acre every third year on the clover fallow. This would make available the potash and phosphoric acid in the soil, and also tend to keep the soil alkaline enough for the production of clover, which cannot grow in acid soil. The turning down of so much green vegetable matter has a tendency to cause acidity, and hence your clover fails sometimes. Possibly an application of 50 lbs. of muriate of potash with bone meal, and acid phosphate every few years, might also be of service, though we think it likely that you have a fair supply of potash in the soil naturally.—Ed.

## Peas and Sorghum.

I have a forty acre field that was fallowed and sown in wheat (red land), and sown with timothy and clover with 200 lbs. of fertilizer. The drought caused no growth in the fall, and in the spring the drought again prevented any growth until late in May. The result was no grass, and only some 240 bushels of wheat. I am thinking of sowing it in peas, with a little sorghum, by a disc drill, after plowing, say three fourths bushel peas, two quarts sorghum, and 100 lbs. fertilizer per acre, in May, and cutting it by mower, when peas are forming to make hay. Would this improve the land and allow a crop of corn to follow in spring of 1904; or can this be improved?

Culpeper Co., Va.

B. F. CLARK.

The land should be in sufficiently good fertility to make a crop of corn after the peas and sorghum; but it would be an improvement to make an application of



200 lbs. of acid phosphate, instead of 100 lbs. of fertilizer. Peas are great consumers of phosphoric acid, and can never do their best and thus supply all the nitrogen they are capable of doing unless it is present in abundance.—ED.

#### Cow-Peas, Soy Beans, Crimson Clover, Rape, &c.

I would be glad to know the best way to cultivate the following, and when to seed the same: 1st. Cow-peas. 2nd. Navy beans. 3d. Crimson clover. 4th. Rape and Mangel Wurtzel beets for cattle or sheep in fall and winter. J. W. BONNER.

We shall deal with the raising of these various crops in our issues during the spring and fall months when seasonable, and to these issues refer the enquirer.—ED.

#### Horse Training—Artichokes,

Please recommend to me some good book on training horses from their birth up. Also please tell me when and how to plant artichokes.

*Isle of Wight Co., Va.* N. PEYTON YOUNG.

The Saddle Horse—a complete guide to riding or training. Price, \$1.00. Horses—How to handle and educate vicious—Gleason. Price, 50 cents. We can supply these books. In this issue will be found advice as to artichokes.—ED.

#### Corn-Growing.

In this neighborhood, people tell me that we cannot raise corn except we plant the corn on ridges and then keep it ridged as much as possible. Then I have been told that it is an old custom and nothing in it. That we can plant the corn just the same as in the North and get just as good corn. Please give me the best way, as I do not wish to make a mistake and lose my corn.

*Norfolk Co., Va.* JOE M. CHRISTENSEN.

We shall deal with this subject fully in our spring issues, to which we refer the enquirer. Meanwhile, we would only say, take no notice of people who advise you to ridge corn. We have for years been preaching level cultivation of corn, and have got thousands to follow our advice, and always with success.—ED.

#### To Kill Wire Grass.

Could you give me a plan or system by which one can most easily rid a piece of land of wire grass?

I have recently bought a piece of land, and five or six acres of it is strongly set in wire grass, and has not been cultivated for several years.

Any information along this line will be much appreciated. Would be glad to know if wire grass and Bermuda grass is the same in every respect.

*Edgecombe Co., N. C.* F. J. DOZIER.

The only way to get rid of wire grass is to shade it heavily. We know of a case where a piece of land similar to that described was completely rid of the grass in two years by planting two crops of corn on it. The corn was planted in rows three feet

apart and six or eight inches apart in the row, and was cut for the silo. The corn made a very heavy growth, and at the end of first year very little wire grass could be found. The second crop completed the work. Bermuda and wire grass are the same.—ED.

#### Maintaining Fertility of Land—Dorset Sheep—Sheep for Mountain Land.

1. Can rolling land be kept up to its present fertility, or improved, by the following method of rotation: Sow cow-peas in corn at the last working, and when the corn is in hard roasting-ear state turn in enough hogs to "hog-down" the entire crop, then sow rye on same land, and when it is large enough graze with sheep or hogs as late in the spring as it will be safe for it to make a crop; after the rye has matured "hog-down" the entire crop again. After the rye is all consumed and the rag weeds have made a good start commence to plow the same land again for corn the following spring, subsoiling when possible and sowing peas when practical, and "hog down" the whole crop as before, then sow in rye and so on indefinitely? The foregoing method would obviate the risk of clover, save labor, machinery, a great deal of worry and more money, if it does not impoverish the land.

2. Do you know it to be a *fact* that Dorset sheep will defend themselves against dogs?

3. What breed of grade sheep would you recommend crossing Dorset rams on to breed up a flock of high grade Dorsets, providing you could not procure grade Dorsets at a reasonable price? Are Dorsets as good or better than some other breeds for mountain land? C. T. BLACK.

*Boyle Co., Ky.*

1. Such a rotation and system of consuming the crops on the land as you suggest would no doubt maintain and enhance the fertility of the land for a time, but could not be indefinitely continued without impoverishing it and ceasing to be profitable. The several crops named are large consumers of phosphoric acid and potash, and whilst the existing supply of these minerals in the land continues sufficient, the rotation would be successful; but as soon as these begin to fail, then profitable production would cease. You cannot supply the deficiency in one form of plant food by a superabundance of another. They must each be present in equivalent proportion. If 300 or 400 lbs. of acid phosphate and 50 lbs. of muriate of potash was applied per acre each year, then the rotation might go on almost indefinitely with success, as the peas would supply the nitrogen from the atmosphere.

2. Dorset sheep we know will defend themselves better from dogs than any other breed. We have one advertiser of this breed who offered to make good any Dorset sheep supplied by him which were killed by dogs.

3. Whilst the Dorsets are hardy sheep, we do not regard them as especially a mountain breed. Their original home was on the low rolling lands of one o

the warmest counties in England, and they are most fitted for similar lands in this country. The Merinos will do better on high mountainous land, and the true mountain sheep of the north of England and Scotland still better. We would cross the Dorset rams on Merino ewes.—Ed.

#### Nitrate of Soda for Wheat.

When is the best time to apply nitrate of soda to the wheat crop, and what quantity should be used? Should it be harrowed in, or will it do as well left on the surface? How much will it increase the yield?

C. M. H.

Nitrate of soda should never be applied to any crop until it is commencing to grow. It is so very soluble that unless root action is active, much of the nitrate is apt to be lost by leaching into the subsoil. Apply to wheat just when the crop starts in the spring; we have seen it make a wonderful change in the color and rate of growth in a week. Apply from 75 to 100 lbs. to the acre, broadcast. It need not be harrowed in, but it is well to harrow the wheat before sowing the fertilizer to break the crust and incite root action. We have frequently known it to increase the crop from five to ten bushels to the acre, and make what would have been a complete failure a fair crop.—Ed.

#### Grinding Bones for Fertilizer—Preparation for Corn—Melon Growing.

I am starting on a farm outside the city. Among other things, I shall raise some poultry.

1. I have bought a Mann bone mill to run by power. Would it pay me to grind bones for fertilizer as well as for chicks? I have plenty of green bones from my own shops, and have the power on my premises. For what crops would the bone be most suitable, and about what should be its marketable value? How should it be applied?

2. I have some land fallowed for corn. Would it be best to broadcast the manure on now, and let it lay, or keep it in the barn yard till spring, and then apply just before planting time? Apply it now, will not the ammonia and other parts of it evaporate and be lost?

3. What is the most approved manner for preparing the ground for melons, and what is the best manure and fertilizer?

A. E. BURCHER.

Warwick Co., Va.

1. We do not think that you would find it practical to grind bones for fertilizer with a Mann mill. The bones used for fertilizer are first freed from grease and fat by boiling before being ground. The fat is of no value as a fertilizer, but rather a hindrance. These bones are then dried and ground to a powder much finer than a Mann mill will produce. Bone meal is valuable, is a source of phosphoric acid, and has also a small percentage of ammonia. It is one of the most useful phosphatic fertilizers used—being lasting in its

action. It is excellent for wheat and grass production, and should be applied broadcast at the rate of 300 to 500 lbs. to the acre.

2. Apply the manure broadcast at once. It will waste less in the field than in the barn-yard.

3. The land should be deeply plowed as soon as dry enough, and be left rough for the weather to break it down until April. Then work it fine and lay off the hills by running furrows lengthwise six feet apart and cross furrows six feet apart. At the intersection of these furrows, open a space with a hoe three feet in diameter and put in two or three forkfuls of good farm yard manure, upon which spread a handful or two of good truck fertilizer and mix the two. Then cover with good soil to the depth of three or four inches and plant the melon seeds on this bed after the ground is warm.—Ed.

#### Alfalfa Growing.

I want to raise alfalfa for meadow, and as it is a new grass in Southwest Virginia, I want you to please advise me how to start it.

The *Southern Planter* recommends sowing it in fall; but I do not think it can stand the freezing here in winter, as the soil is of such a nature as to be readily heaved by the alternate freezing and thawing.

What time in the spring do you recommend sowing it? We very often loose red clover by sowing early in the spring, and the frost killing it. Is alfalfa easily killed by frost? Is it best to sow broadcast or drill it? How much seed is required per acre? Ought it to be fertilized? If so, what kind and how much per acre? If it be fertilized, would it be best to mix grass seed and fertilizer together and drill, or not? If sown in March or April, and it grows off nicely, should it be mowed this year or not? The land is good where I am going to sow it.

JNO. B. FERGUSON.

Russell Co., Va.

Whilst we are strongly of opinion that alfalfa should in the South, as a general rule, be seeded in the fall, yet exception should be made in the mountain sections—say above 1,000 feet in elevation, or wherever the winter is very severe. Where these conditions apply, the crops may be seeded in the spring at any time from April to June. The land should be well prepared and a fine seed bed be made. If not rich, it ought to have an application of 250 lbs. of bone meal to the acre, and if at all acid, which is nearly always the case where clover fails, it should have a light dressing of lime worked into the soil after it is plowed, say 10 to 20 bushels to the acre. Alfalfa will not grow on sour land. If alfalfa has never been grown on the land before, it will succeed much better if a sprinkling of soil from a field which has grown alfalfa be applied. This will infect the land with the necessary bacteria. Some of these are always found on the seed, but usually not as many as necessary to make the best growth. Sow 20 lbs. of seed per acre broadcast. Do

not sow with a grain crop of any kind. Be careful to sow only on land free from weeds. These are the worst enemies the crop has usually to contend with in the South. After the crop has grown five or six inches high, run over it with the mower, clipping it back to three inches. Repeat this three or four times during the summer, leaving the clippings as a mulch, unless they become too heavy and fit for hay, when they should be removed.

The following remarks by Professor Hopkins on the growing of alfalfa in the Middle West are so valuable that we desire to bring them to the notice of all our readers. We take them from the *Breeders' Gazette*:

1. Nitrogen costs at least 15 cents a pound in commercial fertilizers, and the farmers of the United States (chiefly in the older States) are paying millions of dollars every year for commercial nitrogen.

2. The atmospheric pressure is fifteen pounds to the square inch; four fifths of the atmosphere is nitrogen; there is as much nitrogen resting upon every square inch of the entire surface of the earth as is contained in one ton of ordinary farm manure.

3. Alfalfa requires more nitrogen for successful growth than any other farm crop and more than even our rich prairie soils can furnish; and, consequently, to grow alfalfa without bacteria not only exhausts the soil of nitrogen, but requires heavy applications of manure to keep the alfalfa from dying.

4. When inoculated with the proper bacteria and grown on soils which are not acid, alfalfa has free access to the unlimited and inexhaustible supply of atmospheric nitrogen, and it then becomes the greatest nitrogen-gathering plant known to American agriculture.

5. Alfalfa hay contains at least 2½ per cent. of nitrogen and eight tons of alfalfa hay which frequently have been, and can be, and should be, produced from one acre of land in a single season contain at least 400 pounds of nitrogen, which is as much nitrogen as is contained in 400 bushels of corn or in forty tons of farm-yard manure, an amount of nitrogen which in the form of commercial fertilizers would cost at least \$60.

6. These are not estimates; they are facts, absolute, positive and well established facts; and if we can put our soils in suitable condition to grow alfalfa—by inoculating the soils which need inoculation, by liming the soils which need lime, by applying phosphorus to the soils which are becoming deficient in phosphorus (and even at the expense of a few dollars per acre)—shall we not do it?

7. The Illinois Experiment Station has cured four crops of alfalfa hay without loss and without difficulty during the very wet season of 1902. But even if we should lose a crop of hay because of wet weather, we could well afford to use it for manure. For manurial purposes one ton of alfalfa hay is worth more than four tons of ordinary farm yard manure.

8. Alfalfa hay is an excellent feed for horses, cattle, sheep or swine. It is a richer feed than red clover and requires less corn to be fed with it to produce equal results.

Cotton Fertilizer—English Peas.

1. *Muriate of Potash for Cotton.*—I would like to know if I can safely use 100 lbs. of potash per acre for cotton. I used 50 lbs. per acre last season with satisfactory results. My lands are old cultivated, medium light soil, with clay subsoil.

2. *English Peas.*—I would like to have some information in regard to English peas. How many bushels (in the hull) is considered a fair crop per acre—say land that will yield forty bushels of corn per acre with good fertilization? Are they a profitable crop for shipping to Northern markets, provided they are ready for shipping in May?

*Vegetables and Fruit Packed in Lime.*—I would like to hear from others that have tried the lime receipt in the October issue. I packed a lot of tomatoes, some nearly ripe, some green, in a box with air slaked lime as per instructions. some two months ago. I opened them recently, and found that some of them had rotted and others had dried completely up.

Marlboro Co., S. C.

J. FLETCHER.

In South Carolina a very elaborate and carefully-conducted series of experiments was made upon the Experiment Station farms some years ago to determine the fertilizer requirements of the cotton crop. The soils selected were typical of the upland soils of the State, and had been much exhausted. The conclusions reached were in part as follows:

1. Cotton requires nitrogen, phosphoric acid and potash.

2. Of the three, phosphoric acid is relatively the most important, and controls the action of the other two.

3. Nitrogen is relatively more important than potash.

4. Potash, when applied separately, is of little value.

5. With proper allowance for cost, as well as the effect of each application, the requirements may be more exactly given as follows, for a crop yielding 300 lbs. of lint per acre: Nitrogen, 20 lbs.; phosphoric acid, 50 lbs.; potash, 15 lbs.

It is concluded that the amount of phosphoric acid and proportionate amounts of nitrogen and potash cannot be indefinitely increased with the expectation of obtaining a corresponding increase in the crops. The maximum quantity of fertilizer that can in general be used with advantage, is concluded to be an amount that will furnish per acre phosphoric acid, 50 lbs.; potash, 15 lbs.; nitrogen, 20 lbs. In general, the most effective amount of fertilizer was 652 lbs. per acre, made up of—

Acid phosphate .....	468 lbs.
Nitrate of soda .....	130 lbs.
Muriate of potash.....	54 lbs.

652 lbs.

It would seem, therefore, that it would not be wise for you to increase the potash to 100 lbs., even though you correspondingly increased the other ingredients.

2. Very large crops of English peas are grown in Tidewater Virginia for shipping in May and June to the North and for canning. They are in a good season, usually regarded as a profitable crop, and the area planted is constantly increased. We have no reliable data as to the average yield per acre. You ought to be able to grow them quite as profitably in South Carolina, as you should strike a very early market when the price is high. They ought to be in the ground now to do this.—Ed.

#### Grass Seeding.

Will you please state in your next number how much Evergreen should be seeded to an acre. Some say one bushel, but I want to know for certain how much, and how much red top or herd grass.

Campbell Co., Va.

W. C. JONES.

We presume you refer to Tall Meadow Oat Grass when you speak of Evergreen grass. We would seed from a bushel and a half to two bushels of the meadow oat grass and a bushel of herds grass. We believe in heavy seeding of grass seeds, and this belief is founded on long practical experience. We never sowed less than three bushels to the acre, and nearly always secured a good stand sufficient to smother down the weeds.—Ed.

#### Pecans—Grass Seed.

Enclosed find half dozen "pecans" that I shook from tree to day—9th January. I have six trees 15 to 35 feet in height—the larger ones 40 inches in circumference—from Texas nuts planted about fifteen years ago. Four of the trees have borne a few nuts for some three years; two produced nuts not quite so good as the ones enclosed. They bear more, but on account of late ripening, they do not mature before cold weather or frost. I do not know how those nuts compare with the first nuts grown, but think they are as good as the average nut offered in the stores. We propose to graft some on seedling Hickories to try to get them to come into bearing earlier. The trees stand in stiff clay land or sod, but fertile.

I would take advantage of this opportunity to ask you or your readers to advise us the best and most practical way to get rid of "persimmon bushes." They are a great nuisance with us. I have them from half an inch to three inches in diameter at bottom and ten to twelve feet in height. Will Angora goats eat persimmon bushes?

What is the advantage of the lawn grass mixtures over Kentucky blue grass for lawns where the soil is stiff red clay and naturally runs into blue grass and white clover?

Rappahannock Co., Va.

Our Virginia friends seem determined to prove to us that pecans will grow in Virginia. We never disputed this, but merely said that it was not the best and natural latitude for them, and that we could not advise planting them in this State for profit. The nuts

sent us are fair ones, but not so fine as those sent us from Norfolk county, Va.

The advantage in seeding lawn grass over Kentucky blue grass alone is, that you secure a mixture of grasses which mature at different times, and therefore tend to keep a lawn in fine order through a longer season than one variety alone. We know of no other way to get rid of persimmons than to grub them out, except that if browsed for years by goats sufficiently numerous to keep them from leafing, they will die out. Any tree or plant kept from leafing will eventually die, but some, like persimmons, are very tenacious of life.—Ed.

#### Improving Mountain Land.

My father has recently purchased about 2,000 acres of very rich mountain land in Mitchell county, N. C. Some 800 acres of this land is cleared, much of which lays as smoothly as valley land, and is covered with native sod, which seems to fatten cattle fairly well. He is thinking of plowing up this sod and sowing blue grass and red top, thinking that he can carry a greater number of cattle. If any of your correspondents have had any experience with this kind of land, I would like to get some information as to whether it is practical to establish a permanent blue grass sod.

The soil is very deep and black, and the timber is mostly sugar tree, buckeye and bass wood. Timothy grows to perfection, will produce about two tons to the acre. How would a timothy seed farm pay on this land? What machine would you recommend for thrashing timothy, oats and rye? This land is not suited for growing wheat, as it lays from three to four thousand feet above the sea level.

Sullivan Co., Tenn.

J. H. REYNOLDS.

We would like to hear from some of our subscribers on this subject, as it is one with which we have had no practical experience. Please oblige us.—Ed.

#### Fertilizer for Grass and Clover.

I have a field well set with timothy and clover—would it be profitable to sow Orchilla guano this spring towards making a good hay crop, and next spring to be turned under for corn, and how much should I use per acre?

York Co., Pa.

A SUBSCRIBER.

We doubt much whether you would derive any benefit in the hay crop from the use of Orchilla guano as a top dressing. This is a phosphatic fertilizer, and wants to be mixed with the soil to secure its benefit. You would derive much more advantage from an application of 75 to 100 lbs. to the acre of nitrate of soda just when the crop commences to grow. This is a very soluble fertilizer, and will benefit the crop at once. Apply the Orchilla guano in the early spring after plowing down the sod in the fall or winter, and it will benefit the corn crop.—Ed.

### Artichokes—Best Cross for Grade Hogs.

The *Southern Planter* is the best "farming implement" on my farm, and I can't do without it. Please give in your next issue information about artichokes, what is the best variety? how many to the acre? what is the best time to plant? what kind of land is best for them? and what is the method of cultivation?

Which makes the best hog, Poland China male on Berkshire sows, or Berkshire male on Poland China sows?

Northumberland Co., Va.

W. S. DILLER.

We have a high opinion of the value of artichokes as a feed for hogs. They are also good feed for milch cows, but it is as a hog crop that we most value them. Curiously enough, we have this month a letter from an old subscriber complaining that his hogs will not eat them. In all our long experience, we have never before had such a complaint. We have subscribers who grow acres of them and feed large herds of hogs on them with the most complete success. The best variety to grow is the Jerusalem or White French. This variety will produce from 300 to 700 bushels to the acre, according to the fertility of the land and the season. They should be planted in rows about 3 feet apart and about 2 feet apart in the rows. Prepare the land as for corn. Then open out a furrow and drop the sets as with Irish potatoes. These sets may be either whole roots if small or cut ones if large. Every piece with two or three eyes will make a plant. Cultivate as for corn. In the fall turn in the hogs and let them harvest them for themselves, digging sufficient first to provide seed for another year. If desired, a portion of the crop may be lifted, and be stored like turnips to be fed to the hogs when the land is too hard frozen for them to root them out. If not needed for the hogs, they may be fed to cows.

A cross of Berkshire male on Poland-China sows will be best, as the Berkshire is more prepotent than the Poland-China, having been longer bred pure.—Ed.

### Cattle Dying—Texas Fever or Blackleg—Lice on Hogs.

Through my pasture is a stream of running water (a creek). The past summer being an exception it dried up, except in holes. This my cattle would drink. Fresh water was drawn for them daily, but they seemed to prefer the creek water. In September two heifers were sick three or four days, died, and were carried off, and no one seemed to know what was the trouble. In October two more young heifers died. In their case I found it a genuine case of hemorrhagic fever. I began the use of quinine, but I think too late. In case of another attack, will you kindly tell me what to do? Will kerosene oil, poured on hogs until it runs off their sides, damage them? Object, to kill lice.

Cumberland Co., N. C.

W. C. FIELDS.

We are inclined to think that your cattle died from either Texas fever or Blackleg. If there was a puffed and swollen condition of the skin on the legs up near

the body, and this when rubbed over with the hand gave out a crackling sound, the disease was Blackleg. For this, inoculation with Blackleg vaccine, which is advertised in our columns and can be had from the Experiment Station Blacksburg, is a certain preventive. If the disease was Texas fever this is caused by ticks, and there is no known cure. The remedy is to keep the cattle free from ticks. Clean off all ticks by picking and then grease them about the legs and under the body with grease of any kind, in which mix a little carbolic acid. A pasture which has carried cattle which have had Texas fever is sure to be infested with ticks and no other cattle should be put on that pasture for a year. The ticks will then be exterminated as they cannot perpetuate themselves unless they have cattle to feed and breed on, nor can they crawl or fly out of the fields. Such a field so cleared can only again become infested by the introduction of ticky cattle and will be perfectly safe for clean cattle even from the North.

We have frequently poured kerosene on hogs to kill lice without any injury to them. Very thin skinned hogs will sometimes be blistered by it. It is not necessary, however, to do more than pour a little oil down the centre of the back. This will soon spread in a thin layer over the whole body and will kill the lice without hurting the hog.—Ed.

### Angora Goats.

I am considering the purchase of a flock of Angora goats, and as I know little more about them than what I have read in the farm papers, I would like to have your views on the matter. Are conditions in this section favorable to them? Will ordinary sheep fence turn them? Best age to buy; about price; lot of say 25 head; amount wool they shear; its worth, increase in kids per year. Will they cross on sheep? Demand for Angora venison, &c., &c.

Caroline Co., Va.

C. B.

In our July, October and December issues of last year we published a considerable amount of information on Angora goats, to which issues we refer our correspondent. We believe that there is a field for this kind of stock in this State, and that they would do well here in any part of the State. You will find them advertised for sale in our columns, and a letter to our advertisers will give you the prices at which they are selling. These run all the way from \$10 to \$50. A good sheep fence will confine them. The wool is always in demand at from 15 to 50 cents a pound, according to quality and length and fineness of staple. We would purchase young goats and breed up a flock. They will not cross with sheep. There is not any demand for Angora venison as such, but it sells well and are tord for lamb. If our correspondent has not the issues of the *Planter* referred to, we will try to find them for him if he desires.—Ed.

### Clover Seeding.

I would be glad to have discussed through the columns of your paper the best methods of getting a stand of red clover, as adapted to this section.

Fall, winter, or spring sowing? Is it best to harrow in seed? With or without nurse crop? What do you think of early spring sowing—covering seed lightly and sowing rye at same time as a protection against sun—the rye to be grazed or cut for hay when ready? How would this combination do for August or early September sowing?

I believe the salvation of much of our farming land lies in the cultivation of clover and other legumes, and therefore merits our most careful investigation. So let us have a full discussion of the subject and the opinions and experience of our up to date farmers.

I would also be glad to hear the best methods of preparing a clover crop for the huller. Best time to cut and cure.

*Culpeper Co., Va.*

A. G. PARR.

Your land probably needs lime. Clover will not grow on acid land, and this is probably the condition of yours. Render it slightly alkaline by using 25 bushels of lime to the acre. The clover microbes cannot live or work in acid soil. We believe more clover seed is lost by not covering sufficiently where the land is in suitable condition for its growth than from any other cause. We always harrowed it in lightly and rarely failed of a stand. In another part of this issue (Work for the Month) we have given our views as to seeding grass and clover with grain. We are opposed to the practice in this climate. Try the lime and seed alone in the fall, or if not ready, then in the spring. We think you will succeed. We shall be glad to have the views of our readers on the hulling question.—ED.

### Alfalfa,

Can we grow alfalfa here on a well drained red clay soil? No lime in our soil here, but we can grow red clover. We have made a crop of corn, wheat and buckwheat on the land, and now wish to seed it to alfalfa. Please give us your advice as to seeding it.

*Grayson Co., Va.*

P.

Yes, alfalfa can be successfully grown all through the South if the proper conditions for its culture are observed. It requires rich sound land with a subsoil into which the roots can penetrate, and must be free from weeds, which are the greatest trouble with which it has to contend in the South. In all sections except the mountains, it should be seeded in the early fall. The best preparation for the crop is to spend the summer months in preparing the land intended to be sown, and in killing out all weeds by constantly bringing the seeds near the surface, and, as soon as they have commenced to grow, destroying them by cultivation. Then in August give the land an application of 300 lbs. of bone-meal to the acre, harrow in and seed; or the land may be well prepared and 300

lbs. of acid phosphate or bone meal be applied and be seeded with cow peas. This will smother the weeds. After the peas are cut off for hay, cultivate lightly with a harrow or cultivator and sow the alfalfa. In your section, the crop should be sown in May or June.—ED.

### Green Crops for Hogs—Sick Hogs.

I have five pigs ten weeks old which I wish to make average 200 pounds at killing time. Propose sowing three acres in oats and Canada peas, as this is the earliest green feed I can get for them to graze on. During summer they can have cabbages, squash, melons, etc., and September will be turned in a pea field. Would it be reasonable to expect 200 pounds each with such feeding? The same pigs are at present broken out with small sores all over; their hair looks dead, yet they eat heartily. What is the probable trouble with them? What kind of medicine do they need?

Many farmers have lost fattening hogs this season through this section. They seem to take almost instantly sick with a cough, hard breathing, very rapid as though choked, and never eat anything scarcely, and after a day or so of sickness they die. What do you think the trouble is? Three lots of those killed on being dressed were found to be full of little worms about an inch long. They are principally around the kidneys, though some were found in the livers. Those so affected throve very poorly in the pen, and in most cases were weak across the loins. Is there any tonic which if given would kill such parasites?

*Mecklenburg Co., Va.*

A SUBSCRIBER.

It is impossible for us or any one else to say that hogs will make any particular weight on certain feeds within a certain time, but thousands of hogs fed largely on green crops and only finished with a little corn, make every year the weight you suggest before they are a year old. You will, however, need to supplement your peas and oats with some other crop to carry the hogs to September, when the peas are ready. Canada peas and oats make a fine grazing crop when put in early enough (they ought to be sown before the middle of this month at the latest); but the period of their usefulness ends as soon as the hot weather sets in. They cannot stand heat. You should plant some sorghum and corn to come in for use in July and following months until the peas are ready.

As to the sickness of the little pigs: Give them a little sulphur in slop feed, and keep them warm until it has worked off.

As to the worms: These should be expelled by giving them a little turpentine, say a spoonful per hog, in slop feed, followed with some Epsom salts in the food to carry off the worms. It is impossible for us to say from what the hogs died; probably from some form of disease of the digestive organs or obstruction of the bowels.—ED.

### Fertilizer for Garden Crops—Lettuce.

I would respectfully ask your opinion as to the best fertilizer to use on garden truck, especially lettuce, and as to the application of nitrate of soda as a top-dressing. When so applied, should it be covered by earth, or simply put on top near the plant?

Cumberland Co., N. C.

H. J. McDUFFIE.

The best fertilizer for all garden and truck crops is rich farm-yard manure. This tends to keep the soil full of humus and vegetable matter, without which it is impossible to grow good vegetables. The soil can scarcely ever be made too rich for truck crops, as unless grown quickly they are never of good quality. Farm-yard manure can be profitably supplemented by fertilizers especially rich in nitrogen, like nitrate of soda, blood, cotton seed meal and tankage. Nitrogen tends to induce quick and abundant leaf growth. The cruciferous crops, like cabbages, also call largely for potash, as also do Irish potatoes. In fact, nearly all the vegetable crops require an abundant supply of potash in the soil. The cereals, like corn, call also for phosphoric acid. For lettuce, a fertilizer having about 6 per cent. ammonia, 5 per cent. phosphoric acid, and 8 per cent. potash, is about right. This may be made up of 300 lbs. nitrate of soda, 800 lbs. cotton-seed meal, 600 lbs. acid phosphate (13 per cent.), and 300 lbs. muriate of potash—to make a ton.

Nitrate of soda need never be plowed under. It is as soluble as common salt, and will soon melt and find its way into the ground.—Ed.

### Tomato-Growing.

Will you kindly write an article on tomato culture? 1st. The character of soil best adapted. 2d. The best seed to be used. 3d. The preparation of the land. 4th. Which is best to use, fertilizer or manure?

We have a new cannery and a number of farmers in this neighborhood are anxious for the information.  
King George Co., Va.

H. T. GARNETT.

We will write fully on this question of tomato growing in our next issue. Meanwhile, we would say that the best land for the crop is a light loamy soil, which should be deeply plowed and finely prepared. The work of getting the land in order should be undertaken as soon as ever the land is dry enough to work, so that by 1st May it may be in good order and nicely warmed, that the plants may start off freely. The hot beds in which to raise the plants should be got ready this month. They should be made up as for striking sweet potato slips. Do not sow the seed until a nice gentle bottom heat has been developed, cover the manure with about 3 inches of loamy woods earth. Sow the seed in this not too thickly about the first week in March for the earliest plants. Stone, Beauty, Acme and Trophy are good varieties for canning purposes.—Ed.

### Hen Manure.

Having gone into the poultry business on a small scale, something like 260 chickens, and by gathering the droppings once every week, I believe in one year's time I will have a large pile of hen manure. I would like to use this on my wheat in the fall.

1. Is this the crop to use it on? Wheat and corn, are the principal crops here in the northern part of Virginia.

2. How would you keep it from heating? At the present time I am mixing kainit with it, but do not know if this will prevent it from heating. Wanted this fall to take one part hen manure, one part potash, one part acid phosphate.

3. Will this make a good fertilizer for wheat and grass?

4. Will you tell me a better way to use my hen manure? People tell me it is a very rich manure, but have never been able to realize much out of it.

*Shenandoah Co., Va.*

N. D. HITE.

Hen manure is rich in nitrogen with a small percentage of potash and phosphoric acid. It should be gathered up regularly once or twice a week and be stored in barrels. Kainit, or acid phosphate, or plaster should be dusted over it under the roost every day or two, and this will prevent the nitrogen from being lost. It should be kept moist, not wet, in the barrels or it will be difficult to handle when wanted, as it dries into very hard lumps. Being rich in nitrogen, it is more suited to vegetable or forage crops than wheat. It lacks the phosphoric acid and potash which the cereals call for. If used for wheat it should have three or four parts of acid phosphate to one of the hen manure applied with it. The mixing of kainit with the manure as it is gathered will supply the potash needed. Used in this way it will make a good wheat fertilizer.—Ed.

### Budding Peaches.

I want to bud some peach trees next June. Will you please tell me when to cut the buds? Please answer by mail or through the columns of your journal for February; and by so doing, you will greatly oblige  
J. H. DAVIS.

*Monroe Co., W. Va.*

The buds must be cut from a shoot of this year's growth. The shoots containing the buds should be cut when so mature as to be rather firm and hard in texture. They are usually in the best condition after the terminal bud has formed.—Ed.

### Holstein-Friesian Associations.

Have there ever been two Holstein-Friesian Associations in America? If so, did one fail?

*Nottoway Co., Va.*

SUBSCRIBER.

There was at one time a Western Holstein-Friesian Association, which was organized on October 28, 1891, and held its first annual meeting at Marshall, Mo.; but this was consolidated with the Holstein-Friesian Association of America in the spring of 1898. Mr. F. L. Houghton, of Putney, Vt., is secretary of this Association.—Ed.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH

Not much can be done in the garden or truck field this month in the way of planting crops, but much may be done in the way of getting the land into condition for planting, and in applying the manure and fertilizer necessary to ensure good crops. The point we have emphasized in "Work for the Month" in the Farm Management Department is equally as necessary here, yea, indeed, more necessary if that be possible, and that is, the more perfect preparation of the soil for the crops before planting. Plow and re-plow, harrow and re-harrow, if you want to secure the best results. In no other way can the inherent fertility of the soil be made available, nor can the plant food supplied in the way of manure and fertilizer be otherwise made to give the best results. Get out the barn-yard manure on to the plots and do not be sparing in its application. A hundred loads to the acre will not hurt the crops, and this may be supplemented with 500 lbs. of acid phosphate and 100 lbs. of muriate of potash per acre. Spread the phosphate and potash on the barn-yard manure and work all in together. These fertilizers are better applied now than at the time of planting the crops, as they require time to become available as plant food.

The crops which may be planted in this month, in Tidewater Virginia and Eastern North and South Carolina, are English peas and Irish potatoes. In other sections of these States, and the States West and North, March is soon enough to get in these crops.

English peas are very hardy, and even a sharp frost will not hurt them much. They should be planted in drills 2 feet 6 inches apart, and be given a cover of 4 or 5 inches of soil. Scatter the peas in broad rows, and tread into the soil before covering. The early smooth varieties are the hardiest, and should be first planted. If the land needs additional fertilizer (though it is not well to make land too rich for peas, as it tends to cause them to run to vine,) apply acid phosphate and potash, say 300 lbs. of phosphate and 50 lbs. of potash.

The planting of Irish potatoes in this month is always attended with some risk, as they are very susceptible to damage from late frost, and, when once cut off, rarely make much yield, but the price of the earliest potatoes is always a good one, and it is worth while to take some risk. Commercial fertilizer usually makes a better yield and sample of potatoes than farm yard manure. Manure has a great tendency to make the potatoes scabby. The spores of the disease

causing scab are often present in manure. A good fertilizer for Irish potatoes may be made up of—

300 lbs. nitrate of soda.  
600 lbs. cotton seed meal or fish scrap.  
800 lbs. acid phosphate.  
300 lbs. muriate of potash.

2,000 lbs.

This may be applied at the rate of from 500 to 1500 lbs. to the acre broadcast. If less than 500 lbs. is applied per acre, it may be put in the rows, but must be well mixed with the soil before planting the sets. Open the rows 2 feet 6 inches or 3 feet apart and drop the sets 12 to 15 inches apart in the rows. The sets may be if cut large, so as to leave two or three eyes on each piece. Cover to the depth of 4 or 5 inches. The crop should be cultivated with a harrow or weeder before the plants come through the ground to kill off weeds and open the soil. Cultivate frequently and keep level.

Small sowings of lettuce, radishes and other early salads may be made in sheltered spots.

Hot beds should be got ready for raising tomato, cantaloupe, melon, egg and pepper plants, and for striking sweet potatoes. Make up the beds and cover the manure, which should be fresh horse litter and leaves with 3 or 4 inches of soil, but do not plant the seeds until the first hot fermentation of the manure is over. What is needed is a gentle steady heat.

Spinach and kale may be seeded towards the end of the month. These crops should be sown in rows where they are to complete their growth and not in seed-beds. If the weather is very cold, March is soon enough to sow them.

Cabbage seed may be sown in frames for plants to set out to follow the fall sown crop.

Asparagus beds should have attention. They should be worked over and covered with manure and soil to the depth of 10 or 12 inches. New beds may be made and the plants be set out this month and the next. In making the bed, plow out the soil as deep as possible in the line of the rows, and then in the bottom of this deep furrow spread 2 or 3 inches of good soil and set out the plants 12 or 15 inches apart. Cover with 2 or 3 inches of good soil, and make firm over and around the plants. The rows should be not less than 6 feet apart, so as to provide for plenty of soil to cover, the beds the second year.

Don't delay ordering your seeds and fertilizer until time to plant the crops. If you do, you are pretty sure to have to wait for them, and thus miss the best time for planting.



## GARDEN AND ORCHARD NOTES.

*Editor Southern Planter :*

Start the pruning implements now. What tools should I use on the vineyard and in the orchard? A pair of lopping shears and a pair of ordinary hand shears will do the work in the vineyard if moved by the hand of an intelligent farmer. For the orchard, a small hand saw, in addition, will be all that may be needed. You can buy these of most large nursery-men and seedsmen, who advertise in the *Planter*. But how shall I prune? Why should I prune? Whole books could be written in answer to these two questions. No one should prune who cannot give a good reason for each operation and tell what the results of each operation will likely be. This rule will exclude the mere mechanic from fruit plantations. Fruit trees and vines should not be cut because the tools are sharp, nor for the sole object of permitting cultivators to go through the orchard more readily. Each vine and each tree presents a separate and distinct problem to solve before pruning. It requires as much brains to manage a pruning implement properly as it does to read Blackstone intelligently. The time has arrived in the Old Dominion when many people believe it. But the State needs many more just such believers. Training is quite a different thing from pruning. We prune in order to train. Therefore, we should have a well settled idea of training before we attempt to prune. In pruning the grape, it is well to remember that the fruit is borne in a few clusters near the base of the growing shoots. These growing shoots come out from wood of last season's growth. Thus it can readily be seen that the amount of fruit a vine will bear can be easily controlled by intelligent pruning. The shoot that grows out from each bud will usually bear from three to four clusters of fruit. Forty buds left on the bearing canes will produce about 150 clusters of good sized fruit. Strong vines will carry more and weaker ones fewer. What system of training is best? That depends upon the species or variety you are growing, and also upon what system you like best. After testing a number of the systems, we like the Munson system for several of the long caned species, and some modification of the old Kniffin system for the shorter vined varieties, like many of the *Labrusca* species. The bearing wood should be kept as near the ground as possible to hold the vine in manageable limits, to facilitate spraying and to make the fruit easier to gather. After pruning, we like to have the bearing canes tied to the wires almost in a horizontal position, so that the sap will be distributed as evenly as possible to all growing shoots. About three or four spurs with two buds each should be left near the main trunk for bearing canes next year.

For more exhaustive discussion of this subject, send postal card for Bulletin No. 48, Texas Experiment Station, College Station, Texas, and Bulletin on the Grape, published by Virginia Experiment Station, Blacksburg, Va. These bulletins should be in the hands of all grape growers of the State. They may be obtained if the editions are not exhausted.

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Commence pruning your trees this month, for fear you may put it off till the sap starts and much damage may be done when the bark slips. During my travels over the State, I notice a very large number of fruit trees planted out with the tops unpruned. They are frequently left to grow with the same switch-like top they usually have when taken up from the nursery where they grew in a crowded condition. This crowded condition made the young trees push their tops up in a tall and slender manner. The nurseryman usually encourages this form of growth to meet the erroneous popular demand for the tallest young trees. The conditions are entirely changed for the young tree's growth in the orchard. Nature will usually try to correct this slender top herself by pushing out thrifty sprouts lower down. These young and thrifty sprouts will usually grow faster than the older top growth, and thus make a very ugly and undesirable top. We usually prefer well-grown, one-year trees, so that we can cut the top back within two feet of the ground for most apple sections of the Southern States. The side buds usually push out readily when growth starts, and, by a little early summer pinching, we can usually start the top according to our own ideal the first year. We like the low vase form of top, with stout spreading branches. The trees are easier to spray, the fruit more readily gathered, and the wind does not do so much damage to the tree and fruit.

Limbs that cross and are likely to rub each other, should be taken out early. The top should be made open and spreading to carry a heavy load, and let the sunlight and air enter freely to give color and size to the fruit. Slender limbs should be cut back to keep them from bending down too much and to cause them to branch. When limbs are cut off at the trunk, the operation should be performed just outside of the collar, and the cut surface be made parallel with the main body of the trunk to facilitate the healing over of the wound. If pruning be intelligently done each year, it will rarely be necessary to cut a limb off the main trunk over one inch in diameter. White lead paint is an excellent thing to put on the cut surface to keep out disease germs and to facilitate the healing over of the wounds.

These general remarks apply more specially to such pomaceous fruits as the apple and pear, where the

fruits are borne on spurs that grow out all along the older limbs. The peach bears its fruit quite differently. In this instance the fruit is produced from buds that are borne directly, nearly always, on one-year-old wood. If all this wood is cut off, there will be no peach crop the following season. We like to prune off about one-third of the previous year's growth. This lessens the number of fruit borne, and, accordingly, causes the limbs to branch more, lessens the tendency of the limbs to droop down and split off, causes the tree to make more bearing wood for next season, and increases the size of the remaining fruit. Go out into the orchard and bring into the house some apple and peach twigs. Notice the difference between an apple bud and a peach bud. Learn the prospects of a fruit crop the coming season. Teach the boy the difference between a fruit bud and a leaf bud. This may give him his first lesson in nature study and start him in the study of horticulture. The State needs him.

For further study along this line, write for Bulletin No. 58, on Pruning and Training Peach Orchards, Texas Experiment Station, College Station, Texas, and also the Bulletins on Pruning Orchards, published by the Virginia Experiment Station, Blacksburg, Va.

\* \* \*

Make preparations now for war on injurious insects and fungous diseases. Order a good spraying outfit. Some good machines are advertised in the *Planter*. Order a supply of bluestone to make Bordeaux mixture. This may be ordered from your local druggist. You cannot afford to share your crop of fruit with insects and diseases. The bitter rot has done immense damage to Virginia apple crops, and it is almost sure to be ready to begin work again this coming season. While pruning your apple orchards, notice very carefully for cankered places on the upper sides of the limbs. Disease producing spores come from such places, and cause bitter rot of the fruit. Cut out all such limbs at least twelve inches below the infected places, and burn them. Take off all dried up fruit still hanging on the trees, and burn these also. Prepare to give the orchard a good spraying with Bordeaux mixture before the buds swell. Begin work on pear blight. Cut out all affected limbs in the same way, and burn them. The effectiveness of this work will depend largely upon the thoroughness with which it is done. If one single tree with diseased wood on it is left in the orchard, a number of trees near it may be seriously affected from it. If all diseased parts are cut out and destroyed early in the season, and this work be followed by a good spraying with Bordeaux mixture before the buds open, more than half the battle has been won.

\* \* \*

Give all garden soil a good, deep plowing as soon as possible. A freeze will do more in one night in helping you to put the soil in a fine mechanical condition than many days work with harrows. The advice in regard to early plowing, especially on heavy clay soils, frequently given in the *Planter*, is good. It will give the old pea vines, grass and weeds, a chance to make manure for the crops. Are you hauling out all the manure from the barns during these lengthening days of February to save time for pressing spring work?

Have you decided upon the best varieties of vegetables for your locality? Write a postal card to several seedsmen for seed catalogues. T. W. Wood & Son, Richmond, Va., and Geo. Tait & Sons, Norfolk, Va., publish valuable seed catalogues. You may learn something valuable by reading them. If you want any of Uncle Sam's garden seeds, write to your Congressman for them. These politicians will be glad to send them, but I cannot vouch for the satisfaction they will give you.

\* \* \*

The annual report of the Commissioner of Agriculture of Virginia for the year 1902, is before me. Have you received a copy? If not, write for it. The report contains some interesting information. The illustrations of the San Jose scale insect and bitter rot of the apple will interest our orchard friends. We hope the Commissioner will permit us to make a few friendly suggestions. While we realize the difficulties under which the Commissioner has labored—such as the limited use of the money at the command of this department and lack of facilities—still, if the Commissioner desires this general style of report, would it not be better for Virginia farmers and Virginia horticulturists to write more of the articles for this report instead of gathering them promiscuously from various States and taking a number of second hand ones? It seems to me this would more readily meet the conditions confronting the average Virginia farmer. While it is true that science is the same the world over, still, the correct application of scientific principles will depend upon the peculiar conditions that characterize each locality. We like reports concentrated upon one subject—such as one upon beef in Virginia, one upon apples in Virginia, one upon blue grass in Virginia, one upon sheep in Virginia, one upon trucking in Virginia, etc. Let these reports be made as exhaustive as possible. They would be handed down from one generation to another as standard works upon each topic. The reports would become reference books in the Old Dominion. While I may seem to be too critical, still, it seems to me that the same mistake is being made at the Test Farm. Too wide a scope of work is being undertaken for the force and the means at

hand. Many Experiment Stations made the same mistake in the beginning, in order to meet what was thought a universal demand for general information. Many of those Stations had to begin over and specialize. Some have never gotten over the A, B C's along this line yet. Consequently, there is always some "hindering cause" that prevented conclusions. Let me urge the Commissioner to specialize more, both in his reports and on the Test Farm. The best reports that I have seen along this line are published by the Secretary of the Board of Agriculture of Kansas. I am reliably informed that the State has made marvelous progress, both in stock husbandry and in general agriculture, since these reports began to be published.

\* \* \*

What a great pity our Commissioner of Agriculture was made elective by popular vote. Agriculture is certainly broad enough for any man without being forced to build political fences. The politician "got in a little of his work" on this law while the friends of agriculture least expected it. These latter sentences have no reference whatever to the report in question, which we believe is an improvement upon several previous reports, nor to the Commissioner. The Department cannot be made what it should be under this law. The man with industrial training and scientific learning does not fit in with the politician. The industrial man is coming to the front in Virginia now. A revolution along this line is silently taking place. This law will be changed, because it is a step backwards. But the farmers must look after their representatives more closely, and vote a little with the postage stamps.

R. H. PRICE.

*Montgomery Co., Va.*

### SWEET POTATO GROWING.

*Editor Southern Planter:*

This is a good time to form new resolutions and make out a plan of campaign for the year. Probably I can drop a word to others who may profit by it.

First, let me just say a word about sweet potatoes. They are the best crop I know of to raise on poor land. Because you can do as I have done for several years, raise 300 bushels per acre, and on as poor a *gall* as existed in this old State. Plow land deep in the fall. Do not harrow, let it stay rough, to crumble all winter by the repeated freezing and thawings, crumbling and disintegrating all winter. In the spring harrow early and destroy weeds, if any sprout thereon. Then in May after repeated harrowings, plow again and harrow again, to destroy weed seeds.

Then about May 15th take your big plow and open big furrows, four feet apart, running twice in the row.

Fill the trench so made full with good, well rotted manure, and put a bag (200 pounds) of tobacco fertilizer on the top of the manure; cover with two furrows, making a good cover of earth on the top of it. Then harrow longways, to bring it down nearly level. Then either roll or drag a slab longways, to smooth the top. If a rain comes run a weeder to prevent baking. Now you are ready to set slips. Set your slips out small, don't wait until they are a yard long to sap the potato in the bed, six inches will do very well. After setting (I always wait for a season) and after I get the slips started, I work crossways with a weeder, which makes them just jump up and grow. I pulled out only 7 in 8,000 plants last year. Don't be afraid to work them. A garden rake beats a hoe every time to work a garden with. Keep the ground loose on top. Use the Iron Age Cultivator in the rows often, and beyond all things keep your crop clean until the plants commence to run, when they will smother the weeds themselves. I always set slips 15 to 16 inches apart, which is about right.

About digging. Sweet potatoes grow until a frost hits the vines. I always await a frost myself. Still they can be dug earlier. My sweet potatoes are put away in boxes in my basement, where I keep about 50 bushels for seed, selling at \$1 per bushel each spring. They should be kept, not too warm and not too cool, but at an even temperature of from 50° to 60°, if possible. If too warm they sprout badly; if chilled, they rot.

When fed to stock, I know one bushel of sweet potatoes and two of corn will beat three bushels of corn, as I have often proved to my entire satisfaction. All corn is too heating to keep a hog, steer, or sheep in good health, whilst fattening, and the one third sweet potatoes makes the animal enjoy his corn the more. Any root will act the same, but sweet potatoes fatten as well, for I fattened a large beef with sweet potatoes alone one year, and have often fattened hogs on them.

Now, in conclusion, let me say I can raise as many sweet potatoes on one acre as I can corn on 8 or 10, and that land will produce a fair crop of wheat the following year, and grass as well, if the manure is properly worked out and scattered by repeated harrowings and re-harrowings, and the ground be put into good order for a grain crop. I have raised 20 bushels of wheat after my sweet potato crop, and you, brother farmers, can go and do likewise. But I put work on that sweet potato patch. One hundred dollars would not buy my crop when I dig it. Have you an acre to pay more, even in tobacco? I don't want to ride my hobby to death nor do I want to tire others, but I want all to try a sweet potato patch and report.

My potatoes have an extended redigree, probably, but all I know of them is just this: A lot were in

my cellar when I came here eight years ago, and I have the same kind yet, with some additions now and then from a good neighbor who gave me two or three potatoes, and I put them in my hot bed because they tasted so good when roasted of a cold winter's day or night. My potatoes are some big, some little, from eight pounds to one pound, every shape, size and color. I pick them as I feed them, and always put good-shaped ones not too large or small into my hot bed for slips.

Yours for Sweets,

Goochland Co., Va. W. ELLIOT HAMMOND.

#### NOTES ON VARIETIES OF APPLES AT THE AGRICULTURAL EXPERIMENT STATION, BLACKSBURG, VA.

[EXCERPT FROM BULLETIN 130.]

##### Editor Southern Planter :

The Horticultural Department of the Experiment Station is issuing at this time a second series of bulletins dealing with the Experiment Station orchards. This series is entitled "Orchard Studies," and the third number discusses some of the more important varieties of apples growing in the test orchards. Thirty-two varieties are discussed in the bulletin; six summer varieties, nine autumn, and seventeen winter varieties. The bulletin is too long to be reproduced in one issue of the *Planter*, hence the more important details are condensed and presented in advance of the official publication for the benefit of the readers of the *Planter*.

While, as shown in the official publications, the orchard studies deal with both scientific and practical matters, the chief object of the bulletins issued for the farmer is to convey information that is usable in his work, hence, in condensing for the press, mention is only made of those varieties which are summarized in the bulletins as the most important. Under the head of

##### SELECTION OF VARIETIES,

the question is sure to occur to every one familiar with even the limited list treated in this bulletin, "What shall I plant for my purposes?" To this question the following list is suggested as in part answering the same:

*For Summer.*—Select, Early Ripe, Yellow Transparent and Oldenburg, as cosmopolitan varieties which thrive in all apple soils. Chenango and Summer Rose are fine amateur sorts for the home orchard. Jefferis is a promising late summer variety here, but not well enough tested to warrant distinct commendation—quality excellent.

*For Autumn.*—Select, Maiden Blush, Buckingham and Wagener, again fairly cosmopolitan varieties, which thrive almost everywhere. Bonum, Fall Orange, Tolman and others have special value for persons desiring fine quality, and a commercial value where they can be sold on their merits.

*For Winter.*—Speaking first of those which are not cosmopolitan, and must be planted with nice discretion as to soil, conditions, etc., select, Albemarle Pip-  
 ton, Winesap, and possibly Lawver. For standard

cosmopolitan sorts, select, Arkansas, Gano or Via and York Imperial. As a secondary selection for quality, Grimes, Roxbury or Smokehouse may be suggested, but these are not keepers in ordinary storage.

The really interested orchardist can't afford not to try, in a small way, a varied list of old and new sorts, for otherwise he misses the finest pleasures of his calling, and gratification of his own aesthetic tastes for fine fruits, but the *Commercial Orchard must be kept clear of experiments.*

##### DESCRIPTIVE NOTES ON ABOVE NAMED VARIETIES.

All the varieties mentioned herein were planted in spring of 1889.

*Early Ripe.*—An old variety—origin, Pennsylvania. While this variety resembles in some characteristics of tree and fruit the Early Harvest, it is a decidedly superior variety at least for this district. Tree quite vigorous grower, measures at 14 years old in the orchard here 33 inches in circumference at base of trunk and 29 inches just below limbs, free from blight, and fruit free from rots.

First bloom noted in 1894, and bore few fruits in 1895, fair crops in 1897, 1899 and 1901. The fruit is larger than Early Harvest, roundish oblate, greenish yellow, quality acid, but good for culinary use and eating. The best general purpose variety of the very early sorts. It is to be regretted that it cannot always be purchased with certainty. Season with Early Harvest, but lasts better.

*Yellow Transparent.*—A recent but comparatively well known early variety of Russian origin. The tree is a vigorous though not large grower, and has been very healthy here. In this respect surpasses some of the other Russians. The fruit has also been entirely free from fungous diseases. After 14 years' growth, the trees measure in circumference at base 24 inches; and at point where limbs start 22 inches. The head is upright, compact. The first bloom was observed on this variety in 1893, and in 1895 it bore a heavy crop for the size of the trees. It has continued to bear a heavy crop in the fruit years of 1897, 1899 and 1901, and also has borne a moderate crop the off years. We have gathered as high as three bushels per tree. The fruit here is mostly medium in size, rarely large, although in some other parts of Virginia it grows to excellent size. The shape is somewhat conical, color light green, shading to an opalescent tint when fully ripe, and can be called a beautiful fruit. The quality is acid, but pleasant and agreeable when ripe, and may be rated as a valuable dessert variety. It is far the best dessert variety of any Russian fruit grown with us. As an early variety, and a sure bearer, it rather surpasses the other varieties mentioned in this section. It is highly commended for home use and for near-by market, where there is demand for such fruit. Season follows Early Ripe.

*Oldenburg (Duchess of.)*—A well known variety of Russian origin, and quite generally planted for early market and culinary purposes. The growth here is fairly vigorous, but not heavy. Thus far entirely free from blight and the fruit from rot. The trees now measure 22 inches in circumference just above the ground and 20 inches in circumference at the point where the head starts. The growth is upright, rather compact.

This variety bloomed first in 1892, and shows bloom-

ing dates from April 28th to May 2d, during the last nine years. A few fruits were borne in 1892; a fair crop for age of tree in 1895. Subsequently fair crops have been produced in 1897, 1899, 1901, and moderate crop in 1902. The fruit with us is never large, but a good medium size, striped and handsome. Quality suited only for culinary use. It is one of the very best market sorts for local sale. Season 2nd early to midsummer.

*Chenango*.—An old variety—origin New York State. Only fairly vigorous in growth, subject to blight, and fruit slightly subject to bitter rot. Tree at this time, after fourteen summers' growth, measures 25 inches in circumference at base and 22 inches at point where limbs start; head thick and round; growth of wood short.

Bloomed first 1893; fruited, few specimens, 1895; very fair crop in 1897; less crop 1899 and 1901. Falling off in productiveness attributed to blight. Fruit is beautiful pale green and striped with red, elongate in shape.

Quality very good; one of the best for high class dessert use. An amateur sort of the first rank for dessert and the home orchard. Highly commended for home use; does not seem to warrant commendation for commercial growing. Ripens mid season to late summer.

*Summer Rose*.—An old but not well known variety of New Jersey origin. The tree is a vigorous grower; forms an upright, compact head; not subject to blight, and the fruit quite free from fungous diseases. The trees at fourteen years old measure 30 inches in circumference at base and 25 inches in circumference at point where the head starts.

This variety shows its period of full bloom between the dates of April 24th and May 6th; bore a few fruits in 1892. In 1895, the trees fruited very well for their age, and in 1897 bore a full crop; in 1899, 30 per cent. of a crop; and in 1901 a fairly heavy crop, about four bushels per tree. The fruit is small to medium in size, round and very prettily marked with stripes of red. The quality is very good, especially suitable for dessert use. While the fruit is not overly rich, it has a very pleasant flavor. We consider it one of the very best early dessert fruits, but the fruit appears to be quite tender; the skin cracks easily. Ripens mid-season.

*Maiden Blush*.—A generally disseminated old variety of New Jersey origin, but which has merits that warrant its larger use in our plantations. The tree is a healthy, vigorous grower, not subject to blight. Measures 29 inches in circumference at base, and 27 inches at head of trunk. The habit is moderately spreading, upright, and forms a very good top. First bloom was observed upon this variety in 1893; it bore a few fruits in 1895; and a very fair crop in 1901. The largest crop has been 3 bushels per tree. This variety is acid, of very good flavor, desirable either for home use or market. The size of fruit is medium. Color, greenish with a fine blush on one cheek. To be commended for the family orchard, or for market where fruit of this class can be disposed of. Season early to mid autumn.

*Buckingham*.—This well known variety of Virginia origin has also been called Fall Queen, but is now rightly known as Buckingham. The tree is a fairly

vigorous grower but not large, comparatively free from blight and other fungous diseases, and the fruit is also quite free from disease here. Measurement of trees at this time, 25 inches in circumference at the base, and 22 inches in circumference at point where the head starts. Head upright, moderately spreading. First bloom noted in 1892, and also three specimens of fruit were produced on one tree, 1895, a very good crop for size of trees; and the same was true in 1897. In 1899 the trees set so full that there was slight breaking of the limbs, produced about four bushels per tree; 1901 the crop was light. The fruit is of good size, medium to large, and colors here so as to be mostly red. In quality it is excellent, and very desirable for both dessert and culinary purposes. It seems to be very good for canning. Recommended for home use, and for market where fall fruit can be disposed of. Season mid autumn to late.

*Wagener*.—An old variety of New York origin, but rarely met with in our fruit plantations. The tree is only a moderate grower, with well formed, open top, wood short. Trunk 21 inches in circumference at base, and 18 inches at head. Quite healthy, free from blight, and moderately so from other fungous diseases. Bore a few fruits in 1892, three years after planting; and a full crop for size of tree in 1895 and 1897; in 1899 three bushels per tree were gathered; fruit of good size and fine quality. In fact, this variety fruits so heavily it does not develop sufficient wood. In 1901 the crop was light, and also the present off year, 1902. The fruit is medium to large, roundish oblate, greenish ground, splashed and striped with red. Quality not rich, but pleasant sub-acid. Desirable for culinary use and for market. This variety is one of the most promising as a bearer of any in the list of fall apples. We have found it desirable for canning. Season mid autumn to late.

*Bonum*.—A well known variety of North Carolina origin. Tree fairly vigorous, but not large in growth. Comparatively free from disease, both as to tree and fruit. Size of trunk at base, 24 inches circumference; at head, 20 inches. Upright, spreading habit. The first bloom on this variety was observed in 1893; a very few fruits were produced in 1895; in 1897 a fair crop set; but in 1899 only a very few fruits were produced; in 1901, the crop was fair, measuring 24 bushels per tree. A small but showy fruit of the very best quality. Desirable either for dessert or market. Season is late autumn at this altitude.

*Fall Orange*.—This is an old variety of Massachusetts origin; it is not common in the orchards and gardens of Virginia. The tree is a strong grower and comparatively healthy; measures at base, 21 inches in circumference, and 20 inches at point where limbs start. Head upright, moderately spreading. This variety bloomed first in 1893, and produced a few fruits in 1895; in 1897, a good crop, and in 1899 a light crop was produced; 1901, the trees produced 2½ bushels of fruit each, which is a full crop for this size. The fruit is medium in size, of a yellowish red color here, and fine looking. The quality is excellent either for dessert or culinary purposes. It is generally free from rot. Ripens early to mid autumn.

*Tolman Sweet*.—An old variety of Rhode Island origin. It is rarely met with in our fruit plantations, but is worthy of more attention, especially for the

family orchard. The tree is moderately robust in growth, forming a broad, spreading top of quite distinct and peculiar type. This variety has shown some blight, but not serious. Trees measure 29 inches in circumference at base, and 25 inches at head. First bloom was observed in 1894, and a few fruits in 1895. The trees bore a full crop for their size in 1897; and a light crop in 1899; in 1901, a very fair crop was borne, averaging about 4 bushels per tree. A very light crop was produced the present year, 1902. The fruit is medium to large, round, compressed, of a yellowish, golden color; and fairly free from disease; has shown some attack from the black and bitter rot on one occasion. The quality is rich, sweet, with a fine perfume, making it an excellent variety for preserving and other culinary uses. This apple is regarded as of special value for home made goods of above description, and should sell well for special uses where it becomes known. Season mid autumn.

WM. B. ALWOOD,  
*Horticulturist.*

Dec. 20, 1902.

[TO BE CONTINUED.]

### THE SPRING GARDEN.

*Editor Southern Planter :*

Winter is now upon us. Growing vegetation is all most at a standstill. This is true of a very large part of the country. But our country is so large, and climatic conditions so varied, that we must take broad views. While one section is clothed in ice and snow, other sections are enjoying strawberries and vegetables from open air gardens and fields. We have all the gradations from 72° above to 22° below. Hence, it is more or less timely to write of the spring garden, even in mid-winter; but we write rather from another standpoint.

It is always wise to look ahead and prepare for coming duties. That we may have the best spring garden, it is necessary to do much of the work now. Then, whether we live where spring comes in March or in May, we can be ready to welcome her coming, and gather the fruits of our thoughts and plans.

#### PREPARING THE SOIL.

This is an important part of successful gardening. The best soils for producing the most luscious fruits and the choicest vegetables cannot be prepared hastily. Time is needed for atmospheric action. For the best results, we cannot have our soils too fine, too deep or too rich. We should break them very deep. And this breaking should be done now if it has not already been done. This will enable the rains and the snows and the freezes to do their work. Their work is all important, and we cannot do it. When we have used plows, spades and harrows, we still leave millions of little lumps or clods. These need to be broken finer. The agents of nature will do this when we have prepared the way by doing our part. Aeration requires time.

#### MANURING AND FERTILIZING.

Manuring is putting on vegetable matter and animal voidings to rot in the soil. It takes time for these to become thoroughly incorporated with the soil and to become soluble in water. They should be put on as early as practicable, and mixed in with the soil. Then they will decay. In so doing, they start fermentation. This assists aeration, and the two working together, get the plant-food in soluble form, ready for use by the plants. But when we have done this, we do not always supply all the elements of plant-life needed, neither do we give them in proper proportions. This is very important.

One of the most important elements in plant-growth is potash. This enters into the composition of all plants. It gives health to the plant, and strength to do its work. This element is very abundant in nearly all garden crops. It is especially needed for all those crops which have numerous seeds, and also for crops which are liable to fungus diseases, such as rust, wilt, etc.

Most soils are deficient in this element. Hence, it is very important to supply it. German kainit and muriate of potash are the cheapest and most reliable of the sources of supply. These should be used liberally on garden and truck patches. Phosphoric acid is also needed. This we can get from superphosphates and bones. The nitrogen is usually supplied from the manure and vegetable matter.

#### PLANTING.

Having made the soil rich and warm, we can begin planting quite early. There are many vegetables, such as radishes, lettuce, mustard, turnips, onions, salsify, and so on, which, in many sections, grow all winter. These can be planted early. Irish potatoes can be planted in all the South any time you are ready. Put them in rather deep; cover with rotting straw or leaves or other decaying vegetable matter; then throw on soil as deep as you think best. As spring approaches, rake off the crust with a light harrow.

We do not propose to enumerate here what you can plant. Your locality and the seed catalogues will help you to decide. But be sure to be ready to have an early garden. This contributes so much to the happiness of the family, and brings an income at a time when cash is scarce. A garden may be ever so large, or ever so small. But be sure to have a garden.

Atlanta, Ga.

JAMES B. HUNNICUTT.

To winter twenty animals on the food that would give best returns if fed to only fifteen, is poor policy. Although the twenty might not starve, the extra time required for them to regain their normal condition would prove the experiment a sorry failure.

## Live Stock and Dairy.

### DEVON CATTLE.

*Editor Southern Planter :*

We see a great deal written in the stock journals of the country about beef and dairy breeds of cattle, and also the "general-purpose," or farmer's cow, but we seldom see anything said about one breed—the Devon—one of the oldest breeds in the United States, and one which we do not think has yet outlived its usefulness. Whilst there is so much written about the Red Polls, Holstein, etc., as "general purpose" animals, we are sure that if there is a breed of cattle worthy the name of "General Purpose" the Devon is that one. We believe in the "general purpose" cow. She is not a myth by any means, as some writers seem to think. When the good qualities of the Devon for beef, butter and milk are taken into consideration, the breed will be found among the stayers, and will always leave its mark. Now that "baby" beef is so much in demand the Devon is certainly in the race, for they fatten well at any age. The flesh is well marbled, and they kill well with less loss in offal than most breeds. Whilst we do not claim that they are as large as the stately Shorthorns or Herefords, they are a medium size. Steers at two years old, weighing 1,725 pounds, when well fattened. The fat does not lay in lumps, as we see in some of the other breeds. Bulls of this breed weigh 1,700 to 2,100 pounds. Cows 900 to 1,500 pounds. The steers grow rapidly, and are always hearty, and while their weights are not as large as those of the other beef breeds, they are plenty large enough for the general market for a large portion of our country. In a hilly country where the feed is not so abundant as it is in some of our Western States, this breed does well, and even in the West they make their mark. We quote from an English writer: "The Devon breed has been traced from the earliest period when its existence was scarcely known beyond the then remote county from which it derives its name, and it having been shown how a small band of farmers, justly proud of their native breed, by their own exertions sustained its purity and carried it triumphantly through a critical period until at length its own intrinsic merits attracted the attention at first of a few discriminating judges, and finally of the general public, leading to its introduction into various parts of Great Britain, Ireland, France, Jamaica, Mexico, Australia, Canada, and lastly, in the United States. A breed whose native home is a bleak, hilly district several hundred feet above sea level. Flourishing as they do there, it is not surprising that they maintain their reputation when transplanted to a richer soil and milder climate."

Another writer says of the Devon: "In all points the Devon is the finest formed, most blood like and active of cattle. He is to his congeners what the Arabian is to other horses." Another writer of experience says: "I find Devon cattle the most profitable breed in America, and can raise more valuable beef on them with the same amount of food than on any other breed."

We quote from a South Dakota ranchman as follows: "I am thinking of buying Devon bulls to turn on the range with Shorthorn cows. Shorthorns are too large and slow for the short grass country. Herefords I do not like, and Angus are shy breeders. Devon cows will last two or three years longer on the range than Shorthorns, and always be in better fix. They have proved to be the best of breeders with a good calf every spring. The steers are good ones. This is a short grass and a short feed country, and we want something that can get a hustle on. Some of our farmers here milk their cows and I think Devons would suit them."

A South Carolina breeder says of the Devon: "My experience and observation of the Devon steer leads me to think that they are far superior to any other breed of cattle for beef purposes. They are far more thrifty and docile than any cattle I have ever seen, and can be fattened on one third less feed than is required for any other breed of cattle. They are particularly hardy and will thrive where others would almost starve.

The dairy qualities of the Devons are not lacking. A Pennsylvania breeder says: "My cows give six times their weight in milk per year. Such an animal should not be despised. I have not bred for quantity, but rather for quality and uniformity. All my cows have the wonderful staying qualities that stamp the Devon breed the world over." Mature cows of the Devon breed yield from fifteen to twenty quarts of milk per day, testing from 4 to 6 per cent. butter fat. One ten-year old heifer has a record of 7,000 pounds of milk and 423 pounds of butter for her first year. She is now nearly dry and in perfect beef condition. Her dam has a record of 453 pounds of butter per year, and her grand dam has a record of over two pounds of butter per day, showing that this cow is no sport.

We quote once more from a large breeder of Devons and Shorthorns in California (he has over 100 head of Devons) as follows: "From here southward is a dry country, and we find the Devons do better than any other breed where they have to go a long distance to water. We have sold very few Devon heifers, as it is

our intention to increase our herd. Our bulls find ready sale all over the coast. The Devons are not only an excellent beef breed but are also great milkers."

The above experience of those who have handled other breeds besides Devons goes to show that they are certainly a general-purpose breed of cattle. They are good for beauty, beef and butter, three B's that are hard to beat.

Newark, Ohio.

L. P. SISSON.

### BLACK-LEG IN CATTLE.

*Editor Southern Planter:*

I saw an article in a Blacksburg bulletin claiming that black leg in calves was a germ disease. I don't agree with them. I bought some yearlings and put them on blue grass, and salted every day for 5 days. One died and another went lame. I bled the one that was lame, and skinned one that died, and found that the blood had settled in one leg and neck. I moved them to a field that was short grass, and lost no more.

2. My neighbor had over a hundred yearlings in the woods and lost nine, supposed black leg to be the cause. He said that he knew it was not for the want of salt, for he had two men salting every day. I told him that the salting was what was killing them, and he quit salting and lost no more. Last fall in dry weather some of my neighbors salted their yearlings every day, and several died. Water was scarce, and, after the cattle drank water, they had strong appetite and eat very heartily, and, having very rich blood, lay down and died. The blood would settle in some place and that caused death.

V.

We referred the foregoing to the Blacksburg authorities for their comment. Below is their reply. We agree with them. Black-leg is undoubtedly a germ disease, and salt has nothing to do with it.

"The party from Warm Springs, Va., has no knowledge of the nature of the highly infectious disease, black leg in cattle, or else he could never have made the foolish statement that the disease was the result of cattle being allowed to have sodium chloride (common salt). Nor has he a knowledge of the action of the salt on the healthy animal.

When I tell you that I have sent out from this Station a vaccine, which is prepared by the Bureau of Animal Industry, Washington, D. C., and is made from the muscular tissue of the animal which has died from black leg, thus containing the germ, in an attenuated form, and that this vaccine has so successfully prevented the disease in cattle in this State that the farmers have written for and obtained over five thousand doses of this vaccine during the last four months, which they have used with the satisfactory result of preventing the outbreak of blackleg, you will doubtless see that we do understand the cause of the disease, and are not simply guessing at it."

J. G. FERNEYHOUGH,  
State Veterinarian.

Blacksburg, Va.

### THE STATUS OF ABERDEEN-ANGUS CATTLE.

*Editor Southern Planter:*

Those fortunate enough to be able to visit the last great International Live Stock Exposition, were struck, in the first place, with the vastness of the show; and in the second, by the uniform high quality of the numerous exhibits. A really poor animal was hard to find. Taken altogether, it was simply a mass of grand individuals of the horse, cow, sheep, and hog kind.

To see the draft horse show alone was well worth a thousand-mile trip, while in the cattle classes, the show was grand beyond conception. The long rows of fine breeding animals led one to wonder at the vast improvement made in the several beef breeds, even in the past ten years.

The *Breeders' Gazette*, in its report of the show, said "It it was a 'black year' at the show. The grade Aberdeen-Angus bullock was dominant. Whether in the pavilion, in the pens, or in the slaughter test, the color was 'black, and all black.' Never has a breed accomplished such sweeping victories at a fat stock show. Two out of three of the breed championships by ages, the grand championship of the show, the grand champion herd, and reserve for the herd (second), fell to the blacks within the building, while in the pens the carload lots made almost as sweeping a victory. On the block it was repeated, as five of the ten prizes for carcasses fell to the 'blackskins,' together with the championship."

This victory was the more remarkable because of the great inducements offered by the other breed associations—one of which offered \$1,000 for the grand champion car lot should it fall to their breed. In the sales of these, both single animals and car lots, the Angus again demonstrated the fact that the breed was at the top in the estimation of the butchers—the champion steer selling at 56 cents per pound; champion car lot at \$14.50 per hundred gross.

From Chicago the writer made a trip to Channing, Texas, and visited Mr. Boyce, manager of the X. I. T. ranch, the largest in the world.

He there raises all three breeds of beef cattle—each breed in separate pastures—and all given the same treatment. Speaking of the qualities of the different breeds, Mr. Boyce said: "I wish all of our cattle were the Angus, as the Angus feeders always sell first. We never have to keep our Angus steers until three years old, but have a good many of the other breeds of that age; generally sell all the Angus steers as calves and yearlings. I spent a pleasant week at the ranch, and brought home five cars of two year-old Angus heifers as souvenirs. No one in the 'Pan Handle' has a word to say against the 'doddies,' but every one who is so fortunate as to own a black herd, speaks in the highest



terms of them; and it must be remembered that the Angus bull was unknown on the range twelve years ago."

Taken altogether, I believe the Angus breeders have every reason to congratulate themselves upon the achievements of their favorite breed, and are in position to shake hands with themselves, and

"Hurrah! for the doddies;  
With their glossy black bodies.  
Hurrah! for the doddies! hurrah! hurrah!"

Rockingham Co., N. C. A. L. FRENCH.

**DAIRYING IN SOUTHSIDE VIRGINIA.**

*Editor Southern Planter:*

As I frequently get letters asking what I consider the proper management of and feed for cows in order to make them profitable, I concluded that I would write a short article giving my experience with Holstein cattle at the Grove Stock Farm, Nottoway county, Va. It may be of interest to some of your numerous readers. These cows have not been made to do their best, as they were running on a broom straw field from the 1st of May until the 10th of August. Then I commenced to feed some green corn, peas and such green crops as were then on hand. I milked on an average eleven cows during the year. From this number I sold \$1,623 worth of cream and skim milk in the twelve months. This skim milk was allowed to sour and was used for baking purposes. One half of the skim milk was fed to calves and hogs. Each cow had a calf during the year, the price of which would average \$25.

The mauree from these cows is worth a great deal in bringing a farm up to a high standard of fertility. The daily ration per cow, when in full flow of milk, is two bushels of ensilage, eight pounds of bran, and all of the cut corn fodder they will eat up clean. The cost of this would be as follows:

Ensilage .....	4c.
Bran .....	7c.
Corn fodder.....	2c.
	13c.

I feed this ration five months of the year. I feed bran summer and winter. It pays to feed it in warm as well as in cold weather. My experience is that cows will do better when fed ensilage in winter than when feeding on the best grass in summer. Ensilage is truly the poor man's friend. Think of the amount that can be raised on an acre—from twelve to twenty tons. With ensilage and peas for feed, both of which can be produced at small cost, we can raise cattle in Eastern Virginia at a profit.

Nottoway Co., Va.

T. O. SANDY.

**POLLED DURHAMS.**

*Editor Southern Planter:*

Many people seem to get the Red Polled and Polled Durham confused, or to think the Polled Durham are grade cattle. I take the opportunity of answering inquiries through your valuable journal.

The pure Shorthorn branch of Polled Durhams are known as "Double Standards," because, being of recorded Shorthorn ancestry, they are eligible to registry in the Shorthorn record. Being naturally polled, they are also eligible for registry in the Polled Durham Record. The origin of the breed is as follows: Oakwood Gwynne Fourth, registered in Vol. 15, p. 803, had loose horns or scurs. When bred to seventh Duke of Hillhurst, 34221, she dropped a pair of hornless roan heifer calves, now named and recorded as Mollie and Nellie Gwynne.

Oakwood Gwynne Fourth to the service of Bright Eyes Duke Eighth, 31874, produced a hornless red bull calf, recorded as King of Kine, No. 23, Polled Durham Record, and No. 87412, Shorthorn Herd Book. King of Kine, bred to these heifers, laid the foundation of this popular breed.

All Shorthorn breeders know that the Gwynnes are of the Princess family, from which more noted dairy cows have come than from any other strain. The Princesses are known, wherever Shorthorns have been bred, as "Milking Shorthorns." The Princesses, too, have the distinguished honor of the longest recorded ancestry found in the Herd Books. It is a matter of history (see Sander's Shorthorn Cattle, p. 94. Belvedere, 1706, of the Princess blood); that when Mr. Bates came to the point of calling on an out-cross to reinforce his celebrated Duchess tribe, he bought Belvedere, 1706, in the conviction that in all the strains of Shorthorn blood there was none worthy to be commingled with it but that of the Princess blood. It was a fortunate incident that so good a family produced a hornless animal.

J. L. HUMBERT.

Albemarle Co., Va.

There is also a single standard Polled Durham which is only eligible for registry in the Polled Durham register. This strain came originally from a Muley and Shorthorn bull.—Ed.

It may not be generally believed that a horse will put on flesh more readily if watered regularly. A light drink in the morning before feeding will assist very materially in improving the digestion and general health of our noble friend.

Mention the *Planter* when corresponding with advertisers.

## The Poultry Yard.

### HATCHING CHICKENS.

If you intend to have good winter laying hens, it is time that you set about the work of hatching the chickens from which the pullets which are to be the best of these layers are to be selected. If large numbers are to be kept, you want an incubator to do this work. If only a few fowls are needed, the old hen will meet the requirements. If you determine to try an incubator, buy a good one from a reliable firm which has a reputation to maintain. You will find all the best machines advertised in *The Planter*. We have friends who are making successes with nearly all the different makes advertised, and therefore we do not feel justified in selecting any one maker's machine for special commendation. When you have got the machine, follow the instructions given for operating it closely, and do not experiment with your own ideas. If the machine is to have a fair trial, operate it according to the maker's directions. If it fails, then the machine is at fault, and the maker should be held responsible. When you buy an incubator, buy a brooder as well, or your investment in the incubator may be a waste of money. Incubator chicks must have brooder mothers, or they will make but poor progress in growth. It is true that it is not a difficult matter to make a brooder which will do good work, but this requires time and a knowledge of the requirements for maintaining an equable temperature neither too high nor too low. Later in the season, when the weather is warm, this is not a matter of so much importance, as the chicks are not likely to suffer, even though the temperature in the brooder may not be exactly right. If you do not have, or intend to have, an incubator, select some short legged, year old hens, well feathered, and encourage them to become broody by leaving them some eggs in the nest (mark these so that they may not get mixed with those sold as new laid eggs), and feed the hens with a stimulating heating diet like corn and warm mash. When they take to the nest, make up nests in a house where the other hens will not disturb them, and give them no more than eleven eggs each at this early season. The house in which they are set should be a warm house, free from drafts, and not too light. We prefer always to set a hen on the ground on a dirt floor, as the moisture from the soil helps the hatching of the eggs. If more than one hen is set in a house, cover each hen with a wire coop or put a wire door before each nest. This will prevent the hens leaving their nests and crowding two or three on one lot of eggs and spoiling the others. Take the hens off every day, and feed and water them and air the eggs. See that they return to

the eggs in due time—say fifteen minutes after being taken off.

### ARTIFICIAL INCUBATION.

*Editor of Southern Planter.*

It takes a lot of big words and long phrases, perhaps, to write an up to-date article on incubators, but some how or other I have been reasonably successful with just common United States language when it comes to the hatching question.

Let us be plain and call things by their right names. A fertile egg is a seed; it must have the necessary warmth to sprout and grow—a temperature of 103; it must also be cultivated, the eggs must be turned, aired and manipulated after nature's ways.

A temperature of 103 seems to be a standard, although very few recognize that placing the thermometer differently would necessarily mean that it would read differently, but such is the case. With the thermometer between the eggs showing 103, the same thermometer lying on the eggs would show 104, or if suspended above the eggs near the tank it would show still more. I prefer placing the thermometer on the eggs, thus showing the combined heat of the eggs and the heat applied to them. Still more, I prefer a variation of temperature as the hatch progresses; for instance, 102 to 103 first week, 103 second week, and 104 third week; this variation being due to the increased animal heat in the eggs as the chick develops. This temperature will bring good results.

There are bushels of iron clad prescribed rules about turning the eggs just so, but my advice is to turn them as often as you have time, and air them as often as you have time. I don't mean that it would be necessary to put in your whole time or even a tenth of it turning and airing the eggs, but I do mean that they should be turned at least once every day, and twice every other day, and that when looking at the thermometer the tray should be pulled out and let the eggs get a whiff of pure air. Why? you would ask. I will tell you. Turning the egg ripens it clear around, the germ comes to the top; every movement of the egg makes a corresponding movement of the embryo chick; besides ripening the shell clear around, these movements wake the chick up, it's exercise for it, it moves, expands and develops its own strength; this principle applies to all life, whether stock or eggs; for instance, a stock breeder would not pen up a dam in close quarters to bring a strong young one. There is simply nothing mysterious or unaccountable in hatching eggs; a little reasoning in advance of the real thing explains most everything about it.

Now about moisture. An egg must get rid of a lot of moisture before it can hatch. Eggs during incubation get smaller and lighter; this being the case applied moisture could not enter the egg. The moisture and ventilation questions are so entwined with each other that the effects of one are often taken for the effects of the other. Personally, I do not believe in dosing out the air in prescribed quantities. There is lots said about governing the size of the air cell by opening or closing the dampers, but I prefer correct and continuous ventilation. If the incubator is correctly fitted there need be no dosing of the air in a mystical way with dampers. I prefer a constant mild circulation of air, and depend on airing the eggs in the open air to conform to nature's ways.

What's the good of airing the eggs? might be asked. In answer, I will say that the egg shells, like many other things, expand in heat, and contract in cold. This expansion and contraction breaks down the tough fibres of the shell, and when the chick is due to hatch it can hatch. I am sure moisture, however light, is good for shells, good for the reason that it affects the shell only.

Good hatches are made with and without moisture. Opinions are about equally divided. I am satisfied, in fact I know, it does no harm to apply a little moisture directly to the shells if the ventilation is sufficient. Have tried all the moisture plans, and plans without moisture, and have, at this time, more faith in the old fashioned way of sprinkling the eggs occasionally than any new way.

The old fashioned sprinkling is applied directly to the shells, and does not make a heavy, continuous, damp air in the egg chamber. It does not matter about exact dates in sprinkling, exact dates would be nonsense, but I can guarantee that you will do the eggs no harm if you sprinkle them with tepid water on the 12th, 15th and 18th days.

Ohio.

M. M. JOHNSON.

### FEEDING FOR EGGS.

*Editor Southern Planter:*

I would not advise any one who has a good healthy flock to undertake doctoring them with drugs with a view to forcing egg production, either summer or winter. On most farms, there are plenty of feeds that would go towards making a perfect balanced ration, if we took advantage of them. The secret in making hens lay, is simply providing them with suitable feed; and it is the safe way.

Corn, wheat, oats, barley and millet seed are good poultry feed; some do not believe in corn, but their reasons are mostly like the small boy's "because."

The Agricultural Experiment Stations tell us that corn is one of the best feeds for poultry, but they do not tell us to feed it exclusively; still more, cool reasoning would not suggest that we feed it exclusively.

The natural make up of their feed is a variety; a little of this and that and constant exercise in procuring it. Some tell us to *make them* scratch for their feed. A more correct way to say it would be to *let them* scratch for their feed; they would rather do it than not; besides, it does away with gorging and encouraging a lazy disposition.

Corn exclusively, or wheat or millet exclusively, is too heavy and too rich; something to make bulk must be added. I know of nothing better than wheat bran to balance up a heavy rich food; it is so common, though, that it is hardly popular. Bran makes bulk; not only bulk, but it clears the passages and keeps the digestive organs in condition. Bran alone would be too light for exclusive food; besides, it would not be in line with nature to feed nothing else. The crow is a grinding mill, and we must keep it at work.

The different grains would not be a perfect feed alone. Grass, insects and dozens of things we hardly think of, go towards completing the natural wants. Fowls on free range usually find these extra knick-knacks; but penned up fowls, or fowls in winter, must have their equivalent in some form, or they cannot do the very best. Cut clover or alfalfa hay, or cut vegetables and green cut bone, help to make summer out of winter as near as it is possible. All these things are within our reach, and the time required to procure them will return a nice profit. These means will bring eggs, and it is the safe way.

M. M. JOHNSON.

Clay Center, Neb.

### GREEN BONES.

I never fed very much green bone until last fall, when I started early and fed all winter, and was more than paid for my trouble with an abundance of eggs. In the month of January, I received more eggs than in any other month of the year, but the previous winters the eggs did not pay for the chicken feed. The cost of the green bone is a mere trifle, and it requires only an ounce to each hen about every other day, and it is enjoyed and craved for above all the other foods. A bone mill is as much a necessity to a poultryman as an anvil is to a blacksmith. As an egg producer, a bone producer, and a health producer, green bone is unexcelled.

B. H. SEWELL.

Galva, Ill.

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## The Horse.

### NOTES.

Imported Diomed, thoroughbred son of Florizel and the sister to Juno, by Spectator, was a chestnut horse, foaled 1777, and bred by Sir C. Bunbury, England. He was imported to Virginia in 1799, when 22 years old, and died the property of Col Hoopes, in 1808, aged 31 years. The initial Derby, probably the most noted of English classics of that character, was run in 1780, and won by Diomed, then three years old, which gained him distinction, and he was for a term of years well patronized in the stud, but then his popularity began to wane, and he was sold for export. In Virginia, imported Diomed sired such horses as Ball's Florizel; Euroc, the sire of American Eclipse, and Sir Archy, who got Timoleon, sire of the famous Boston. What Diomed did toward the improvement of the thoroughbred in this country is a matter of history, and in its annals the name of this famous son of Florizel will endure as long as the horse holds a place in the affections of the people.

Mr. A. Pollard, who removed from Toronto, Canada, during the early part of 1902, to the Dunraven Farm, three miles east of Richmond, reports that he is well pleased with his purchase, his determination being to devote the place mostly to breeding, grazing and rearing of live stock. The greater attention, however, will be given to horses, for which Dunraven is admirably adapted on account of its location and the fine roads in the vicinity. During the past season, Mr. Pollard lost by death the registered hackney stallion Aristocrat, chestnut, foaled 1899, by Banca, dam Polly, by Norfolk Hero. Among the horses now at Dunraven are Margery, the good looking half bred hackney mare, by Roseberry. She was foaled 1893, and is in foal to Aristocrat. The yearling chestnut colt, by the hackney stallion Squire Rickels, out of Margery, is a fine specimen, as also a couple of fillies, viz., a black two year-old and a yearling chestnut, both by Squire Rickels, out of a well made bay mare of Morgan blood. The latter is owned on the farm, and will be mated this season with some good thoroughbred sire, and the produce should make a high-class hunter.

Dr. J. C. Walton, prominent for years as a physician and railway surgeon, also as a breeder and owner of light harness horses at Reidsville, N. C., has removed to Chase City, Va., where he has headquarters at "The Mecklenburg," the elegant new hotel and sanatorium there, which is under the same management as "The Jefferson," in this city. Chase City has become noted for its lithia and chloride of calcium waters, while The Mecklenburg has complete electrical and hydriatic apparatus, with a splendid chemical and microscopic library. Dr. Walton is the resident physician at Chase City, and his presence and wide experience is likely to be of lasting benefit to this new health resort. During recent years, the Doctor has owned and driven such good horses as Lucy Ashby, 2:21½; a full sister to her, who was sold for export; Matie, 2:30½; Miss Parker, trial, 2:29½, and others,

among them the fine young mare Princess, of Ridgefield, by Prince Belmont, now in foal to the great young sire Lynne, 2:10¼.

The Ainslie Carriage Company, of this city, report that the season has been a prosperous one and the demand good for all classes of fine pleasure and business vehicles. Among the orders recently filled was one for a new ambulance for the Virginia Hospital, which is a model in point of workmanship, and finished and furnished with all modern conveniences. Mr. David A. Ainslie, the head of this concern, shows, among other innovations at the Company's big warehouses, a new style of runabout wagon, the body of which swings higher and is finished in gaudy colors, wide stripes being noticeable and yellow the most prominent shade. The carriage-house of Ainslie has been established for generations, and as designers and builders of the highest class of vehicles has gained a wide reputation.

The imported Hackney stallion, The Duke, son of Silver Star and Lady Fanny, Rob Roy, offered for sale in our advertising columns by T. O. Sandy, of The Grove Farm, Burkeville, Va., should prove a most desirable acquisition to any stock farm or breeder in search of a horse whose get develop into well made, handsome and serviceable horses. The Duke is registered in both the English and American Hackney Stud Books. He is well preserved, unusually vigorous, and in rugged health, while kind and tractable in harness and under the saddle. This good stallion will be sold at a price which he can more than earn if placed in proper hands in a single season. Statements made by Mr. Sandy can be relied on, and he will be pleased to furnish full particulars.

Capt. C. B. Denson, widely known as a soldier, statesman and scholar, and for more than a quarter of a century past prominently identified with the affairs of the North Carolina Agricultural Society in the capacity of secretary, treasurer and member of the Board of Directors, died at Raleigh on January 15th, his death being due to general debility, at the age 65. Capt. Denson was born at Suffolk, Va., September 29, 1837, but had passed the greater part of his life in North Carolina.

BROAD ROCK.

The thoroughbred stallion, Saint Charles, out of Carlita, by Saint Blaise, owned by D. H. Barger, proprietor of "Walnut Grove" Farm, and L. E. Johnson, vice president and general manager of the Norfolk and Western Railway, has been given by these gentlemen to the Virginia Polytechnic Institute and Experiment Station, at Blacksburg. Saint Charles is one of the best bred horses in America, and is a great acquisition to the pure-bred stock of the farm. The thanks of the people are due these gentlemen for their liberality.

## Miscellaneous.

### FORESTRY—PRACTICAL.

*Editor Southern Planter :*

The Division of Forestry of the National Government in recent years has given much attention to the improvement of forestry and the prevention of the destruction of the timber of the country. The immense devastation of property by forest fires, which sweep over the extensive mountain territory annually, leaves a charred and blackened district repulsive to the eye and destructive to the fond expectation and hopes of the dwellers on the surrounding farms, many losing their fences and also their humble homes, filled with terror in danger of their personal safety. The desolation can be more easily imagined than described. The beautiful Blue Ridge, once the pride and resource of the Valley of Virginia, now, in large part, periodically is made to resemble a smoking volcano, denuded of her valuable forests and the population discouraged. Other mountain districts of the State, suffering like wastes of immense values. The causes of these fires are numerous, but a majority of them from most trivial and unpardonable recklessness, neglect, don't-care and badness. The public and private persons have suffered so long and so frequently from "the fire fiend" that this great evil has been regarded as a matter of course, and a resort is sometimes had to insurance. But this does not restore the forestry which has gone up in smoke. It only transfers the loss from one pocket to another. The value is irretrievably wasted.

A remedy proposed by the Forestry Division is to arouse public sentiment and direct it in an organized and effective action to express by suitable official vigilance, strengthened by official legislation. The time has passed for continued indulgence in a slipshod neglect, "I didn't think," "I don't care," or a "defective flue," to satisfy the reasonable and just demand of a thinking and moral civilization. Those who are incapable of handling the many modern combustibles can be taken care of by the State. An aroused and vigilant public sentiment can save more values from destruction annually than any increased toil and enterprise can replace. If we would have capital and immigration come to Virginia, we must show a resolute disposition to protect both by intelligent methods. But to return to forestry proper. At once measures should be employed to restore the denuded places in the farm forests by plantations of walnut, locust, white oak, hickory and other timbers. It is entirely practicable. If prompt action is taken, there can still be seed from last year's crop gathered. Do not conclude that the profit is too remote. The cost will be small in labor and expense. It will be a good investment for poster-

ity. It will add value to the farm, if for sale. Cases are reported by the papers of remarkable success in the boost of values produced in ten to fifteen years. The annual value of the growth of new timber on our barren wastes, if protected from fire, would increase from year to year until in twenty-five to forty years it would amount, at a low estimate, to \$500,000, or perhaps \$1,000,000. The necessities of the State will continue with the lapse of time. A wise forecast demands attention to this waste of public and private resources. If we have a government, it should govern. If it is "up to date," it should immediately suppress this Indian relic of barbarism and stupid indifference to the future prosperity of Virginia.

*Augusta Co., Va*

PRO BONO PUBLICO.

This appeal for attention to our forest values comes from one who was long honored with the confidence of his fellow-citizens as their representative in the Legislature, and who only retired when the pressure of long years made the burden of attention too onerous. He is one of the far-sighted and thinking men of the State, yet withal most conservative in his views, and what he says ought to have great weight given to it. We are heartily in sympathy with his views.—Ed.

### LIVE STOCK A NECESSITY.

*Editor Southern Planter :*

Age usually brings infirmities, but after the lapse of more than sixty years, *The Southern Planter* comes to us rejuvenated as if she had bathed herself in the fountain of youth.

Your last issue has determined, in my mind, that you have found the philosopher's stone. If there is any one thing that the Southern farmer must learn, either sooner or later, it is that all successful agriculture has a sure and abiding foundation in stock raising. It is a pity that your last number could not find its way into every Southern home. As a boy at the beginning of the war, I was sent to school in East Virginia, and when I came back my father was greatly amused at my impression of the country. Its vast sedge fields, red and gullied hillsides and scrub pine forest, gave to my youthful mind a weird and desolate picture. My frequent visits to that part of the State since has never relieved my mind of those early impressions. The good old days of yore have departed. The negro as a farm laborer is a thing of the past. Tobacco must in part be supplanted by clover and peas, and they in turn by other cultivated grasses and followed by cattle, sheep and hogs. When that happy day shall come, then your brightest hopes and the labor of all these years will have found their full fruition and Old Virginia will blossom as the rose.

It is time that Southwestern and Eastern Virginia should become acquainted. It was my good pleasure, some months ago, to introduce to our people a gentleman from Orange county, and before he left he bought ten head of thoroughbred Angus cows and heifers from one of our breeders, and he went away happy, because he found here what he wanted at prices much less than if he had gone North for them. If more of such wide awake farmers could be induced to venture this way, they would realize what it is to be a stock raiser, and they would also see a fine grass country with plenty of fine cattle, sheep and hogs, and find a prosperous, sleek and saucy yeomanry.

*Pulaski Co., Va.* B. E. WATSON.

Accept thanks for your kind words and compliments. May the day of grass, forage crops and live stock soon come to every farmer in the South. Then truly will he be in the way of prosperity.—ED.

### TIDEWATER (VIRGINIA) NOTES.

*Editor Southern Planter :*

I want to write you of a little patch of turnips grown by one of our friends who has a habit of calling on us now and then, and he always has a pleasant effect—something like a strengthening plaster on a weak back. It makes us feel better long after he has gone, because he has a way of putting matters up in a cheerful sort of way, which makes one more hopeful and more happy than before his visit.

In February, 1902, he planted two acres in potatoes—a small patch by itself—and dug therefrom in June 90 barrels of fine potatoes, which he sold at \$3.25 per barrel.

The last week in August he sowed the two acres to clover, and mixed with his clover seed 25 cents worth of turnip seed, sowing both with one hand, one motion and one time.

Now he has finished harvesting or pulling fully 1,000 bushels of turnips from the two acres, and his clover is looking fine and promises three good cuttings next year, good for not less than five tons to the acre.

Where land can be so handled, there surely is profit in tilling the soil. On being asked if the pulling of the turnips did not injure the clover, he replied: "No; the stirring up of the soil did not dislocate the clover. On the contrary, it operated as a sort of cultivation of the clover, and it grew faster than ever."

Upon another patch of two acres, adjoining the first two acres mentioned, he sowed clover alone,

and the seed potatoes, or potatoes left in the ground from the potato digging in June, came up thickly through the clover, and about the middle of December he went through and pulled up the potato vines and saved 14 barrels of fine potatoes for winter's use and to plant in the spring.

Your readers can figure out the profit of such farming. They have plenty of time when the Northern winter rules at the North, East and West. Here it is—viz.: "Forty-five barrels of potatoes to the acre, and 500 bushels of turnips in one season, and the land—the acre—in a fine stand of clover for another year. Potatoes sold for \$3.25 per barrel, and the turnips worth fully 20 cents per bushel to feed on the farm and cost only 25 cents for seed for two acres and the cost of harvesting the crop."

This is not a big thing, it is true. But still it may be called a big little thing, which can be repeated and duplicated upon every farm in Eastern Virginia, especially on each farm which lies under the warm and genial influences of the "Gulf Stream."

This same farmer has 200 acres of cleared land in cultivation, but cultivates only a small portion thereof himself, renting out the balance to colored farmers, who handle the land under his direction. He dictates or stipulates what crops are to be grown and how the soil is to be handled, and under his instruction both the soil and the tenant prosper.

It is not so where the tenant rents from year to year and has his own way. That is one great reason why Virginia lands, as a rule, do not improve. They, under the tenant system, have been robbed for years and years.

Our farmer referred to above does not consider it any trick at all to grow 45 barrels of potatoes to the acre and 500 bushels of turnips on the same land in one growing season, and then leave the land in such a fine stand of clover as to yield him five tons of good hay the next year, worth, right on the farm where grown, fully \$10 per ton. Land so handled pays well. Land so handled improves each year.

The soil, the climate, and the markets permit the intelligent owner here to handle his land just as a skillful teamster handles his team. We want more clover; more stock; more general farming. The farmer referred to above did not wait for "things to turn up," but he "turned out" a tater crop and then "turned up a turnip crop;" and when the "returns" are all in for the year, there will be no "sheriff's returns" to disturb the dreams or interfere with the peace of mind of the "turnip" grower.

It is just so with this same farmer with his cow-

peas and his corn. He grows the best and largest crops of peas and corn of any man in his section, and he does it "just as easy as falling off a log." He does not get out so very early in the morning, nor does he stay out in the fields at work late at night.

He does not do a real hard day's work in the year. But he manages matters. The principal ingredients in his management are simply "git," "grit" and "gumption," with a very strong emphasis on the last-named qualification.

If our Virginia farmers, as a rule, would "turn up" the soil a little more vigorously, and engage more in the raising of turnips and such like crops, and "turn up" at the country grocery a little less frequently to discuss politics, a wave of prosperity would sweep over the Old Dominion sufficiently large and strong enough to crowd out all the croakers.

*Let us dig up new ideas and new methods; turn up new soil with new implements, and beat the world in results, as we already excel all other sections in great natural and acquired advantages.*

Norfolk, Va.

A. JEFFERS.

#### NOTES.

I have observed that plowing is the work that makes corn. The stalk does not need a large hill of dirt heaped up around it to become "baked" and compressed; but the earth being made loose around it is the prime necessity.

If the fence rows are not kept clean and free from briars and bushes, the rails will rot and the fence will settle down to a rotten mass.

Fowls will do much better if they can be allowed the "run" of a stretch of woodland upon the farm instead of being confined in close unhealthy quarters. They will present a much neater and cleaner appearance under such conditions, and the man who comes round with the poultry wagon will notice the difference.

You cannot get more strength from the horse than you give him through his feed. The horse is the farmer's best friend, and he should be more than half cared for.

There is nothing like doing everything on the farm at the proper time. A few day's delay of work while the weeds are growing will make extra work. If the farmer gets behind hand with his work, it is most probably his own fault.

Dickenson Co., Va. FRANK MONROE BEVERLY.

#### READING FARMERS

*Editor Southern Planter:*

It is a question well worth considering, how little reading is done by farmers, and how well satisfied they are without it.

A vast number of our land-owners go on year after year doing the same things their fathers did before them, in the same old ways, and generally with the same results, contentedly asking nothing better.

No thought is given new ways and means that are daily coming in use to shorten and make work easier and more profitable, the success of the reading man often being attributed to unfairness and greed.

There is something new under the sun, and it only remains for men to avail themselves of such knowledge as will benefit them in their life-work.

A reading farmer has a decided advantage over his neighbor who does not read, and he is very quick to use this advantage to the detriment of his non-reading neighbor; and why shouldn't he? He knows from his agricultural journal that prices are higher on all cattle this week than they were last. He knows that hogs are higher in price and scarcer than ever. He also knows that fodder and hay need only to be seen to bring fancy prices.

This much he has learned from the market quotations he has taken pains to have in hand; consequently, he is on the alert for the non-reading farmer who labors without this knowledge.

His watchful eye tells him where to go to find certain farm products, cattle, &c., that the careless farmer must dispose of in order to live, and thither he goes.

The non-reader sells, and is glad to do so, thinking of his necessities, not of the possibilities of the future, with which he would be familiar but for shortsightedness, stinginess, or, what is oftener, self-conceit, sometimes called lack of time.

Many men know too much for their own good; very often they are so full of their own ideas concerning things that no room remains to imbibe ideas of men better informed; in other words, they are self-sufficient and suffer blindly, while they labor with no visible success, ascribing failure to everything except themselves.

Farm papers, and good ones, are to be had for a mere song in this day of enlightenment. A man must own himself behind the times who does not read and keep abreast of the times. While no one will assert that every idea contained in a farm paper is infallible, yet the wheat can be sifted from the chaff, and a man with good common sense, willing to learn, can cull a vast amount of information in a year's time beside helping the press to disseminate the knowledge in fields where it is possibly more needed.

Mention the *Planter* to your friends.

A wide-awake business man or woman must read or suffer themselves to be justly called old-fashioned and out of date.

Knowledge is now no more a fountain sealed.

JNO. F. PAYNE.

### PROPOSED STOCK LAW FOR THE STATE OF VIRGINIA.

A bill to prevent live stock from running at large and trespassing upon the lands of others within the State, or ranging upon the public highways thereof, and authorizing the holding of an election on the petition of freeholders of any county, to determine whether such county or district shall be subject to the provisions of this act.

1. Be it enacted by the General Assembly of Virginia, That it shall be unlawful for the owner or manager of any horse, mule, cow, sheep, swine, cattle or goat, or any herd of such live stock, to permit the same to go or range at large or trespass upon the lands of others within this State, or range upon public highways thereof unattended, or to permit such live stock to range over or upon the public highways of the Commonwealth for the purpose of grazing thereon. For each and every violation of the foregoing provision, the owner of such animal, or herd of animals, shall be proceeded against as prescribed in sections 2,042, 2,049 and 2,050 of the Code of Virginia of 1887, and be subject to the fines prescribed in said sections; provided, however, that this act shall not apply to any lands or territory within the limits of any incorporated city or town of this Commonwealth.

2. Whenever a petition shall be presented to the circuit court of any county of this Commonwealth, signed by a majority of the freeholders of such county, or any magisterial district within such county, petitioning said court to order an election of the qualified voters thereof to determine whether such county or district thereof shall be subject to the provisions of this act, it shall be the duty of such circuit court to order an election, to be held within sixty days from the presentation of such petition, within such county or district, as the case may be, notice of which election shall be published once a week for four successive weeks in such of the newspapers published in such county if it be a county election or such newspapers published in the district, if it be a district election, as the court making the order may designate, and also by notices posted at each voting precinct within said county or district requiring an election to be held to determine the question whether such county or district will be subject to the provisions hereof, the question to be voted upon and printed or written upon the ballot shall be "for the stock law," or "against the stock law," which election shall be held, canvassed and returned in the mode prescribed by law for the holding, canvassing and returning of county elections, and if a majority of all the votes cast shall be against the stock law, then, and in that event only, the provisions of this act shall not apply in such county or district, and which return shall be duly certified by the commissioners of election to the said circuit court, and it shall be the duty of said court to enter of record the

result of such election, and if it be determined against the application of the law to the county or district, the said court shall in its order so declare and determine, and thereafter this act shall be of no force in such county or district.

3. Nothing in this act shall be construed to alter or change the laws now in force in reference to the fencing of lines of railroads and right of way thereof through this Commonwealth, nor to amend or repeal the existing laws in force in any of the counties of this Commonwealth in regard to the trespassing of stock where no fence is required.

4. This act shall be in force after January 1, 1904.

This is the form in which Mr. Leake's bill has come from the Committee of the House. Whilst not altogether what we should like, it is an improvement on the existing laws and should have the support of all farmers. We would like to see every man's line made his fence, and every crossing of this line by man or beast be at the peril of the trespasser.—ED.

### Feed for Hens—Service of Sow.

Will you please tell me what amount of feed and what kind to give to chickens. I have got 50 laying hens and get but very few eggs. I am afraid I have got them too fat, although I keep them scratching all the time. My chickens are yarded and I feed them fresh bone every other day. I also have 50 pullets and I am not getting very many eggs from them.

Also, will you please tell me if it is advisable to keep a boar with the sow all the time or just when she is ready for service?

I always have grit and oyster shells before my chickens.

Gloucester Co., Va.

FRED SCHWAY.

If our correspondent will refer to our last October and November issues he will find this subject of feeding hens for egg production very fully discussed. If the hens are fat, no way of feeding will make them lay. They must be reduced in flesh by short feeding and plenty of exercise. Feed plenty of green food, or in its absence roots.

Put the boar to the sow only when in service, and after service take him away.—ED.

### THE CHESTNUT GOING.

The former millions of wild pigeons of Ashtabula county, O., says the *Jefferson Sentinel*, are only known to the "oldest inhabitant," and now the chestnut, the king of all nuts for boys, will soon only be known as a cultivated nut. Parties at Harriman, Tenn., are preparing to locate a mill for grinding chestnut timber into pulp for tanning purposes. It is proposed to consume one hundred cords per day. At this rate, and with the destruction of the hard-headed borer is doing, chestnuts to eat will soon be a thing of the past. In the early settlement, chestnuts, it is said by early settlers in Tennessee, were so abundant that the Indians, after burning the leaves off the ground, would pick them up roasted and sell them at the stores for 6 cents per bushel.—*Country Gentleman*



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J. F. JACKSON,  
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Remittances should be made direct to this office, either by Registered Letter or Money Order, which will bear our title. When made otherwise we cannot be responsible.

We invite Farmers to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Selected matter will be returned on receipt of postage.

Address— THE SOUTHERN PLANTER,  
RICHMOND, VA.

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PUBLISHER'S NOTES.

Our January Issue.

We have been the recipients of congratulations without number on our January issue, and what has been, and still is more pleasing to us, of hundreds of new subscriptions. For these favors, we beg to tender our warmest thanks and assure those who have sent the messages and subscriptions that it will be our constant endeavor to merit the same by devotion to the interests of agricultural advancement in the South. We would ask that all to whom we have sent sample copies of the January issue will carefully read and examine the same, and note particularly the low yearly subscription. We feel assured that if they do this, we may confidently count upon receiving their subscription to the journal. We asked in our last issue that each old subscriber should send us at least one new subscription with their own renewal. Hundreds have done this, and hundreds more have sent us two new names with their own renewal at our special rate. May we again urge this request. There are still thousands of Southern farmers who take no agricultural journal. They cannot expect to make advancement in their calling until they become readers and students of the facts, principles and science underlying the scientific cultivation of the soil, and the breeding and feeding of live stock. If they will read *The Planter* regularly, and practice what it teaches, they will soon see better results from their labors, and cease to complain that "farming does not pay." Every one of our regular subscribers knows of neighbors who never read an agricultural paper. See some of these men, and try to interest

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are the best that can be obtained—free from weed seeds and impurities and of strong germinating qualities. It is very important if you desire to secure good stands and good crops to purchase the highest grade seeds obtainable. This you can always do by purchasing "Wood's Trade Mark Brand" of Farm Seeds.

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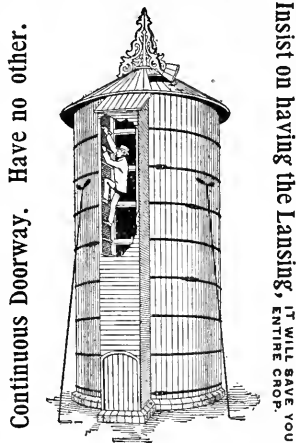
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them in the matter of reading. Get them to give you 50 cents, and let us send *The Planter* for a year. Every new subscriber secured enables us to make *The Planter* a better journal, and therefore benefits not only the new subscriber, but every old reader. Give us your help, and we can yet add thousands of new names to our list before the winter's subscription season is over.

**DEAFNESS CANNOT BE CURED** by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

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Sold by Druggists, 75c.  
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**WITH THE ADVERTISERS.**

The Morewood Farms are new advertisers in this issue. They offer prize-winning poultry.

The Elkhart Carriage and Harness Manufacturing Co. begins the season's advertising with a card in another column.

W. W. Boob, maker of buggy and wagon wheels, renews his advertising contract for a year, beginning with this issue.

A. H. Reid, of Philadelphia, is offering his excellent Separator in this issue to our farmers and dairymen.

H. C. P. is advertising for a position on a farm in the South where he can learn the business.

The celebrated Bullfield Farms of Doswell, Va., are advertising some well-bred Poland-Chinas.

W. G. Owens, proprietor of "The Cedars," Midlothian, Va., is advertising Thoroughbred Poultry, Pekin Ducks and Bronze Turkeys in this issue.

Rand, McNally & Co., New York, want some salesmen for their well-known publications.

B. W. Stone & Co., Nurserymen, Thomasville, Ga., offer some choice stock in another column.

Schilder Bros., Chillicothe, O., Grow-

HAVE YOU EVER USED YAGER'S LINIMENT? TRY IT.

**YAGER'S**  
**APPLYING TO RHEUMATIC JOINTS**  
**APPLYING TO SPRAIN**  
**TRADE MARK**  
**YAGER'S**  
**LINIMENT**  
**FOR**  
**MAN OR BEAST**  
**POPULAR**  
**SOOTHING & EFFECTIVE**  
**FOR ITS**  
**QUICK HEALING POWERS.**  
**IN THE TREATMENT OF DISEASES REQUIRING AN EFFICACIOUS EXTERNAL REMEDY.**  
**BEWARE OF IMITATIONS.**  
 PREPARED ONLY BY  
**GILBERT BROS. & CO.**  
 SOLE PROPRIETORS  
**BALTIMORE, M.D.**  
 U.S.A.  
 REGISTERED COPY-RIGHT OFFICE

THERE ARE MANY IMITATIONS, BUT THE GENUINE IS ONLY 25 CENTS.

EXACT SIZE OF BOTTLE.

**TAKE NO SUBSTITUTE.**

ers of Onion Seed, have an advertisement in this issue.

The Neck of Land Farm, Jamestown, is for rent, and a good lot of stock, etc., with which it is equipped, is for sale, as will be seen by advertisements elsewhere in this issue.

R. A. Courtenay, of Pennsylvania, desires to purchase a good farm of 250 or 300 acres. Look to his ad.

Stratton & Bragg, Implement Dealers and Hardware Merchants, Petersburg, have an extra half page ad. in this number. We invite the attention of our readers to it.

Mrs. J. D. A. Fisher, Salisbury, N. C., is advertising Thoroughbred Poultry elsewhere in this number.

The International Stock Food Co., Minneapolis, have a large ad. on another page. Kindly refer to it and answer the questions they ask, and get a \$3,000 stock book free.

In addition to its Weeder advertisement, the Spangler Manufacturing Co. offers its celebrated Corn Planter to our readers.

Meyer & Son, Bridgeville, Del., have made a good hit with their Premo Dewberry. They advertise in another column.

A new advertisement this issue is the Economy Bugy Co. of Cincinnati. Look up their ad., if interested in their line of goods.

The Cyphers Incubator Co. advertises with us for the first time in this issue. We take pleasure in referring our poultrymen to the card of this company.

The well-known firm of Hensch & Dromgold Co., York, Pa., resumes its advertisement in this issue. This firm makes a full line of farm implements, and offers a seasonable one in another column.

The Columbus Carriage and Harness Co. are out with their usual spring announcement in this issue. They have been selling their goods from factory to consumer for a number of years, as many of our readers well know.

The Oakland Poultry Farm is advertising Thoroughbred Poultry and Eggs in this issue.

The Indiana Steel and Wire Fence Co. is a new advertiser with us this season. Look up their card on another page.

J. W. Hall is advertising a new Strawberry. Look up the advertisement.

J. W. Apperson & Bro., Yancey's Mills, are advertising Farms and Homes in Piedmont Virginia.

The Dairy Association, Lyndon, Vt., is advertising its preparations in this issue.

Gilbert Bros. & Co., Baltimore, have their usual announcement of Yager's Liniment in another column. Kindly refer to the advertisement, or better still, inquire of your merchants for a bottle. It will be found very useful in emergency cases.

Note the change in the advertisement of S. L. Allen & Co., makers of the famous "Planet Jr." Implements.

The Marvin Smith Co. has several ad-

FOUNDED  
1802.

GOLD MEDALS:  
Paris, 1900. Pan-American, 1901.

# Thorburn's Seeds

For over a hundred years have been universally recognized as the standard of excellence. They received the GOLD MEDALS (the highest award) both at the Paris Exposition of 1900 and at the Pan-American, 1901.

## Our Catalogue

—the 102d successive annual edition—contains a more complete assortment and fuller cultural directions than any other seed annual published. It is beautifully illustrated, not with highly colored exaggerations, but with the finest half-tones from life photographs. It contains 128 large size pages, and in addition 16 full page half-tone plates, and is in every respect and without exception the most complete, most reliable, and most beautiful of American Garden Annuals. We will mail it free on receipt of 10 cents in stamps, which amount may be deducted from your first seed order.

## Market Gardeners

are invited to send for our special price-list of high-class vegetable seeds for truckers and large market growers. It contains all sorts of approved merit.

# J. M. THORBURN & CO.,

36 Cortlandt Street, NEW YORK.



## Seed for New Leader Cabbage

is now ready for the public. The greatest money maker ever produced. Will yield big crops of the finest large, flat, solid, perfect keeping cabbages ever bred. Tested thoroughly, and proven to be a wonderful improvement over any extra early cabbage now grown. The best of all early flat headed varieties.

## Bolgiano New Leader

is the cabbage that will make your fields yield you big returns. Write for large, free illustrated catalogue of Rocky Ford, Cantaloupe, Alaska Peas, Valentine Beans, Gradus Pens and all Seeds, Plants, Bulbs, etc., for the Garden and Farm. Write now.

J. BOLGIANO & SON, Dept. P 6, Baltimore, Md.

Special line of Tomato, Cucumber, Radish and all garden seeds!



## OLIVE'S PRIDE.

The GREATEST OF ALL NEW STRAWBERRIES. It contains more points of excellence than any other variety introduced in recent years. WRITE FOR FREE CATALOGUE; it tells you all about this grand variety and forty other varieties of choice stock free from all diseases, Second crop Seed Potatoes, etc.

J. W. HALL, MARION STATION, MD.



**Some People**  
do not see the necessity for two wheels on a hoe. They like a Single Wheel Hoe because it is a trifle lighter than a Double, and it does not cost quite so much. To meet this demand we make the **No. 16 "Planet Jr."**  
**Single Wheel Hoe Cultivator, etc.**  
It is our latest 1903 model outfit and is a decided improvement on anything of its kind we have heretofore offered. It is provided with two hoes for working middle, or both sides at once, throwing the dirt to or from the rows; three cultivator teeth for working middles; two rakes for pulverizing and smoothing; and a plow which is also an excellent furrow opener. Handles are adjustable to fit short or tall workmen or children. Attachments are quickly and easily changed. It will work any garden crop planted in rows and two men can do more and better work with it than six men can do with hand hoes. Should you need a horse tool you will find the **No. 8 "Planet Jr." Horse Hoe, etc.**, shown below to be the best in existence.  
These are full of our cutting, rearing and outfitting implements, including plain and combined seed sowers, Wheel Hoes, Hand Cultivators, Walking Cultivators, and the Twin Horse Riding Mowers, Special Sugar Beet Tools, etc. Our new 1903 catalog is a directory. It contains over 100 illustrations with full descriptions and prices. It costs you nothing and will make you money. Write for it.

**S. L. ALLEN & CO.,**  
Box 1107-X,  
Philadelphia, Pa.

**OUR LOW HITCH DISC HARROW**



Best, simplest, strongest and most durable Disc Harrow made. All steel. Double rollers. Low hitch. Center draft. All sizes With or without cutting attachments. Write for circulars and prices.

**TOLEDO PLOW CO.,** Toledo, Ohio.

Don't Monkey with anything but the **"PEERLESS,"**



If it is clean, unbroken and you want the **"PEERLESS,"** is easy to operate, light to handle, strong and durable, elegantly finished. It will clean peas to perfection, also millet, sorghum seed and velvet beans. J. E. Sanders's latest improved, fully guaranteed. We pay freights. Write to-day for prices, addresses,

**PEERLESS PEA HULLER CO.,** Box V, Dalton, Ga.



**Krausers' Liquid Extract of Smoke**  
Smokes meat perfectly in a few hours. Made from hickory wood. Delicious flavor. Cleaner than any smokehouse needed. Send for circular.

**E. KRAUSER & BROS.,** Milton, Pa.

vertisements in this issue. This house can furnish anything needed on the farm. Write them for their latest catalogue.

The "Iron Age" Cultivators are gaining in popularity. An ad. of them will be found in this issue as usual. If you have not yet gotten the latest catalogue, address the Bateman Manufacturing Co., Box 167, Grenloch, N. J.

Gleason's Horse and Cattle Powder should be in every stable. Look up the ad. in this issue.

The Lansing Silo is offered to our readers by A. M. D. Holloway. The silo has many commendable features, and we invite those interested to write for catalogue and prices.

Foutz's Horse and Cattle Powder is advertised elsewhere in this issue. It is recommended as one of the finest tonics on the market. Your dealer probably sells it. Look up the ad., and write for pamphlet No. 8, which will be mailed free.

The DeLoach Mill Manufacturing Co. are advertising their well-known Pony Saw Mill. This is a very low priced mill, and is guaranteed in every particular by its makers.

The Richmond Plumbing and Mantel Co. have a half page advertisement in this issue. They are having a good run at present on their "Favorite" Range.

Woodland Farm is offering some nice Dorsets this month.

W. T. Thrasher is advertising Short-horns at right prices.

The Ruumsy-Williams, C. St. Johnsville, N. Y., are offering Gasoline Engines and Threshers in this number. Get prices and catalogues.

The Peerless Pea-Huller Co., Dalton, Ga., is a new advertiser in this issue. They exhibit splendid testimonials regarding the Peerless.

**SPECIAL OFFER.**

To poultry raisers who read the *Southern Planter* we will send a leading poultry journal, subscription 50 cents, prepaid, for one year, if you will fill out the following blank and forward it to us by early mail:

How many hens have you?.....  
How many chickens do you expect to raise next year?..... Do you intend to buy an incubator?.....  
Cut out and mail to the Hawkeye Incubator Company, Newton, Iowa, Box No. 119. Our contract is limited for subscriptions, send at once.

Gasoline is to the country what electricity is to the city; with the "big end" in favor of the farmer, as he can get both light and power without running wires or paying bills which are measured out monthly by the meter system.

As an economical and reliable power for the farmer, the Engine manufactured by the Weber Gas and Gasoline Engine Co., of Kansas City, Mo., seems to have solved the problem. A mechanical triumph, which requires no engineer, no fireman—in fact, can be operated as efficiently by the farm hand as by the expert. A power which is ever ready and can be run without danger to life or its

**STUMP PULLERS**



All Sizes and Prices. Catalogue Free.  
**MOHLAND & COMPANY,**  
BURLINGTON, IOWA.

**THE IMPROVED**  
**SCREW STUMP PULLER**  
Write to Prices.



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

**STUMP PULLER**



Most Powerful, Handiest and Strongest Built in the World.  
We make 4 kinds in place to suit all needs and of any desired strength. Saves time and does the work right. The operation of pulling stumps and trees by our methods is simple and easy. Send for Free Catalogue.

**CHICAGO STUMP MACHINE MFG. CO.,**  
226 La Salle Street, Chicago, Ill.

**HERCULES STUMP PULLER**



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 7 1/2 St., Centerville, Iowa

**FREE**



From anxiety over wash day, are all who use a **DILLEE QUEEN WASHER**. We guarantee it to be the best. A trial machine sent at factory price. Agents wanted for exclusive territory. Write for catalogue with full description. We will surely please you.

**LYONS WASHING MACHINE CO.,** Lyons, Mich.



**IF WE DID NOT KNOW OUR SPRAYER AND SPRAYING MIXTURE**

The Best ever devised, we would not buy expensive space to tell you about them.

WRITE TO-DAY and we will send you a Book showing the benefits derived by the use of our Mixtures and Spraying Outfits.

**Lenox Sprayer & Chemical Co., Inc.**  
Dept. 11 PITTSFIELD, MASS.



**THE APPLE MAN**

above all others is the one who needs to spray. Good, smooth, even sized, disease-free, salable apples are now an impossibility without spraying. For the apple man's use nothing quite equals our

**Century Barrel Sprayer.**  
Submerged brass cylinder, brass ball valves, everlasting plunger packing, automatic agitator. Unexcelled for durability, ease of operation, free water ways. Eighteen styles of sprayers. Catalogue with formulas and testimonials free.

**THE DEMING COMPANY, SALEM, OHIO.**  
Western Agents, Henlon & Habbell, Chicago.

**Get the Best**

A Good Spray Pump cures big profits and lasts for years.

**THE ECLIPSE**

is a good pump. As practical fruit growers were using the common sprayers in our own orchards—found their defects and then invented The Eclipse. Its success practically forced us into manufacturing on a large scale. You take no chances. We have done all the experimenting.

Large fully illustrated Catalogue and Treatise on Spraying—FREE.

**MORRILL & MORLEY, Benton Harbor, Mich.**

**SPRAY PUMPS**

SAVE MONEY BY BUYING ONE OF OURS.

They will do as much work, being all brass are lighter to handle and are more durable, will generate a higher pressure thereby making them the easiest pumps to operate on the market. Write for catalog and get treatise on spraying free. Agents wanted. Mention this paper. J. F. Gaylor, Successor to P. C. Lewis Manufacturing Company, Calkins, N. C.

Mention the Southern Planter when corresponding with advertisers.

surroundings. Many of these engines, stationary, or mounted on all iron and steel trucks, are used for heavy work throughout the civilized world; grinding, shredding, threshing, wood sawing, and many other classes of work requiring heavy and light power. This Company also makes a specialty of a Farm Engine of 24 H. P., called the "Weber Junior," which is used to great advantage on the farm and about the dairy in operating small machinery and pumping water for stock. These little engines are mounted on a wood base and so constructed as to be easily moved about as required, the weight being but 650 pounds.

On every up to date holding will be found a gasoline engine of such size as amply meets the requirements.

We are glad to direct the attention of our readers to the advertisement of the Field Force Pump Co., of Elmira, N. Y., which appears on another page of this issue. This pleases us in the first place, because these people are old and valuable advertising patrons of ours, and in the second place it pleases us, because we know that their goods are satisfactory to our readers. In any event, we have had no single complaint since we have been carrying their advertisement. They make a full and complete line of spraying machinery, apparatus and appliances.

They are manufacturing only such things as have been thoroughly tested and have been found to be of merit to the orchardist and others who find it to their advantage to spray. Write them for matter touching the subject of their specialty.

**AN HONEST ANSWER.**

Nathan, when a small boy, once drifted into a Sunday-school, or was dragged there—accounts differ—and when asked concerning the chief end of man, merely shook his head. The question was not clear. Trying again, the teacher sought to get from him some idea of moral responsibility. There was no reply. A third effort was made by gradually approaching the subject, the teacher asking him what he best liked to do.

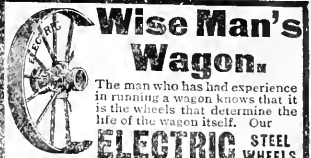
"Shirk work," was the prompt reply.—Dr. C. C. Abbott, in February Lippincott's.

The Pastor.—I hope you never swear when the baby is irritable."

The Parent.—"Oh, no; the baby attends to all that."

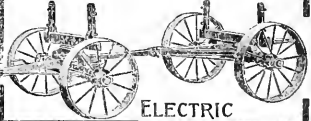
"I've made it a practice to put all my worries down in the bottom of my heart, then set on the lid 'n' smile."—From "Lovey Mary," The Century, January, 1903.

Government statistics show that the Miami Valley in Ohio produces better grain and has purer water than any other section of this country. It is Nature's garden. Right in the heart of this favored spot is our distillery. We have at our very door the two essentials for producing the finest whiskey in the world—the best grain and the purest water. Add to these one of the most completely equipped distilleries ever operated and an experience of 36 years in distilling whiskey



**Wise Man's Wagon.**

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS** have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen of best selected material—white hickory axles, steel wheels, steel joints, etc. Guaranteed to carry 4000 lbs. Here is the man who will save money for you, as it just almost for ever. Our list of describing the uses of these wheels and wagons on hand. Write for **ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**



**ELECTRIC**

**WE'LL PAY THE FREIGHT** and send 4 Heavy Wheels, Steel Tire, on \$7.25 With Saddle Tires, \$16.00. 1 Mile Wheel 2, to fit tread, Top Huggies, \$28.75. Horns, \$2.50. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. W. V. DODD, Cincinnati, O.

**LATEST** (Newton's Patent) **Every** **DEHORNER** **Dehorner** **Guaranteed**

**IMPROVED THOUSANDS IN USE.**

Ask your hardware dealer for them or write **H. H. BROWN MFG. CO., DECATUR, ILL.**

**BOSTON'S IMPROVED FARM LEVEL**  
Pat'd 1902. WITH AND WITHOUT TELESCOPE



Is no **MAKESHIFT**, but the best one made for Terraceing, Digging and Draining. Price \$5 and 10, including Tripod and Rod. Send for descriptive circulars and Treatise on Terraceing, etc., Free.

**BOSTON PATENT HOISTING FIG. CO.,**  
81 1/2 W. Alabama St., Atlanta, Ga.

**Corn Planting**

must be well and carefully done, as the future crop depends upon it. In any soil, on all kinds of ground nothing equals the



**SPANGLER CORN PLANTER.**

It saves time, labor, money and lowers the cost. You know when it is working, you can see the corn on its way to the ground. Most of our machines are self-attached. New device for sowing peas, beans, melon, corn, etc. Also makes the best corn planter for Dry Grain and Fertilizer Drill. Write for catalog and circular.

**SPANGLER MANUFACTURING CO., 5010 4th St., York, Pa.**

**A Kant-Klog SPRAYER**

We want to send in every town and country a sample of our new self-operating Kant-Klog Sprayer. No farmer, fruit or vegetable grower can afford to be without one. They increase crops both in quantity and quality, and double your yearly profit. \$20.00 a DAY is what one

**TO AGENTS:** new agent made. Another has sold and delivered 600 machines and has 100 more sold for later delivery. Write for complete details and instructions we send our agents any man of ordinary ability can do as well.

For further information address:

**Rochester Spray Pump Co., 21 East Av. Rochester, N.Y.**

# HENCH'S 20th Century Steel Ball Coupling Cultivator

With Double Row Corn Planter and Fertilizer Attachment Complete on One Machine.

Parallel beam movement, pivoted axle with lateral beam movement in connection with the most advanced roller, or either independent of each other, centre level for spreading and closing of shovel ends.

Order immediately and introduce them for next season, having every possible movement of the shovel gears.

The HENCH & DRUMGOLD CO. Mfrs., York, Pa.

# FEED MILLS. EVERY MAN HIS OWN MILLER.

The latest improved. Does all kinds of work. Most durable; has ground over 15,000 bushels without repair or expense. The fastest grinder; has ground 300 bushels in 4 hours. Lightest draft and lowest price. The World's Best! Send for prices to the manufacturers.

N. M. FIELD MFG. CO., St. Louis, Mo.



**Ground Feed**  
saves corn and grows and fattens faster. The best mill for corn, with or without shucks, and all grain, is the

**KELLY**  
Duplex Grinding Mill.

Crushes and grinds to any fineness, always uniform. Has great capacity. Easy running. Makes excellent meal. Use minimum power any size. Double set burrs, force feed and regulating device. 4 sizes. Catalog FREE.

THE O. S. KELLY CO., DEPT. T SPRINGFIELD, OHIO.

## The Old Reliable Anti-Friction, Four-Burr MOCUL MILLS.

No gearing, no friction. Thousands in use. Four-horse mill grinds 60 to 80 bus. per hour. We make a full line of Feed Mills, best ever sold, including the famous Iowa grinder No. 2, for \$12.50. Send for free cat. Manufactured and sold by the Iowa Grinder and Sreamer Works, Waterloo, Iowa.



**The "Weber Junior" Pumper**

Is all complete, ready to attach to pump. Equals 50 man power. Uses but little gasoline. It is shipped crated completely assembled, all connections made. Easy to start any one can operate it. Every one guaranteed. Other sizes call on G. H. P. Send for catalogue. Weber Gas & Gas Engine Co., Box 128 Kansas City.



**DITTO'S TRIPLE BEARED BALL BEARING FEED GRINDER.**

Sold on trial. We ask no money in advance. Try it on your own farm. If not of largest capacity, easiest running and most durable, don't keep it. Circular free.

O. M. DITTO, BOX 48, JOLIET, ILL.

and you have a combination that is unequalled anywhere. That's why Hayner Whiskey is the best for medicinal and other uses. That's why we have over a quarter of a million satisfied customers. That's why you should try it. Don't forget that it goes direct from our own distillery to you, with all its original strength, richness and flavor, carries a United States registered distiller's guarantee of purity and age and saves you the dealers' enormous profits. Your money back if you're not satisfied. Read our offer elsewhere in this paper. The Hayner Distilling Company.

## HOME, SWEET HOME. LENA WEE COUNTY.

That's the name of our home county, and after selling our products here for over seventeen years, during the last year, 1902, we sold to the farmers in this county alone, for their own use, over seventy-six thousand (76,000) dollars worth of Page Fence—our own home county, so far, being the banner county to use Page Fence.

If anything would make a company proud, how ought this to affect us. Here is where our first fences were erected, and here the bulk of our experimenting was done, and still each year we sell more fence right here at home than we did the previous year.

Our average total sales by months for the year just passed, 1902, were over twenty seven per cent. greater than for the year 1901.

During the latter month of 1902 there was quite a drop in the price of some qualities of fence wire, which accounts for other companies cutting prices a little below ours, but there was no drop in prices of the materials of which "Page-Wire" is made. Indeed, the pig-iron out of which it is made costs \$5.75 per ton more to-day, December 11, 1902, than it did December 11, 1901, and cannot be gotten for immediate delivery for less than eight dollars more than it cost a year ago. See prices in The Iron Age, December 11, 1902, and December 11, 1901.

Thus, you see, our prices must remain, at least, as high as last year; but, notwithstanding their lower prices, our sales have been larger than ever before. We cannot use their kind of wire. It will not hold the coil feature in our fences.

## A FIFTY-FOOT CALENDAR.

N. W. Ayer & Son, the Philadelphia advertising agents, who have a national reputation for "keeping everlastingly at it" believe in sticking to a good thing when they have one. For instance, their calendar for 1903 follows the design used for several years past, but with new coloring. And in truth, it would be hard to improve upon their design; the dates are plainly readable at fifty feet, yet the calendar is not unpleasantly conspicuous; it is artistic, simple and useful, and it is not surprising that it has become so popular an adjunct to business offices that the supply never equals the demand.

While they last, one will be mailed to any address for 25 cents, which barely covers cost and postage.



## Announcement

We have obtained the Court's decree against two additional manufacturers who have been infringing our patent. The rule of law is: "The holder, seller or user of an infringing device is liable in damages to the owner of the patent infringed." The Jacksonville Machine Co. and the Keystone Farm Machine Co. are the only firms licensed to use a flat tooth covered by our patent, and we finally won our case and our other makes. So ultimately have the famous "Hallock" W. Weeder done. By the various Courts' decisions, these makers are compelled to abandon the manufacture of our W. Weeder having flat teeth, and they are now experimenting with other shapes; but it is the flat tooth that made the "Hallock" W. Weeder famous, and in view of the manner in which our patent has been sustained, it is dangerous to use an infringing tooth. Write for descriptive circulars and prices.

**HALLOCK WEEDER & CULTIVATOR CO.,**  
Box 839 York, Pa.

## HARD STEEL WIRE FENCE

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance, and durability, the Hard Steel Wire Fence is unequalled for catalogue and low prices. THE HARD STEEL WIRE FENCE CO. Cuyahoga Falls, Ohio

## PAGE POULTRY FENCE

weighs 10 pounds to the rod—bottom wires only 1/2 inches apart—and don't cost any more erected than a slazy netting. Send for descriptions. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



**LAWN FENCE**  
New designs. Cheap in price. 32 page Catalogue free. Special Prices to Customers. Fully Illustrated. Catalogue Address: COILED SPRING FENCE CO. Box Q, Winchester, Ind.



**DOW FARM FENCE**  
PRICE AND QUALITY WILL PLEASE YOU—WRITE US NOW.  
DOW WIRE WORKS—LOUISVILLE, KY.



**STRONGEST FENCE!** Made of galvanized iron. Strong. Chicken tight. Sold to the Farmer at Wholesale and Retail Prices. Fully Illustrated. Catalogue Free. COILED SPRING FENCE CO. Box 83 Winchester, Indiana, U. S. A.



**HIGH CARBON COILED SPRING FENCE**  
Solely Manufactured by THE WEAVER FENCE CO. BOX 11, MUNCIE, INDIANA.

WE PAY \$26 A WEEK And expenses to men. Poultry Companies with rigs to introduce INTERNATIONAL M'F'G. CO., Parsons, Kan.

\$100.00 Send for a FREE COPY of the NEW MAGAZINE Suggest a NAME for it, and earn \$100. No money required in this contest. Enclose a stamp for particulars. NEWS OF THE WORLD CO., Rochester, N. Y.

## FOUR FREE FRIENDS FOR FARMERS



Our money winning books, written by men who know, tell you all about

## Potash

They are needed by every man who owns a field and a plow, and who desires to get the most out of them.

They are free. Send postal card.

GERMAN KALI WORKS  
93 Nassau Street, New York

## SAN JOSE SCALE and other insects can be controlled by using Good's Caustic Potash Whal Oil Soap, No. 3.

It also prevents Curd Leaf. Endorsed by an entomologist. This soap is a fertilizer as well as insecticide. 50 lb. kegs, \$2.50; 100 lb. kegs \$4.50. Half barrels, 270 lbs., at 83¢. per lb. barrels, 425 lbs., at 83¢. Large quantities special rates. Send for circular.

939-41 N. Front St., PHILADELPHIA, PA.

## FRAZER

### Axle Grease Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 boxes any other brand. Not affected by heat. Get the genuine.

FOR SALE BY ALL DEALERS.

## AGRICULTURAL and BUILDERS' LIME

Send for Circulars and Price-List.  
FELLSWORTH LIME WORKS  
REEVES CATT, Agent,  
Bodley, Augusta County, Va.

## S. B. ADKINS & CO.

4 and 6 Governor Street,  
RICHMOND, VA.

EXPERT BOOKBINDERS  
and Commercial Printers.

## MAGAZINES.

The leading color pictures in the February Century—the most novel and curious in subject of any that magazine has yet published—are from interesting and beautiful studies of the aurora borealis made by Frank Wilbert Stokes while in the Arctic in the fall of 1892 and are richly worthy the subject. They reproduce in tint for the first time in a popular magazine the wonderful effects of the aurora. Mr. Stokes, probably the first real colorist to visit the Arctic regions, was with the Peary and relief expeditions on the Kite when he was privileged to see some color displays worth all the dangers and privations of the trip. His work painting is as vivid and interesting as the color work.

That the Senate is the most powerful body in the government, that it has slipped out of its orbit and is describing a larger area in the political heavens than that which the fathers marked out, that its constituent elements make the Senate self assertive, tyrannical and prone to prefer the material to the moral advantages of the republic, these and many other statements not altogether complimentary are made and discussed by Henry Loomis Nelson in his article on "The Overshadowing Senate" in the February Century, which is enlivened by plenty of lively anecdotes and clever pictures by A. I. Keller.

For those to whom the fiction of the magazines is always first the February Century has provided liberally. Lovey Mary visits Miss Viny and goes with Mrs. Wiggs and in the family on a picnic which proves decidedly Wiggeseque. The second part of Abigail H. Fitch's "When the Consul Came to Peking" carries its characters to safety through some thrilling adventures. "The Yellow Van" continues in interest. There is wit in Virginia Frazer Boyle's "Her Freedom," and much pathos in Kate W. Hamilton's "The Baby From Ruggles's Dip." "There is another Pa Gladden story, too," "Knights to the Rescue," in which Elizabeth Cherry Waltz takes her gentle, lovable hero on an unusual errand of mercy.

Arnold's battle with the wilderness is the dramatic subject of the dramatic chapter in the February Century, forming the third installment of Justin H. Smith's "The Prologue of the American Revolution" The sufferings and heroism of that terrible march to Quebec made sad but inspiring reading. Prof. George E. Woodberry, editor of the valuable Poehivers papers, which are concluded in the February Century, finds in the correspondence evidence that Chivers, who thought himself a genius, was to Poe, who really was one, not unlike what Alcott was to Emerson. William Gage Erving's story of his 1800-mile trip from Khartum to Cairo in an Adirondack canoe is full of exciting experiences, and tells something incidentally of Egyptian affairs. "Nobody associates fires with spinsters in any pleasant way," muses Lillie Hamilton French in "My Old Maid's Corner," but her winter night dreams over the ashes are sweet and wholesome and tenderly sympathetic. There is much verse in the number, and the Century's standard of illustration is maintained.

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Feed it to your stock and note the results—they will improve at once. It is the most reliable and undoubtedly the best Powder for all kinds of stock. It can be had from any dealer, so give it a trial. Prepared by

GILBERT BROS. & CO., Baltimore, Md.

The prominent feature in Lippincott's Magazine is always a complete novel. That contained in the February number is by Alice Duer Miller, entitled "A Man of His Word." Mrs. Miller, by the way, belongs to a popular New York story-writing family. Both her mother and sister are well-liked contributors to the leading magazines. The motive in "A Man of His Word" is the moral obligation of a member of the Four Hundred to marry a young school-teacher because her mother had saved his life at the expense of her own. Before her death she whispers to her debtor, "Marry my daughter." On this foundation the author has built a tale of compelling interest and infinite diversion.

In addition to the novel, eight striking short stories enliven the pages of the February Lippincott's. W. A. Fraser's "The Capture of the Canton" is a rattling good yarn of the sea. Beulah Marie Dix contributes one of her striking and unusual stories called "The Scythe in the Oak Tree." This is a Puritan incident where a man's "masterful temper" runs up against a younger man's obstinacy. "Deceivers Ever," by R. E. Vernele, is a bright sketch of a pretty, perverse girl who hated boys. The cause for such a sentiment is the point of the story. Elliot Flower calls his humorous story "The Demure Wife of Ned Barrett." An obliging friend of the husband's who consents to entertain her for a while is doubtful about the applicability of the adjective. "Brother Johning's" "Spierence," by Ella Middleton Tybout, has to do with a "brother" of color who is wont to stray from his own freside. Clinton Dangerfield writes a tale called "A Game of Chess" which has great dramatic qualities. The game is played between lovers. The man's life is staked on it, but his fair antagonist, unaware of this, uses all her skill in its unwinding. "A Race Through the Night" is an exciting automobile story by Edgar Jepson; and "Till A' the Seas Gang Dry" are letters written by a young widow to her "dear departed." It is the collaborated work of Mary and Rosalie Dawson.

A novel and attractive feature of the February St. Nicholas is an operetta in three acts, "Prince Charming's Fate," by Catherine C. Lovell, the full production calling for nineteen characters besides lords and ladies, heralds, guards and pages, a gypsy tribe and a corps de ballet. The scenes are laid in the Kingdom of Imagination, and Prince Charming is the "leading man." There are directions for the stage business and costuming; and the girls and boys and their elders should have much enjoyment from "Prince Charming's Fate."

Most important of the stories in the February St. Nicholas, of course, is the new installment of Howard Pyle's "The Story of King Arthur and His Knights," which tells of the Sable Knight and how King Arthur fought with him, even unto grievous wounding. Tudor Jenk's "The Castle of the Beeches" is a good, old-fashioned story of buried treasure. Jack London's "In Yeddo Bay" will delight every adventurous, loyal American lad. Charles Newton Hood's "The North Shore Lim-



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ited" has the merit of being as true as it is exciting. Joseph Blethen's "The Fire Cat" gives beside its thrills a fascinating story of an Indian superstition and an Indian hero's bravery. Some animal sketches, an account of child life in Germany and verse and pictures, written and designed for the hearts and eyes of the girls and boys, fill up the February number.

### PIONEER FARM IMPLEMENT MAKER.

The pioneer manufacturer of the all-steel harrow was Mr. Roderick Lean, founder of the Roderick Lean Manufacturing Co., of Mansfield, Ohio. From a meagre beginning in a small blacksmith shop to the largest harrow works in the world, is the typical illustration that true merit wins. To merit in his career he realized that to merit success his product must not only be right in principle but also right in construction and material—honest through and through. The evidence that he applied in practice what he believed in theory, is proved by the universal use and recommendation by farmers throughout the length and breadth of this country, of Roderick Lean harrows, land rollers, hand carts and other farm implements. Their catalogue is sent free on request.

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ARTIFICIAL INCUBATION BY FAR THE MOST SATISFACTORY.

The fact is generally recognized by farmers and poultrymen, that to successfully meet business competition, the incubator is a necessary acquisition. The question of quantity is not the only point of vantage over the hen's method of raising her brood, but quality is also to be considered. The chick that owes its existence to the incubator and passes the early stages of life in a brooder inherits a stronger vitality and is less subject to the attacks of disease and vermin that beset the life of the chick that breaks through the shell in the chicken-house nest.

The success of the incubator and brooder has created an industry that has rapidly grown to large proportions. Easily the leaders in this enterprise is the George Ertel Company, of Quincy, Ill., the makers of the celebrated Victor Incubator. An idea of the magnitude of their business can be formed from the state ment that in one day of February, 1902, they made the enormous shipment of five carloads of Victors, covering orders from every part of the world.

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I have been planting this corn for 4 or 5 years, and never expect to plant any other kind. On ordinary land it makes from 25 to 30 bushels per acre. On 1 1/2 acres last year I gathered over 70 bushels. It is a firm, white corn, and keeps well; ears under medium size. Averages about three ears to the stalk, some stalks having as many as five and six ears. Every farmer ought to plant it. Send 15 cents in stamps for a start—enough to make you two or three bushels. Will send one peck by express, collect, for 75 cents.

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## REPORTS.

U. S. Department of Agriculture, Washington, D. C. Report of the Secretary of Agriculture. Departmental Reports for the year ending June 30, 1902.

Eighteenth Annual Report of the Bureau of Animal Industry for the year 1901.

Rules and Regulations in regard to Renovated Butter in accordance with the Act of Congress approved May 9, 1902, and information concerning Adulterated Butter.

Report of the Editor for 1902. Experiment Station Record, Vol. XIV, No. 5.

Bureau of Plant Industry. Bulletin 31. Cultivated Forage Crops of the Northwestern States.

Farmers' Bulletin 163. Methods of Controlling the Boll Weevil.

California Experiment Station, Berkeley, Cal. Report of Work of the Agricultural Experiment Station for the years 1898-1901.

Bulletin 142. Grasshoppers in California.

Bulletin 143. The California Peach Tree Borer.

Bulletin 144. The Peach Worm. The Red Spider of Citrus Trees.

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R. F. BITCHIE, - Richmond, Va.

Illinois Experiment Station, Urbana, Ill. Bulletin 79. The Corn-Bill Bugs in Illinois.

Bulletin 80. Methods and Results of Field Insecticide Work Against the San Jose Scale.

Bulletin 81. Forcing Tomatoes.

Kansas State Board of Agriculture, Topeka, Kas. Report of the Board, 1901-1902. This, like all the reports of this Board prepared under the direction of Mr. F. D. Coburn, the well-known Secretary, is a volume of great interest and value not only to Kansas, but to all farmers everywhere. The Report makes an octavo book of 1,118 pages, with a full Index in addition. It gives valuable information upon Shorthorns. Herefords, Aberdeen-Angus, Galloway, Red Polled, and Polled Durham cattle; the breeding, rearing and fattening of farm animals; the growing of alfalfa and numerous other crops, and full statistics of the products of each county in the State. It is a sample of what such a report should be, and makes the reports of our own State Board and many other States look miserable subterfuges.

Louisiana Experiment Station, Baton Rouge, La. A Report on the Geology of Louisiana.

Minnesota Experiment Station, St. Anthony Park, Minn. Bulletin 75. Fattening Lambs of Different Grades. Oats as a Factor in Feeding Lambs. Balanced and Unbalanced Rations.

Bulletin 76. Fattening Steers of Different Types. Feeding Steers for Short and Long Periods. Feeding Steers in the Stable and the Open Shed.

Bulletin 77. Insects Notably Injurious in 1902.

North Carolina State Board of Agriculture, Raleigh, N. C. Bulletin, November, 1902. Miscellaneous Subjects

Columbus Horticultural Society, Columbus, O. Journal of the Society, December, 1902.

Pennsylvania State Board of Agriculture, State College, Pa. Bulletin 61. Annual Report of the Director.

Hampton Institute, Hampton, Va. Nature Study Leaflets, No. 8. Winter Buds.

Virginia Weather Bureau, Richmond, Va. Report for December, 1902.

Department of Agriculture, Richmond, Va. Annual Report of the Commissioner of Agriculture. This is a small octavo volume of 170 pages, of which the Report of the Commissioner occupies three pages, the report of the manager of the test farm in Charlotte county 21 pages, and the report of the chemist 13 pages. The balance of the book is mainly made up of clippings from agricultural and other journals published in various parts of the country. The only suggestions of the commissioner for making more efficient the work of the department for the advancement of the agricultural interests of the State are one in favor of an appropriation for the execution of a pure-food

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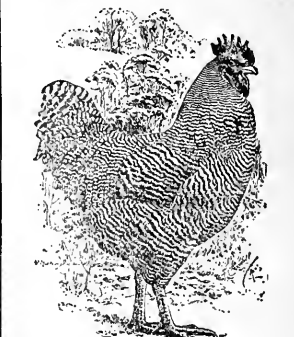
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**KENTUCKY ALUMINUM EAR LABEL.**  
Made by F. H. JACKSON & Co., Winchester, Ky. Write to them for free samples.

law and another authorizing the department to analyze minerals and mineral waters, neither of which it would seem to us would amount to much in the way of helping farmers to make their labors more profitable. When one considers the cost and expenditures of the Department, which amounted in the year to \$35,070.16 actually expended, and \$8,500 in addition appropriated for work not yet executed, and the showing of the work done, as exhibited by these short reports, it would seem that, like Falstaff's celebrated tavern bill, there is an "intolerable amount of sack to very little food." The salaries and commissions of the officers of the Department and the office expenses amount to \$5,930.12, nearly as much as the Legislature (when the Department was given an appropriation and the fertilizer tax was turned into the treasury), appropriated for the whole cost and expenses of the Department and the cost of the fertilizer inspection. Now, in addition to this outlay, there is an additional one of \$6,397.11 for expenses of inspection. Surely this is an extravagant outlay for the work done and results attained. We are also disappointed at the results obtained at the test farm, as disclosed in the manager's report. Perhaps it would be unjust to charge or blame this wholly to the manager as he seems, like the Israelites of old, to have been expected largely to make bricks without straw, notwithstanding the fact that there has already been expended on the farm during the year \$9,843.64, and appropriated for it, but not expended, \$4,500.00. He complains that he cannot make complete experiments and give the results reached from lack of scales to weigh his crops, and we judge from lack of measure in which to measure them, as he gives estimates of the production in many cases where actual measure ought to be given, even to fractions of a pound. Experiments conducted on such a loose system as this can never result in supplying reliable data for the guidance of farmers. Judging from the amount already spent on the farm and appropriated for it, and the lack of equipment as yet for carrying on the work of an Experiment Station as disclosed in the manager's report, it would seem that this gift is likely to prove rather a costly one for the State before it makes any returns. Frankly, when one compares what is being done by the Department of Agriculture of this State with that done by the Department of Agriculture of the State of Kansas, as disclosed in each case by the reports submitted by the executive officer of each department, both of which reports the Virginia one of 170 pages, the Kansas one of 118 pages, are now lying before us, we are compelled to feel ashamed and humiliated at the poor showing made by this State. It is time for an awakening of interest in the Department by those in whose interest it is supposed to be run and who supply the funds to run it by a tax levied upon the fertilizer they use, which tax they as certainly pay as though collected directly from them. So far as one is able to gather from the report the function of the Board of Agriculture is now simply that of an auditing committee for a fertilizer inspection department.

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### BREEDERS OF

Highest-Quality Barred Plymouth Rock, White Wyandotte, Black Minorca and Partridge Cochon Fowls. We won 19 prizes at late Richmond Show. Breeding stock and eggs for sale at all times. If you mean business, write for Handsome and Valuable Illustrated Catalogue and Poultry Guide. Write to-day.

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We have the winning pen of Madison Square Garden Show. Gobbler weighs 45 lbs.; hens, 26 lbs.

### PEKIN DUCKS.

Prize-winning drake at Philadelphia and New York Madison Square Garden. Young ducks weigh 14 lbs. per pair.

### PLYMOUTH ROCKS, Barred and White. WHITE HOLLAND TURKEYS.

A limited number of pure fowls and eggs for sale. Also pure bred POLAND CHINAS, SHEL-LAND PONIES, HORSES, and RED POLLED CATTLE, the milk, butter and beef breed. ALBEMARLE PROMPTO SEED CORN.

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## Fine Laying Strains of BARRED PLYMOUTH ROCKS SILVER LACED WYANDOTTES

My best pen of Silvers will be headed this season with a fine cock direct from Mr. J. T. Orr, out of his famous laying strain of Silver-Laced Wyandottes. EGGS at \$1.00 per setting of 15 at Express Office, Salisbury, N. C.

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## BARRED and BUFF PLYMOUTH ROCKS

Cocks and Cockerels, \$1.50 and \$1.00 each, trios, \$5.00.

**FRED NUSSEY,** - Summit, Spotsylvania Co., Va.

..HOLLYBROOK FARM..

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From Thoroughbred Poultry.

In our poultry yards we have the following thoroughbred poultry, all first class stock, originally started from the best stock in this country, and carefully cross-mated so as to give strong and vigorous stock and the best laying strains of the different breeds that it is possible to obtain:

**BARRED P. ROCK.** \$1.00 per sitting.  
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**BUFF PLYMOUTH ROCK.** \$1.50 sitting.  
**LIGHT BRAHMAS.** \$1.50 per sitting.  
**SILVER LACED WYANDOTTE.** Price, \$1.50 per sitting.

**WHITE WYANDOTTE.** \$1.50 per sitting.

In addition to careful breeding, we pay special attention to the handling and packing of our Eggs, so as to ensure good fertility and a good hatch.

We have also for sale a few first-class young cockerels of **BARRED AND BUFF PLYMOUTH ROCKS, SILVER LACED WYANDOTTE, LIGHT BRAHMAS AND WHITE WYANDOTTE.**

Price, \$1.50 and \$2 each, crated for shipment.

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**SILVER LACED  
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Choice pure bred specimens of either sex, \$1 each, in any quantity. Eggs in season.

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Descendants of prize winners. Sold in pairs or trios. Large, beautiful birds, at exceedingly low prices. The first orders will get pick of large flock. Correspondence solicited.

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Barred, Buff and White P. Rocks, Light Brahmans, White Wyandottes, Buff Cochins, Partridge Cochins, Black Langshan, Black Minorca, S. C. Brown Leghorns and S. C. White Leghorns. Write for sale cheap. Prize winner eggs, for 15¢. A batch of 5% or order duplicated at half price.

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**32 Varieties  
 Best Poultry**

FINE ILLUSTRATED CATALOG for stamp, if you mean this paper. All poultry keepers should have it. **JNO. E. HEATWOLE,** Harrisonburg, Virginia.

**PRIZE WINNINGS**

AT RICHMOND SHOW 1902.

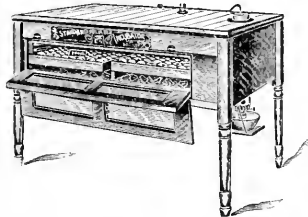
I received 1st on pen, 1st on hen, 1st and 2nd on pullets, 3rd on cockerel.  
 Choice cockerels, \$2 to \$5. Hens and pullets, \$2 to \$5. Write me for wants, I can please you. Eggs, \$2 per 15 in season.  
 C. G. M. FINK, 1409 W. Leigh St., Richmond, Va.

Surely this was not what was contemplated by the Constitution and the Legislature when it was created. It should be a force for the advancement of the agricultural interests of the State with the Commissioner as merely an executive officer.

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In the Incubator World there are comparatively few who discover at first hand and apply any necessary principle of artificial incubation. There are many followers. Ideas are quickly appropriated and dozens of concerns are constantly engaged in hurriedly throwing together machines and foisting them upon the market in imitation of any valuable discovery, in the hope of getting a share of the profit.

Perhaps the most important feature which distinguishes the Reliable from any and all other makes of incubators is its superb construction, which enables it to produce and hold a uniform temperature upon all parts of the egg tray throughout the entire batch. This does not mean that it fails in any essential possessed by any other incubator, but in



this one particular it stands in a class by itself. Poultrymen everywhere recognize the superior genius manifested by the Reliable's work. The manufacturing company is enabled to take a broad stand upon it. The offer they make shows that they never doubt for a moment that the machine in comparison with others will give the highest per cent. in hatches under all conditions and in any impartial man's hands. They make the statement everywhere in the form of a positive guarantee that "the machine must prove satisfactory to the customer in his own hands and hatch the largest possible percentage of chicks from the fertile eggs or his money will be refunded." We are showing here out of one of the incubators.

For detailed description, we must refer our readers to the company's catalog and Poultryman's Guide, mentioned in the advertisement elsewhere in our journal. This book will be mailed to any one writing for it on receipt of ten cents to pay for postage.

Now is the time to terrace and irrigate your farms. You should not delay this work any longer. See advertisement of Bostrom's Improved Farm Level in this journal.

To make cows pay, use Sharples Cream Separators. Book "Business Dairying" & Cat. 205 free. W. Chester, Pa. ♀

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Have for sale a limited number of Single Comb Brown and White Leghorn Pullets and Roosters. Best layers known. Prize-winning stock. Price, \$1.00 to \$1.50 each. Eggs in season at \$1.00 for 15; \$5.00 per 100. Satisfaction guaranteed. Address

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**WHITE LEGHORNS,  
 BLACK MINORCAS,  
 PULLETS, HENS AND COCKERELS.**

High-grade at low prices,  
 for quick sales.

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**Black Langshans.**

Fine stock and free range. Only breed kept. Splendid winter layers. A few birds for sale.  
 Cocks, \$2.50; Hens, \$1.50; Eggs, \$1.50, \$5 per 15. Satisfaction guaranteed.

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RINGLET WINTER-LAYING STRAIN

**B. PLYMOUTH ROCKS.**

Choice Cockerels, \$1.50 to \$2.50. Eggs, in season, per 15, \$1.00. Incubator Eggs, \$3.00 per hundred. If not as good as you can get elsewhere for twice the money, return and get your money back.

**SUNNYSIDE POULTRY FARM,**  
 Reference: Christiansburg, Va.  
 Bank of Christiansburg.

**BROWN LEGHORNS**

(Single Comb.)

Eggs from prize winners and good layers \$1.50 per sitting. Reduction on larger lots.

**WHITE PLYMOUTH ROCKS**  
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 FOR BROILERS.**

The undersigned can furnish them in limited quantities at \$4 for 100.

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LIVE WILD TURKEYS, SWANS,  
GEESE, DUCKS of all kinds,  
SQUIRRELS, etc.

Write me for prices.

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**EGGS! EGGS! EGGS!**

Best B. P. Rocks in Virginia.  
Hawkins, Thompson and Bradley strains.  
\$1.25 per sitting (39).  
M. B. Turkey Eggs, 50c. each, \$4 per dozen.  
Even the best is never too good, you'd better buy of the Mammoth Pekin Ducks.

THE CEDARS W. M. G. OWENS,  
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**COCKERELS.**

S. C. B. Leghorn, \$1 each, 6 for \$5. As good as the best. Satisfaction or money refunded.

TURKEYS all sold.  
Eggs from B. P. ROCKS, \$1 per sitting.  
Mrs. JNO. F. PAYNE,  
Clairmont Dairy Farm. University of Va.

**White and Barred Rock COCKERELS**

Single bird, \$1.00; trio, \$2.50. Eggs for hatching, 75 cts. for setting of 15. JERSEY BULL, No. 5417. J. B. JOHNSON,  
Clover Hill Farm. MANASSAS, VA.

**WHITE PLYMOUTH ROCKS, HOLLAND TURKEYS**

Fine strains and beautiful birds. Will be sold at reasonable prices. Farm bred birds and very healthy; six months old. A few Setter puppies a month old. For prices no particulars apply.

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THE IMP. FRUIT AND POULTRY FARM

—OFFERS—

**200 B. P. ROCK and S. C. B. LEGHORN COCKERELS and PULLETS**

At only \$1 each. This stock is pure, and will please.  
P. H. HEYDENREICH, Prop., Staunton, Va.

**FOR SALE.****ONE PURE M. B. TURKEY GOBBLER.**

This year's bird. Weighs 25 lbs. Price, \$5.  
APPLY  
MRS. A. E. JOHNSON, - Manchester, Va.

**Barred Plymouth Rocks**

—EXCLUSIVELY—

Strong, healthy, vigorous, farm-raised stock; bred for laying; 75 cts. per setting.  
WM. B. LEWIS, Irby, Nottoway Co., Va.

MAMMOTH BRONZE TURKEYS  
FOR SALE at reasonable prices, Barred Plymouth Rock Eggs, \$1 per dozen.  
ROBT. B. IAYLOR, - Cedon, Caroline Co., Va.

I have a few pure bred

**BUFF PLYMOUTH ROCKS FOWLS**  
FOR SALE. Price, \$1 apiece.  
W. C. DORSET, - Pilkiaton, Va.

**COMPULSORY SCHOOL ATTENDANCE—SOME REASONS FOR IT.**

The best schools will never eradicate the evil of illiteracy until there is an effective attendance law in every State. To be effective the law must be compulsory, with sufficient penalties to cause it to be obeyed. This has been the experience of all other States and countries, and we may not expect a different result here in the South. The sooner we profit by their example the better.

At present Austria, France, England, Scotland, Hungary, Italy, Norway, Sweden, Denmark, the Swiss Cantons, the German States, British Columbia, New Zealand, Prince Edward Island, Tasmania, Queensland, South Australia, the provinces of Canada, and thirty-two of the United States have compulsory attendance laws. With a few minor exceptions, these laws require attendance six, seven or eight years, from twelve weeks to ten months annually. In all the States in which such laws have been enforced longer than twenty-five or thirty years the percentage of illiteracy has been reduced to a minimum. These States and countries contain a population of more than two hundred and fifty million people, the freest and most progressive in the world—more than eighty per cent of all the people we call enlightened and progressive. Of the thirty-two American States having such a law only two—Kentucky and West Virginia—are Southern States. But what has been found good for all these great States and countries will probably not prove otherwise for us; and it is noted with pleasure that the sentiment in favor of such a law is developing rapidly in all parts of the South.

The following seems to be a fair summary of the arguments for compulsory school attendance:

1. Universal education is essential to the material, intellectual and moral welfare of the State. Illiteracy is a burden and constant menace to public morals and civil liberty, and threatens the very existence of the State. The State provides schools at public expense, collecting money for their support by law, and by force if necessary. It, therefore, has a right to enforce attendance, that its money may not be wasted and that its interests may be protected.

2. Individual welfare depends on the general welfare. Having taken the money of one man to educate the children of another, the State must protect that man and his children from the oppression and dangers of illiterate neighbors and fellow-citizens.

3. Children have rights as well as parents, and the State must protect them in their rights. Chief among these is the right to such education as will enable them to live useful and happy lives and become intelligent and self-supporting citizens. The importance of this right and the necessity of its being recognized increase as competition becomes more fierce, the use of machinery more common, the demand for intelligent labor greater, government more democratic, religious liberty more perfect, and the obligations of the individual to himself, his family, his country, and the world more complex and binding. Especially

**For Sale A FEW FINE M. B. TOMS**

EGGS in season of M. B. Turkeys, S. C. B. Leghorn and White Wyandotte Chickens and Pekin Ducks. Address Miss CLARA L. SMITH, Croxton, Caroline County, Virginia.

**FINE B. PLYMOUTH ROCKS.**

S. C. BROWN and WHITE LEGHORNS and BEFF COCHIN CHICKENS, and PEKIN DUCKS FOR SALE. 50cts to \$1.

Rev. J. W. HECKMAN, - Spotylvania, Va.

**PIT GAMES.**

BLACK DEVILS and RED HORSES.  
These Cocks won 90 per cent of battles fought in 1901 and 1902, and have never lost a battle when gameness and cutting qualities could win. Eggs, \$2 per sitting and stock for sale.

THOS. W. JARMAN, Yancey Mills, Va.

**HAWKSLEY STOCK FARM.**

**Large ENGLISH BERKSHIRES**  
**B. P. ROCKS FOWLS,**  
Eggs from same, \$1 per 13.

J. T. OLIVER, Allen's Level, Va.

**WANTED—A LARGE JACK,**

Must be good foal-getter.  
ADDRESS, stating age, size, price, etc.,  
WILLIAM E. SANDERS, Gratitude, Kent Co., Md.

**JACKS and JENNETS FOR SALE.**

Enclose 2 cent stamp for new catalogue.  
W. E. KNIGHT & CO.,  
R. F. D. 5, Nashville, Tenn.

**FINE JACKS.**

Mules are equal to Gold Dollars, from "youth to old age." Several nice ones and 2 very fine Jennets for sale. Buy Jack now and get him ready for spring.  
Write your wants to

L. L. THOMAS,  
722 W. Campbell Ave., - Roanoke, Va.

**KNIGHT & JETTON,**

Breeders of and Dealers In  
Jacks, Jennets,  
Stallions.

Fine Jacks a Specialty  
Write for cat.  
MURFREESBORO, TENN.

**150 Jacks, Jennets & Mules 150**

Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell two Percheron stallions at close figures.  
BAKER'S JACK FARM,  
Lawrence, Indiana.

**CLYDESDALE STALLION.**

Will trade for Hereford bull and heifers or Angus go. Must be registered stock. Horse is No. 4561, 5th Vol., American Stud Book. He cost, \$1,400, five years ago.  
Write what you have.

JO. HARDIE, Brown's Summit, N. C.

## KOW-KURE FILLS THE UDDER



THAT  
FILLS  
THE  
PAIL

Now we do not claim that Kow-Kure will make milk, because it is not a food, but it puts the digestive organs in condition to get the most out of what is eaten. In this way it makes the cow give a larger flow of richer milk.

SURROX, Vt., March 6, 1899.

*Dear Sirs:* I had doubts about Kow-Kure increasing the flow of milk in a cow in the best condition. To make a test I weighed each milking. After feeding the medicine three days there was an increase of two pounds, and a gradual increase through the week until she had gained two and three-fourths pounds per day. This cow had the same feed while taking the medicine as she did before. I consider this result simply wonderful in a cow that was in the best condition. F. M. ASBOTT.

Kow-Kure is in powder form, to be given in regular feed. It cures abortion, barrenness and scours, removes retained afterbirth and caked udder, strengthens the appetite, purifies the blood, vitalizes the nerves and prevents disease. It increases the milk. It is a medicine for cows only, made by the Dairy Association, Lyndonville, Vt., and for sale by

must it be regarded in those States in which the right of suffrage depends on educational qualification.

4. Such a law cannot interfere with any right of parents; for no parent has a right to make a slave of his child or to rob it of the opportunity of gaining an elementary education. Parents who would commit this crime against their children should be restrained and punished. Such a law cannot be a burden to those who would educate their children without it. As the laws against stealing are not burdensome to honest men, so a reasonable compulsory law cannot be burdensome to parents who desire to deal honestly and justly with their children.

5. The experience of other States and countries has demonstrated that such laws may be made effective, and that they need not work any hardship on individual citizens.

Teachers, school officers, and all leaders of thought in the South must begin and continue to cultivate sentiment on this subject, until just laws are on the statute books and are properly enforced.

### CATALOGUES.

J. M. Thorburn & Co., 36 Cortlandt street, New York, Seedsmen. This is a beautifully got up book, and contains much valuable information. The firm is an old and reliable one.

Griffith & Turner Co., Paca street, Baltimore, Seedsmen. A handsome book replete with information on farm and garden supplies.

H. Lightfoot, Chattanooga, Tenn. Strawberry plants.

The A. I. Root Co., Medina, O. Beekeepers' supplies.

Sure Hatch Incubator Co., Clay Center, Neb., and Columbus, O. A useful catalogue for those needing an incubator or brooder.

Landreth's Seed Catalog, Market street, Philadelphia, Pa.

James Vicks Sons, 191 Main street East, Rochester, N. Y. Seedsmen.

J. I. Case Threshing Machine Co., Racine, Wis.

The Deming Co., Salem, O. Spray Pumps and Nozzles, Hand and Power Pumps. This firm is one of the oldest makers of spraying appliances.

John Lightfoot, Sherman Heights, Tenn. Strawberry plants.

J. W. Jones & Son, Allen, Md. Strawberry plants.

F. S. Bullinton, Richmond, Va. White Minorca fowls.

Bateman Mfg Co., Grenloch, N. J. Makers of the well known and highly satisfactory Iron Age Cultivators and other farm and garden implements.

Lovers of flowers will find many interesting hints on flower seed culture in the 1903 Illustrated Annual of Wm. Elliott & Sons, 56 Dey street, New York. It contains a valuable collection of flower, garden and vegetable seeds, and will prove interesting to every one interested in flowers. It is sent free with a packet of pansy seed.

## Horse Owners! Use

GOMBAULT'S



## Caustic Balm

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches, Blisters, from Horses and Cattle. SUPERSEDES ALL CAUSTIC DR FRINGE. Impossible to produce scar or blenheim. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by all druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

A medicine which makes sick animals well, the diseased whole, the weak strong and the thin fat. It will restore lost Appetite, expel Worms and cure Chronic Cough, Heaves, Influenza, Distemper, Flatulency and all Stomach and Bowel trouble.

The finest of all animal vitalizers and tonics and the only one which increases the coefficient of digestibility of protein.

PRICE  
25¢ PER PACKAGE  
5 PKGS. \$1.00  
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CHARGES PAID.

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**FOUTZ'S  
HORSE  
AND  
CATTLE  
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Get the Genuine or send us, Paraph No. 19. Sold by All Dealers.

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BALTIMORE, MD.

## Fistula and Poll Evil...

You can treat these diseases yourself and cure them in 15 to 30 days. Fleeting's Fistula and Poll Evil Cure is easy to apply, perfectly safe to use, and your money is promptly refunded if it should ever fail to cure you.

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We have two booklets to send you. One tells about Fistula, Poll Evil, Spavin, Ringbone, Curb, Splint, Knee-Sprung, Lump Jaw, etc., with instructions how to cure them.

The other proves that you can cure them. Write to-day.

FLEETING BROS., Chemists,  
22 Union Stock Yards. - Chicago, Ill.



Newton's Heave, Cough, Blistering and Indigestion Cure. A veterinary specific for wind, throat and stomach trouble. Strongly recommended. All top can dealers, mail or R.P. paid. Newton Horse Remedy Co., 17 Toledo, Ohio.

As I retire from farming 'S' L L CHEAP this Spring I will sell the following stock and implements little used, and almost as good as new:

- 1 FRICK'S ENGINE AND BOILER, 10 horse-power, on wheels,
- 1 McCORMICK REAPER AND BINDER 7 foot cut,
- 1 DEERING CORN HARVESTER,
- 1 HARTEL FULL CIRCLE BALING PRESS, 17x22,
- 1 GEISER THRESHING MACHINE, 30 inch feed.

### Also Stallion, "KING IDLER,"

by King Alphonso, Idle Girl, a seal brown horse, 15½ hands, thoroughbred, has got some fine stock on Virginia Common mares, is a sure foal sower. Apply

NECK-OF-LAND FARM, Jamestown, Va.

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In want of a PIANO will find it to their interest to write to us. We assure them there is such a thing as buying an honestly-made instrument at a moderate price.

We make CASH and TIME SALES, and are willing to take part payment in Stock and Farm Products.

Write and state your wishes.

F. W. WALTER & SON,  
STAUNTON, VA.

\$30 WEEKLY. Straight salary and expenses paid to advertise and introduce our Poultry Compound in the country; ring necessary. Enclose stamp. Dept. 218, Royal Co-Op. Mfg. Co., Indianapolis, Ind.

• **FILSTON FARM.** •

SECOND LARGEST

## JERSEY HERD

IN AMERICA. FOUNDED 1852.

**BULL CALVES**, and for the first time, **Heifers** bred to Imported Golden Peter, and **Heifer Calves** and a few aged Cows.

**BERKSHIRES**, all ages, sired by Imported Storm King, or Imported Esau 2nd, "Sise, good shape and large liters.

Visitors welcome. Address for Book of The Farm, or prices

E. M. GILLET, Clerk, Glencoe, Md.

ASA B. GARDINER, Jr., Manager

### Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

### JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25.00. Heifers, same age, \$35.00. **POLAND-CHINA PIGS**, \$5.00 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battletown, N. C.

### ELLERSLIE FARM

**Thoroughbred Horses**  
AND **SHORTHORN CATTLE,**  
**Pure Southdown Sheep**  
and **Berkshire Pigs.**

FOR SALE. B. J. HANCOCK & SON,  
CHARLOTTEVILLE, VA.



COOK'S CREEK HERD,

### Scotch-Topped Shorthorns

Herd Headed by Governor Tyler, 158548 Young Bulls and Heifers for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

— FOR SALE —

**SHORTHORN BULL CALVES,**  
Sired by Verben's Champion,  
No. 12881. Also

**POLAND-CHINA PIGS.**  
Sired by Black Lad, No. 4747 and Springwood Guy, No. 53799. Pedigrees furnished with all stock sold. Eggs in season from M. B. TURKEYS and B. P. ROCK CHICKENS. Come or write.

WM. T. THRASHER, SPRINGWOOD, VA.

EAST RIVER SIDE

## SHORTHORNS FOR SALE.

One choice Red Bull, old enough for service.

ADDRESS

JAMES F. CLEMMER, - Summerdean, Va.

Registered P. Chinas Berkshire, C. Whites. Fine large strains. All ages, mated not skin, 8 week pigs. Bred sows, Service boars and Poultry. Write for prices and free circular.



P. F. HAMILTON, Cochranville, Chester Co., Pa.

### WHOLESALE PRICE ON AGRICULTURAL CHEMICALS AND FERTILIZERS.

The market continues firm and steady, with an upward tendency. Southern business is picking up, and prices are well maintained. Nitrate of soda remains strong and sulphates of ammonia are a little stiffer.

#### AMMONIATES.

Nitrate of soda, spot, per 100 lbs. \$	2 10
Nitrate of soda, futures, per 100 lbs.....	2 00
Cotton-seed meal, per ton, c. i. f. N. Y.....	28 00
Sulph. ammonia, spot.....	2 07 1/2
Sulph. ammonia, shipment.....	2 07 1/2
Dried blood, New York, low grade.....	2 47 1/2
Dried blood, Western, high grade, fine ground.....	2 60
Fish scrap, at New York.....	10
Tankage, per unit.....	10

#### PHOSPHATES.

Acid phosphate, per unit.....	60
Bone black, spot, per ton.....	17 00
Ground bone, per ton.....	23 50
S. C. phosphate rock, ground, per 2,000 lbs.....	5 50
S. C. phosphate rock, undried, f. o. b. Ashley River, 2,400 lbs.....	3 25
do. do. do. dried.....	3 50
Florida high grade phos. rock, f. o. b. Fernandina, per ton.....	7 00
Florida land pebble phos. rock, f. o. b. Fernandina, per ton.....	4 50
Tennessee phosphate, f. o. b. Mt. Pleasant, domestic.....	3 50
do. do. foreign.....	4 00

#### POTASH.

Kainit, future shipment, per ton... Keiserer, future shipment, per ton	9 05
Mur. potash, 80 p. c., future shipment.....	7 50
Double manure salt (48 a 49 per cent. less than 2 1/2 per cent. chlorine), per lb.....	1 80
Basis 48 per cent.	1 09
High grade manure salt (90 a 93 per cent. sulphate potash), shipment.....	2 08
Basis 90 per cent.	1 80
Manure salt, in bulk, 20 per cent. per unit, O. P.....	64
—N. Y. Jour. of Commerce, Jan. 10, 1903. [Only highest prices quoted.—S. P.]	

The Frank B. White Co. of Chicago and New York, send us a very nicely gotten up pamphlet—"Your Business and Ours"—in which they bring before advertisers the advantages they can offer them in the way of preparing and displaying their advertisements and securing their insertion in the best agricultural journals in this country. This firm makes a specialty of agricultural advertising, and does its work well.

We beg to acknowledge with thanks the receipt from the Holstein-Friesian Association of America of the official record of cows and their sires, and list of official butter and milk records of the Association from 1894 to 1901.

We acknowledge with thanks a copy of the Baltimore Sun Almanac for 1903. It is full of useful information.

### MARKET TOPPERS FOR SALE, LOW.



One thoroughbred Angus cow, unregistered, coming 3 yrs., with heifer calf at foot Price, \$75.  
Four three-fourths Angus heifers, two coming 3 yrs., two coming 4 yrs., bred to reg. Angus bull. Price, \$30 each.  
Four seven-eighths Angus heifers, coming 2 yrs., bred to reg. Angus bull. Price, \$100.  
Three seven-eighths Angus heifers, coming 1 yr. \$30 each.  
Four one-half Angus heifers, coming 1 yr. \$30 each.  
One bull calf, out of a thoroughbred Shorthorn cow, by a reg. Angus bull. Price, \$50.  
One 8-mos.-old reg. Angus bull. Price \$100.  
One 12-mos.-old reg. Angus heifer. Price, \$100.  
All of the above cattle are black, and as well polled as a thoroughbred Angus.  
Eight beautiful reg. Angora goats, six does which will kid soon, two fine bucks. Price, \$100 for the lot.

Address W. M. WATKINS & SON,

Cottage Valley Stock Farm,

Randolph, Charlotte Co., Va.

## ANGUS BULL CALVES

Registered and unregistered. Stock first-class, and breeding the best.

## SHROPSHIRE SHEEP

First class yearling rams, and ewes of all ages. Several FINE FARNIS for sale.

WARREN RICE, - Winchester, Va.

## FOR SALE Aberdeen-Angus Cattle

Choice breeding. Registered bulls ready for service. Address A. D. FARR, care A. G. FARR, Jeffersonton, Va.

FOR SALE.

**SIR NETHERLAND OF THE GROVE,**  
No. 30672.

This Holstein bull is 3 yrs. old. His dam has given 8 gals. of milk per day, testing 4 1/2 per cent. of butter fat. His sire is equally well bred. Price, \$80. f. o. b. cars, Burkeville, Va.  
T. O. SANDY, - Burkeville, Va.

# V. P. I. Farm Bulletin

We are offering some nice **BERKSHIRE PIGS**. Let us have your orders early. Choice stock; prompt attention.

D. O. NOURSE, Prof. of Agr.

Blacksburg, Va.



**FOR SALE**

At a price which he can easily earn himself out in a single season, the **Imported and Registered Hackney Stallion**

**THE DUKE**

son of Silver Star and Lady Fanny, by Rob Roy. This horse is good looking, of fine size and well made, having no waste substance. He is a sure foal getter and his produce sell readily. Simply offered because I wish to procure a horse of different breeding to cross on fillies sired by The Duke. Address

**T. O. SANDY,**

The Grove Stock Farm, BURKEVILLE, VA.

**COLLIE PUPS!**

By prize-winning imported sires and trained dams. Eligible. Fit for bench, ranch or farm. Price, \$10, either sex. Also a book on the care and training of the Collie for all practical uses. Price, 50c. Copy of book free to purchaser of Collie.

Stock Farm, "MAPLEMONT," Albany, Ver.

**POLAND-CHINAS**

Closely related to such famous hogs as Anderson's Model, Model of 87, Hands On, etc. Choice pigs, and gifts for sale. Suck that will please and not disappoint you. References and testimonials furnished. Also extra good, dark-red, 8 mos.-old SHORTHORN BULL calf for sale. Prices right.

J. F. DURRETTE. Birdwood, Albemarle Co., Va.

**BERKSHIRE PIGS**

I have a few first-class eight weeks old BERKSHIRE PIGS for sale. From registered stock, Biltmore strain. Prices quoted on request.

HENRY W. WOOD, - Hollybrook Farm, Box 330. Richmond, Va.

**FOR SALE.**

Large English Berkshire Hogs, Barred Plymouth Rock Chickens

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. EGGS IN SEASON.

JOHN P. FOSTER, Noecreek, Ohio Co., Ky.

Ayrshires, Berkshires and Oxford-Downs. - Ayrshire calves of both sexes, Berkshire pigs and boar, and 2 Oxford-Down Rams For Sale.

MELROSE CASTLE FARM, ENOS H. HESS, Manager, Casanova, Va.

**ANGORA GOATS** are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Keaten, Ohio.

**FOR SALE at \$10 each,**

Three pure-bred

**ANGORA BUCKS**

Price includes crating and delivery on cars at Columbia, Va., C. & O. R. R. A good flock of goats can be built up by using pure bucks in crossing with common does.

C. E. JONES, - Carysbrook, Va.

**THE GROWTH OF OUR SHOE INDUSTRY.**

The boots, shoes and slippers made by machinery in the United States, every year, would provide a pair of some kind for more than one-seventh of the inhabitants of the earth. If they were arranged by pairs, heels and toes touching, they would make a belt that would encircle the globe, with enough to spare to stretch across the North American Continent from New York to San Francisco. Placed singly, heel and toe, they would go around the world two and one-half times. If placed on the tracks of our great trunk railroads, the rights on one rail and the lefts on the other, they would cover the irons, from the Atlantic to the Pacific, of all the continental lines that now cross our country. The hides and skins used to form this immense quantity of shoes come from all over the world, but chiefly from the East Indies, South America and Europe; and if they were sewed together in one sheet, they would make a tent large enough to cover Manhattan Island.

The following statistics, showing the condition of the industry, were furnished in advance of their general publication by S. N. D. North, Chief Statistician of the United States Census for manufacturers:

*Pairs of Boots and Shoes Made in 1900.*

For men, youths and boys .....	\$9,123,318
For women, misses and children .....	107,415,855
Slippers for men, etc. ....	4,456,965
Slippers, Oxfords and low-cut for women .....	12,655,876
All other kinds .....	5,583,405

Total pairs .....

Total value, wholesale.....	\$261,025,580 00
Cost of materials used .....	169,604,054 00
Capital invested .....	101,795,233 00
Wages paid .....	59,175,883 00
Average number of wage-earners employed .....	142,922

The industry is largely concentrated in New England, chiefly in Massachusetts, where, in 1900, 45 per cent. of the production was turned out, principally in Brockton, Lynn, and Haverhill, and the smaller places in the immediate neighborhood. The figures for Massachusetts are as follows:

Value of product .....	\$117,115,243 00
Cost of materials used.....	75,751,964 00
Capital invested .....	37,577,630 00
Wages paid .....	27,745,820 00
Average number of wage-earners employed.....	58,645

Since 1890 the production in the whole country has increased a little over 18 per cent.; the cost of materials used 42 and eight-tenths per cent.; while the capitalization has only increased 6 and eight-tenths per cent., and the number of wage-earners 6 and nine-tenths per cent. Ten years ago Massachusetts produced over 52 per cent. of the total; but while she has made an absolute gain in the value of goods turned out, in 1900 she had less capital invested and fewer establishments engaged in the manufacture of shoes than in 1890. During the last decade, the effectiveness of the ma-

chinery used in the manufacture has been greatly increased.—Robert Grieve, in the February Success.

**FINE SEED CATALOGUE.**

That the Griffith & Turner Company of Baltimore, Md., propose to occupy a high position among seedsmen is apparent from the magnificence of their catalogue. It is indeed a most handsome book. The attention is arrested at once by the elegant front cover page, and with any one at all interested in the garden, the interest is kept up until he has looked through all its pages. It contains 145 pages, and is profusely illustrated with large size cuts of vegetables, fruits and flowers. They also catalogue a full and complete line of agricultural implements. One cannot escape the conclusion, both from the illustrations and from the extended and painstaking descriptions, that the Company is endeavoring to present only the best to their customers, and that their patrons are to know what the characteristics and qualities of what they are buying are, before placing their orders. Their advertising is elsewhere in this paper. They are perfectly reliable, and their trade, already large, is rapidly growing. Every one interested in fruits or vegetables should at least send for the catalogue, which is mailed free. Look up the advertisement for correct address.

**BOWLING GREEN**

**SHORTHORNS.**

HERD NUMBERS 75 HEAD.

HEADED by the Scotch bull ROYAL CANADA 136788. Cruickshank and Scotch tribes represented are Duchess of Gloster, Nonpareil, Mina, Rose of Strathdale, Ury, Crimson Flower and Louisa. Also popular American families.

FOR SALE Cows, heifers and young bulls. Foundation herds a specialty; inspection solicited, and if notified parties will be met at depot.

D. M. KIPPS, Success, Warren Co., Va.

Woodland Farm **DORSETS**

Of 16 rams, 9 to 14 mos. old, we now have on hand, 4 are not quite good enough to head any herd in the United States. The best ram hard to find in England now heads our flock. Are buying a few ewes; none to sell, but are booking orders for October dropped ewe lambs.

WOODLAND FARM, Mechanicsburg, O. (J. E. Wing, Willis O. Wing, Chas. B. Wing.)

**DORSETS AND HEREFORDS**

H. ARMSTRONG, - Lantz Mills, Va.

**FOR SALE.**

**3 Reg. HEREFORD BULLS**

From 6 mos. to 3 yrs. old.

**3 Reg. HEIFERS**

From 6 to 18 mos. old. At reasonable prices. HAYFIELDS STOCK FARM, Cockeysville, Md.

**RUPTURE CURED** while you work. You pay \$4 when cured. No cure, no pay. ALEX. SPEIRS, Box 844, Westbrook, Maine.

**THE MILLER MANURE SPREADER**

The practical benefits following the use of manure spreaders in the country have led to a large demand for such machines throughout the entire United States. Various manufacturers have added such a machine to their line, and jobbers have seen the advantage of carrying them also.

The Miller Spreader has proved a winner in previous years, but 1903 has been improved in every particular where trouble has arisen. Malleable iron is used on this machine for every part where strength is required. A method has been devised for driving from both wheels, which gives double traction power. The cylinder is now made two inches larger than heretofore, and is made with eight beaters instead of six. A new end-gate, which can be raised or lowered at will from the driver's seat, does away with some of the objectionable features common to most manure spreaders. This machine is low down, which makes it very easy to load. There are other excellent and exclusive features, among which are the following:

It is just the right width to straddle corn-rows and leave all the land evenly covered with manure. This is a strong feature on corn-stubble land, owing to the fact that other machines cannot do good work without driving team and spreader wheels on the cut corn-hills, a thing that any farmer knows is impossible.

The Miller is the only spreader that will do perfect work in winter with manure from the stable daily. We have solid bottom, which is scraped clean every load; nothing can freeze to it, as in tread-power bottom machines.

It doubles the value of manure by covering two acres where you could only cover one by hand.

For further particulars, address The Newark Machine Co., Newark, Ohio.

**A MUNIFICENT GIFT.**

The Studebaker Bros. Manufacturing Company, of South Bend, Ind., has just presented to the Young Men's Christian Association of that city \$200,000 in cash, to be used in the construction and equipment of a magnificent new building for the uses of the Association. The building is to be a memorial to the original five Studebaker Brothers, who have always been closely identified with philanthropic and charitable work. This munificent gift will give South Bend one of the handsomest Young Men's Christian Association buildings in the United States.

**THE DEMING CATALOGUE.**

The 1903 Catalogue of the Deming Company of Salem, Ohio, is just off the press. It includes hand, bucket, knapsack, barrel, mounted and power sprayers. In certain sprayers of their line, notably the Century, Simplex, Peerless and Success Knapsack Sprayers, the mechanical agitation of the liquid, insuring the perfect mixing of poison with the water, is worked out to a nicety. The wide adaptability and general usefulness of the line cannot be realized without perusing the catalogue, as usual. It will be mailed to any one writing for it.

No. 6  
Iron-Age  
Cylinder  
Double  
and Single  
Wheel  
Hoe,  
Hill and  
Drill  
Seeder



**Four  
of the  
Famous**



No. 1  
Iron Age  
Double  
and Single  
Wheel Hoe

workers that have made the Iron Age line of farm and garden implements known all over the continent. You can make more money this year than last if you will decide now to let them help you. Look at the good points of

**Iron Age Implements**

Improved-Robbins  
Potato Planter.

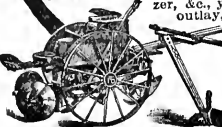


Figure out how much time, work, seed, fertilizer, &c., you might save with a very small outlay, by buying Iron Age Implements. They have won their way by honest performance of every promise. Write for free book.

No. 60 Iron Age  
First Wheel Cultivator.



**BATEMAN MFG. CO.,**  
Box 167,  
Crenloch, N. J.

**JERSEY CATTLE**

Bred from high-testing St. Lambert Cows.

**LARGE YORKSHIRE HOGS.**

The BACON BREED now leading all other breeds for making high-priced bacon.

**INDIAN GAMES**—The king of table fowls.

**WHITE WYANDOTTES**—The best general-purpose fowl.

**WHITE LEGHORNS**—All sold out.

Address

**BOWMONT FARMS, SALEM, VA.**

**REGISTERED JERSEYS,**  
**REGISTERED BERKSHIRES.**

YOUNG STOCK OF BOTH KINDS

\*\*\* FOR SALE. \*\*\*

**FOREST HOME FARM, - Purcellville, Va.**

**HOLSTEINS THAT PAY.**

Purchasers are offered selections from our herd, both male and female; our cows are of the leading strains, including De Kols, Pauline Pauls, Mechthildes, Hengervelds, Netherlands, Aggies, etc., etc. They are all well bred and milking from 40 to 65 lbs. per day. Herd headed by Ury ALWINA Count Paul De Kol and DeKol 29 Butter Boy 3rd No. 2.

**THOS. FASSITT & SONS, Ury Stock Farm, Sylmar, Md.**

When corresponding with advertisers, always mention

The Southern Planter.



for this top buggy, piano body 20, 22 or 24 in. wide, seat has solid panel spring back. Wheels, choice of height and size, 2 or 4 low top. Boot, storm apron, shafts and anti-rattlers. 43 styles top buggies illustrated with large cuts fully treated in catalog.

Extension top buggy, has large full size body, wide roomy seats with solid panel spring back and cushions. Axles 1 1/16 in. Lamps and feeders extra. Every vehicle guaranteed for two full years. 22 other styles surveys in our big catalogue.

For this top buggy with Guaranteed Rubber Tires, piano body, roomy seat, solid panel spring back and spring cushion, 3 or 4 bow top. The Most Wonderful Bargain in a guaranteed rubber tired buggy ever offered. Write for free catalogue. It has large illustrations and full descriptions. It illustrates and fully describes every kind of a vehicle and harness made.

For this large, roomy phaeton, just what you want for solid comfort, wide, roomy spring cushion, solid panel spring back 23 in. high. Trimmed with heavy imported, all wool broadcloth. Full patent leather fenders, large lamps, long distance axle. Details for nearly twice our price.

For this high arched axle, low wheel, Guaranteed Rubber Tired driving wagon, open head springs, long distance axles, Bradley couplers, Bailey loops, stick seat, rubber pad, 21 other styles. Don't buy until you see our catalogue and most wonderful offers.

Stick seat driving wagon. Long distance axles, Bailey loops All complete. 36 30 Platform spring wagon, 7 ft. body, heavy gear and wheels; 12 other styles. Issuing wagons in catalog. 150 styles above in Catalogue.

No. 105. Sleigh harness, Mkt. 2 or 4 rubber tires. \$7.00. No. 106. Dbl. harness, traces 1 3/4 in. \$14.00. 150 styles above in Catalogue.

**SEND FOR OUR CATALOG.**

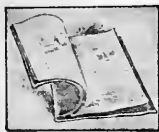
Cut this ad out and mail to us and we will mail the catalogue FREE.

**MARVIN SMITH CO.,**

66-57-59 N. Jefferson St., CHICAGO, ILL.

**GREAT POULTRY BOOK FREE.**

On another page of this issue of our paper will be found a new season's advertisement of the Cyphers Incubator Co., Buffalo, N. Y.



We wish to point out to those of our readers who have seen their annual books and catalogues in the past that the New Year

Book for 1903, entitled "How to Make Money with Poultry and Incubators," now being sent out, is in every way superior to its predecessors. Nothing has been left undone to make this Poultryman's Guide and Catalogue most entertaining and instructive, devoted exclusively to the real business of growing and marketing poultry for profit.

"How to Make Money with Poultry and Incubators," consists of 196 pages, 8 x 11 inches in size, is profusely illustrated, giving over 300 photographic views of many of the largest and most successful poultry plants in the United States, England, Germany, New Zealand and South Africa, and contains twelve special chapters, each written by an expert, treating of profitable poultry keeping in all branches, as follows: Starting with an Incubator, Handling Chicks in a Brooder, Feeding the Chicks, Duck Producing on a Large Scale, Broiler Raising, Profitable Egg Farming, The Egg and Poultry Combination, Eggs and Fruit Farming, Scratching Shed House Plans, Incubator Cellar and Brooding House Plans, Feeding for Eggs, and Standard Bred Poultry.

Everything is made so plain that it can be understood by all. Those of our readers who have never seen a "Cyphers" Annual Guide, and are interested in the latest developments in incubators, brooders, poultry food and appliances, should write at once to the Cyphers Incubator Company's nearest office, Buffalo, N. Y., Chicago, Ill., Boston, Mass., or New York City, N. Y., and they will send a copy free, postage paid (during the next thirty days only), provided you mention this paper.

"I b'lieve in havin' a good time when you start out to have it. If you git knocked out of one plan, you want to git yerself another right quick, before yer sperrits has a chance to fall."—From "Lovey Mary," The Century, February, 1903.

**Reg. HOLSTEIN-FRIESIAN**

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

**Reg. BERKSHIRES** From noted strains, Imported Headlight, Lord Highclere and Sunrise.

**DORSET SHEEP.**

**B. PLYMOUTH ROCK CHICKENS**, Fifteen Cockerels for sale.

N. and W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

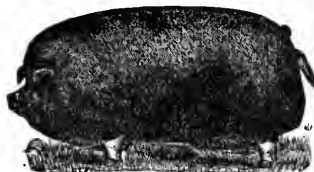
**JERSEY AND GUERNSEY CATTLE**

Berkshire Hogs, young boars ready for service, and Pigs in pairs or trios not akin. Large, young Bronze Turkeys. A few Plymouth Rock and Brown Leghorn Fowls. All the above stock ready for shipment now.

A FEW BEAUTIFUL FOX TERRIER PUPPIES AT \$5 EACH.

**M. B. ROWE & CO., FREDERICKSBURG, VA.**

**POLAND-CHINAS.**



TEGUMSEH G. 49283.

Have sold out all pigs on hand and am now booking orders for pigs from my spring litters. Have a limited number of **YOUNG SOWS** in pig **FOR SALE.** Address

**J. B. GRAY, FREDERICKSBURG, VA.**

**"THE OAKS" SHORTHORNS FOR SALE**

2 Reg. Bull Calves; 2 Reg. Cows; 1 three-year-old Reg. Bull (immune) raised south of Petersburg, Va. All right in every particular.

**B. B. BUCHANAN, Bedford City, Va.**

The Venezuelan and Panama Canal situations are editorially discussed in the Review of Reviews for February. In addition to his comments on these very prominent topics of the hour, the editor gives his usual valuable survey of the month's important happenings, at home and abroad. Among the contributed articles there are two character sketches of exceptional interest; "Abram S. Hewitt, a Great Citizen," is the subject of a discriminating tribute from the pen of Edward M. Shepard, who knew Mr. Hewitt intimately, while George Perry Morris reviews the too brief career of Mrs. Alice Freeman Palmer, the former president of Wellesley College and a leader in many intellectual movements. The art treasures of the late Henry G. Marquand, many of which were sold recently in New York at almost fabulous prices, are described in an illustrated article by Ernest Knauff. The latest developments in wireless telegraphy are recounted by Prof. A. Frederick Collins, while Mr. Thomas C. Martin describes the new Pacific cable lines—the all-American and the all-British. Prof. Frank A. Wilder gives much interesting information about the coal deposits of our great Northwest. The fullest statement yet published of the impending land reforms in Ireland is furnished by Mr. Walter Wellman, who has just returned from that country. There is also returned from that country in England the rights and liabilities of labor unions in connection with strikes is reviewed by Mr. A. Maurice Low. "Some Taxation Problems and Reforms" is the subject of a comprehensive article by Secretary Commons of the National Civic Federation. "Some Cartoos Comments," "Leading Articles of the month," and the other regular departments, round out the number.

AN INEXPENSIVE COFFEE FRUIT CAKE.

To make coffee fruit cake, beat half a pound of butter to a cream; add one cupful of brown sugar. Dissolve a teaspoonful of baking powder in two tablespoonfuls of water; add it to half a pint of New Orleans molasses; add this to the butter and sugar; add a teaspoonful of allspice, one egg well beaten, a tablespoonful of cinnamon and one grated nutmeg. Mix a quarter of a pound of shredded citron, two pounds of seedless raisins and three-quarters of a pound of cleaned currants. Measure three cupfuls of pastry flour; take sufficient from it to flour the fruit thoroughly. Add half a pint of warm, strong coffee to the sugar mixture; then add the fruit; beat until smooth; add the flour, pour into well-greased cake pans, and bake slowly in a moderate oven.

"Don't you go an' git sorry for yerself. That 's one thing I can't stand in no-body. There 's always lots of other folks you kin be sorry fer 'stid of yerself. Ain't you proud you ain't got a hie lip? Why, that one thought is enough to keep me from ever gittin' sorry for myself."—From "Lovey Mary," The Century, December, 1902.

# ANNEFIELD HEREFORDS,

"PRINCE RUPERT," No. 79539.

Winner Sweepstakes at Kansas City, 1901. Herd rich in "Anxiety" blood.

## BERKSHIRE HOGS

FINEST STRAINS OF BLOOD.

INSPECTION INVITED

CORRESPONDENCE SOLICITED.

EDWARD G. BUTLER, - "Annefield Farms," Briggs, Clarke Co., Va.

## CASTALIA HEREFORDS...

The breeding cows and herd bulls at "Castalia" have been selected with one aim: THE BEST, REGARDLESS TO COST. Herd headed by the \$3,000.00 imported SALLSBURY, assisted by LARS, JR. I have now for sale a very fine bunch of bull calves by these bulls, also a few females. Visitors are welcome and metal station. Write your needs.

MURRAY BOOCOCK, - Keswick, Va.



## BACON HALL FARM.

# HEREFORD REGISTERED CATTLE

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no Sale.

E. M. GILLET & SON, - Glencoe, Maryland.

**C. C. Taliaferro,**  
NATIONS,  
VA.  
1902

"MOUNT SEARON  
HEREFORD CATTLE  
REGISTERED  
REGISTERED SHROPSHIRE SHEEP  
REGISTERED POLAND-CHINA PIGS."

NOW OFFERS FOR SALE

**HEREFORD CATTLE.**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

**SHROPSHIRE SHEEP.**—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 and \$12. Ewe Lambs, July delivery, \$8 and \$10.

**POLAND-CHINA HOGS.**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

**M. BRONZE TURKEYS.**—Toms, \$4. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

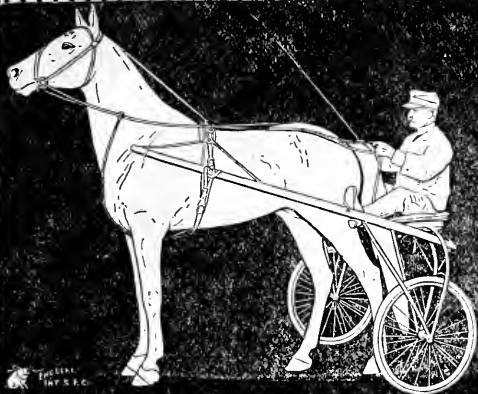
**MUSCOVY DUCKS.**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25; trios, \$3.

**HARRED PLYMOUTH ROCKS.**

**ROUEN GEESE.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.00

WILLIAM L, Jr., No. 21058, half brother of Axiell, will serve a limited number of mares for 25 the season. Mares boarded at lowest figures per month.



**DAN PATCH**

Officially Timed at Radway, Mass., Sept. 23, in 1:58 1/2  
Champion Harness Horse of the world.

This Engraving was made from a Photograph taken when ready to race.

## THE \$60,000 PACING STALLION

Just purchased by M. W. Savage, Minneapolis, Minn., as one of the leading stallions for his "International Stock Food Farm." The purchase of Dan Patch was a tremendous sensation in horse circles, and was taken up and given columns of notices in all of the leading dailies throughout the entire country. The price was over Three times as much as was ever paid for a pacer, and by far the largest price paid for a harness horse for a long term of years. This farm is now one of the most famous horse-breeding farms in the world, as Mr. Savage owns the Three Fastest Stallions ever owned by one man or by one farm. Dan Patch 1:58 1/2—Directum 2:05 1/2—Roy Wilkes 2:06 1/2. The establishing of this farm in Minneapolis, Minn., means a great deal for the live stock interest of the Northwest as well as for the entire world. It will add thousands of dollars every year to the live stock interests of Minnesota alone, and Mr. Savage expects to prove to the world that high-class harness horses can be raised in the Northwest as well as in other parts of the United States. You are cordially invited to visit "International Stock Food Farm" whenever you are in this vicinity. You will find the celebrated "International Stock Food" 3 FEEDS FOR ONE CENT fed every day to our Stallions, Brood Mares, Colts, Race Horses and other stock. "International Stock Food" has the largest sale in the world for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs and Pigs. Over 50,000 dealers sell it on a "Spot Cash Guarantee" to Refund Your Money if the results of feeding it are not perfectly satisfactory to you. It will cause your colts and other young stock to grow rapidly even during the winter. Keeps them free from worms and tones up and strengthens the entire system. **It Will Pay You To Test It At Our Risk On Your Stock.**

## A \$3000.00 STOCK BOOK FREE

IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.

The Cover of this Book is a Beautiful Live Stock Picture and Printed in Six Brilliant Colors. Book is 64 by 9 1/2. See engraving for greatly reduced design of cover. It cost us \$3000 to have our Artists and Engravers make these fine Engravings. This Book contains a finely illustrated Veterinary Department that will save you Hundreds of Dollars. It describes common Diseases, and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains testimonials, and Life Engravings of many very noted Animals. The Editor of This Paper Will Tell You That You Ought to Have This Book in Your Library For Reference.

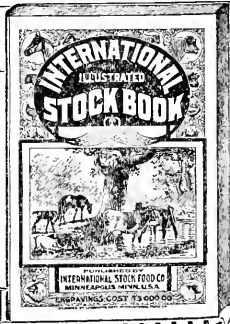


Largest Stock Food Factory in the World.  
Capital Paid in, \$1,000,000.  
We Occupy 62,000 Feet of Floor Space.

**\$10.00 CASH**, we will send you, **IF BOOK IS NOT AS STATED.**  
This Book Mailed Free, Postage Prepaid, if You Write Us (letter or postal) and Answer These 2 Questions:  
1st.—Name This Paper. 2d.—How Much Stock Have You?

Write us today for book.

**International Stock Food Co., MINNEAPOLIS, MINN., U. S. A.** We employ over 300 people and have Hundreds of thousands of Testimonials from Farmers and Stockmen.



**TEST 3 FEEDS FOR ONE CENT ENTIRELY AT OUR RISK.**

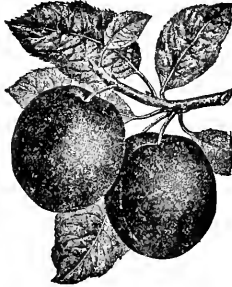
### SPLIT HICKORY vs. SAWED



A vehicle is only as strong as its weakest part. A wheel, with hub, spokes and fellows made from the strongest wood, if the wood is sawed across the grain, has little strength. The "Split Hickory" line of vehicles, as their name indicates, is constructed of split hickory not sawed—and is of greatest strength and endurance and uniformly strong in all its parts. To obtain these



splendid, strong and stylish vehicles, send to Station 41, the Ohio Carriage Manufacturing Company, Cincinnati, O., for complete illustrated catalogue. Their prices are low, quality high, and their thirty days' free trial offer is genuine and bona fide.



## Japan Plums

And all other desirable standard and new varieties of PLUMS, APPLE, PEACH, PEAR and ORNAMENTAL TREES, SHRUBS, ROSES, Etc.

**HEADQUARTERS FOR TENNESSEE PROLIFIC STRAWBERRY.**

The Most Reliable Variety Ever grown in the South.

Three hundred and fifty acres under cultivation. Write us if you contemplate planting. Catalogue free.

AGENTS WANTED. WRITE FOR TERMS.

**W. T. HOOD & CO.,**

OLD DOMINION NURSERY.

RICHMOND, VA.

Mention the Southern Planter in writing

The American Free Trade League send us copy of the Free Trade Almanac, for which we return thanks. It would do the hide-bound protectionists good to study the matter contained in this issue.

#### TAKEN ORDERS.

When Miss Lucy wanted particularly fine chickens, she always drove over to see old Aunt Etta, who had a scrap of a farm and made a specialty of raising chickens for the quality folks.

One day, as the lady stopped in front of the cabin, Aunt Etta came out and hung over the gate.

"Chickens!" she exclaimed in answer to her customer's request,—"chickens! Why, law, Miss Lucy, don't you all know there's been a camp-meetin' and preachers' conference down here? Why, I ain't got one chicken left. They're all done entered the ministry."—N. E. ALLENDER, in *February Lippincott's*.

#### THE GROWTH OF THE SEED HOUSE.



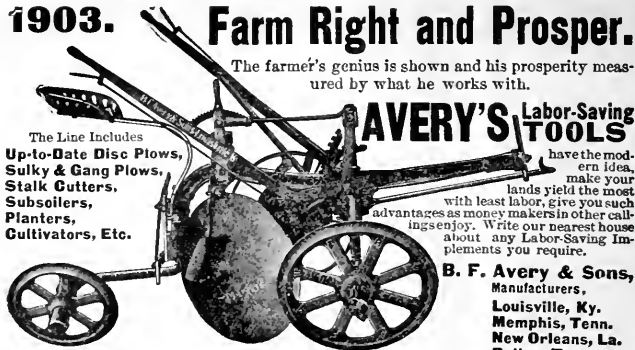
The above cut is a faithful picture of the extensive new building recently occupied by J. Bolgiano & Son, of Baltimore, Md. This concern is one of the oldest and most substantial in the East, with a record and reputation extending far back into the very infancy of modern seed business. Their growth has been forced upon them more by the excellency of their products than by a grasping desire to capture everything. Some of their most noted specialties this season are the New Century Tomato, Ruby King Radish, New Leader Cabbage and the New Early Fortune Cucumber. In their stock is also to be found fresh tested seeds of the Rocky Ford Cantaloupe, Valentine Beans, Alaska and Gradus Peas, and a general line of farm and garden seeds. Look up their advertisement elsewhere in our paper and write for the catalogue, kindly mentioning where you saw this notice.

A Neat BINDER for your back numbers can be had for 25 cents. Address the Business Office.

## 1903. Farm Right and Prosper.

The farmer's genius is shown and his prosperity measured by what he works with.

The Line Includes  
**Up-to-Date Disc Plows,**  
**Sulky & Gang Plows,**  
**Stalk Cutters,**  
**Subsoilers,**  
**Planters,**  
**Cultivators, Etc.**



### AVERY'S Labor-Saving TOOLS

have the modern idea, make your lands yield the most with least labor, give you such advantages as money makers in other callings enjoy. Write our nearest house about any Labor-Saving implements you require.

**B. F. Avery & Sons,**  
 Manufacturers,  
 Louisville, Ky.  
 Memphis, Tenn.  
 New Orleans, La.  
 Dallas, Tex.

✧ GLEN ALLEN HERD OF ✧

## ..ABERDEEN-ANGUS CATTLE..

Headed by ALLENHURST KING IV 47199,

Assisted by VICTOR G., No. 37693.

I am now offering for sale a few choice young bulls of serviceable age, at a bargain. Any one wanting bulls from prize-winning families at a moderate price, will save time and money by calling on or addressing

**GLEN ALLEN STOCK FARM,** W. P. ALLEN, Prop., Walnut Hill, Va.

## SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

BARON ROSEBOY (The great son of the world-famous  
 GAY BLACKBIRD) in service.

Nearly all the leading families of the breed represented by females sired by the most famous bulls of the age. We challenge comparison on both as to individual excellence and pedigree. Another car of grand cows just arrived, personally selected from one of the best herds in central Illinois. The tops out of one hundred head. Six animals of the same family and strain as ROSEGAY (for two years the champion of America), others equally good. All young stuff of weaning age sold; am booking orders for future delivery.

Write your wants; we are bound to please you.

**A. L. FRENCH, PROPRIETOR, FITZGERALD, N. O.**  
 Rockingham Co., 24 miles south-west of Danville, Va., on D. & W. Ry.

## POLAND-CHINA BOARS

THE KIND THAT GETS BIG.

Sired by son of PROUD PERFECTION. Have now 8 on hand, from 2 to 3 months old. Price, \$10 for 2 months old, \$11 for 3 months.

Expressage prepaid to Virginia point. Your money back if you are not satisfied.

**BULLFIELD FARMS,** - - - **Doswell, Virginia.**

### THE ADVANTAGES OF FARM LIFE

It is the farmers' boys who are most likely to succeed, whether in business or in professional life. Spending most of their time under the open sky, breathing fresh air, and eating simple food, they are more likely to have vigorous health and strong constitutions than are their city cousins. Brought into constant contact with nature, they absorb a great deal of useful knowledge, and acquire habits of observation. Then, too, thru regular farm work, the "chores," and numberless other little things keep them well occupied, and enable them to feel that they are earning their way, thus giving to them a sense of independence and cultivating a spirit of self-reliance and manliness.

The performance of a deal of drudgery is an indispensable preparation for all real success in life, whatever the occupation. A boy who is afraid of work or of soiling his hands need not expect to accomplish much in the world. Country boys have their full share of fun, but there are many disagreeable duties on a farm which farmers' boys learn to accept as a matter of course. Edward Eggleston, speaking of the value of his farm training when a boy, once said to me: "I learned one thing of great value, and that was to do disagreeable things cheerfully."—JOSHUA STONE, in "Uncle Sam's Talks on Our Country," in February "Success."

### FAMOUS PRESCRIPTION FOR ALL HOUSEKEEPERS.

Dr. O. B. JOYFUL,  
21 Sunshine Avenue.


Office Hours: 6 A. M. to 12 P. M.

A little dash of water cold,  
A little leaven of prayer,  
A little bit of sunshine gold,  
Dissolved in morning air,  
Add to your meal some merriment,  
Add thought for kith and kin,  
And then as a prime ingredient  
A plenty of work thrown in;  
Flavor it all with essence of love  
And a little dash of play;  
Then a nice old book and a glance  
above  
Complete the happy day.  
Take daily, and repeat.

Patrick Murphy was taking a walk one Sunday through a field where cows were grazing. The bull took after him, and before he could get over the fence the bull caught him with its horns and pitched him right over into the adjoining field. When he got himself gathered up, the bull was standing on the other side of the fence, seraping and booin. "Oh, be me sow!" said Pat. "ye needn't stand there apologizing, for ye intinded it all the toime."

Ruth was watching mamma for the first time prepare some hominy for breakfast. "What is that, mamma?" she asked. "It's hominy," said mamma. Ruth still looked puzzled, and pretty soon she said again. "What is that?" "Hominy," mamma answered once more, and somewhat impatiently Ruth looked at her and said, "Why, I don't know how many!"

## FARQUHAR Portable Saw Mills



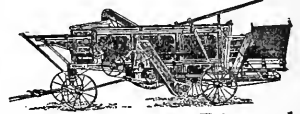
**Illustrated catalog of farm machinery and implements, free.**

**AJAX Center Crank ENGINE**

with Engines and Rollers Complete. Made in seven sizes, friction feed, cable lighting etc, patent chain set works and improved dogs. **AJAX CRANK ENGINES** are constructed with special reference to the peculiar work required of them. This combination of engine and mill makes the best sawmill outfit on earth.

**A. B. Farquhar Co., Ltd**  
York, Pa.

## RUMSEY-WILLIAMS COMPANY



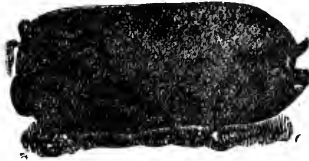
**GASOLINE ENGINES and  
GRAIN THRESHERS.**

ST. JOHNSVILLE, NEW YORK.

## SIR JOHN BULL and UNGLE SAM

Have become so famous that I found a multiplication of their progeny necessary to the filling of orders; hence I have added a large

number of purest-bred Imported and American Sows, no akin to my old herd, and most of them now in farrow to Imported Berkshire Boars of a new strain.



**HUNTING DOGS and PUPS FOR SALE.**

A DURHAM BULL CALF, a picture, cheap. Write for particulars.

**THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.**

## CISMONT DORSETS..

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices reasonable.

G. S. LINDENKOHL, Koswick, Albemarle Co., Va.



### Improved Steam Cookers

gold under a guarantee for cooking feed, heating Poultry, Hog and Dairy houses, beating water in stock tanks or cooking feed 200 ft. by used outside or in house. Safe as a stove. Will cook 25 lbs. of feed in 2 hrs. Used and endorsed by Wis., Ia., Va., Ga. and Ont. State Experiment Stations. First premium at Omaha and Forest Exposition. Highest honors at Tex., Ill., Ind., N. Y., Neb., Ia. and S. Dak. State Fairs. So simple children run them. Brown Cookers. Cooker and Breeder's Supply Catalogue and prices mailed free.

**RIPPLEY HARDWARE CO., Cooker Mfrs., Box 7 GRAFTON, ILLINOIS.**



When corresponding with Advertisers, always say that you saw their advertisement in The Southern Planter.

One very cold day Tom, in his first trousers, was walking along with his tiny overcoat turned back to its utmost limit. "Tom," said his father, meeting the child, "button your coat." But the boy demurred. "Look at mine," added his father. "Yes," said Tom, ruefully, and obeying under protest, "but everybody knows that you wear trousers!"

A minister whose education in business matters had been sadly neglected had a small charge, and eked out a living by writing for the papers. One day he received a check for \$15, made payable to his order. He took it to the local bank, and, handing it in, was told to indorse it. He hesitated a moment, and then, taking up the precious document, wrote on the back: "I heartily indorse this check."

**TOWNS MADE BY RAILWAYS.**

To-day towns do not grow merely because of their location, and this factor of location will become less and less important as the years go by. Chicago is situated upon the most impossible an unlovely of all places of human habitation. She is simply a city of transportation and is no better than her rails and boats, though by her rails and boats she lives in every Western State and Territory. The same is true of St. Louis and the vast Southwest. One railroad recently planned for Western extension, and laid out along its lines the sites of thirty eight new towns, each of which was located and named before the question of inhabitants for the towns was ever taken up. Another railway in the Southwest has named fifty cities that are yet to build, and still others have scores of communities which in time are to be the battlegrounds of human lives, the stages of the human tragedy or comedy. The railways have not only reached, but created provinces; they have not only nourished, but conceived communities.

Maine Lawyer—What is your opinion of the character of Deacon Blank?

Witness (cautiously)—I never heard nothin' agin him.

"Don't you know him to be an honest man?"

"Wall, he's ben fair an' square in all his dealin's with me, and with others as far as I know."

"Isn't that sufficient to prove him a man of sterling integrity?"

"Wall, I dunno. I never traded horses w' th him."

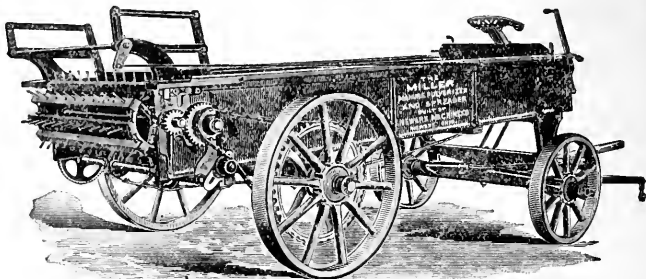
"You never kin tell which way any pleasure is a' comin'. Who ever would 'a' thought, when we aimed at the cemetery, that we'd land up at a first-class fire?"—From "Lovey Mary," The Century, February, 1903.

"The way to git cheerful is to smile when you feel bad, to think about somebody else's headache when yer own is 'most bustin', to keep on believin' the sun is a-shinin' when the clouds is thick enough to cnt."—From "Lovey Mary," The Century, January, 1903.

Mention the Southern Planter when corresponding with advertisers.

**The Miller MANURE SPREADER and PULVERIZER**

Is a machine every farmer should have. It will **SAVE YOU** its cost in a short while. **IT MAKES FRIENDS WHEREVER SOLD.**



Agents wanted. **THE NEWARK MACHINE CO., - Newark, Ohio.**  
Write for catalogue. Mention the SOUTHERN PLANTER when you write.

**Made for the Man Who Wants the Best.**

**The Great Western Manure Spreader**



spreads all kinds of manure, fresh, well rotted, fine, coarse, hard, mixed, full of straw, full of corn stalks, etc.

Will also spread compost, lime, road plaster, salt, wood ashes, cotton seed and hulls, and in every case do it quicker, better and more evenly than it can be done by hand. Spreads as much manure in one day as twelve men can load and spread by hand and the job is much better when done. Spreads the largest load a team can haul in 2 to 4 minutes. It makes the same amount of manure go three times as far and at the same time produce better results.

**REGULATED**—It can tick or pour spots—2 to 3 loads per acre. Spreads much or little while in motion. Puts **ENDLESS APRON**—always ready to load. No turning back into position with crank.

**COMBINED HOOD AND END GATE**—Catches all flying sticks, stones, etc. Front wheels cut under, and machine can be turned in its own length. Made in two styles and four sizes. Capacity 30 to 30 bushels. It saves time, labor and money and will double the crops. Makes all manure so fine and spreads it so evenly that it is immediately available for plant food.

**LARGE CATALOGUE**—10 by 15 inches, with 8 large cuts, shows the spreader perfectly and describes it fully. Tells also how to apply manure to secure best results. Mailed free. **SMITH MANURE SPREADER CO., 65 N. JEFFERSON ST., CHICAGO, ILL.**

**BLACK=LEG=INE**

Pasteur Blackleg Vaccine ready for use. **EACH DOSE SEPARATE.**

Single Blacklegine (for common stock): 10 dose box, \$1.50; 20 dose box, \$2.50; 50 dose box, \$6.00. Double Blacklegine (for choice stock) \$2.00 for 10 doses, first lymph and second lymph inclusive. Blacklegine Outfit for applying Blacklegine, 50 cents.

**Pasteur Vaccine Co.,**

CHICAGO - NEW YORK - FT. WORTH - SAN FRANCISCO.

**SPRAYING IS EASY**

and you have an outfit always ready at a moment's notice for a small or large job in the

**GARFIELD KNAPSACK SPRAYER.**

Best sprayer made for nine-tenths of all work, as Cotton, Tobacco, Potatoes, Cardenas, Shrubby, etc. Easily carried and worked, simple and durable. Copper tank covered to lit back, and all brass pump. Nothing to corrode. We also make the Empire King and Orshard Moneys, mounted sprayers for large operations, and others for all purposes. Fully described in free catalog. Write for it. **FIELD FORCE PUMP CO., 223 Eleventh St., Elmira, N.Y.**





# THE GENTLEMAN ON THE PLANTATION

SHOULD HAVE AS MANY COMFORTS AND CONVENIENCES AS THE GENTLEMAN IN THE CITY.

With a **WIND MILL** or **CASOLINE ENGINE** farm work can be made easy and at a small cost.

You can CUT and GRIND FEED, SAW WOOD, THRESH GRAIN, PICK PEANUTS, SHELL CORN, MAKE CIDER, PUMP WATER FOR STOCK, AND

LAST BUT NOT LEAST

**PUT WATER IN YOUR OWN HOUSE.**

## STRATTON & BRACC,

20 and 22 N. Sycamore St., PETERSBURG, VA.

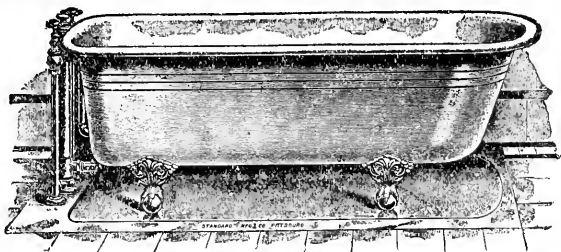
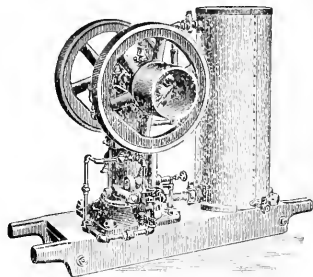
You can have your Bath Tub, Water Closet and Hot and Cold Water in your own Home.

**WE CAN FIT YOU UP FROM START TO FINISH.**

We have our own competent and skilled workmen, which we send out to install our fixtures.


**NO DISTANCE TOO FAR.**

Let us figure with you.



## IVANHOE POULTRY YARDS

Breeders of

 **Exhibition Barred  
Plymouth Rocks**

ENGLISH CARRIERS AND HOMING PIGEONS.

For information, address

**Ivanhoe Poultry Yards, Box 258, Richmond, Va.**

**ADVANTAGES OF CONSOLIDATIONS OF SCHOOLS.**

The educational problem of the present is the problem of the rural school. The cry has gone up for longer term, better supervision, better teaching, better houses, with improved equipment, including well selected libraries. The demand is for a school that shall be in every respect the center of a richer social life. This can never be so long as we have so many small schools. At the very basis of all reform of the rural school is the problem of consolidating small schools into larger ones centrally located. Consolidation of rural schools is made all the more necessary in the South because of the great multiplicity of schools resulting from separate schools for the two races. In view of our problem, it is of interest to see the results of consolidation in other States.

A summary made up from the reports printed and written from the eighteen States in which consolidation has been tried, shows the following advantages accruing from the consolidation of small schools and the transportation of pupils at public expense:

1. The health of the children is better, the children being less exposed to stormy weather, and avoiding sitting in damp clothing.
2. Attendance is from 50 to 150 per cent. greater, more regular, and of longer continuance. There is neither tardiness nor truancy.
3. Fewer teachers are required, so better teachers may be secured and better salaries paid.
4. Pupils work in graded schools and both teachers and pupils are under systematic supervision.
5. Pupils are in better school houses, where there is better heating, lighting and ventilation, and more appliances of all kinds.
6. Better opportunity is afforded for special work, such as music, drawing, etc.
7. Cost in nearly all cases is reduced. This includes cost and maintenance of school buildings, apparatus, furniture, and tuition.
8. School year is often much longer.
9. Pupils are benefitted by a widened circle of acquaintances and the culture resulting therefrom.
10. The whole community is drawn together.
11. Public barges used for children in daytime may be used to transport their parents to public gatherings in the evenings.
12. Transportation makes possible the distribution of mail throughout the whole township daily.
13. Finally, by transportation the farm becomes, as of old, the ideal place in which to bring up children, enabling them to secure the advantages of centers of population and spend their evenings and holiday time in the country in contact with nature and work, instead of idly loafing about town

The Parson—Your wife, sir, is trying to run my church.

Witherby—If that is really the case, the only thing for you to do is to join my poker club.

**ACME Pulverizing Harrow**  
**Glod Crusher and Leveler**  
**SENT ON TRIAL**

SIZES  
 3 to 13 1-2 Feet.  
 Agents  
 Wanted



To be returned at my expense if not satisfactory. The best pulverizer—cheapest Riding Harrow on earth. We also make walking Acmes. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes. Made entirely of cast steel and wrought iron—indestructible.

Catalog and Booklet, "An Ideal Harrow," by Henry Stewart, mailed free. I deliver free on board at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, etc. Address DUANE H. NASH, SOLE MANUFACTURER - MILLINGTON, NEW JERSEY. PLEASE MENTION THIS PAPER.

**POPULAR TOOLS FOR MARKET GARDENERS**

**SEE SEED DROPS** In Plain Sight  
**NEW UNIVERSAL** Drill & Cultivator  
**NEW UNIVERSAL** Wheel Plows  
**AMES PLOW COMPANY, 56 MARKET STREET, BOSTON, MASS.**

FOR SALE BY GRIFFITH & TURNER CO., BALTIMORE, MD.

**RODERICK LEAN Implements**

Famous for good work. A cent spent for a postal requesting illustrated catalogue will save you dollars in the purchase of Spike-tooth, Spring-tooth and Disc Harrows or Land Rollers. Don't buy until you learn why the RODERICK LEAN are superior to any other.



ASSETS, \$900,000.

**Virginia Fire and Marine**

Insurance Company, of Richmond, Va.

**Insures Against Fire and Lightning.**

ALL DESCRIPTIONS OF PROPERTY IN COUNTRY AND TOWN. PRIVATE OR PUBLIC, INSURED AT FAIR RATES. ON ACCOMMODATING TERMS.

AGENCIES IN EVERY TOWN AND COUNTY.

WM. H. PALMER, PRESIDENT. W. H. MCCARTHY, SECRETARY.

\* VIRGINIA DIVISION. \*

**Farmers Mutual Benefit Association.**

A Fire Insurance Association, chartered by the State for the farmers of Virginia, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy holders apply secured—all losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address, CHAS. N. FRIEND, General Agent, CHESTER, VIRGINIA. MENTION THIS JOURNAL.

## **BILTMORE FARMS, - BILTMORE, N. C.**

### **Headquarters for GOLDEN LAD JERSEYS,**

**Also get of TREVARTH and GEN. MARIGOLD.** ❀ ❀ ❀

**GOLDEN LAD'S SUCCESSOR**, First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



### **BILTMORE POULTRY YARDS.**



**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

### **Headquarters for the best IMPORTED ENGLISH BERKSHIRES.**

**APPLY TO BILTMORE FARMS, BILTMORE, N. C.**

The most popular Machine in use for Peanut Picking and Grain Threshing are the

## **HEEBNER'S, LITTLE GIANT AND PENNSYLVANIA**

Machines, and they have splendid improvements for 1903. They are built in first-class manner, and are strong and durable. The price is within the reach of all. We guarantee them to do the work satisfactorily. We will mail catalogue and testimonials, and quote prices on application.

**RUBBER, LEATHER  
and  
GANDY BELTING.**

**FRICK'S "ECLIPSE"  
ENGINES and BOILERS.**

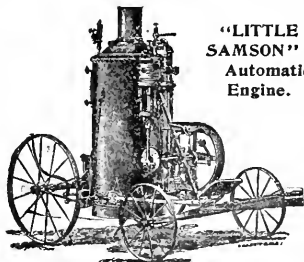
**ERIE ENGINES and BOILERS.**

**THE CELEBRATED  
"CHASE" SAW MILLS**

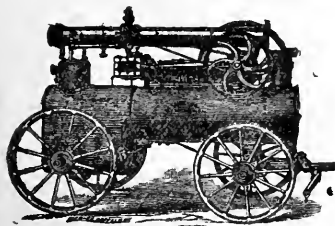
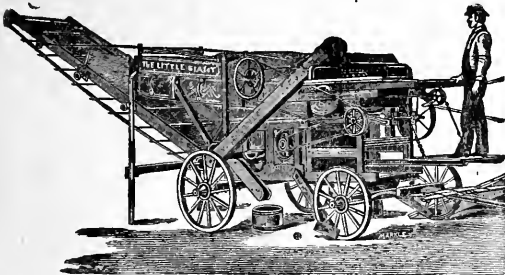
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**"DE LOACH" MACHINERY.**

**"LITTLE  
SAMSON"  
Automatic  
Engine.**



This cut shows our 5 and 7 h.p. "Little Samson" Vertical Automatic Engine, for running threshers, peanut pickers, cutting feed, sawing wood, etc.  
Larger sizes also furnished.



**STRATTON & BRAGG, 20 and 22 N. Sycamore St., Petersburg, Va.**



For this complete set of 16 blacksmith tools, a wonderful bargain—just a-1 of 23 carter's. **\$5.40** buys this complete set of 16 blacksmith tools and chisel. Illustrates, describes and prices all kinds of tools for carpenters and blacksmiths. We sell each tool separate. We save you 50%!  
**Send for Our Catalogue**

**\$8.50** for 40 ft. **Hay Carrier** (One carrier, 11 fork, 15 roller) **hoxes and hook, 150 lb. rope, 6 floor hook, 3 pulleys. Wood, steel and cable track out 4 1/2 in. height. It has 422 pages, size 10 1/2 inches. cut this ad out and send it to us we will mail the catalog**

**\$18.80** Made in U.S. **\$2.78** for this 12 ft. steel **harrow** has genuine **Lad-daw bumper. Dust proof will buy.** **Most Perfect Made.** Other articles listed for \$1.25. We save you about 1-1 in price. **Protective 15c.** but if you will mail this ad out and send it to us we will mail the catalog **FREE!**

**\$2.80** for hand pump **No. 151 with cylinder ready for use, with windmill head \$3.60.** for No. 1 **cistern or kitchen pump, with cylinder, 100 styles and sizes pumps, every kind made, at one-half retail prices. All kinds of pipe fitting.**

**95c.** for No. 1 **cistern or kitchen pump, with cylinder, 100 styles and sizes pumps, every kind made, at one-half retail prices. All kinds of pipe fitting.**

**\$16.50** for this **Steel Mill, easiest running, and strongest made. All sizes, 8 to 16 feet.** **\$7.45** **rolling mill, 5 1/2 inch steel tank with heavy axle steel rims. We make all sizes and styles. Send for catalog and price list.** **55-57, 5th N. Jefferson St., CHICAGO, ILL.**

**USELESS TRICKS FOR FARMERS.**

To try to farm without a judicious application of manure to your lands.

To buy what you do not need because it is cheap—or nice.

To plant more acres than you can properly take care of in the way of cultivating because you wish to have a "big" crop.

To expect to grow crops without due attention being given to their cultivation.

To expect to grow good crops from poor seed.

To expect to have good farm stock without feeding and giving attention to it.

To expect to have good milk cows without providing for their comfort at all seasons.

To leave your farm tools exposed to the weather.

To lounge about the village store or postoffice when the weeds are growing in your crop.

To talk of what your farming operations will be next year while you are doing nothing this year.

To plant fruit trees and then allow the cattle to destroy them.

To leave your neighbors' gates open and then expect yours to be shut always. You thus teach a bad lesson by your own example.

To elect to office men who cannot take care of themselves by the ordinary pursuits of life.

To be surrounded by mud when you can easily have good paths about your premises.

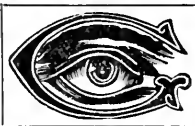
FRANK MONROE BEVERLY,  
Dickenson Co., Va.

**QUICK PROFITS IN POULTRY.**

With the exception of strawberries, says Prof. A. G. Gilbert, it takes three years to realize on small fruits; a milk cow does not approach her full production short of three and a half years; apple trees do not begin to bear freely short of seven or eight years. How about the hen? Three weeks from the setting of the hen you have a hatch of chickens; from four to four and a half months from hatching the cockerels are ready for the market, and in five to five and a half months the pullets will begin to lay. Add to this the fact that in cities at the present time fresh laid eggs are selling at 30 to 35 cents a dozen, and it is clearly demonstrated that poultry-raising well-managed is one of the most profitable branches of farming.

Author—My book, sir, will be in existence long after you are forgotten.

Critic—Yes, I should say that it is likely to escape the wear and tear of excessive reading.



**How are Your Eyes?**

We are the largest optical establishment South, and give proper adjustment of SPECTACLES and EYE GLASSES. Complete manufacturing plant on the premises. Mail us the pieces and we will from them duplicate your Glasses. Glasses by mail our specialty.

**Our PHOTO DEPARTMENT** is also complete with CAMERAS, KODAKS and PHOTO SUPPLIES. Developing and printing finely executed.

Our line of GRAPHOPHONES, with latest records. OPERA GLASSES, FIELD GLASSES, Incubator and Dairy THERMOMETERS, etc., etc., is also complete. Lowest charges in all cases.

**THE S. GALESKI OPTICAL CO., 9th and Main Sts., Richmond, Va.**

**THE SEABOARD AIR LINE RAILWAY**

**OFFERS PROFITABLE INVESTMENTS**

**TO**

**THE MANUFACTURER, THE STOCK RAISER, THE DAIRYMAN, THE FRUIT GROWER, THE TRUCKER.**

**WHERE YOUR LABOR IS NOT IN VAIN.**

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The **SEABOARD** Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE, EDW. F. COST, CHARLES B. RYAN,  
Gen. Industrial Agt., Portsmouth, Va. Traffic Mgr. Gen. Pass. Ag., Portsmouth, Va.

When you write to an advertiser, always say you saw the advertisement in **THE SOUTHERN PLANTER.**

# SHELBURNE'S

Is the BEST WAREHOUSE

in Richmond, the BEST MARKET for all grades of Tobacco. It is the home of sun and air cured Tobacco and headquarters for flue-cured and shipping types. Here are located the head offices and stemmeries of all the large corporations, Regie representatives and the largest number of independent factories and buyers in the United States.

## SHELBURNE'S WAREHOUSE

Has the largest lighted space, insuring equal attention to every pile. Ample accommodations in every way for all our customers.

Correspondence solicited.

SILAS SHELBURNE & SON, Props., 12th and Canal Sts., RICHMOND, VA.



## THE RICHMOND PLUMBING AND MANTEL CO., 26 N. Ninth Street, RICHMOND, VA.,

Has just received  
an entirely new  
Stock and com-  
plete line of

**STOVES, RANGES, FURNACES,  
MANTELS, GAS and ELECTRIC  
FIXTURES, TILING and  
FIRE-PLACE TRIMMINGS.**

We are contractors for

**PLUMBING, TINNING, SHEET-METAL  
WORK and ELECTRIC WIRING.**

Correspondence Solicited.

CALL AND INSPECT OUR SHOW-ROOMS.

## INVENTIONS WHICH HAVE BROUGHT WEALTH.

BY MARY WASHINGTON.

No. 1.

In rendering the records of modern inventors in the United States, two points strike me especially about them—first, that the great majority of them are mechanics, or at least, plain, practical men, without scientific training; and secondly, that they have a much easier and more prosperous fate than the inventors of past ages, few of whom reaped any pecuniary reward, or even obtained recognition and appreciation of their services during their lifetime.

Among the long list of men in the United States who have made useful and important inventions during the last quarter of the 19th century, few of them except Dr. Alexander Graham Bell (inventor of the telephone) enjoyed the advantages of early scientific training, although those who had a strong bent that way, managed to pick it up, to some extent, in later life.

In studying the career of Dr. Bell, it is very interesting to note how his previous experience both in his studies and life work, and even in those of his father before him, seemed to pave the way to his great invention. His father, Dr. Alexander M. Bell, was an educator of deaf mutes, born in October in 1819. In 1843, he became a lecturer on elocution and voice culture in the University of Edinburgh and in New College, but his principal work was instructing deaf mutes. In 1870, he removed to Camden, and in 1881, settled in Washington City. He published many works on elocution and phonetics, but was chiefly distinguished as the author of "Visible Speech," a method highly successful in teaching deaf mutes to speak. His son, the renowned Alexander G. Bell, was born in Scotland March 31, 1847. He was educated in Edinburgh, but went to London in 1867, and to Canada in 1870. In 1872, he introduced his father's system of deaf mute instruction into the United States, and was made a Professor in Boston University. After having experimented for years on the transmission of sound by electricity, and devised various apparatus for the purpose, he, at length, produced the telephone which he exhibited in Philadelphia, in 1876, and this seemed a fitting climax to all his previous studies, efforts and labors which had all had a bearing on the human voice and on electricity. This invention brought him a large fortune, but not all at once. He carried the first working model of his telephone to John A. Logan, offering him a half interest in it at \$25, but Logan made light of his machine, and rejected his offer. Then he offered a tenth interest in it to an examiner in the Patent Office for \$100, but this offer was also declined. Within fifteen years this tenth interest was worth a million dollars, so great a commercial success did the telephone become, when its claims were fairly set before the public. No one has done more than Bell to annihilate the barriers of space. Morse's work was wonderful enough in enabling us to receive tele-

## DEAL DIRECT WITH THE FACTORY

Don't pay retail price for carriages or harness. Write for our catalogue and learn about our system of selling direct from factory to customer. Two profits are saved to you. Satisfaction is guaranteed, or you can return the purchase and we will pay freight charges both ways. We have the largest assortment of buggies, surreys, phaetons, carriages, and other high grade vehicles, as well as harness, horse rugs and other horse accessories, in America. Write for the catalogue to-day.

THE COLUMBUS CARRIAGE & HARNESS COMPANY,  
Factory and General Office, COLUMBUS, O. Write to  
Western Office and Distributing House, ST. LOUIS, MO., nearest office.



## 30 YEARS SELLING DIRECT

We are the largest manufacturers of vehicles and harness in the world selling to consumers exclusively.



No. 42—Double Surrey Harness. Price \$19.50.

As good as sells for \$30 more.

Large Catalogue FREE—Send for it.

ELKHART CARRIAGE & HARNESS MFG. CO., Elkhart, Ind.

WE HAVE NO AGENTS  
but ship anywhere for examination, guaranteeing safe delivery. You are out nothing if not satisfied. We make 195 styles of vehicles and 63 styles of harness.

Visitors are always welcome at our factory.



No. 231—Surrey. Price \$68.

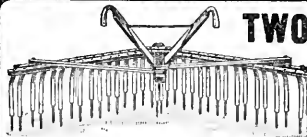
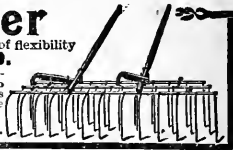
As good as sells for \$100 more.

## A Perfect Weeder

in all soils, under all conditions. The all important feature of flexibility of teeth is near perfection in the YORK IMPROVED.

Made of square spring steel with round points, and set staggered in strong but flexible anti-rust frame. Wide clearance, no clogging, teeth too strong to break. Multiplies producing qualities of soil and does not whip or bruise growing plants. Adjustable handles and shafts. Write for free descriptive circular.

Spangler Manufacturing Co., 501 Queen Street, York, Pa.



## TWO CROP ESSENTIALS

are cultivation and keeping down weeds. More important than deep cultivation is keeping the surface stirred, breaking the crust due to rains, and allowing the light, air, moisture and warmth to penetrate quickly to the roots of the growing plant. For doing just these things the ideal implement is the

## KEYSTONE Adjustable Weeder and Shallow Cultivator.

It kills the weeds at first showing, the top soil is pulverized and kept mellow, the plant roots are not disturbed and the moist soil is not brought up to dry in the sun. Adjustable in width. Narrows to 30 inches, widens to 7 1/2 feet. Strong, runs steady, no cumbersome shafts. Furnished either with round teeth or with flat to suit different soils, as we are licensed by the Hallock Weeder Company to use their famous flat teeth. Weeder booklet mailed free. We also make 10 styles Corn Planters, 12 styles Cultivators, 20 styles Corn Shelters, hand and power, Harrows, Field Rollers, Feed Cutters, etc. Write for catalogue C.

KEYSTONE FARM MACHINE CO., 1554 N. Beaver St., York, Pa.

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No. 519 Eleventh St., N. W., WASHINGTON, D. C.

graphic messages over the wires, but Bell's is far more marvellous, enabling us to hear the living voices of our loved ones with all their lesser peculiarities of accent and inflection. The Bell apparatus, however, was improved upon by a clerk named Emile Berliner, who evolved ideas which made the long distance telephone possible. The monopoly of the Bell Telephone Company is now held under Berliner's patents, and Emile Berliner has reaped prosperity from them.

Thos. Alva Edison was born at Milan, Ohio, February 11th, 1847, the same year in which Bell was born. He received all his early education from his mother, and at the age of twelve was a train boy on the railroad. A station-master taught him the art of telegraphy, in which he soon became remarkably skillful. He studied the principles of the science, and his quick and inventive mind soon turned towards making practical applications of electricity to the wants of every-day life.

When he made his first important invention, he carried it to a company on Broadway, N. Y., and the manager told him he would pay him \$36,000 for it, but not a cent more. This announcement amazed Edison, as he had not dreamed of aspiring to so large a sum, and when the check was paid him he still distrusted that it might be a bogus one, especially as the clerk refused to cash it off hand, but when Edison established his identity the money was paid to him without further difficulty.

It would be tedious to enumerate all of Edison's hundreds of inventions. Sufficient to say, he has attained not only fame, but great wealth by means of them. Amongst his marvellous inventions may be mentioned the phonograph, which is the root from which have sprung the graphophone, gramophone, and all the talking and singing machines which can so wonderfully reproduce the voices of the absent or even of the dead, the strains of concert singers, and of bands and orchestral music.

Augustus Schultz, of New York, invented the modern method of tanning, which has reduced the process of making leather from a year or two to a few weeks. All thin, tough leather now manufactured is made in this way. Prior to this invention, Schultz was very poor, but he became wealthy by means of it.

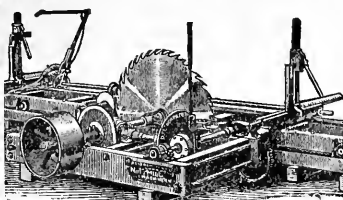
L. C. Crowell, who was a day laborer, made a large fortune by his invention of a paper folder which made possible the present enormous edition of many paged newspapers. The Crowell folder takes the sheets as they receive impressions, packs them into neat shape and stacks them up, ready for distribution.

Hugh Cook, of Dayton, Ohio, was a worker for wages when he made the invention on which the most efficient cash register in the market is based, from the proceeds of which he receives about \$25,000 a year.

Amongst the men who have reaped wealth from their inventions, I am glad to say I can enumerate Mr. John N. Gamewell, of South Carolina, who invented the fire and police alarm now generally used throughout the whole

## The DeLoach SAW MILLS ARE SURE WINNERS.

Eight sizes, from Farmers' 4 h. p. up to 200-h. p.  
If interested, write for large illustrated catalogue of DeLoach Patent Saw Mills to suit any power from 4 to 200-h. p.; Single Mills, Planers, Edgers, Trimmers, Saws and Lath Mills, Bolters, Corn and Bahr Mills, Water Wheels, etc. To introduce our **New Farmers' Saw Mill**, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



We will deliver on cars at factory our No. 0 **Pony Farmers' Saw Mill**, with Duplex Dies, Improved Head Blocks and Hatchet Set Works, complete as shown in cut, except it has Carriage made in two 3-foot sections, with Rope Drive instead of Beek and Pinion, without saw or Belt, for **\$15.00 Spot Cash!**

With 36" Solid Saw, \$127.50; 40", \$132.50; 44", \$140.00; 48", \$150.00.

With 36" Inserted Saw, \$147.50; 40" \$152.50; 44", \$160.00; 48", \$170.00.

Best Rubber Belting, 4-ply, 6", 20 cents per foot; 8", 30 cents per foot, net.

No discount from these prices.

**Our Warranty:** This mill is warranted to be made in a workman-like manner, of first class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. **Any one with ordinary intelligence can set and operate** without the assistance of an experienced sawyer; will easily cut 2,000 to 2,500 feet of first class board lumber per day with only 1-h. p.; 3,000 ft. with 6-h. p.; 4,000 ft. with 8-h. p.; is adapted to any kind or size power up to 15-h. p.

**DELOACH MILL MANUFACTURING CO., Box 600, ATLANTA, GEORGIA, U. S. A.**  
The DeLoach is the only mill made that is shipped to all parts of the world. Over 10,000 in use.

## THERE'S A HEN ON

All the time, doing her duty and making you easy money, when you install The Hawkeye Incubator. Made in sizes to suit your needs, from 60 eggs to all of the finest and most approved construction and guaranteed in every particular. Our little price includes everything needed. We send our incubators on **30 DAYS' FREE TRIAL**. Send for free illustrated catalogue describing fully all sizes of Hawkeye Incubators and Brooders mentioning this paper, or send me and we will send you catalogue and a leading poultry paper for one year.



HAWKEYE INCUBATOR CO., Box 49, Newton, Iowa.



**THE HATCHING INSTINCT.** The machine that adapts Nature's requirements and for years has been turning all fertile eggs into strong, vigorous chicks is the **Petaluma Incubator**. Known every where by its works. Case of ash-liking redwood, heaters of copper, self-ventilating, self-equalizing. Devices the most sensitive and dependable. Supplies moisture for dry climates. Used all over U. S. with great expert demand. Petaluma Brooders have no competitors. Fair prices and freight paid all over U. S. Write for latest free catalogue. **PETALUMA INCUBATOR CO., Box 46, Petaluma, Cal., or Box 46, Indianapolis, Ind.**

## INCUBATORS ON 30 DAYS' TRIAL. THE WORLD'S BEST STANDARD HATCHER.



Thousands of these incubators are in successful operation in the United States, Canada, South Africa, New Zealand, Sweden, Russia, Holland, and Germany. These machines operate to perfection and always bring off a large brood of strong, healthy chicks. Catalogue with full particulars



free for the asking. **THE STANDARD P. C. INCUBATOR CO., Dept. 5, Rochester, N. Y., U. S. A.**

## DO YOUR TRADING.

Where an established reputation warrants confidence. The name of **LUMSDEN** on anything in the **JEWELRY or SILVERWARE** line is a STANDARD of QUALITY.

**FINE GOLD AND DIAMOND JEWELRY, STERLING SILVERWARE AND CUT GLASS.**

**SIX SOLID STERLING SILVER TEA SPOONS, \$3.40.** Write for our catalogue, it contains many articles on which we can save you money.

**C. LUMSDEN & SON, Established 1835, 731 E. Main St., Richmond, Va.**

When corresponding with Advertisers, always mention **The Southern Planter.**

civilized world. Mr. Gamewell received a medal both from the French and Russian Government for this invention. He took up his residence in New York city, was made Superintendent of the Fire Department, and acquired a large fortune from his patents.

Another Southerner who has achieved prosperity by his inventions, is Mr. James Albert Bonsack, of Virginia, who invented the cigarette machine, which has redounded so largely to the wealth both of the State and of himself.

#### OF 217 MOST ILLITERATE COUNTIES IN THE UNITED STATES, 212 ARE IN THE SOUTH.

In the Southern States there are two hundred and twelve counties in which one-fifth or more of the native white males of voting age (twenty-one years old and over) are illiterate; in all other States of the Union only five. In two States—North Carolina and Louisiana—nearly half the counties are in this class. In fifty-one of the Southern counties the illiteracy in this class is thirty per cent. or more. Of these, three are in Virginia, three in North Carolina, nine in Kentucky, eighteen in Louisiana and eighteen in Texas. In any of these counties the balance of power is in the hands of the illiterate voters, and illiteracy is king. Under such conditions Democratic government must be in great danger. Its form may remain, but its substance can hardly exist longer. If it does continue to exist, it can only be to illustrate the truth of the fact that it is woe unto any country when the ignorant man and the evil bear rule in it.

Prunes are exceedingly wholesome and should be used often as dessert. Many whose digestion forbids the eating of other fruit can eat stewed prunes and be benefited by them. Prunes have a curative property. They are very suitable for the diet of convalescents. They are nutritious, laxative, and healing to the membranes of the stomach. Do not take medicine, but eat liberally of stewed prunes. They have been known to cure inflammation of the stomach. There are several different varieties of as many different qualities, sour and sweet, but the large French prunes are the best that can be had.

Stewed prunes are the best for general use. Wash thoroughly and soak them an hour in cold water, then stew slowly in a porcelain-lined stewpan until soft. Sugar to taste before sending to the table, or they can be sweetened while stewing.

The heavy charges on small parcels come pretty near being outrageous. The robbery is all the worse where a package has to travel between two small towns and over the routes of two express companies. There should be a universal parcels post. This reform should precede any reduction of letter postage. Now that rural free delivery will soon be made universal, the next great reform to be insisted upon is the parcels post. Then, for a few cents, farmers can supply customers in the cities directly with nice fresh fruits, vegetables, etc., just as is done in England.

## Uncle Sam says it's all right

Uncle Sam, in the person of ten of his government officials, is always in charge of every department of our distillery. During the entire process of distillation, after the whiskey is stored in barrels in our warehouses, during the seven years it remains there, from the very grain we buy to the whiskey you get, Uncle Sam is constantly on the watch. We dare not take a gallon of our own whiskey from our own warehouse unless he says it's all right. And when he does say so, that whiskey goes direct to you, with all its original strength, richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE, and saving the dealers' enormous profits. That's why HAYNER WHISKEY is the best for medicinal purposes. That's why it is preferred for other uses. That's why we have over a quarter of a million satisfied customers. That's why YOU should try it. Your money back if you're not satisfied.

### Direct from our distillery to YOU

Saves Dealers' Profits! Prevents Adulteration!

# HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

## 4 FULL QUARTS \$3.20 EXPRESS PREPAID

We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. Try it and if you don't find it all right and as good as you ever used or can buy from anybody else at any price, send it back at our expense, and your \$3.20 will be returned to you by next mail. Just think that offer over. How could it be fairer? If you are not perfectly satisfied, you are not out a cent. Better let us send you a trial order. If you don't want four quarts yourself, get a friend to join you. We ship in a plain sealed case, no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo. must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

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CHARTERED 1870.

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Designated Depository of the United States, City of Richmond and Commonweath of Virginia.  
Being the Largest Depository for Banks between Baltimore and New Orleans, this Bank offers superior facilities for direct and quick collections.

Capital Stock, \$200,000.00  
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# If You Want YOUR GOOSE TO LAY "THAT GOLDEN EGG" FEED HER PROPERLY.

I mean buy your supplies right. You should lay aside a few Gold Pieces yourself, you might ask how it can be done—easy, dead easy—stop paying high, country prices. The mail comes to your home six times a week, I can get a letter from you every day.

**GET MY PRICES, I WILL BE GLAD TO MAIL YOU OR YOUR FRIENDS MY PRICES EVERY NIGHT.**

The railroads almost pass your house. Uncle Sam spends millions yearly to give you mail and railroad accommodations. You need not come to town, let Uncle Sam do your shopping. He can knock the spots out of you in buying—just try him. No matter how small your order I will be glad to have it and ship promptly. Here is what your groceries will cost you

**JUST ONE-HALF WHAT YOU ARE NOW PAYING.**

Arbuckle's Green Coffee.....	9½	Cotton-Seed Meal, Nothing Finer.		Gibson's Fine Old Rye Whiskey; fit for a king, get a quart.....	75
Granulated Sugar.....	4½	510 Tons Cotton-Seed Hulls—an excellent Winter Food, Cheap and Nutritious, per hundred.....	50	O'Grady's Pure Malt. Try a bottle of Malt for that hacking cough. It is a sure cure. It is good for dyspepsia. Indigestion it cures at sight. Warms the inner man; makes new rich blood, and stimulates the whole system. It has saved many and many a man and his family. 75 a quart. The price is insignificant compared to the benefit it will do you.	
Best Family Flour.....	4 25	This is as good as Coarse Meal for stock.		Country Cured Bacon Sides.....	13½
Byrd Island—have no other.		60,000 lbs. Rock Salt for Stock—try a bag, keep it in the Trough, improves Stock very much, \$1.00 for 100 lbs.		100,000 bushels finest Oats.....	40½
10,000 lbs. Nice Family Pork.....	9	Chalmer's Gelatine, 3 for.....	25	60,000 bushels fine Corn.....	56
7 Boxes Axle Grease.....	25	Seedless Raisins in Packages.....	9	Water-ground Corn Meal, made of the finest White Corn, and ground by one of the finest mills in Virginia. Bushel.....	72
800 Bbls. White Oil.....	12	Cleaned Currants, per lb.....	8	I have everything that is required by a farmer from a 1,000 acre farm to a mouse trap. Write for my price list that will give you more information than a gossiping woman.	
1,000 Bushels Seed Rye.....	68	New Citron for Fruit Cake.....	12	Clover Seed, prime Crimson Clover Seed.....	2 60
500 Tons Fine Timothy Hay, hundredred.....	75	Home Made Mince Meat.....	8	Choice Crimson New-Crop Clover Seed.....	4 25
300 Tons Choice Clover Hay, hundredred.....	70	100,000 lbs. New Mixed Nuts.....	11	Fine Winter Turf Oats (seed).....	75
10 Large Cakes Fancy Soap.....	25	Virginia Hams, Choicest of Meat. I have a Nice Lot of Hams Made in Smithfield, Va.....	14	Prime Winter Seed Oats.....	60
Crystal Washing Soda, Light, Smooth, and Durable, makes Washing Easy.....	30	Fine Sweet Cider, per gallon.....	20		
Washing Powders, 8 for.....	25	Home-Made Black Berry Brandy, 5 years old and nice.			
Fine Gun Powder Tea.....	40	Family Tonic, quart.....	20		
Ben Mocha and Java Coffee Roasted	18	Northampton Apple Brandy, 6 years old—pure—Apple Juice—nothing finer made—gallon.....	2		
Large Fat Mackerel in Nice Buckets or Kits, about 15 lbs.....	1 25	Clemmer's Fine Old Mountain Rye Whiskey, double distilled, sweet and wholesome, quart.....	40		
New River Herrings, 750 fish in the barrel, Large and Fat.....	5 50	Juniper Gin, sure cure for bladder and kidney troubles; relieves the cutting, stinging ache in your back, quart.....	45		
New Cut Herrings, barrel.....	5 50				
Finest Cream Cheese.....	15				
Baker's Chocolate—2 Cakes.....	25				
New Table Raisins—6 Lbs.....	60				
Fine French Candy.....	8				
Pure Lard.....	9½				
610 Tons Pure City Made Shipstuff, hundred.....	1 00				

I have an immense stock of NEW YEARS' GOODS, CAKES, CANDIES.  
FRUITS of all kinds, and I will ship any quantity required.

**D. O'SULLIVAN, Eighteenth and Main Sts., Richmond, Va.**

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News-Leader, Richmond, Va.....	3 00	3 00	

TRI-WEEKLY.			
The World (thrice-a-week), N. Y.....	1 00	1 25	

WEEKLIES.			
Harper's Weekly.....	4 00	4 00	
" Bazaar.....	1 00	1 40	
Montgomery Advertiser.....	1 00	1 00	
Nashville American.....	50	75	
The Baltimore Sun.....	1 00	1 35	
Breeder's Gazette.....	2 00	1 75	
Hoard's Dairyman.....	1 00	1 35	
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Times-Dispatch, Richmond, Va.....	1 00	1 25	
Religious Herald, Richmond, Va.....	2 00	2 25	
Central Presbyterian, ".....	2 00	2 50	
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Wool Markets and Sheep.....	50	75	
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Where you desire to subscribe to two or more of the publications named, you can arrive at the net subscription price by deducting 50 cents from "our price with the Planter." If you desire to subscribe to any other publications not listed here, write us and we will cheerfully quote clubbing or net subscription rates.

Subscribers whose time does not expire until later can take advantage of our club rates, and have their subscription advanced one year from date of expiration of their subscription to either the Planter or any of the other publications mentioned.

Don't hesitate to write us for any information desired; we will cheerfully answer any correspondence.

We furnish no sample copies of other periodicals.

# Seed House of the South.

- RED CLOVER.
- MAMMOTH CLOVER.
- CRIMSON CLOVER.
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- TIMOTHY.
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- OATS and
- CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are BAGLAND'S PEDIGREE TOBACCO SEEDS.

WE ALSO SELL

## Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.  
Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

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We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

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|-----------|-------------|---------------|----------------|
| Apples,   | Nectarines, | Pecans,       | Ornamental and |
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| Peach,    | Quinces,    | Walnuts,      | Evergreens,    |
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CALIFORNIA PRIVET, for Hedging.

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**For COTTON** When used on land with a fair amount of vegetation or with COMPOST (which is better - the crops are as good as from any Fertilizer. It prevents RUST and SHEDDING and keeps the plants green much longer in dry weather.

**PEANUTS** With the same conditions as above, it is a COMPLETE FERTILIZER for this CROP. Our customers say it is equal to the BEST FERTILIZERS ON THE MARKET.

**DARK HEAVY TOBACCO** Haul out your farm pen scrapings, plow under and broadcast 500 to 600 lbs. per acre (the earlier the better), and you will get a heavy crop of Tobacco and a fine crop of Wheat and Clover or other grass, and by proper rotation will have a rich lot for any crop.

**BRIGHT TOBACCO** Our customers say that 200 lbs. per acre in the drill with other Fertilizer will prevent the Tobacco from FIRING and giving it a GOOD BODY and increase its value \$20 per acre. For Wheat, Oats, Clover and other grass it is exceptionally good.

It prevents RUST, SCAB and SMUT in WHEAT and all say it is the best thing for clover they ever used. Fruit Growers will find a WONDERFUL IMPROVEMENT by its use on their Orchards and Vineyards.

## Our EXCELSIOR TOBACCO FERTILIZER

Has been tested for six years and has proved equal to and in some cases superior to the high-grade ammoniated goods on the market. We put in no useless filler and the farmer gets the 2000 lbs. to the ton of valuable fertilizer for the crops and THE LAND. Hence they say their succeeding crops are much better than from other fertilizers

**Our SPECIAL CORN FERTILIZER** For land where there is not an abundance of vegetation is equal to any.

General agents for **BLACK DEATH BUG KILLER** for destroying Potato Bugs, Tobacco Worms, and all insects injurious to vegetation; and Sifters and Insecticide distributors for applying it.

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In car lots at lowest market price from kilns.

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*All of Virginia.*

These vehicles are guaranteed to be as good as can be bought elsewhere; material and workmanship unsurpassed; all sizes and styles, prices low. We can save you time, money and freight by purchasing our vehicles. Send for our illustrated catalogues. Drop in our warehouse and inspect our stock. Inquiries cheerfully answered.

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REPAIRS for all the plows in general use.

CORN PLANTERS with and without Fertilizer Attachment.

CULTIVATORS—Iron Age pattern, Disc, Riding and Walking Shovel Cultivators.

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THE FINE HACKNEY STALLION

## ✦ HEIDRIK ✦

Bay horse, foaled 1898; 16 hands high. This horse has great natural action, and is capable of getting the highest class harness horses.

FEE, \$10.00 the Season or \$15 00 to Insure.

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Burlingame, 26235, record 2:18½, trotting bay horse, by Guy Wilkes, 2:16½, dam the famous brood mare Sable, by The Moor. This horse is richly bred, a prize winner, at the New York Horse Show, and sires grand looking colts. Fee, \$25 the season. Ed. Kearney, chestnut horse, by Tom Ochiltree, dam Medusa, by Sensation. A grand looking specimen of the thoroughbred, and will sire not only race horses, but hunters and jumpers of the highest class. Fee, \$10 the season.

Address SPRING GARDEN FARM, Coalwell P. O., Va.

## 1903. IN THE STUD 1903. WEALTH, 29579.

RACE RECORD, 2:17½, Pacing.

Timed separately in 2:08 in a race at Indiana State Fair, 1902.

Bay horse, foaled 1897; 16 hands high, weight, 1,200 lbs. Sired by Gambetta Wilkes, 2:19½, dam Magnolia, by Norfolk, 3670, Wealth is grand individually and in appearance.

FEE, \$20 the Season, with return privilege, or \$25 to Insure.

Address S. F. CHAPMAN, Gordonsville, Va.

## GREAT STAKES, 25521.

RACE RECORD, 2:20, Trotting.

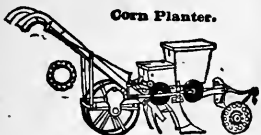
Bay horse, by Billy Thornhill, 2:24, dam Sweetstakes, by Sweep Stakes, 298. Great Stakes has sired Captain, 2:16½; Foxhall, 2:19½, and four others in the list. He is handsome, well-formed and sires speed uniformly.

FEE, \$25.00 for the Season of 1903,

Address

W. H. NELSON, - 1417 E. Franklin St, Richmond, Va.

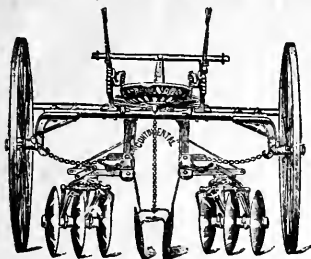
# LABOR-SAVING IMPLEMENTS AND MACHINERY.



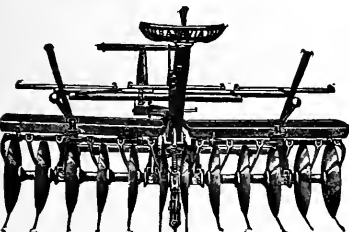
Corn Planter.

Corn Planter.

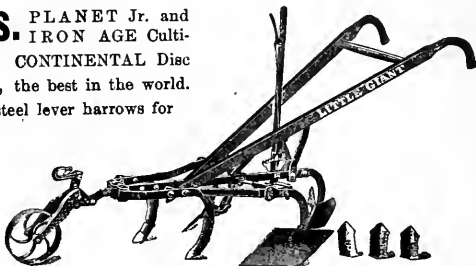
Spring tooth attachments for Cultivator. RODERICK LEAN steel lever harrows for one, two and three horses.



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DISC HARROWS—All Sizes.



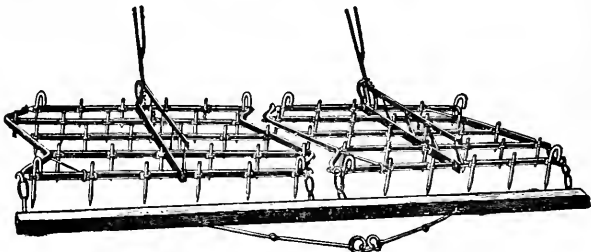
HORSE HOE.

Wood or Steel beam; all sizes. Guaranteed equal to any made.

THE CELEBRATED

## HANGCOCK DISC PLOW.

Single or Double Disc.

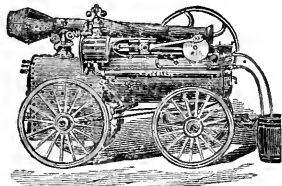


SPIKE TOOTH HARROW.

THE OLD RELIABLE

## PEERLESS ENGINES.

SAW MILLS and  
THRESHING MACHINES.



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The FISH, The WEBER and The CHAMPION Wagons  
IN ALL SIZES.



General agency for the Columbus Buggy Co., Columbus, Ohio, A. Wrenn & Sons, Norfolk, Va., and other celebrated makers of vehicles. All grades in stock.

Harness, Robes and Whips, Pittsburg Perfect Wire Fencing, welded by electricity. Circular for the asking, Correspondence solicited.



THE WATT PLOW CO., 1452 E. FRANKLIN and Richmond, Va.  
1404 E. MAIN STREET,

## PURE-BRED FOWLS.

Why is the pure-bred fowl better than the mongrel? The reasons are many. For one, you can always depend on the pure-bred for uniform growth. Take a mongrel hen, and her chickens will vary. They never grow fast, and one or two in the bunch will be ready for market two months before the others. Not only that; the pure-bred are uniform in looks after dressing, and sell higher on this account for breeding and hatching purposes. Their eggs and themselves always sell higher than the market price for either. Persons raising the pure-breeds exclusively in this country must keep all their eggs from early spring until the hatching season is over to supply the demand for the eggs; and now, since incubators are so useful and common, those who want eggs often order many weeks ahead to get all they need. Another reason is that the mongrel hen averages at the best about forty eggs per year. The pure-bred laying breeds with worst care given will lay over a hundred eggs, and with moderate attention I have known them to lay very close to two hundred eggs per year.—Chas. Arnge Coy, Georgia.

## A DELICIOUS NEW SALAD DRESSING.

A most delicious dressing for green salads is made by putting one tablespoonful of lime juice in a bowl, adding a teaspoonful of celery salt, a saltspoonful of white pepper, and a dash of cayenne. Mix in, a little at a time, alternately, three tablespoonfuls of oil and two of lime juice. Stir all the time, or the ingredients will separate. Add a table-spoonful of finely cut chives, or an equal amount of chervil or fresh tarragon leaves.

Nodd—I shall have to postpone that dinner for a week.

Todd—Certainly. Nothing wrong, I hope.

Nodd—Oh, no; but when I asked you, I was under the impression that it was the cook's night in.

Mother—Have you any waterproof boots for a boy?

Salesman—We have waterproof boots, ma'am; but they are not for boys.

Mother—Why don't you have some for boys?

Salesman—When somebody has invented a boot that has no opening for the foot to get into it, we may hope for boys' waterproof boots, not before.

"Pretty tiresome, isn't it?" remarked the first man at a reception.

"It is so," replied the other.

"I'd sneak out, if I could, but my wife would get mad. She's a friend of the hostess."

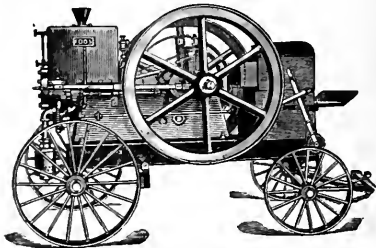
"I'd sneak out, too, but my wife would be furious. She's the hostess."

Mistress—Jane, I hear the bell. I think there must be somebody at the door.

Maid—I think likely, marm; but it can't be for me; my company always call at the kitchen door, you know.

## GASOLINE ENGINES,

ALL SIZES AND STYLES.



PORTABLE GASOLINE ENGINES.

We drilled the well and installed the complete pumping plant at the famous old James River country place, "Westover."

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Rams, Wind Mills, Tanks, Towers, Country Plumbing a Specialty, Saw Mills, Saws, Engines and Boilers, Pipe, Fittings, etc. Water-Supply Contractors.

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Every farmer should have these books on his library table. They are invaluable.

**Feeds and Feeding. Henry, . . . \$2 00**

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**THE SOUTHERN PLANTER, Richmond, Va.**

## Seeds! Seeds! Seeds!

We sell the BEST Seeds for this section. Our long experience and study of the farmer's needs and the climatic and soil conditions enables us to make this statement.

Have you seen our NEW SEED BOOK for 1903? If not, send for a copy to-day. It is well worth your while to do so.

**T. W. WOOD & SONS,**

**SEEDSMEN,**

**RICHMOND, VA.**

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EXTENDING FROM CINCINNATI AND LOUISVILLE, AND THROUGH ITS CONNECTIONS

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

THE OHIO CENTRAL LINES, from Toledo and Columbus;

THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest ROUTE.

To STAUNTON, LYNCHBURG, CHARLOTTESVILLE, RICHMOND, PETERSBURG, NORFOLK, And Principal Virginia Points.

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## RURAL BOOKS OF EVERY DESCRIPTION

AT LOWEST PRICES.

SOUTHERN PLANTER, - Richmond, Virginia.

### THE SEX OF EGGS.

An English poultry keeper, who has been working on this subject for several years, thinks that he has at last discovered a way to insure a large proportion of either pullets or cockerels, as may be desired. He has given up all idea of being able to determine the sex by the shape of the egg, size of air-cell, time of day it was laid, or any external characteristics. He now thinks the sex of the egg is determined at the time of sexual contact, and that there are two elements or forces which unite, a positive from the male and a negative from the female.

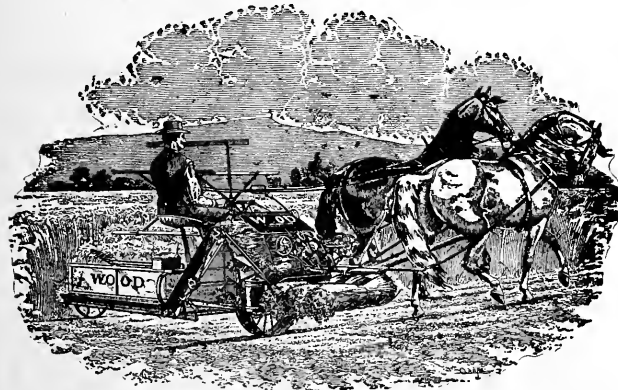
Where the predominating force is positive, a male will result, and vice versa. To test this, he mated in April a very vigorous cockerel, with two hens which had laid all winter, with the object of getting cockerels. The hens had worked hard for some months, and the conclusion was that they must be more or less weakened by it. Thus was obtained a condition which pointed to a preponderance of the positive element, and the result was about 80 per cent. cockerels.

To further test this matter, six pullets, in the pink of condition, were put in a pen by themselves, and every afternoon a two-year-old cock, which all the rest of the day was running with 40 hens, was placed with them. This mating resulted in 80 per cent. of the chicks coming pullets. Similar matings have been practiced by American breeders for some years, and they have been able to obtain a large per cent. of pullets or of cockerels, but not always as high as 80 per cent., as here mentioned.

## THE TRAP HAS BEEN SET, BUT THE FARMERS "ARE ON TO IT."

IN 1903

THEY ARE GOING TO BUY THE WALTER A. WOOD MACHINES.



### WHY?

Because it is the Best Machine Made.

Because it Belongs to no Combination.

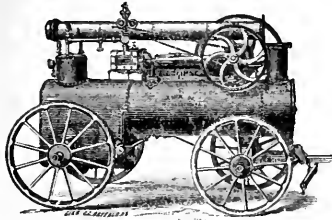
Because its Repairs Cost Less.

The Wood Binders, Reapers, Steel Hay Rakes, Tedders, Corn Harvesters, Knife Grinders the world knows and the world endorses.

SEND FOR SPECIAL CATALOGUE.

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# Latest Improved FARM IMPLEMENTS.

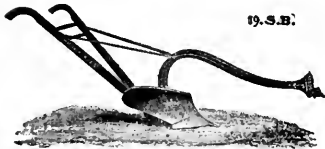


**FARM THRESHERS MACHINES, ENGINES AND SAW MILLS.**



**Steel Lever Harrows.**

Wood Harrows—All sizes.  
Disc Harrows—All sizes.  
Spring Tooth Harrows—All sizes.  
Aeme Harrows—All sizes.  
Harrows of all styles kept in stock at lowest net prices.



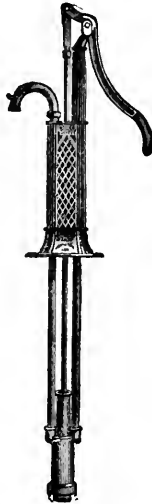
19. S.B.

**DON'T FORGET!** All the merchants in town who claim to sell Oliver Plows and Repairs only sell the Imitation, Bogus, Cheap Goods. The only place in Richmond, Va., to buy Genuine Oliver Plows and Repairs is at 1436 and 1438 East Main Street.



**One and Two-Horse Planter, Plain or with Fertilizer Attachment.**

Special prices given on Studebaker and Brown Wagons, Buggies and Carts. Studebaker Buggies, all styles, Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.



**Buckeye Force Pumps. Porcelain Wood Pumps. Wood and Steel Wind Mills.**

**ELI BALING PRESSES.** 58 styles and sizes. For horse or steam power. Write for prices and catalogues.

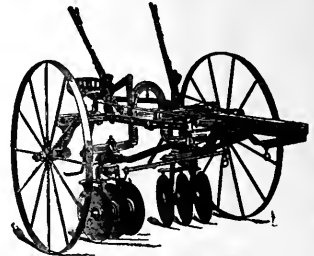


**LITTLE GIANT CORN SHELLERS, One and Two Hole.**

The frame is made of thoroughly dry hard wood. The joints mortised, tenoned and bolted. The bearings are bolted on to the frame instead of screwed. The iron work is made from the very best material, and ever piece is carefully inspected before being put on. This machine is high-grade all the way through. It is hand-somely painted, striped and varnished.

Write for special catalogue and price on any implements wanted.

Superior Grain and Fertilizer Drills. Hoe and Disc.



**Bement Disc Cultivator, with 6 or 8 Disc.** Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.

**"SCIENTIFIC FEED MILLS, All Sizes."**

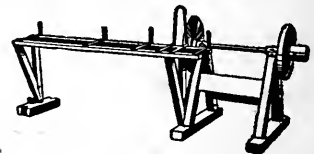


**The SCIENTIFIC Grinding Mills.**

Are unequalled for grinding ear Corn, shucks on or off, Corn, Oats, Wheat and all other grains, single or mixed.

**POWER MILLS in Five Sizes, 2 to 50 horse-power.**

**"SCIENTIFIC SWEEP MILLS in Five Sizes."** Geared—plain and combined, with horse power.



**Wood Saws for Long or Short Wood. Wood or Steel Frame.**

## ROSS

Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



**Bennett's Improved Stump Pullers.**

Three sizes and 10 styles. Write for catalogues and prices.

**HENING & NUCKOLS, Successors to CHAS. E. HUNTER, 1436-38 E. Main Street, RICHMOND, VA.**



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DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK AND THE FIRESIDE.

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Agriculture is the nursing mother of the Arts.--XENOPHON.

Tillage and pasturage are the two breasts of the State.--SULLY.

---

64th Year.

Richmond, March, 1903.

No. 3.

---

## Farm Management.

### WORK FOR THE MONTH

Since writing our article on "Work for the Month" for the February issue, weather conditions have been such almost throughout the whole South as to prevent the carrying out of the programme of work therein laid out for February. The frequent rains have kept the land too wet for plowing, and those who failed to make good use of the time in the fall and early winter months to push on the work of breaking land to be cropped this year will now find themselves likely to be behind hand when seeding time is at hand, and will perforce be compelled to try to put four months' work into two. The result will be incomplete preparation of the soil and diminished yields of crops. Year after year we keep on urging the full utilization of the fall and early winter months in the breaking of land in order not only to lessen the pressure of work in the spring, but also that advantage may be had of the ameliorating influence of the winter's frosts on the soil, but with comparatively small results. The farmer is usually a procrastinating individual—very much like the Spaniard who always, when urged to make an immediate effort, replies, "Manyana," "to-morrow," a to-morrow which often never comes. So with the majority of farmers—they put off the plowing of land in the fall and winter months, confident that in the spring there will be ample time to plow and fit the land for the crop. And yet reflection would assure him that probably in a majority of years in the South there is always at least one month, and often

two, when the winter weather and the spring rains are so persistent as to practically compel him to lose at least one month of the time he had confidently reckoned on within which to complete his preparation of the land for the crop. This practice of neglecting the golden opportunity of the fall and early winter months also results even when the spring is fairly genial in largely limiting the amount of work which he can find time to put on the preparation of the soil, and this, as we pointed out in our last issue, is, in our opinion, largely the cause of the small yields which crops make in the South. Where land was broken in the fall and winter, it is now well filled with moisture, not merely on the surface, but in the subsoil, and this, if conserved as it ought to be, will serve to meet all the needs of the crop, even though we should have a dry summer, whilst land yet to plow, though now wet on the surface, is likely to be dry in the subsoil, and will require very careful management to make a crop should the summer be dry. Very much of the rain which falls on unplowed land during the winter is lost to the soil, as it largely runs off the soil into the creeks and ditches, and it is rarely the case in the South that we can afford to waste water in this way if we are to make a full yield from the land.

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As soon as the land is dry enough, let the plows be set to work first in breaking the land intended to be seeded with oats, and then upon the land intended for corn and forage crops. Do not, however, be tempted

to plow until the land is dry enough to work freely and leave the plow in a crumbly condition. Land plowed wet can never be made into a good seed bed, however much labor may be spent on it, whilst the injury done to the productive capacity of the land by the tramping of the horses, especially in the bottom of the furrows, is great, not only affecting the first crop, but many subsequent ones, unless remedied by subsoiling. Plowing, to be effective, should not merely turn the soil over, but should do a great part of the work of breaking that soil into fine particles and leave it in such condition as that the harrow and cultivator can thoroughly and completely disintegrate it and reduce it to a fine loose condition, at least to the depth of 6 inches, and much better if to the depth of 9 inches. We would once again urge the importance of a more perfect preparation of the soil before planting any crop than is customary in the South, or indeed any part of this country. Instead of placing reliance upon the application of commercial or other fertilizer for the making of crops, let the first reliance be upon the perfect preparation of the soil. There is an immense reserve of plant food placed by nature in almost every kind of soil, as analysis proves, much more than sufficient to meet the needs of crops for years if only available. This availability can only be secured by the breaking up of the soil into the smallest particles and subjecting these to the action of water, air and sunlight, and later to the action of the acids developed in the roots of almost all kinds of plants during the process of growth, and which acids have a powerful solvent effect on inert plant food. Only when the soil is thus finely broken can the soil microbes bring to bear upon it the wonderful fertilizing qualities which recent investigation has demonstrated them to possess. Mr. Geo. M. Clark, of Higganum, Conn., probably the most successful hay grower in the country, and who has made over 200,000 lbs. of hay in one year on 16 acres of land, and over 20,000 lbs. of hay on one acre of land, says the secret of his success is perfect preparation of the land and not the fertilizer which he uses. He thus describes his method of fitting his land for a grain and grass crop. He begins on July 1st with the Double Action Cutaway Harrow going over the field twice the first week in half lap, the second time at right angles to the first. The second and every subsequent week till August 1st he goes over once in half lap each time at right angles to the preceding. He thus harrows five times in July, and in August follows in half lap with an 8 foot smoothing harrow with leveling board until the surface is true. He then plows the field with a 24 inch Torrent Cutaway plow to a depth of six or seven inches, then trues the surface with the smoothing harrow again, and finally

harrows the field with the Double Acting harrow once a week until September first (say three times), when the field will be in condition for sowing wheat or rye, if desired, or to lie until spring for oats. In this way the land is stirred 43 times before sowing a seed. In the second season, before sowing the grass seeds and after cutting the wheat or oat crop, the field is stirred 32 times, at regular intervals, from July 1st to September 1st, with the same implements as before, thus making a complete stirring of the soil 75 times before the sowing of the grass, which makes so great a yield of hay. Mr. Clark has for years demonstrated that such thorough working of land yields a heavy profit. With hay selling at \$12 per ton he has made a net profit of \$42 per acre on his crop. Whilst it is not possible for a farmer having a large area to put into crops of various kinds to give so much work to each acre, yet there is a great difference between one plowing, one harrowing, and three cultivations, which is about the average of that given to a crop of corn in the South and the foregoing method of Mr. Clark. It would certainly pay to give land here three or four times the preparation usually given to it. Try the experiment.

Oats for grain, forage or hay should be seeded during this month. It is too late to sow Virginia grey winter oats after the 15th of the month with the expectation of their making a heavy crop. Up to that time they may be sown, but they will not usually make anything like so great a yield as when sown in the fall or in January or February. The rust proof oat is about the best variety to sow after the middle of March in the South. None of the Northern spring oats are suitable for Southern climatic conditions, as the weather becomes too warm for them before they have had time to make sufficient root growth to withstand the heat. Land for the oat crop should be deeply plowed and finely broken, and the seed should be well covered, so that the roots may be protected from the heat. The oat is a cold climate crop. Most Southern farmers seed oats on their poorest land, and without any fertilizer. This is a mistake. If oats are worth growing at all they are worth better care than this. Probably in the South their greatest value is as a forage or hay crop, as the grain is not so plump and heavy as Northern grown oats, and therefore not so good feed nor so valuable on the market. If given good land to grow on, or they are helped with 250 to 500 pounds of acid phosphate to the acre, they will make a hay or forage crop of value for stock-feeding, especially for cattle, and can be followed with a cowpea crop, to be sown in June or July. Sow from a bushel and a half to three bushels to the acre, according to the fertility of the land. Put the heaviest

seeding on the poorest land and decrease the quantity of seed as the land is more fertile. Whilst phosphoric acid has been proved to be the dominant fertilizer required in the production of the oat crop, yet experience has also proved that a nitrogenous fertilizer will materially help a weak growing crop. An application of from 75 to 100 pounds of nitrate of soda to the acre, made just when the crop has fairly started to grow, will generally largely increase the yield, and especially so of the straw, a matter of great importance where the crop is to be used for forage or hay.

Grass and clover seed should be sown this month where not already seeded in the fall, which in the South is undoubtedly the best and most proper time for the crop. In our last issue we wrote fully on this question, and to that issue refer our readers. We want again to emphasize the importance of not seeding grass with a grain crop at any time if the best stand of grass is desired, but certainly with spring seeding nothing but grass and clover should be sown. In the earlier part of this article we have made a quotation from Mr. G. M. Clark as to the way in which he prepares his land for seeding with grass, and thereby secures enormous crops of hay. We refer our readers to this and ask them to follow the directions, certainly to as great an extent as time will allow. Fine and perfect preparation of the land before seeding is absolutely essential to successful grass growing. As a fertilizer for the crop Mr. Clark, after long experimenting, finds that he succeeds best by using all his coarse farm-yard manure for the production of corn and other cultivated crops where the weeds can be killed as they sprout. When seeding with grass he uses only commercial fertilizers made from bone, muriate of potash and nitrate of soda. He applies these ingredients to each crop of grass—that is to say, twice in each year, as he makes two crops of hay each year. In the fall he applies 1000 lbs. of bone meal, 800 lbs. of potash, and 200 lbs. of nitrate of soda per acre. In the spring he applies one third of each of these ingredients. This applies to fall seeding of grass. If seeded in the spring we would give the heavy dressing before sowing the grass seeds, and harrow in, and then in fall, after the hay has been cut, apply the lighter dressing as a top-dressing. Mr. Clark sows only timothy and red top (herds grass) 16 quarts of each per acre. On his very finely prepared land he finds this quantity of seed sufficient, but on less care fully prepared land we would sow twice this quantity. The poorer the preparation of the land and the less fertile the soil the more seed should be used, up to three bushels to the acre. The sowing of timothy and red top alone presupposes that the field seeded is only to be used for mowing for hay. If it is desired also

to secure a pasture after mowing, say two or three years, then it will be well to sow also Orchard grass, Meadow Fescue, Perennial Rye and Virginia Blue grass. Under grazing, the timothy will die out, whilst the other grasses will endure. Be very careful to sow the seeds with regularity. It is well to sow half one way of the field and the other half across. Harrow in the seed with a smoothing harrow, running the harrow both lengthwise and across, and then roll. If after the grass has commenced to grow it looks yellow, or a light green, apply 75 lbs. to 100 lbs. to the acre of nitrate of soda as a top dressing. The quantities of fertilizer used will seem large to Southern farmers, but it should be borne in mind that they are intended to produce a heavy yield of hay. Mr. Clark has made over 23,000 lbs. of cured hay to the acre in two crops in one year. Our own experience has convinced us that it pays to be liberal in the use of bone meal before seeding grass, and we would never apply less than 500 lbs. of this to the acre. We believe that much less potash (probably less than one-third) than Mr. Clark uses will be found sufficient in Virginia, and that probably 150 lbs. of nitrate of soda to the acre in two dressings will suffice.

In the cotton section land should be broken and be got into fine condition for planting as soon as it is sufficiently dry to work. The same remarks as to the importance of perfect preparation of the land before seeding apply to cotton growing as to other crops. The yield of cotton per acre is, on the average, less than half a bale; whilst there is no reason whatever why at least a bale to the acre should not be produced, and on much of the land, properly adapted to cotton, 1½ bales can easily be made. Where land will not, under proper cultivation, and with reasonably heavy fertilization, make a bale to the acre, it should not be planted in cotton until sufficiently improved to make that quantity. There is not a living profit in making half a bale to the acre even at present prices. The cause of the failure to make more than half a bale to the acre is mainly two fold—lack of fertility in the land and lack of preparation of the soil before planting. The lack of fertility is mainly a lack not so much of the mineral fertilizers as of humus (vegetable matter) in the soil. No application of commercial fertilizers alone, however heavy, will correct this. Vegetable matter must be grown, and be put into the soil, and then even a moderate application of fertilizer will produce a paying crop if only that soil, when thus reinforced with life giving matter, is properly prepared before the crop is planted. We would strongly urge that only such land as is not altogether devoid of humus should be planted in cotton, and that other land should be planted in peas to prepare it for cotton next

year. Only by following this practice of growing husk making crops and turning them into the land in the late fall, or feeding part of the crop to stock, and applying the resulting manure to the land and turning down a heavy stubble, can the increased yield be secured. Do not bed up the land intended to be planted unless it is wet land or liable to be flooded. Cotton, like corn, succeeds best with level culture. Plow an inch or two deeper than was plowed last year, and plow all the land, not merely just where the row is to be. After plowing, use a good heavy drag harrow or cultivator, and work the land both lengthwise and across until reduced to a fine seed bed. The fertilizer intended to be given to the crop should be applied during the harrowing and working of the land, and will thus become thoroughly mixed with the soil, and will be much more effective than if applied just previous to planting the seed. If less than 500 lbs. to the acre be applied it may be put in the row, and should be thoroughly mixed with the soil by running a cultivator through it, but we are on principle strongly in favor of broadcast fertilizing. Before planting the seed freshen up the soil by running a cultivator down the row. As to the fertilizer to be used. A series of experiments made in South Carolina demonstrated very positively that it is an easy matter to supply more plant food than the crop can utilize with profit. The maximum quantity of fertilizer that can generally be used to advantage on average land is such an amount as will furnish 50 lbs. of phosphoric acid, 15 lbs. of potash, and 20 lbs. of nitrogen to the acre. A fertilizer made of 1,200 lbs. of acid phosphate, 600 lbs. of cotton seed meal, and 200 lbs. of kainit will supply this need if applied at the rate of 800 lbs. to the acre. If peas have been previously grown on the land as a preparation for the crop and acid phosphate was applied to them both the acid phosphate and the cotton seed meal in the moisture may be reduced or a less quantity be applied per acre.

In laying out the land for crops see that provision is made for growing an abundance of forage crops, such as cow-peas, Soy beans, sorghum, millet (so called Pencilaria, which has been much advertised and recommended, is nothing more than the old cat tail millet), and in Southern Virginia and the States South Teocinte. Do not let the live stock have to depend for their long feed next winter on the blade and corn fodder made in the production of the corn crop. Southern lands will never be improved until more stock feeding crops are produced and either fed or turned under.

Mention the *Planter* to your friends.

## "ALL FLESH IS GRASS."

*Editor Southern Planter:*

Improved stock must have improved forage—palatable, wholesome, nutritious forage, and plenty of it.

Until better and cheaper winter forage plants are found than are now in common use in Alabama, and until better summer pastures are provided than such as our old fields afford, we cannot sell beef, butter and pork in our own markets in competition with Illinois and Kansas.

Our usual sources of winter forage, consisting of cotton seed, blade fodder and corn, are well enough as far as they go, but the trouble is they do not go far enough. In truth, they furnish an altogether inadequate supply, and are far too costly.

There is no denying that a man newly arrived from a stock country, and viewing Alabama from North to South through the windows of a railroad car, would not be favorably impressed by it as a stock farming country. He would naturally ask, What is there to feed stock on? and say, I see no green pastures—nothing but broomsedge and coarse weeds. Neither do I see any meadows of timothy and clover; nor, indeed, anything to take their places in supplying winter forage. Very likely some one would tell him that "here in the sunny South cattle do not need to be fed, or, at least, but very little." And maybe a diminutive fodder stack would be pointed out as the only provision necessary to carry a dozen head of stock through the balmy and beautiful winter of our Southland.

Is it not time that such nonsense was ended? Improved stock are only improved machines for turning forage into meat and butter. For "all flesh is grass," and instead of giving stock only enough to keep them alive, or "enough to do 'em," as the saying is, they ought to be fed to the full from the time they are born until they are ready for slaughtering.

It will not do for us to blindly copy the practices of stock farmers in other countries. Our conditions differ widely from theirs; and let me say right here that I fully believe our conditions, though different, are fully as favorable as those of the farmers of Illinois or Kansas. Our Alabama has just as grand possibilities as the very best of them. She has wonderful capacities in the stock food line. But like the iron and the coal in these mountains and valleys, they lie hidden, and it will take ingenuity and industry to develop them.

We must provide a bill of fare for our stock for each and every season here. No single grass, for instance, will afford pasture from spring to fall, as the "June grass," or Kentucky blue grass of the North does. I find Red top and Orchard grass the best for spring and fall pasture. I say "spring and fall," because our winter is too cold to keep them in active growth,

and they curl up to take a summer siesta during our hot season. Bermuda has no equal as a hot weather grass. It is a vegetable salamander, and I am sure it is a mystery to me that here in its own home it is not more highly appreciated. It is time we honored our own prophet; for no other grass known to botanists presages so much to the stockman of the South. It is my humble opinion that even the "June grass" of the North cannot compare as stock pasture with our Bermuda. It used to be said in Old Virginia that two months on a wire grass field, as Bermuda was called there, would fatten any run down mule or steer. Dairymen in the North have to supplement their pastures in the heat and drought of even their short summers by soiling with cut up corn or sorghum. But we of the South can do well in our long semi tropical summers if provided with plenty of Bermuda.

For the winter part of our bill of fare in stock food, after experimenting for several years, I have settled on Soy bean hay as a staple general ration for cattle, horses and hogs. As I find it, the Soy bean is the most reliable, the most productive, the most palatable, and, above all, the most nutritious of all hay plants. Neither is it very difficult to cure. It is much less so than field peas, and is in every way a fine superior plant.

In choosing forage plants, preference ought to be given to legumes, because they are not only rich in protein, but yield well on land poor in nitrogen, provided such land can stock them with the necessary parasitic microbe, as is now well known. In other words, the millets, sorghums, and fodder corn, must have nitrogen to produce a heavy yield, and that being the costliest, as well as the most generally lacking element in our Southern soils, the advantage of legumes will be the more apparent.

I have experimented with sand vetch and am greatly pleased with it. I am gradually extending the area of it on my farm. This takes time, as unless the soil be inoculated naturally or artificially, it is not worth while to sow it on common land expecting to obtain either hay, pasture or seed. Notwithstanding the drought of last summer, it grew waist high for me, and I threshed out several bushels of seed far superior in vitality to such as I could buy. As my soil is heavy and moist, a winter pasture is not of much value, but in dryer and warmer soils than mine, sand vetch can be of great service in helping out the winter ration. Doubtless it may be a substitute for orchard grass and red top in soils and situations too dry and warm for them, and thus provide stock food in the interval between hot and cold weather, as those grasses do for me. For such a purpose, I know no plant to compare with sand vetch. But our old friend rye must not be forgotten. The stockman will always find it a valua-

ble assistant in time of need. It does not gather nitrogen from the atmosphere, but it gathers it from the soil, where it otherwise would be leached out by the winter's rain (which is often of just as much importance), and then turns it over to us just when we most need it in the shape of green succulent cattle food in the early spring.

I have tried Essex rape; it has done well; but to my mind it has no advantage over rye. I have also tried Crimson clover. On damp, but not wet land it does fairly well. But it is far less reliable than sand vetch, which, while it stands cold as well as rye, also stands heat as well as corn. Seed of sand vetch plowed under (where it had shattered) in early July never came up until the following September. Then every grain sprouted, seemingly. Better still, where there was any moisture it sprouted, and withstood the terrible drought of last July and August unharmed, and now carpets the ground all over. With such a plant as that, together with Soy beans and Bermuda, there need be no excuse for hungry stock in Alabama. All the work in making and saving them can be done by machinery, while blade fodder, corn and cotton seed are gathered by costly and slow hand labor.

*Moseley, Ala.*

JOSHUA FRANKLIN.

The advice given in the above article is equally as adapted to Virginia and North and South Carolina as to Alabama.—Ed.

## HIGH CULTURE, OR THE INTENSIVE SYSTEM, AS APPLIED TO THE CULTURE OF CORN,

*Editor Southern Planter :*

There must be something radically wrong in the present system of fertilization for corn; or possibly the "wrong" may be in the composition of the fertilizer itself, as usually compounded for this crop. I think it is both. Why so? Because it is so common for one to read in experiment station bulletins and in the writings of some editors of farm papers, that "chemical or commercial fertilizers are not profitable when applied to this crop; that the increase obtained by their use will not repay the actual cost of fertilizer employed."

I suppose this is somewhat dependent upon the value (market price) of the crop when gathered. Throughout the entire South, it would not be going too far were I to say that there is never a single season passes when corn fails to sell as high as 50 cents per bushel, and oftener at 75 cents and \$1 per bushel.

I have oftentimes stated the fact, and now reiterate it, that chemical fertilizers get in their best work (that is, do the most good, give best results, and prove most profitable) in correcting known deficiencies in the soil. Used intelligently, and with this specific

object in view, their liberal use cannot fail to be both beneficial and profitable. If the so called "complete" fertilizers fail to give a profit, why use a complete fertilizer at all? It is entirely unnecessary for us to purchase the more costly nitrogen when we can raise our own needed supply in the field, right where we want it, and without the trouble and expense of hauling or distributing it, by means of the cow pea, clover or vetch. This is essential to good farming, to intensive and profitable farming, let the main reliance as a cash or money crop be what it may.

Corn needs an abundance of both nitrogen and potash, and where these are lacking, or deficient, a large or remunerative yield of corn cannot be obtained. With a clover-sod or cow-pea stubble, or indeed any other good sod to turn under, for the purpose of furnishing humus, retaining moisture, and also of furnishing the needed supply of nitrogen, but little if any more nitrogen will be needed than these will furnish, but where said humus is deficient, stable or lot manure becomes an actual necessity in order that best results may be attained. For best results, said stable manure should be reinforced by both phosphoric acid and potash. It is to be supposed that both clover and cow peas were fertilized with these substances previous to planting, as no really luxuriant growth of either can be obtained where these are deficient, and amount of nitrogen abstracted from the atmosphere is of course entirely dependent on paucity or luxuriance of growth of the manurial crop.

In the absence of a clover sod or cow pea stubble, instead of depending upon a paltry 200 pounds of a low grade (8-2-2) fertilizer, from 800 to 1 000 pounds of a fertilizer containing 2 per cent. nitrogen, 7 per cent. potash, and 6 per cent. available phosphoric acid should be applied per acre. This should be applied broadcast previous to breaking; the ground immediately broken deeply with two horse plow; then brought into fine tilth by a free use of the harrow.

I have found the ordinary high grade "vegetable grower," ready mixed goods, applied at rate of 500 to 600 pounds per acre on our rich bottom lands, to be pre-eminently satisfactory, obtaining a yield of 120 bushels per acre thereby.

The brack, creek or river bottoms are undoubtedly the best corn lands we have in the South. As they are more or less subject to overflow, they should not be broken until spring. I have found May the month for breaking these lands, and also the month for planting on these lands for maximum crop. There is quite a large amount of native fertility in our alluvials that deep preparation and intensive culture will bring out; but where maximum yields are desired, not only must the culture be intensive enough to make the largest possible quantity of this native fertility avail

able; not only should chemical fertilizers be used to the extent of correcting any excess, or making good known deficiencies in the soil, but when all this has been done, and not before, then the use of these same chemical fertilizers may be satisfactorily and profitably used in feeding the crop. Maximum crop yields actually demands the presence in the soil of an actual excess of plant food, in an easily available form, over and above any and all demands that the growing crop can possibly make upon it. Do not be afraid that if, from any cause beyond your control, you fail to get the full benefit of the manures applied the same season in which the application has been made, that they are irretrievably lost, for they are not, but will give evidence of their presence in the way of increased crops for at least the next five years to come.

Above objection might hold good with a renter or share worker, but not with a land owner. Take the crop yield (255 bushels of corn per acre) of Zechariah Drake, for instance: \$50 worth of stable manure and \$69 worth of commercial fertilizers were applied to the single acre. Four years afterwards, in a personal interview with Mr. Drake, I was assured by that gentleman that "the yield of oats the succeeding season on that acre was 150 bushels; and that it had not yielded less than two bales of cotton any year since; and that without the addition of fertilizing agents of any kind.

Mr. Alfred Rose, of Penn Yan, N. Y., succeeded in obtaining a yield of 213 bushels per acre with but 800 pounds of a high grade corn fertilizer, and costing but \$17.50, but the land of Mr. Rose was extra good, while that of Mr. Drake had previously been so desperately poor as to yield but five bushels of corn per acre, and had enjoyed the rather undesirable cognomen of "starvation's empire."

After Mr. Drake's experience, it would seem that it is needless to get out of heart with any ground simply on account of its poverty. I have myself seen and walked over this premium acre, and have no hesitation in saying that I have never been in a single State in this Union, nor even a single county of any of the States, but that I there found land that was naturally superior to this prize acre. Truly: "There is more in the man than there is in the land."

Burgess, Miss.

G. H. TURNER.

#### Wood Ashes and Fertilizer.

Is it proper to mix wood ashes and commercial fertilizer together?

Dinwiddie Co., Va.

SUBSCRIBER.

It is better always to apply the ashes alone first and work in, and then the fertilizer later. Ashes have a tendency to set free the ammonia in the fertilizer.—Ed.

## A GREEN CROP ALL SUMMER—CORN AND COW-PEAS.

*Editor Southern Planter:*

If corn be planted in drills 7 feet apart as early in the season as a good stand can be procured (for this climate about the first of April) and from six weeks to two months thereafter cow-peas be drilled midway between the corn rows and both well cultivated until the peas become too large to work, a full crop of corn and very nearly a full crop of peas can be grown.

The following is an extract from Bulletin No. 70, issued in 1901 by the Arkansas Agricultural Experiment Station: "The value of two successive crops of corn without cow peas sown in them was \$21.10, while the value of the two successive crops of corn, plus the value of a crop of cow-peas sown in the first crop, was \$33.54."

Here is an increase on the aggregate value of both corn crops of 64 per cent., to say nothing of the improvement of the land that resulted from growing the peas, and if peas had been grown in connection with the second crop of corn, the percentage of gain would doubtless have been much greater.

The question here arises, "Is it better to plant the corn in ordinary drills—say 4 to 5 feet apart—and sow the peas broadcast at the last working of the corn, or plant the corn and peas in alternate drills, as afore said?"

Prof. Massey expresses himself in *The Southern Planter* of June, 1901, relative to drills as follows:

"I am putting all my peas in rows this year and am rapidly coming to the conclusion that this is the best plan as a rule." He says nothing here, nor do I find an expression from him anywhere else, relative to growing corn and cow peas in connection.

When peas are planted alone, the drills, for forage or improvement purposes, may be 3 to 3½ feet apart. For bearing purposes they may be 3 to 6 feet apart, according to the kind of pea grown. In either case they should be well cultivated until the vines become too large.

Drills, in connection with corn, are preferable for several reasons: First. A saving of at least three-fourths of the seed necessary for broadcasting can be effected. An actual test has shown that 12 pounds of seed per acre in drills will produce a larger quantity of forage or shelled peas than a larger quantity, say 18 pounds, will, and it is believed will also produce a larger quantity than one bushel broadcasted. Second, Fertilizer applied to peas in drills, in connection with proper cultivation, will act far better than it will with peas that are broadcasted without cultivation.

When corn is planted, especially in the Southern States, where the season is long, provision should in-

variably be made for cow peas by adopting the wide row system.

A deep, loose bed of proper width should be provided for the corn by running a suitable narrow plow several times in the drills. A good dressing of stable manure may then be applied in the drills to which may be added 30 pounds of muriate of potash and 50 pounds of acid phosphate for each ton of stable manure, which will correct the excess of nitrogen in the manure; then mix well with the soil before planting. A sufficiency of corn should be used to procure a stand at one planting. When thinned, single stalks may be left in the drills 10 to 12 inches apart. This close distance, however, implies proper fertilizing and thorough cultivation.

Last summer I had corn in 7 feet drills 8½ inches apart, with rows of peas between, that eared well. With 12 inches distance, 100 ears to the bushel, an acre should produce 62 bushels of corn, and with 10 inches distance 74 bushels.

The corn should receive one or more deep cultivations, provided that the roots are not materially broken. A belt of proper width midway between the corn rows may be plowed deep with some suitable narrow plow up to the time the peas are planted.

### FERTILIZER FOR PEAS.

Mix 1600 pounds of acid phosphate with 400 pounds of muriate of potash to make a ton. This mixture will contain 10 per cent. each of potash and phosphoric acid. Apply 600 pounds per acre on a belt about a foot broad midway between the corn rows and mix with the soil, preferably a few weeks before seeding.

From 30 to 40 pounds of nitrate of soda per acre may be added; it will give the young plants a good send off.

In order to utilize the wide spaces, it will be necessary to plant a rank grower. The Red Ripper, Wonderful and Clay peas, in the order named, appear to be among the rankest growers. The past season I grew the Wonderful with excellent results. With single stalks, 3 feet apart in the drill, they covered the ground to a sufficient extent to completely smother the crab grass, and also climbed the corn stalks to a considerable extent. They appeared to yield better than those in adjacent rows of half the distance, and if 4 feet distance had been given, I believe that they would have yielded still better; they were well fertilized. These peas for bearing purposes are usually left much too thick. Six to eight quarts per acre in 7 feet drills will be ample for forage or improvement purposes, while for bearing a far less quantity will be needed. Plant about the 15th of May. From 20,000 to 35,000 pounds of green pea vines can easily be grown per acre. The smaller quantity, 20,000

pounds, will draw from the air and store in the vines about \$15 00 worth of nitrogen. When the vines are turned down, after maturity, said nitrogen will be utilized by the next crop.

Cow-pea hay is far too rich in protein to be economically fed alone. Consequently it should be mixed with timothy or some similar hay in equal parts, or the timothy may be mixed with the pea vines in the proportion of 7 to 6.

Shredded corn fodder (the entire plant, less the ears of corn,) may be used in lieu of the timothy.

*Carthage, N. C.*

BRYAN TYSON.

### GRASSES AND LIVE STOCK HUSBANDRY— BERMUDA GRASS.

*Editor Southern Planter:*

The interest manifested by Southern farmers in questions relating to grasses and live stock farming is indeed very gratifying. There is no question that live stock farming, when properly conducted, is profitable, and will enable the farmer to improve the fertility of his soil. I have recently had occasion to study the amount of commercial fertilizers used in the various States of the Union, and find that in the great live stock growing sections of the country the soil is richer now than it was twenty years ago, while commercial fertilizers are practically unknown to the general farmer. On the other hand, in those parts of the country where live stock are not an important feature of farming, the soil is for the most part in a sadly depleted condition and the commercial fertilizer bill amounts to 5 to 10 per cent. of the total value of the crops produced. The correspondence of this office indicates that the farmers of the South are thoroughly interested in live stock farming, but, like all conservative men, they wish to learn all they can about the subject before making any radical changes in their system of farming. For many years past the writer has taken every opportunity to visit successful farmers wherever they might be found and to learn as much as possible concerning their methods, and he is convinced that more valuable information can be acquired in this manner than in any other. It is a custom in this office, when we learn of a successful farmer whom we cannot visit, to secure as much information from him as possible by correspondence and to use this information for the benefit of other farmers.

From what we have learned in this way concerning results that have been achieved in the Southern States, there seems no question that, on the better class of soils, Bermuda is the best pasture grass so far available. It also seems that in many places burr clover and hairy vetch may be established on Bermuda sod, both of which furnish valuable green feed during the winter.

Occasionally we meet a farmer who is afraid of Bermuda because it is somewhat difficult to eradicate. Personally, the writer believes that this fear is not fully justified. It is true that Bermuda is tenacious of life, and this is one reason why it is so valuable; but it is not difficult to eradicate if one will take the trouble to perform the necessary labor. In many places it can easily be eradicated by growing a crop of winter grain, preferably oats, sown very thick, cutting this for hay and following with a thickly sown crop of peas. Two seasons' cropping of this kind has completely eradicated Bermuda in several cases with which the writer is familiar. Fortunately, this method of treatment is not expensive, and yields two good crops a year.

Occasionally the assertion is made that stock do not do well on Bermuda pasture in the summer. I have before me a letter from Mr. J. D. Herring, of West Carroll Parish, Louisiana, an extensive cattle grower, in which there is some valuable information on this point. He says:

"I had enclosed a pasture containing 140 acres, about 100 acres were set to Bermuda and 40 acres woodland; upon this I put 100 head of two year old cattle about the first of April. These cattle had been used to a large range. Up to the 1st to 15th of July they did well. After that date they began to fall off and look bad. About September 1st I took them off the pasture and put them in the cane brakes for the winter. I think they were much stunted in their growth by keeping them on the pasture the last two months. The Bermuda becomes hard and woody in the late summer, and I don't like it for pasture after July 15th unless there is much rain to keep it; rowing. I had some 10 to 12 milk cows on a pasture last summer that contained 15 acres Bermuda and 40 acres woodland, and they did very well all summer. I advise all farmers to have a Bermuda pasture. It makes good hay, and cattle will do well on Bermuda hay all winter; besides, it is a good hog pasture. I think it feasible to pasture cattle on Bermuda during the spring and summer and winter them on alfalfa, cow pea or Bermuda hay, and finish them for the market on cotton seed meal and hulls. I think the bad effect of Bermuda in late summer could be overcome by mowing the pasture before the Bermuda goes to seed."

I wish particularly to call attention to the recommendation made by Mr. Herring that in order to prevent Bermuda from becoming hard and wiry, it should be mowed so that stock may have the benefit of the fresh growth that follows the mowing. Where it is practicable to do so, it is probable that there would be an advantage in dividing the pasture into three or four fields, so that stock might; raze one of them close and then be turned into another. If the grass got too wiry before the stock had gotten over all of the pasture, the part not yet grazed might be cut for hay. In this way it ought to be possible, at least in



seasons of sufficient rainfall, to provide stock with fresh Bermuda pasture during most of the summer.

W. J. SPILLMAN, *Agrostologist.*

*U. S. Department of Agriculture.*

### THE DIFFERENCE IN RESULTS FROM USING A BALANCED AND AN UNBALANCED FERTILIZER

*Editor Southern Planter :*

The following is the result of a recent test with corn :

Plot 1—No fertilizer.

Plot 2—An unbalanced fertilizer applied in the drill at the rate of 450 lbs. per acre and well mixed with the soil.

Plot 3—The same quantity (450 lbs.) of the unbalanced fertilizer after suitable materials had been added to properly balance it.

The fertilizer for plot 2 contained, as per analysis, ammonia 2 per cent. (equivalent to one and eleven seventeenths per cent. of nitrogen), phosphoric acid 8 per cent., and potash 1 per cent.

The fertilizer for plot 3 was properly balanced for corn by adding to each sack of 200 lbs. of the unbalanced fertilizer, or, at that rate, nitrate of soda 6 lbs. and muriate of potash 30 lbs. (120 lbs of kainit in lieu of the muriate of potash could have been used). Said additions changed the 2 per cent. of ammonia to 2 per cent. of nitrogen, and the 1 per cent. of potash to 7 per cent. of potash. The new fertilizer then contained nitrogen 2 per cent., phosphoric acid 8 per cent., and potash 7 per cent., which is a fairly well balanced fertilizer for corn. There was still an excess of from 1 to 2 per cent. of phosphoric acid, but it did not hurt anything. It would, however, be better to avoid all this trouble by compounding properly at the start.

The three plots received the same treatment, being fairly good.

Plot 1 made little growth, the soil being poor.

Plot 2 largely exceeded the growth of plot 1.

Plot 3 largely exceeded plot 2, producing more than double the corn.

The fertilizer used on plot 2 was manufactured at Wilmington, N. C., and is largely used in this State for corn, cotton and other crops.

The six Southern States east of the Mississippi, commencing with Alabama, use annually about one million five hundred thousand tons of commercial fertilizers, which, at \$20 per ton, amounts to \$30,000,000.

It is now safe to say that by reason of a large proportion of said fertilizers not being properly balanced for the crops to which they are applied the farmers frequently sustain a loss of at least one half of the money invested.

Cotton requires a fertilizer containing nitrogen 3 per cent., phosphoric acid 8 per cent., and potash 3 per cent. (4 per cent. on lighter soil). If a fertilizer is properly compounded for corn, it is not suitable for cotton, nor is a fertilizer that is suitable for cotton suitable for corn. Hence, the necessity for farmers to procure the necessary fertilizer materials and do their own mixing. A saving of 25 and more per cent. can frequently be effected and a better fertilizer produced than the ready mixed goods.

There is not a known crop grown that does not require in the fertilizer more than 1 per cent. of potash, yet many fertilizer brands are on the market having 1 per cent. and even less.

I would, however, emphasize the fact that good results cannot be procured for a series of years, say five to ten, by the application of commercial fertilizers alone, no humus in the meantime being produced. In this case, the soil may even become poorer, however abundant the applications of a well balanced fertilizer may have been. Therefore, the rotation should be such that an occasional legume crop, such as clover or cow peas, will be grown and turned down at maturity. Said plants will draw the needed nitrogen from the air, and the rotted vegetable matter will properly increase the supply of humus.

The ranker the growth the larger will be the supply of available nitrogen and humus, hence it usually pays well to fertilize liberally.

If the soil is deficient in the mineral elements of fertility (phosphoric acid and potash), they should be applied direct; they cannot be drawn from the air. For cow peas, the following materials for an acre may be mixed, applied in 3½ feet drills and well mixed with the soil, preferably a few weeks before seeding. Acid phosphate, 285 lbs. and muriate of potash 75 lbs.; 300 lbs. of kainit may be used in lieu of the muriate of potash.

For clover, add 10 lbs. of muriate of potash or 40 lbs. of kainit to the above.

The above dose can be advantageously doubled. I have used for cow peas in drills 1,200 lbs. per acre of a fertilizer, substantially the same as the above, with the best of results. In this case the fertilizer was applied in a furrow on either side of the young plants soon after they came up. When planted in drills and cultivated, one peck of seed per acre will be ample for forage or improvement purposes, thus affecting a saving of three-fourths of the seed usually required for broadcasting.

If from 30 to 50 lbs. of nitrate of soda be added to the fertilizer, it will give the young plants a good send off.

*Moore Co., N. C.*

BRYAN TYSON.

Whilst the mentioned proportions of the different

ingredients of the fertilizer used fairly represent the needed requirements of the crops, yet experience has shown that more or less of these ingredients may be needed to secure the best results, from the fact that lands vary so much in their different content of fertilizing material present naturally, and also in the availability of that present. Especially is this the case with the potash in this State. Even in Eastern Virginia, the light sandy lands, usually largely deficient in potash, have been found not to respond profitably to large applications of that mineral. In the Western and Central parts of the State, potash is usually present naturally in sufficient supply for all crops except tobacco. Nothing but actual tests with the land can determine exactly what is the proper quantity to supply. The great need of all lands in the South is vegetable matter. If this be supplied, then the needs in other respects can be easily ascertained. This vegetable matter will largely make available the natural supplies of mineral plant food in the soil, and thus render unnecessary heavy applications of mineral food.—Ed.

### MY EXPERIENCE WITH ARTICHOKEs.

Having read a good deal in *The Southern Planter* and other agricultural journals about the value and healthfulness of artichokes for hogs, I concluded to make a trial of them, hoping to raise pork at a minimum cost. I bought seed and planted at least an acre, got a good stand, and cultivated well, and they made a heavy yield. I turned the hogs into them about the 20th of October, expecting to see them go for the tubers with voracious appetites, but to my surprise and disgust they would not root for them nor eat them when pulled out of the ground. I did not feed them anything else for several days, but they all seemed to have made up their minds to starve rather than eat artichokes. I then fed on corn till 1st of November.

I then put them in a floored pen, feeding them only new corn for ten or twelve days. Thinking they would then enjoy a change of diet, I again gave the artichokes to them. They rooted them around and turned up their noses and seemed to be as much disgusted as myself. So I am done with the artichoke.

Mecklenburg Co., Va.

W. RUSSELL

This is the first time in our long experience that we have ever had a complaint that hogs would not eat artichokes. These hogs must have been very fastidious animals. We think we could have got them to eating them. If a few of the tubers had been sliced up and put in a trough or on a floor and a handful of meal spread over them we believe the hogs would at once have taken to them. We know many people who feed them every year and make cheap and good pork on them. Try them again friend, and just tempt the hogs to taste them. They will find them good eating and will not fail to take to them. These fastidious appetites require to be brought down.—Ed.

### ITALIAN RYE GRASS.

*Editor Southern Planter:*

This is said to have been the first grass cultivated separately for agricultural purposes. It is first mentioned in a book published in England in 1611, and seems to have been about the only grass cultivated for a hundred years afterwards. To those who are not familiar with it, the following description will be better understood than the technical terms of the botanist: The culms (stalks) grow from two to three feet high, and are very full of leaves. The panicle (head) is six inches or more in length, contains from seven to eleven seeds, and bears a striking resemblance to those of couch, or quack grass.

A well informed writer says: "It occupies the same place in England that timothy does with us, and is there esteemed on the whole, higher than any other species of grass." Its name, Italian rye grass, is derived from the fact that its native habitat, or home, is on the plains of Lombardy, where broad and extensive areas of pasture land are frequently inundated by mountain streams that intersect them. In irrigated meadows, it is undoubtedly superior to any other grass. It thrives well in the moist climate of Great Britain without irrigation, and no doubt would flourish along the rivers in the United States where the land is subject to yearly overflow.

Prof. Phares, of Mississippi, some years since, said: "This year Italian rye grass stands drouth well, and grows most luxuriantly in the Southern States. If not kept well grazed or mowed, however, the leaves cover the ground so deeply and densely that an excess of rain in very hot weather in the extreme South causes it to rot suddenly, destroying even the roots."

If it will flourish well in the South, farmers could afford to take the risk of having it rot on the ground occasionally, as the benefit to the land by shading and rotting like surface manuring would more than compensate for the cost of the seed and labor of seeding. It may be, however, that Prof. Phares was too sanguine about its value in the South.

Prof. T. M. Tracy, of the Mississippi Experiment Station, says, in the Report of the Department of Agriculture for the year 1890: "From five sowings in the field of Italian, English and perennial varieties, we have nothing left except an occasional plant. None of them seem able to stand our summer, and cannot be recommended for the Southern States."

As long ago as 1860, the Rev. C. W. Howard, in a letter printed in the Patent Office Report, said: "The Italian seed was sown last spring; they came up and grew vigorously, but almost entirely perished during the severe drouth of the past summer."

At the Wyoming Experiment Station, out of twenty different kinds of grass seed selected for trial, Prof. Dyce McLaren gives Italian rye grass the second place in the order of excellence.

The Report of the Department of Agriculture for 1870, places it among the best grasses as regards resistance to drouths and power of endurance when subject to the scorching sun and parched soil.

"The grasses," says the Library of Universal Knowledge, "are distributed over all parts of the world. Some are characteristic of the warmest tropical regions and some of the vicinity of perpetual snow; but

they abound most of all, and particularly in their social character, clothing the ground with verdure and forming the chief vegetation of meadows and pastures in the northern temperate zone. There is no kind of soil that is not suitable to some or other of the grasses, and while some are peculiar to dry and sterile soils, others are only found on rich soils with abundant moisture; some grow in marshes, stagnant waters or slow streams; some only on the sea coast. Some grasses are annual and some perennial. The most important fodder grass in Britain is the rye grass."

The *Encyclopædia Britannica* says: "Italian rye grass and red clover are now frequently sown in mixture for soiling, and succeed admirably."

A Kentucky farmer gives the following mixture of grass seeds to be sown for pasturage: Blue grass, 8 lbs.; orchard grass, 4 lbs.; timothy, 4 lbs.; re clover, 6 lbs. And to this, Dr. George Vasey says add Italian rye grass 4 lbs., which, altogether, will make heavy seeding, but heavy seeding is what is needed to make a good pasture. For pasturage, he recommends a variety of grasses, as stock like a variety, and thrive better on it.

There is no question about the excellence of Italian grass in Italy and England, but the testimony concerning its value in this country is conflicting, and "when doctors disagree" there is no way but for farmers to experiment for themselves.

J. W. INGHAM.

Italian rye grass has been very successfully grown on the James River low grounds and also on some other of the river bottom lands of the State. On these lands it makes a crop which can be cut two or three times unless the summer is very dry. We have grown it largely in England on similar lands, and always with great success. It is one of the best grasses for growing under irrigation, and will yield four or five cuttings in the year. It is largely grown on the sewage farms which have been established in England for the disposal of sewage from the large cities where sewage is not allowed to be turned into the rivers unless first purified by some means. The filtration of this sewage, by using it for irrigation purposes on sewage farms, has been found to be one of the best and cheapest methods of complying with the law.—Ed.

### IMPROVING MOUNTAIN LAND.

*Editor Southern Planter:*

I think it is almost impossible for anybody not perfectly familiar with Mr. Reynolds' soil to give the desired information. Mr. Reynolds informs us that his soil is deep and black, and that timothy grows to perfection. This generally indicates that the soil is rich in humus, and it is therefore questionable if blue grass, which makes other demands on the soil than timothy, will make a good sod there.

It is quite true that timothy alone, or even as the prevailing grass in a pasture, is not as desirable for cattle as other grasses are. Timothy is tender when

quite young, but soon gets hard and they hay is entirely too hard for cattle, besides that it does not possess the feeding value of some other grasses. Whether it is advisable to plow the sod up depends upon the denseness of the sod, its being free from obnoxious weeds and its lasting qualities. If the sod is weedy, it should be plowed up, and the best plan will probably be to fallow the soil. In a climate like ours, fallow is generally not given a regular place in the rotation, but if I want to clean a soil quickly and thoroughly and be sure of the success, I prefer it to any other method. It should, however, be taken into consideration that on some soils it is a very difficult matter to get the new sod as dense and lasting as the old sod. If the soil is not weedy, some other method of improving the sod without plowing it up may be resorted to.

Another way of improving the sod is to top dress it with manure or fertilizers and sprinkle small quantities of suitable clover and grasses over it. Horse manure deserves for cattle pastures the preference, but as it can seldom be obtained in sufficient quantities, other manure or commercial fertilizers will have to be substituted. Next to manure stands hard wood ash. These bring out the leguminous crops in a remarkably short time. The phosphates and potash salts will have to be applied early in fall, as it has often been noticed that grass top dressed with these fertilizers is objectionable to cattle. Without manure or fertilizer, I think, it will hardly be possible to bring about a change in the pasturage. The fine growth of the timothy, which at the present time occupies the soil, is pre-eminently due to the cause that the soil supplies the food which the timothy demands, in liberal quantities. If other grasses with different demands on the plant-food of the soil shall take the place of the timothy, or at least to a certain extent, it will be necessary to change the plant food, by applying liberal quantities of the food demanded by those plants. Without this change, I think, it will hardly be possible to obtain the desired effect.

If it will be profitable to make this change on a permanent pasture, only experience can tell. Generally it is not. It not only requires considerable manure or fertilizer to maintain an artificial pasturage, but the other land, set aside for the growing of crops, being continuously cropped, will also require more manure. On most soils which do not produce a natural good sod, it is decidedly more profitable to have crops and pasture in rotation. One prepares the soil for the other. If the crops are well fertilized, there is sufficient available plant food left in the soil to produce a good pasture. If the soil is seeded with a variety of clover and grasses, these pastures will be for three or four years all that can be desired. The grass is also

of a finer texture, sweeter and better than that of a fertilized permanent pasture, and is also better liked by the stock.

But as I have sa'd before, it is a difficult matter to suggest anything without having seen the soil and the seed. There are so many products which have to be taken into consideration in the management of a farm that they often outweigh the profit from a desired change in one of the branches.

*District of Columbia.*

H. WINKELMAN.

### NITRATE OF SODA AS A FERTILIZER FOR TOBACCO PLANT BEDS.

*Editor Southern Planter :*

As the time is close at hand when the tobacco raiser will have to prepare his plant bed, with your permission, I will give my experience with nitrate of soda as a plant grower. Last spring I prepared and seeded my beds as usual and put about 75 lbs. of regular tobacco fertilizer to the hundred square yards, which is considered a liberal application. Both beds were on a good southern exposure, but the situation was rather dry for the light rains of the latter part of April and the first of May, and my plants came up very scattering, and these few were growing very slowly, and my prospect for a crop of tobacco looked very blue. I had to do something, and that very quick, or miss a crop. I sent to Richmond for a sack of nitrate of soda (200 lbs.), for which I was charged at the rate of \$50 per ton cash. I top dressed my beds with this at the rate of about 10 pounds to the hundred yards, and then put on a light sprinkle of straw to hold the moisture. We had a light rain that night, which dissolved the nitrate, and in a week the plants that came up first and were the size of a quarter when I dressed them with the nitrate, were six inches high, and the darkest green I ever saw. In the meantime the others had come up, and were large enough to plant in half the time it usually takes a plant to grow in, and all of them were of that healthy, robust character that take root and grow off so nicely, as the tobacco raiser likes to see.

Well, I would not have known whether it was the nitrate of soda, the straw or the rain, had I not left out a strip through the middle of each bed with no nitrate of soda on it, but this told the tale. The plants on this strip were not large enough to plant by the first of July, and they were then little yellow, tough things compared to the others growing within a foot of them. In the meantime I had finished planting my crop of 60,000 hills by June 15th, and a week later I think I could have planted as many more out of the same beds, whilst another bed close by, that had a good application of guano and hog-pen manure, had dried up

after the first drawing. I think that the plants where the nitrate of soda was applied, after leaving the ground, without exaggeration, grew at least an inch a day, and this vigorous growth continued in the beds until August, dry or wet.

I think the best time to apply nitrate of soda to plants is about the time they come up, as it acts at once; it is not needed earlier than this. A heavy dew is sufficient to dissolve it. Care should be observed in top dressing with it not to put it on when there is any water on the plants, as it will certainly harm them. I never expect to try to raise plants in the future without it, as it acts more like magic than anything in the way of fertilizer that I have ever tried. I think plants can be produced at least two weeks earlier by the use of it.

*Cumberland Co., Va.*

H. P. BAKER.

### HUMUS.

*Editor Southern Planter :*

How shall we teach our farmers the necessity for a constant accumulation of humus in the soil? One of the greatest evils we labor under is the constant wasting of humus out of our lands. They are farmed year in and out without any regard to gaining humus. We will have to change our plans entirely or our lands will get so poor they will not pay for the plowing. Land is put in corn year after year, or corn and then oats, and nothing added to help it. Every farm should have so many acres (say ten or twenty) every year sowed in rye early in fall to fallow in the spring for corn, and a like area to be sowed in peas in spring to fallow in fall for wheat, oats or grass. If this plan was followed every year, and some good fertilizer used with every crop, our lands would soon begin to pay a profit for working. Fertilizers on lands devoid of humus are almost useless. Land with plenty of humus in it will stand dry spells so much better, be easier improved and work much easier. All persons renting out lands should stipulate in their contracts that all grain crops grown should be preceded or followed by a humus making crop. Then, if every few years a good dressing of lime could be added on top of a good fallow of vegetable matter, our farms would soon take on new life and the country would look far better than it does now. Some may say peas are too high to sow and fallow. Try corn; I am told by some that it does nearly or quite as well as peas. Many of you have noticed wherever a shock of corn stood late in the field that the next crop grown on the land will show where those shocks stood. Even where your plows come out on the end to turn around the land shows a better growth of vegetable matter.

*Henrico Co., Va.*

COUNTRY.

It is not the corn that improves the land, but the shading of the soil by the shock which promotes nitrification in the soil. Corn will not improve the land like a leguminous crop does. It takes nitrogen from the soil instead of adding it.—Ed.

## ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter* Richmond, Va., not later than the 15th of the month, for replies to appear in the next month's issue of the *Planter*.

## Fertilizer for Peanuts and Corn.

1. From what source is it best to obtain nitrogen for Spanish peanuts and for corn?
2. From what source is it best to obtain phosphoric acid for each of the above crops?
3. From what source is it best to obtain potash for each of the above crops?
4. Do you think a field on which Spanish peanuts were grown last year, on which barn yard manure and guano was used, would be benefited and the yield of corn increased this year by application of lime? If so, what quantity to the acre should be used?

Please furnish me formulas for the above crops, and what quantity of mixture to the acre should be used.  
Sussex Co., Va. GEO. D. GRIZZARD.

1. Cotton seed meal or dried blood are good sources from which to obtain nitrogen for the peanut. It, however, does not call for the application of much nitrogen, as being a legume it can obtain its supply from the atmosphere after it once gets a start. It is, of course, necessary for it to do this that the land should have in it the microbe peculiar to the peanut plant. This, however, is always found more or less abundantly wherever peanuts have been grown in the past few years. We deal with the fertilizer for a corn crop in our reply to No. 4.

2. The phosphoric acid is cheapest and best supplied from acid phosphate.

3. Potash can be had from either kainit or muriate of potash, but we should prefer the muriate, as we do not think the salt in kainit is of any value to the plant.

4. We think it very doubtful if lime applied now would be of any service to the corn crop of this year. If applied in December or January it might have helped it. The action of lime is largely mechanical and takes time to become effective. Directly, it is of little value as plant food, but indirectly it helps much in correcting acidity in the soil and in liberating potash and phosphoric acid. For these effects it must have time, as it acts slowly. We have no confidence in advising the use of any commercial fertilizer on the corn crop. A critical examination of many experiments conducted in many corn States justifies us in saying that rarely has the application of commercial fertilizer been profitable on the corn crop. It often results in increasing the yield, but rarely sufficiently so to pay for the fertilizer. If used we would apply only acid phosphate—say 300 lbs. to the acre. The land you refer to will, no doubt, have sufficient nitrogen stored in it by the peanut crop to meet the needs of a corn crop. Potash has rarely been found necessary in

this State for corn, or, indeed, for any crop except tobacco and Irish potatoes. For the peanuts mix:

80 lbs. acid phosphate,  
300 lbs. cotton seed meal,  
50 lbs. muriate of potash,

and apply this quantity per acre. You, of course, know that the peanut requires lime for its successful growth and the perfection of the nuts. About 25 bushels of lime per acre should be applied every three years.—ED.

## Improving Land with Peas and Crimson Clover.

I am a subscriber to your valuable journal, and have read with great interest therein, as well as in other agricultural journals, what has been said and encouraged along the line of "green manuring" and the cultivation of nitrogen producing plants, with a view to raising, with the least possible cost, impoverished soils to the highest state of cultivation.

I have a plot of from six to eight acres of land—light grey soil, fairly red subsoil, land level, no gauls, but thin—very responsive to fertilization. I desire to prepare this piece of land for corn for the year 1904, and it has occurred to me that the proper course to pursue will be to sow it to peas this coming spring and either mow the vines or turn them under and follow with Crimson clover, to be turned under during the spring of 1904, and then plant to corn.

1. Will this be practical? If so,
2. Will it be proper to mow the peas and feed to stock, or plow them under?
3. Should the peas be sown broadcast, or should they be drilled?
4. Should it be proper to drill peas, should the fertilizer be drilled or should it be broadcast?
5. If broadcasted, what number of pounds of fertilizer should I sow to the acre, and kind?
6. If broadcasted, what number of bushels of peas should be sown?
7. Should it be proper to follow the peas with clover, how should the seed be applied, and what number of pounds to the acre?
8. What kind, and what number pounds of fertilizer should there be used in connection with the sowing of clover?

Nottoway Co., Va.

W. M. WHITE.

1. Yes; entirely so, and most proper.

2. As to whether the peas should be cut and fed to stock depends on the condition of the land. If almost completely devoid of humus or vegetable matter, we would say let the vines become nearly ripe and then plow the whole crop down; but if the land is not so poor as to call for all this vegetable matter, then cut the crop, leaving a tall stubble, and plow this down.

3. On such a piece of land as you describe we would sow broadcast. If the land was in better condition we would drill them.

4. Sow the fertilizer broadcast.

5. Apply 300 or 400 lbs. of acid phosphate and 50 lbs. of muriate of potash per acre.

6. A bushel or a bushel and a half of peas will be

sufficient broadcast. If drilled, two pecks or less will suffice.

7. Yes; follow the peas with Crimson clover. After plowing the peas or stubble down harrow the land, then sow 12 lbs. of the clover seed per acre and cover with a smoothing harrow or a bush harrow.

8. We would give the clover 250 lbs. per acre of acid phosphate, sown broadcast, after the land was plowed and before harrowing.—Ed

### Hogs Pasturing in Corn Field.

Can you, or any subscriber, give experience with regard to turning hogs on corn, as described on page 89 of *Planter* for February. I intend growing some acres of soja beans for this purpose. Would half corn and half beans make a better pasture? I fancy hogs would eat corn first and likely waste considerable.

Amherst Co., Va.

THOMAS HOWELL.

We have had no personal experience in hogging down a crop of corn in the way suggested. Shall be glad to hear from those who have. We have a subscriber who grows corn and Soy beans together, and turns his hogs into the field after the beans have podded and begin to ripen. Before doing so, he feeds the hogs Soy beans pulled from the field for a week or ten days. After they have acquired a liking for them, he says they may be safely turned into the field and will not trouble the corn until the beans are eaten. Corn and beans grown together make an excellent hog pasture. The two crops make a balanced ration. The one is rich in protein, the other in carbohydrates.—Ed.

### Renewing Pasture.

We have a blue grass meadow, which we have recently obtained, and which has been pastured excessively. The blue grass is very thin over a good portion of it, and weeds have sprung up in such places. Would it be better to plow it and sow to cow peas, cut them for hay, then turn under the stubble, and seed with a mixture of grass seed suitable for a permanent pasture? If so, what seeds had best be sown or would it be better to disk it out and sow to grass this spring?

Loudoun Co., Va.

W. M. M.

We would advise that the field be plowed up and deeply and thoroughly worked, and then be planted in cow peas. We would help these peas to make a heavy crop in order to smother all weeds by giving them 200 or 300 lbs. of acid phosphate per acre. We would cut the crop for hay and then plow down the stubble, say in September. Work the soil very fine, and fertilize with bone meal, potash and nitrogen and seed. In our article, "Work for the Month," in this and the last issue, will be found full information as to the varieties of grass to sow. A meadow which has been run so long as this one, and which is badly infested with weeds, can never be made a satisfactory sod except by starting completely afresh.—Ed.

### Stump Pullers—Sweet Potato Slips—Tomato Fertilizer.

1. I see advertised in the *Planter* four different kinds of stump pullers. I would like to know if they do the work all right, and the one which is the best. I have about 15 acres to clear of pine, about 12 or 15 inches across the stump. Would they be the right thing to use in clearing it?

2. I would like to know if there is a machine to transplant sweet potato sprouts—run the row, distribute the fertilizer, list the land and set the plant all at one time; if there is, where can it be bought and what is the price?

3. I would like to know how to mix the chemicals to make the proper fertilizer for tomatoes. I have not been growing tomatoes, and don't know what to use.

Accomac Co., Va.

T. D. MARTIN.

1. We have excellent testimonials as to the effectiveness of the different stump pullers advertised in our columns, and we know many who are using them. One man prefers one make, and another the others. Send for information to the advertisers.

2. The McSherry Manufacturing Company, of Middleton, Ohio, advertised a machine for this purpose in our columns last year and will do so, we believe, again this year, probably next month.

3. The following ingredients will make a good tomato fertilizer:

200 lbs. nitrate of soda.

700 lbs. cotton seed meal.

840 lbs. acid phosphate (13 per cent.).

260 lbs. muriate of potash.

2000 lbs.

Apply from 300 to 500 lbs. to the acre.—Ed.

### Peas for Hogs.

Will you kindly tell me what is the best pea to sow to raise peas to turn hogs on in the fall to fatten them? How many hogs could I run to the acre? Will it injure or improve a piece of land to put it in peas year after year, and eat them off with hogs? Would I raise a pretty fair crop of peas without fertilizer on clay land that will produce about two or three barrels of corn to the acre?

Albemarle Co., Va.

J. L. DRYDEN.

Either Black Clay or Whippoorwill peas make the best hog pasture for your section. You would not find that the peas would continue to produce a good crop grown year after year unless helped every year with acid phosphate and potash. Peas get their nitrogen from the atmosphere, but are large consumers of phosphoric acid and potash, which, if not present in available form in the land in abundance, must be supplied or the land will soon be impoverished.

You will not be likely to make much of a crop of peas on such land as you describe without the application of 200 or 300 lbs. of acid phosphate.—Ed.

### Cow-Peas and Corn as a Fodder Crop—Crimson Clover—Sulphur for Stock.

Last June I sowed five acres of cow peas and corn with drill for hay. When the fodder was matured I cut the crop with a wheat harvester, making small, loose bundles. I shocked it in the same way as wheat, putting four to six bundles to the shock. It cured out nicely and was ready to put in bulk in time for seeding the land to wheat. It made an excellent balanced ration, and was easily and cheaply handled. The corn stalks did not attain sufficient size to make shredding necessary for feeding in the barn.

Should any of your readers try this they might find it necessary in case of warm, wet weather during curing to cut the bands on the bundles to prevent moulding inside. In this event I would suggest rebinding in larger bundles for convenience in handling. I had no trouble about this.

1. So well pleased was I with the experiment that I shall increase my acreage next season if you will help me over an obstacle. The fodder on very fertile soil will grow too high to cut with harvester unless sown very thick, in which case it will crowd out the peas. Do you know of any plant of good feeding value that will overcome this difficulty?

2. What do you know of the feeding value of Crimson clover hay? Is there any danger in feeding it to stock? Will the crop produce second growth like red clover when first growth is cut?

3. Is there any danger in feeding flowers of sulphur to stock carrying their young?

*Culpeper Co., Va.*

A. G. PARR.

1. Many of our subscribers use sorghum with the peas instead of corn, and find that it makes a finer and shorter stalk and nicer feed. Possibly one of the millets, either German or Cat Tail (*Pencilaria*) would make even still finer and shorter stalks, and they both make good feed, and would, we think, mature along with the peas. We would like a report on this, if tried.

2. Crimson clover makes excellent green feed cut when in bloom. It also makes a nice hay if cut when in bloom or just when coming into bloom. If not cut until the seed forms it is dangerous to feed to horses, as the hulls of the seed mat into balls in the stomach and cause stoppage of the bowels. We have had balls as large as an orange taken from the bowels of horses which they killed. We have, however, never heard of the hay injuring cattle in this way. It will not make a second growth.

3. We have never heard of any injury from sulphur. It should not be fed in cold weather when animals are exposed to the weather, as its action is largely on the skin and makes the animals sensitive to changes of temperature.—ED.

### Cow-Peas and Corn.

Can you, or any of your correspondents, give me any information as to the efficacy of Kaffir corn or sorghum in serving to hold up cow pea vines when mixed with the peas when sowing with drill? If so,

then which is best, Kaffir corn or sorghum, and the proper quantity of either to sow with the peas per acre in order that the growth of the corn or sorghum may not grow so high as to prevent their harvesting with binder,

*Vance Co., N. C.*

J. P. TAYLOR.

In our October, 1902, issue we replied to a very similar enquiry to this one supplementing what we said in our July issue on the same subject. We have many subscribers who have for years adopted the practice of growing peas and corn and peas and sorghum or Kaffir corn together, and are well pleased with the results, especially when used for filling the silo. Personally, we prefer to mix cow-peas and sorghum, as making a better and richer feed than peas and corn, though probably the corn would make the heavier crop, and if intended to be made into ensilage would be quite as cleanly eaten up. Kaffir corn would do equally as well as sorghum or corn as a supporting crop for the peas, but does not make as rich feed. The advantage it possesses over sorghum and corn is that it withstands drought better. Experiments made at the Delaware Station seemed to demonstrate that the mixing of the peas with corn did not result in increasing the yield so much, but that it resulted in making a better balanced ration for stock without materially increasing the cost, the only increase in cost being the cost of the pea seed, say 50 cents to \$1 per acre. We refer the enquirer to our July and October, 1902, issues for fuller information.—ED.

### State Grange—Marl—Mulching Potatoes.

Let me express to you briefly my hearty appreciation of the *Southern Planter*. It is exceedingly helpful to me. Also permit me to propound these queries:

1. Is there a State Grange in Virginia?

2. How is marl best used, and for what crops?

3. Is it well ordinarily to mulch Irish potatoes, and if so, how would saw dust do for a mulch? I have near my place—within a mile—quantities of saw dust, which can be had for the hauling.

*James City Co., Va.*

CHAS. H. GROSVENOR.

1. There was a State Grange in Virginia, but we believe it is now moribund. We have heard nothing of it for several years. The Grange never made headway in the South.

2. Marl may be applied in heavy dressing to light or loam land with great advantage. The percentage of lime and phosphoric acid is, however, so low in comparison to the weight of the whole that it will not pay to haul it far.

3. The mulching of Irish potatoes is not usually of material advantage, as the vines themselves serve as a good mulch. Saw-dust is of no value except as a means for lightening heavy land, and it is even for that purpose of doubtful utility.—ED.

**Renewing a Pasture—Preparing Land for Peas**

Kindly give me the following information:

How can permanent pastures be renewed without plowing, etc.? What would be the result of running over a pasture, early in the spring, with a disc harrow, sowing grass seed, and harrowing or rolling it in? I have top dressed a pasture that needs renovation with manure, but the grass has run out, and I wish to know the most practical way of getting seeds into the ground without plowing the land.

Can light land be successfully prepared for cowpeas by using a disc harrow instead of plowing?

Fauquier Co., Va.

H. C. G.

In this issue will be found a reply to a similar question from a subscriber in Loudoun county, Va. Where a pasture or a meadow is only failing in places, it may often be successfully improved by harrowing in the spring and sowing grass seeds and top dressing with manure. But where the grass has run out and weeds have taken possession, nothing but plowing up and finely preparing and reseeding will secure a good result.

Yes; we have known many good crops of peas made without plowing by the use of the disc.—ED.

**Diseased Hogs.**

Will you be kind enough to tell me through the *Planter* what is the matter with my hogs and give me a remedy. They will eat only enough to keep them alive, sometimes only a mouthful, and sometimes an ear of corn. They eat very heartily of dirt. I keep them in a close pen until they get restless, then turn them in a large lot without any change for the better. They have a cough. I have 20 head, and this is their condition. I feed on hard corn, soaked corn, ground peas and collards.

Pamlico Co., N. C.

E. A. HOUGH.

Your hogs are no doubt badly infested with worms. Stop off the corn feed, and let them fast a day, then give them some slop made of mill feed and bran half and half. In this give one tablespoonful of turpentine for each hog. After this, give in the next feed a half a pint of raw linseed oil for each hog. After this has purged them, then give mill feed, bran and corn-meal in a slop. If they still do not appear to be improving, repeat the turpentine in a week or ten days. Give a handful of bone meal for each hog once a week. Feed all the green food possible, and let them have a range.—ED.

**Plants Destroyed by Moles or Mice.**

We have hundreds of yuccas in this place that are being destroyed by moles (!) or field mice (!)—eaten at the roots. With dogs and chickens around, I am unwilling to use poison. Can you suggest any remedy in your valuable paper?

Charlottesville, Va.

E. W. H.

Traps might lessen the trouble, but poison would be much more effective.—ED.

**Crimson Clover—Rape.**

Will Crimson clover make a good hog pasture? Also, will rape make a good hog pasture for the summer? Will rape do well on low land?

Dinwiddie Co., Va.

SUBSCRIBER.

Crimson clover will make a good pasture up to the end of May, when it begins to ripen and gets hard and dry. Rape makes a splendid hog pasture in the fall and in spring, but cannot stand the hot weather of summer. If sown now, it will make a pasture up to June, and should then be plowed up and sown with cow peas, or cow peas and sorghum, to make hay or pasture. Sow rape again in August or September for fall and winter grazing. Cow peas or Soy beans make the best summer pasture for hogs.—ED.

**Ginseng.**

Will you please tell me of the standing of the Commercial Ginseng Co., Crozet, Va.? How do you grow ginseng?

Lancaster Co., Va.

R. H. NORRIS.

We believe the Commercial Ginseng Co., Crozet, Va., to be perfectly reliable. We know nothing of ginseng growing except from what we have read about it. We are not at all favorably impressed with the crop. We doubt much whether it will be found generally a profitable one. In any event, it takes five years to realize the profit, if there be one. The Pennsylvania Experiment Station has just issued a bulletin on the subject, giving results of experiments made there. Write Director of Experiment Station, State College, Penn., for copy of this.—ED.

**Silo—Storing Cut Fodder.**

I wish to feed ensilage the coming winter. Can I make one silo do, or shall I have to have more than one?

I wish the most convenient plan for storing cut fodder.

Louisa Co., Va.

SUBSCRIBER.

One silo will be all you will need for ten cows. Later in the year we shall write fully on the question, giving full information as to construction and capacity of silos. If you will refer to our issue for July, 1902, you will find an article on the subject which will probably give you all the information you need.

Cut fodder should be stored in a bay of the barn or under a shed boarded up in front.—ED.

**Kaffir Corn.**

Will you please say what you think of Kaffir corn as a forage crop and for seed?

Dinwiddie Co., Va.

R. DEWSBURY.

We have frequently advised the growing of Kaffir corn in the South. Whilst not quite so good feed as sorghum, it will do better than either corn or sorghum in a drouth.—ED.



**Stump Killer—Disease in Hog—Breeds of Hogs.**

1. Please tell me some simple and cheap way to kill stumps that will not die, such as gum and poplar.

2. I had a litter of pigs farrowed April 26th last year, and when they were about six weeks old one of them became affected very peculiarly. He could not walk or run in a straight line, but would go around in a circle, and had frequent spells when it could not walk at all, especially when it became excited. It made a very peculiar loud and coarse noise in squealing or grunting, which it did almost continually. Its head was twisted a little to the right, and in running around a circle it would always go to the left. After about a month it began to get better and became very thrifty, but its head did not get straight, and it continued to make the same peculiar noise until I killed it a month ago. I thought it must have gotten a lick on its head which affected its brain, but when I killed it I examined it carefully and could find nothing wrong with the brain.

Upon examination of the lungs I found the bronchial tubes full of little worms not larger than spool cotton and about an inch long. Will you or some of your readers tell me whether these worms caused the trouble, and if not, what did cause it, and give me a remedy.

3. If it will not take too much of your space will you please give briefly the merits and demerits of Berkshire and Poland-China and O. I. C. hogs?

Campbell Co., Va.

L. C. A.

1. This query seems on first reading it to be an excellent example of an Irish bull, but we realize what our friend means. He has stumps which will persist in sending up sprouts. We know no means of killing these stumps except either pulling them out or blowing them to pieces with dynamite. There have been a number of methods recommended for killing such stumps, such as boring holes in them and filling with kerosene or saltpeter and other things, but we have no faith in them. A friend of ours who has cleared a large piece of land of such stumps says dynamite is the best and cheapest thing to use.

2. The worms, we believe, caused the trouble. You should give the hogs a dose of turpentine now and again to kill these parasites.

3. All these breeds are good. One man has a fancy for one and another a fancy for the other. We think in a corn country like the West the Poland-China is the hog to keep. He never tires of this diet, and consumes an enormous quantity. Where corn is cheap and far from market this is the animal wanted. The Berkshire is more a grazing hog and better adapted for the South, where corn is high in price and other feeds, like peas, are plentiful, or should be. The O. I. C. is a good hog, but of too large a type for Southern markets. Its color also (white) is against him for the South. A black hog is the best for a hot climate. White hogs must have plenty of shade or the skin will burn and blister in the hot sun.—Ed.

**Tobacco-Growing.**

I never see any method of plowing and preparing the land for tobacco in your columns to destroy the great "pest," we have—viz., the "cut" worm and "wire" worm. We so often fail in making a good crop on account of not getting a stand on stubble land. Some say plow early in the fall, re-plow in the winter, while others say wait until just before planting time, and plow while everything is green. I would ask for advice as to the best and cheapest way to raise the greatest number of pounds per acre, regardless of weight. I grow 10 acres of tobacco, and the average yield is 6,000 to 7,500 lbs. I want 10,000 on a ten acre lot.

Pittsylvania Co., Va.

J. W. GILES.

We usually give each year in the spring our views on the best way to make a tobacco crop, and we will do so in next month's issue. Winter plowing and replowing is of great service in getting rid of cut and wire worms, as it brings them to the surface, where the cold kills them and birds eat them. Where a piece of land is infested with these pests it should never be planted in a crop until an effort has been made to destroy them. The land should be plowed and harrowed and all green plants buried. Then bushes of green clover or cabbage leaves dipped in a solution of Paris green should be dropped at short intervals over the field. The worms will come out and eat these and be poisoned; or balls made up of bran and mill feed, mixed with Paris Green, should be dropped over the field. These will poison the worms, as they are fond of the feed. With persistence in this work, before planting the crop a stand can be secured.

We will try to help you to make 10,000 pounds to the 10 acres, but cannot say that you can certainly do so. The first requisite is better preparation of the land before planting. Begin *at once* this work. See our last issue for remarks on preparation, and also this one. The next requisite is more abundant fertilization. In Pennsylvania and New England tobacco growers often apply 1,000 pounds of high grade fertilizer to the acre.—Ed.

**China Tree—Corn Breeding.**

Please tell me whether or not the "China tree" will last if used for fence posts.

I have two varieties of twin corn—one very tall and large, the other very low and small; and I wish to breed a corn that will twin and be of good size, and yet not so tall. Please state how it should be done.

Mecklenburg Co., Va.

C. L. RUSSELL.

We do not know the "China tree" by that name, and therefore cannot advise you. Can you give us the botanical name? If so, we can help you.

If the two varieties of corn you have are planted near to each other they will cross pollinate, and then by selection of seed from stalks of the type you want you may in a few years establish a corn meeting your requirements and of fixed type.—Ed.

### Butter Will Not Come—Grass for Pasture— Sorghum.

I have a cow from whose milk we have not been able to get any butter for some time. The milk seems to be all right; it sours all right, but as soon as you begin to churn it begins to foam; the more you churn it the worse it gets. The application of warm or cold water has no effect whatever. Is it because of a certain stage of pregnancy of the cow? Please give the cause and a remedy.

What is the best grass to sow for a permanent pasture, and what the best time to sow, and how to sow it?

Do you consider sorghum a profitable crop for the average farmer to raise?

Scottsville, Va.

S. E. BEALE.

Why butter cannot be got from the milk is not always easy to account for. Sometimes it arises from the temperature at which it is churned. It may be too hot or it may be too cold, but in your case this does not seem to be the cause, as you say neither warming nor cooling affects it. Sometimes it arises from the manner of feeding the cow, but more frequently it arises from a condition of health, brought about by pregnancy or from the cow having been very long calven. We would try varying the temperature at which the milk is churned. If the cow is advanced in pregnancy let her go dry, and when she calves again her milk will probably be all right again. We know of no positive remedy for the trouble.

See our last issue as to grasses for a permanent pasture.

We think highly of sorghum as a forage crop, and every farmer should grow it.—Ed.

### Watermelons.

I would like instructions as to the best mode of growing watermelons. The land I propose putting in melons was in peas last year, and the vines were left on the land. How should I proceed? The land lies gently to the south.

Botetourt Co., Va.

J. W. SMILEY.

We will give full instructions on this subject in a later issue. Meanwhile plow the pea-vines down and get the land into good condition for planting.—Ed.

### Wood Ashes for Irish Potatoes.

In your next issue, will you tell how to use wood ashes on Irish potatoes.

Alexandria Co., Va.

C. R. HOFF.

Either sow broadcast on the land if you have sufficient to cover the field, or, if in less quantity, sow in the rows and mix with the soil by running a cultivator through before planting the sets. They only provide potash for the crop. Phosphoric acid and nitrogen should be supplied also. See our article on Work for the Month in Garden Department for a complete potato fertilizer.—Ed.

### Alfalfa.

I have three acres of good red land on which I wish to sow alfalfa this spring. Please inform me what time to sow it; and does it suit this climate best to sow it in the spring or fall?

H. R. MAY.

Sow the alfalfa in the fall—say August or September. Spend this spring and summer in preparing the land for the crop. It requires the land to be deeply broken, finely cultivated and made rich. When the land is in fine condition—say in June—apply 300 or 400 lbs of acid phosphate and 50 lbs. of muriate of potash to the acre. Then seed with cow peas a bushel or a bushel and a half to the acre. This should make a heavy crop and smother all weeds. Cut for hay in August, and then prepare the surface soil finely with a disc harrow, and work in 500 lbs. of bone meal to the acre. Sow 15 to 20 lbs. of alfalfa seed to the acre and cover with smoothing harrow, and roll.—Ed.

### Crimson Clover in Cow-Peas and Kaffir Corn.

Will you be so kind as to tell me in the *Planter* how it would do to seed Crimson clover with cow peas and kaffir corn as I expect to mow the peas or feed and not turn under?

Lynchburg, Va.

X. Y. Z.

We have known Crimson clover to be successfully sown in cow-peas and corn. Much, depends, however, on the thickness of the cow-pea crop. If very heavy, the Crimson clover is apt to be smothered out. Sow the clover about July or August.—Ed.

### Beans for Name.

Enclosed find beans. Please give me name of them, and what they are good for.

H. T. NUCKOLS.

Buckingham Co., Va.

We cannot identify the beans. They look like a large variety of Pole or Lima beans, but may be the seed of some other legume, or possibly of some wild plant. If we had seen them in England, we should have said that they were White Broad beans, but this bean does not grow here.—Ed.

### Cow-Pea and Sorghum Ensilage.

Will you kindly advise me in the next issue of your journal whether or not cow-peas and sorghum, grown together and put in silo together, will make an ensilage that will keep as well as corn ensilage?

Princess Anne Co., Va.

BURTE C. HANES.

Yes.—Ed.

### Lump Jaw.

I have a nice Jersey heifer about three years old which has lump jaw. Will you please tell me what is the best treatment?

SUBSCRIBE.

In this issue you will find a remedy for this disease advertised by a well-known reliable firm. The address of the maker is Fleming Bros., 22 Union Stock Yards, Chicago.—Ed.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The month of February has been so unfavorable for work in the garden and truck field that little of the work suggested for that month can possibly have been done. This means that two months' work will have to be crowded into one, and the planting of many crops will have to be delayed. As soon as the land is dry enough to haul on, get out manure and have it spread and plowed in and set the harrow to work fitting the land for the crops. Both manure and commercial fertilizer are better applied some time before the planting of the crops. They become better fitted to supply the needs of the crops, and by frequent working of the soil become better assimilated with it and their plant food more available. In supplying manure and fertilizers, do not economize on the quantity or quality. To succeed in growing fine vegetables, there must be a very abundant supply of available food, so as to force the growth. Unless vegetables are grown quickly they are not tender and succulent, and hence will not command the best price or be acceptable on the table.

Irish potatoes and English peas should be planted as soon as the land can be got into good order.

Irish potatoes require plenty of available plant food, and this is best supplied by commercial fertilizers, as farm-yard manure is very apt to induce scab. In planting the crop, be careful not to plant on land where scabby potatoes were grown last year, as the spores of the disease will have infested the land and the crop will be sure to become infested with the disease. Also be careful to see that seed is free from scab, or the same trouble will arise. If there is any indication of scab on the sets, they should be soaked in corrosive sublimate solution (2 ounces of sublimate to 16 ounces of water) for an hour before being planted. A good fertilizer for Irish potatoes can be made up of 300 lbs. of nitrate of soda, 600 lbs. cotton seed meal or fish scrap, 800 lbs. of acid phosphate, and 300 lbs. of muriate of potash; or one of the special potato fertilizers put up by manufacturers can be used. Apply at the rate of 500 to 1,500 lbs. to the acre. If not more than 500 lbs. is used, this may be put in the row and be well mixed with the soil before planting the sets. If more than 500 lbs. is used, apply broadcast and harrow in. Cut the sets so as to have two eyes at least on each piece, and plant as soon as cut. Plant 15 inches apart in the row and the rows two feet six inches apart. Cover with six inches of soil to be raked down to four inches before the plants come through.

English peas do not require the soil to be overrich, or they will run too much to vine. A piece of land manured for potatoes last year makes an excellent place for peas. If the land is not rich enough, use acid phosphate at the rate of 300 lbs. and 50 lbs. of muriate of potash to the acre, and after the peas have commenced to grow freely, give a light top dressing of nitrate of soda, say 50 lbs. to the acre, when the plants are dry. Sow in broad rows three feet apart.

Kale, spinach and salad crops, like lettuce and radishes, may be sown in the latter part of the month.

Fall planted cabbage should be encouraged to grow by cultivating the land as soon as dry enough, and after they have started a top dressing of nitrate of soda will greatly help them. A test of the use of nitrate of soda on cabbage made in North Carolina gave the following results: "When no nitrate of soda was used there was a yield of but 910 prime heads of cabbage per acre, showing that the ground itself was 'poor.' When 300 lbs. of the nitrate was applied per acre on the same sort of land in two equal dressings, the number of prime heads obtained was 3,260. When the same amount was applied in three equal dressings, the yield of prime heads per acre was 5,390. On the plot which had received 400 lbs. of nitrate of soda per acre in two equal dressings, the yield was 4,160 prime heads per acre, and when the same amount was applied in three equal dressings, 7,580 prime heads were obtained per acre." Harden off cabbage plants raised in frames during the winter and set out as soon as the weather is mild and the ground fit.

In this issue will be found instructions for making a hot bed and raising plants therein. This should have attention at once.

Strawberries should be cultivated as soon as the ground is dry enough to encourage growth, and if not looking vigorous and healthy in a week after cultivating, give a top dressing made up of 100 lbs. of nitrate of soda, 50 lbs. of muriate of potash, and 250 lbs. of acid phosphate per acre, and work in with the cultivator. Apply the dressing when the plants are dry.

The pruning of all fruit trees and vines should be completed as soon as possible before the sap begins to be active.

When corresponding with advertisers, kindly mention the *Southern Planter*.

SPRAY CALENDAR FOR 1903.

COPPER SULFATE SOLUTION.

Copper Sulfate (Bluestone).....1 pound  
Water.....15 gallons  
As it dissolves more quickly in a bucket of hot water, as it dissolves more quickly in hot water; and dilute to the desired quantity. Use wooden or earthen vessels for copper sulfate solution. This solution is to be used on dormant plants, before the leaves have expanded.

BORDEAUX MIXTURE.

Copper Sulfate.....4 pounds.....  
Unsifted Lime.....60 gallons  
Water.....40 gallons  
Dissolve the copper sulfate as mentioned above, slake the lime in a bucket of water and dilute to several gallons of wa er and strain through a coarse cloth to free the mixture of the small lumps. They interfere with the free flow of the mixture through the spray nozzles. Mix the two solutions together and add water to make 40 gallons. Use this for rots, molds, mildews and all fungus diseases. For potato blight add two pounds more of copper sulfate.  
A combined fungicide and insecticide for biting insects may be made by adding 4 ounces of either Paris Green or London Purple to the above.

AMMONIACAL COPPER CARBONATE SOLUTION.

Copper Carbonate.....6 ounces  
Ammonia.....About 3 pints  
Water.....50 gallons

Dissolve the copper carbonate in ammonia in a closed wooden or earthen vessel and add to it the required quantity of water when ready to apply. As ammonia varies in strength, some care is necessary to use no more than is needed to dissolve the copper carbonate. This preparation is used for the same purpose as Bordeaux, but is intended to be used only when fruit is nearly ripening, as Bordeaux sometimes affects the skin of ripening fruit.

KEROSENE EMULSION.

Hard Soap.....1 pound  
Boiling Water.....1 gallon  
Kerosene.....2 gallons  
Use "soft water" (preferably soft water). Dissolve the soap in the boiling water; add the kerosene and churn violently until the mixture becomes like buttermilk—not less than five or ten minutes. Dilute with water ten to fifteen times before using.  
For sucking insects. For scale insects use strong emulsion. For plant lice, mealy bugs, red spider, etc., the weaker solution may be used. Soft bodied insects like the cabbage worm may be destroyed with this solution.  
Special machines are now on the market that mix the water and kerosene directly, and at most any proportion desired, and is recommended wherever scale insects are to be destroyed. When buds are dormant use a mixture of kerosene one part, water three parts.

PARIS GREEN.

Paris Green.....1 pound  
Water.....175 to 200 gallons  
When this mixture is used by itself add one pound of quick lime to prevent it injuring the foliage. See under Bordeaux mixture.  
Paris Green is sometimes mixed with flour and dusted over the plants when dew is on, in proportion of one pound of poison to ten pounds of flour.

LONDON PURPLE.

Use in the same way and in the same proportions as Paris Green, but use more lime to neutralize its caustic properties. It is best not to use this on the peach at all.

PERSIAN INSECT POWDER.

Fresh Powder.....1 ounce  
Water.....2 gallons  
Spray on plants for soft bodied insects. The powder is frequently dusted on plants while the dew is on. This material is not poisonous to man, hence can be used in dwelling house to kill house flies and mosquitoes. For such cases, set close all doors and windows and shut the room well with the powder (usually at night) and leave it for several hours. It is a good thing to burn a candle or two in hot embers so that the fumes may fill the room. Be sure that the powder is fresh, because when old it often fails to kill.

PLANT.	DISEASE.	What to Apply.	First Application.	Second Application.	Third Application.	Fourth Application.	Fifth Application.
APPLE.....	{ Bitter Rot. Scab. Codling Moth.	Ammoniacal Copper Carbonate. Bordeaux Mixture. Paris Green.	First appearance of rot. When buds swell. Just after fall of blossoms.	14 days later. Just before blossoms open. 3 to 10 days later.	14 days later. When blossoms have fallen. Deafroy all windfalls, and pick off wormy fruit.	Repeat as necessary. Repeat if necessary.	Repeat if necessary.
BEAN.....	Anthraxnose.	Bordeaux Mixture.	When plants are 2 to 3 inches high.	2 to 10 to 14 days later.	Repeat if needed.	Soak seeds 1 to 2 hours, double strength { Copper Carbonate solution before plant g	
BLACKBERRY.....	Rust.	Copper Sulfate.	Before buds open.	Bordeaux after blossoms have fallen.	Repeat as needed.	Dig up and burn all badly diseased plants	
DEWBERRY.....		Persian Insect Powder or Paris Green. Hand pick them; also	When worms appear.	Repeat as needed.	Paris Green should not be applied after heads have started.		
CABBAGE.....	{ Cabbage Worm. Harlequin Bug.	Destroy all plants on which first few lice appear; spray under side of leaves of all nearby plants with strong Kerosene Emulsion.	plant an early crop of mustard or turnips, and spray these with strong Kerosene Emulsion.	Repeat in 10 days.			
CANTALOUPE.....	{ Melon Aphid. Beetles.						

GRAPE.....	{ Anthracnose. Black Rot, Downy and Powdery Mildews, Leaf Folder.	Copper Sulfate and Bordeaux Mixture. Bordeaux Mixture. Bordeaux Mixture. Paris Green.	Before buds open. Before blossoming. First appearance. Before buds swell. First appearance. Before blossoming. See note under Kerose Emulsion.	When buds are fully open. After fruit has set. It is advisable to handle pick and burn folded leaves to prevent second brood. Bordeaux when buds are partially opened. Repeat as needed. When fruit has set. Apply when trees are dormant.	Just after fruit has set 10 to 14 days later. After fruit has set. Repeat as needed. 10 to 14 days later. Repeat if necessary. 10 to 14 days till fruit is nearly ripe. The loose cotton around trunk of tree and apply Kerose Emulsion to it. Gather and destroy all windfalls every few days. Cut off 15 in ches below affected parts.	Repeat if necessary.
PEACH.....	{ Fruit Rot. Canker Worm. Curculio. Sten Jose Scale.	Copper Sulfate. Weak Paris Green. Paris Green. See note under Kerose Emulsion.	Before buds open. First appearance. Before buds swell. First appearance. Before blossoming. Apply when trees are dormant.	When buds are fully open. After fruit has set. It is advisable to handle pick and burn folded leaves to prevent second brood. Bordeaux when buds are partially opened. Repeat as needed. When fruit has set. Apply when trees are dormant.	Just after fruit has set 10 to 14 days later. After fruit has set. Repeat as needed. 10 to 14 days later. Repeat if necessary. 10 to 14 days till fruit is nearly ripe. The loose cotton around trunk of tree and apply Kerose Emulsion to it. Gather and destroy all windfalls every few days. Cut off 15 in ches below affected parts.	Repeat if necessary.
PEAR.....	Blight.	Promptly remove and burn all diseased limbs.	Best done in winter.	Best done in winter.	Cut off 15 in ches below affected parts.	
PLUM.....	{ Fruit Rot. Stiphole Fungus. Curculio.	Same as for Peach. Bordeaux Mixture. Same as for Peach.	When leaves appear. Also by repeatedly jar-ring the tree onto sheets and destroy.	10 to 14 days later. Repeat if necessary.	10 to 14 days later. Repeat if necessary. 10 to 14 days till fruit is nearly ripe. The loose cotton around trunk of tree and apply Kerose Emulsion to it. Gather and destroy all windfalls every few days. Cut off 15 in ches below affected parts.	Repeat if necessary.
POTATO, IRISH.....	{ Blight. Colorado Beetle.	Strong Ford. Mixture. Paris Green.	When plants are 6 inches high. When plants are 6 inches high.	Repeat as needed.	Repeat as needed.	
POTATO, SWEET.....	Black Rot.	Grow slips from clean healthy potatoes.	To get clean potatoes, grow from vine cuttings.	Repeat as needed.	Repeat as needed.	
STRAWBERRY.....	{ Rust and Mildews.	Bordeaux Mixture.	When disease appears before blossoming.	Repeat as needed.	Repeat as needed.	
TOMATO.....	{ Blight. Fruit Rot.	Bordeaux Mixture. Bordeaux Mixture.	When disease first appears. When fruit is set.	Repeat as needed. 10 to 14 days later.	Repeat as needed. 10 to 14 days later.	

The efficiency of spraying will depend upon the time and thoroughness of the applications. Spraying for diseases must be in the nature of prevention and not as a cure. All sources of infection, such as diseased wood, diseased leaves and diseased fruit, should be removed and destroyed.

Keep this Calendar for reference during the year. You may need to refer to it.

Montgomery Co., Va.

R. H. PRICE.

## NOTES ON VARIETIES OF APPLES AT THE AGRICULTURAL EXPERIMENT STATION, BLACKSBURG, VA.

[EXCERPT FROM BULLETIN 130.]

[Continued from February number, 1903.]

### Editor Southern Planter:

*Albemarle Pippin*—While this name is not recognized in the standard lists, as a variety, it seems to us quite clear that the type of tree, and in certain characteristics the fruit, have departed sufficiently from the old Newtown Pippin as grown in the North, to at least warrant position as a subvariety. The trees, certainly, show considerable differentiation, and there is some slight difference in regard to fruiting habit and in size and shape of the fruits, as grown upon the Experiment Station grounds here.

It is a vigorous grower, forming a strong, upright, moderately spreading head, thus far, making long wood growth, very much branched. Trunk 26 inches in circumference at base, and also averaging same at head. Thus far, this variety has not blighted here to notice, and maintains a very healthy appearance.

The trees bloomed in 1895, six years after planting, and have set a few fruits annually, since 1895, but there has not been enough at any time to mention as a crop. The general character of the fruit is so well known that it does not need particular description, but it is interesting to note that on this soil, which is distinctly not suited to Pippins, the variety becomes rather more elongate than ordinarily, and shows the ridges around the eye, characteristic of Oregon Pippins, but the fruits are not so large. The fruit shows a strong tendency to scab, and is also attacked by bitter rot. In 1901, eight well grown trees yielded 13½ bushels of fruit, of which 6½ bushels might have been reckoned as approaching near to first class fruit.

Experiments are under way to determine whether we can make this variety yield good commercial fruit on heavy clay soil. In a previous Bulletin, No. 98, of the Station series, I have discussed the soils to which this variety is adapted. It is so well known that this tree is a shy bearer until it reaches a good age, that further notes in regard to it are hardly necessary.

*Lauver* (Delaware Red Winter).—A fairly well known variety of Missouri origin. Tree only fairly vigorous, forms a round, spreading top of good form. Trunk measures in circumference at base, 26 inches, and at head, 22 inches. The tree is fairly healthy and free from blight here; but the fruit has been more or less subject to bitter rot at this place.

The first bloom was noted in 1894, a few fruits were produced in 1895, and in 1897 the tree bore very well, furnishing fine specimens, free from disease; in 1899 the trees bore a fair crop, and also in 1901. This variety cannot be commended especially for its behavior here, but in soil adapted to Pippins and Winesaps, I have known it to do remarkably well, and it is worthy of trial in a small way in such situations.

*Winesap*—One of the very best known varieties of red apples grown in America; of New Jersey origin, and generally disseminated over the Eastern United States. The tree, on proper soil, is a vigorous grower, but unless pruned carefully to a central stem, the head becomes very procumbent, giving it an ugly

form. It is quite free from blight, and the foliage not particularly subject to fungous diseases. At this time the tree measures here, 25 inches in circumference at base and 23 at head.

The first bloom was noted in 1893, and the first fruit in 1895; in 1897, a light crop was borne, and in 1899, a crop averaging three bushels per tree; in 1901, the crop averaged six bushels per tree; but on this soil the fruit is very small, poorly colored and badly attacked by the common apple scab; bitter rot has not been noted on the fruit, though it stands adjacent to Ben Davis, which is badly attacked. The character and quality of fruit are too well known to need description. As a red apple of market grade, it has no superior on those soils which produce fine, clean fruit of good size. It, however, is illy adapted to the heavy clay soils or moist situations.

*Arkansas* (Mammoth Black Twig).—This variety has but recently become generally disseminated, and is not yet known as a commercial sort in the markets to any extent. It is said to have originated in Arkansas, and few apples have been more discussed recently than it. The tree is a strong, vigorous grower, entirely healthy, free from blight and fungous disease; trunk measures 28 inches in circumference at base, 25 at head. This tree is said to be a seedling of Winesap, and in some respects reminds one of the Winesap in appearance of wood, yet its growth habit is distinctly different and better than the Winesap.

This variety showed the first bloom in 1894, five years after planting, and bore a few fruits in 1895, also in 1897, but showed up better in 1899; in 1901, it bore a very heavy crop, twelve bushels of very fair fruit being picked from one tree, of which 90 per cent. graded first class. The size and color, however, were not up to the standard of this variety in better fruit soils than ours. The fruit is roundish, oblate, regular, much larger than Winesap, and of a dull reddish color, nothing like so pretty as Winesap. The quality is also below Winesap, but distinctly better than York Imperial. It promises to be a good keeper in this latitude. The fruit has been thus far entirely free from scab and bitter rot, except on one occasion it showed some slight attack of the latter. This variety is mentioned as a promising cosmopolitan apple on all of our good fruit soils, and it will probably be far less attacked by blight than York Imperial.

*Gano*.—A supposed seedling of Ben Davis, disseminated from Tennessee, and by many thought to too closely resemble Ben Davis to warrant separate variety position. The true Gano is, however, distinct from Ben Davis in character of tree, and also to a less extent in character of fruit, and has distinct claims as a variety. At this place it is a strong grower, forming an upright, slightly spreading head, with well developed wood. The trunk is 31 inches in circumference at base and 28 inches at head.

This variety bloomed first in 1893, and produced a fair crop for the size of the trees in 1895 and a heavy crop in 1897; in 1899, the crop was injured by bitter rot, and only about three or four bushels picked per tree; in 1901, a crop of 8½ bushels per tree was picked, which was quite free from disease except slight attack of scab. The fruit is round, ovate, larger than Ben Davis, more distinctly washed with red and quite brighter in appearance. The quality is almost or quite identical with Ben Davis; some-

times one thinks there is a slight difference in favor of Gano, but it is very slight indeed. This variety as a filler for an early bearer is, in our estimation, quite superior to Ben Davis, but it is quite true that in many cases Ben Davis is sold for Gano, and the opposite may also be true.

*Via.*—A little known variety of ——— origin. Though it appears to be an old variety, it has gained very little notice, and is rarely found in cultivation; here it has shown some remarkable qualities. The tree is a fairly good grower, not large, forming a well rounded spreading head. The trunk measures 23 inches in circumference at base and 21 at head. It is quite free from blight and fungous diseases.

First bloom was noted in 1893 and the trees bore heavily in 1895, six years after planting. Full crops were borne in 1897 and 1899, the latter year three bushels per tree. In 1901, the trees bore six bushels each, which for their size is a very heavy crop. About 90 per cent. of this crop was fists. In the off years, there is ordinarily a light crop produced. The fruit is roundish, oblate, a dull red in color, of fine appearance. The quality is medium to good, and the season is early winter. This fruit ought to cold store well, and thus become a very profitable sort because of its great productiveness. The size of the tree and its early bearing habit, renders it valuable as a filler; and this, coupled with its freedom from disease both in fruit and tree, leads us to commend it for this purpose. In the warmer parts of Virginia, it will prove a fall apple, and prompt cold storage will be necessary to carry it into winter.

WM. B. ALWOOD,  
Horticulturist.

Dec. 20, 1902.

[TO BE CONTINUED.]

## GARDEN AND ORCHARD NOTES.

### *Editor Southern Planter:*

The farmer should have a hot bed to start early garden plants in. Commence making one now. Select a location with good drainage and sloping towards the south. If the location have some protection from the cold north winds, it is much more desirable.

A bed nine feet long and six feet wide will usually be ample for ordinary purposes. In such a bed enough tomato seed can be germinated for two acres. But to carry this many plants through, a cold frame is also necessary, into which the young plants may be transplanted when about one and a half inches high.

For the hot bed, excavate the ground to a depth of about three feet, and throw the dirt on the north side of the bed for protection against cold north winds. Plank up the sides of the bed and make the north side at least six inches higher than the south side, so that water will run off the glass readily.

Place cross pieces of 2 x 4 inch material at intervals of three feet to make the bed more substantial, and also for the sash to meet over. Good stobs of 2 x 4 inch material should be driven into the ground even with the side walls of the bed, and to which the plank

should be nailed. If all wooden parts are given a good coat of paint before they are put in place, they will last much longer.

The bed is now ready for the heating material. This should be good, fresh stable manure. Fill the bed up to eighteen inches with it. Now, to start fermentation evenly, tramp the material down and make it moist, but not too wet. Fork it over once or twice at intervals and re tramp.

When the temperature comes down to about 95 degrees, fill in with six inches of very rich loam soil. Rotted sods mixed with about one half good wood's earth make a good hot bed soil. The soil should be run through a coarse sieve before putting it in place. The sash should now be put on for several days to give the weed seed time to germinate, and also to keep out water from drenching rains. Hot bed sash can usually be purchased for about \$2 50 apiece. The bed is now ready to sow. Take a stick as long as the width of the bed and press it into the soil, sow the seeds in the depression and cover them lightly. Sprinkle some fine sand over the rows to keep the soil from baking above the seeds.

The surface of the soil should be kept moist, but not too wet. Take one part sulphur and ten parts slaked lime, mix well, then make the soil appear nearly white with it to prevent fungus diseases from injuring the young plants. Give the bed good ventilation during fair weather. It is a good rule to give enough ventilation during the day to keep moisture from settling on the under side of the glass. However, if the weather is very cold, great care must be exercised in ventilating. The most critical time is when the young tender plants are coming through. How to manage a hot bed correctly must be learned from experience.

The young plants must be kept thinned out and given one or more transplantings to keep them from spindling up too much. This sentence does not apply to sweet potato beds, since we want such plants to be about six inches high.

The tubers for sweet potato plants should be selected with the greatest care. No disease of any kind should appear on them, since disease producing spores will get onto the plants and may seriously affect the crop. I have frequently been successful in preventing all diseases, except soft rot, from injuring my sweet potato crops by selecting clean tubers for the hot bed. Spores of soft rot fungus appear in the atmosphere, and frequently do serious damage to the crop when carelessly harvested.

I may treat this subject more exhaustively at the time of harvest. Plant a good crop of this most excellent vegetable. Those who may desire an exhaustive treatise upon nearly all phases of sweet potato growing and storing, are referred to my book upon the subject, as space will not permit a full discussion here.

R. H. PRICE.

Montgomery Co. Va.

## WORK IN THE STRAWBERRY PATCH.

*Editor Southern Planter :*

The great planting season is now at hand at the South, trending northward as the ground thaws. For fully three-fourths of the planting of berry plants in this country is done in late winter and early spring. For many reasons it should be disposed of as early as practicable. Done now it competes little with the pressing work to come later. It can be done better while there is no rush, then in a climate that admits of it the winter is the safest season to transplant all fruit trees and berry plants. They are then in a dormant state and it is as hard not to get a stand as to get one later on when the sun gets hot and parches the ground hard.

For field culture of strawberries set plants in rows three feet apart. The distance apart in the row depends on whether the stool system or the matted row system is to be followed. For nearly all varieties the stool or hill system is the simplest, most profitable and in the long run the cheapest. For hills we set plants fifteen to eighteen inches apart in the row, according as the variety is a rank grower or not. For thin matted rows, the only matted row at all advisable, plant two feet apart.

The quantity of manure allowable will also depend entirely on how it is applied. If broadcasted and thoroughly mingled with the soil an almost unlimited quantity can be used. If to be applied in the drill, judgment must be used not to overdo the thing and bring too much manure in immediate contact with the plant roots.

We have often broadcasted one hundred loads of stable manure an acre, or in lieu of this applied in the same way two tons of cotton-seed meal. Both of these manures being highly nitrogenous and tending to greatly stimulate plant growth at the expense of fruit, it is always best to apply the following fall as a top dressing a liberal quantity of potash and phosphoric acid; the first in the form of sulphate of potash and the latter in the form of acid phosphate or dissolved bone.

Where manuring is to be confined to the drill, 500 to 700 pounds cotton-seed meal to the acre, evenly sown and mixed with the soil by running a cultivator, harrow or plow lightly down the furrow is best. Lacking the cotton-seed meal, any fertilizer rich in ammonia will answer. What is desired is to promote a steady, vigorous plant growth. The fruit producing properties of manure, potash and phosphoric acid, should be applied the following fall, winter or early spring, as a top-dressing.

More depends on the proper setting of a strawberry plant, or any kind of plant or tree than most people

can be led to believe. If the roots of the strawberry plant are very long, it is best, though not essential, to trim them back to about four inches. The holes should be opened broad and deep enough to admit of the roots being spread fan-shaped, and the earth should be pressed firmly around them. The proper depth to set a plant or tree of any kind is the depth that nature set them. Observe and discover this when you dig them up.

In a garden bed strawberry plants can be set in rows fifteen inches apart with the plants fifteen inches apart in the row. But between each series of three rows there must be left an alley or walk two feet wide. All runners must, of course, be kept closely clipped from plants set this way, and, indeed, from all plants grown in the stool or hill system.

Dewberry plants should be set six feet apart. A good plan is to run the rows six feet apart and then cross them at right angles with rows the same distance apart. Right in the check, where the cross comes, the plant can be set, spreading out the roots well. Raspberries, blackberries, and grape-vines can all be set this way. Plants or vines set this way can be plowed both ways, and hoe work almost entirely dispensed with in cultivating the crop.

A good way to apply manure or fertilizer to plants set this way is to drill it in the open furrow on the four sides of the plant and cover with earth. About the same manure can be used on the dewberries, blackberries and grapes as on the strawberries.

*Kittrell, N. C.*

O. W. BLACKNALL.

## SPRAYING FRUIT TREES AND VEGETABLE CROPS.

In this issue will be found a Spray Calendar giving instructions for the treatment of trees and vegetables infested with disease or insect pests, and also for the preparation of the fungicides and insecticides required. In our advertising columns will be found the advertisements of numerous makers of spray pumps.

## SAN JOSE SCALE.

The Virginia Experiment Station (Blacksburg, Va.) has prepared and is now issuing a bulletin on the best treatment for destroying this pernicious and deadly enemy of apple, pear, plum and peach trees. If you have not received a copy, write for one at once, as infested trees should receive the first treatment before the buds begin to push.

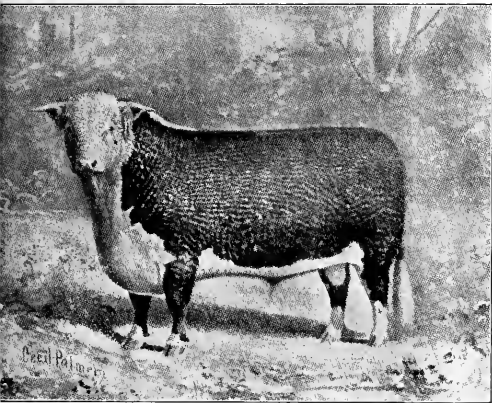
## PECAN NUTS.

Mr. Pendleton, who wrote on this subject in our January issue, asks us to say that he has neither trees nor nuts for sale. He has received many enquiries for same.



## Live Stock and Dairy.

HEREFORDS AT ANNEFIELD, CLARKE CO., VA.



PRINCE RUPERT.

Prince Rupert, No. 79539, sire Beau Donald, 58996, by Beau Brummel, 51817, out of Donna, 33735, dam Sallie Morton, No. 44785, sire Roscoe, 16509, dam Loyala 3d, 17683, first attracted attention when a yearling by winning first premiums over all beef breeds at several Missouri fairs. In 1901 as an aged bull, he won first premium at the big Lexington (Ky.) Fair, and the same year won sweepstakes over all aged bulls at the Royal Show of America at Kansas City. In 1902, he started again at Lexington, winning second in his class and first at the head of his herd, at Lawrenceburg, Ky. He won over all beef breeds first in class and first at the head of his herd. At the Ohio State Fair, he won first in class first at head of herd, also at the head of his herd he won sweepstakes over all beef breeds. At the West Virginia State Fair he won first in class and first at the head of his herd, and at the same place, with the assistance of his family, the Beau and Belle Donalds, won the get of a sire which was the largest cash Hereford premium paid in America in 1902. We congratulate Mr. E. G. Butler on having secured so fine a specimen of the Hereford breed to head his herd.

### Wood Ashes for Grass Land.

Will you tell me in your next issue the best way to apply ashes to grass as a top dressing?  
Alexandria Co., Va.

C. R. HOOFF.

Sow broadcast by hand.—ED.

HEREFORDS AT CASTALIA, ALBEMARLE COUNTY, VA.

*Editor Southern Planter:*

I am glad to say that my present lot of calves and yearlings are the best I ever had, and in the best condition. It is worth a visit to Castalia to see them, and no buyer can afford to overlook this opportunity to buy cattle at home which are as good as can be found anywhere at a distance, and at prices which are extremely low for value received.

I have shipped Hereford bulls from the Castalia herd to over a dozen States, but Virginia leads them all in the number purchased; and I look for a still better demand here, as farmers begin to realize the real value of good cattle to make the farm pay, and especially Hereford cattle, which are the best adapted of all breeds for the South.

My recent visit to Herefordshire, England, confirmed the opinion formed before I decided on Herefords, that the climate and soil conditions of Herefordshire are more like those of Virginia than any other part of England; and thus it is only natural that the Hereford should thrive well on Virginia pastures when transferred from his native heath.

So it is that Imported Salisbury 76059 (19083), the chief stock sire at Castalia, found in the salubrious climate of Albemarle a home so much like that of his birthplace, that he had a rare opportunity to thrive steadily, and his calves all show remarkable development and hardy, thrifty condition.

My visit to Mr. John Price, of Court House, Pembroke, Herefordshire, was worth the journey across the sea. Mr. Price will be remembered as the breeder of Salisbury, and a more genial, hospitable and cultivated host it would be difficult to find. Mr. Price is one of the few great breeders of to day, and the cattle from his herd of the choicest "White Faces" have been sought after by the best breeders of America. To give a history of Mr. Price's fifty years' experience in breeding Herefords, would be to largely give the history of Hereford cattle in England for that period.

Words are inadequate to picture the beauty of Herefordshire with its park-like farms, its winding and picturesque River Wye, its rich pastures and rolling meadow lands, and, above all, the herds of fine Hereford cattle grazing in nearly every field.

We have much to learn from the Old Country—much of intensive and less of extensive farming. The fields there are so clean that one can ride for days without seeing "a stick or a stone;" and the neatness of the hedges and fence rows and barn yards, and the smooth stone roads in every direction, show a high

state of cultivation and activity which makes Virginia—and, indeed, all of this New World—seem new in fact; but give us time. Give us the same time that it has taken to produce that state of systematic development and culture, and this fair Virginia will blossom like a garden, and surely we shall not be far behind. In fact, Mr. Price said that we have as good cattle in the United States as they have in England. We ought to have. Have we not been buying the best Herefords in England for the past half century? Salisbury is one of them; “and there are others.”

There is another point I wish to impress, and that is the regard for trees manifested in England. Nearly every field has a dozen fine old trees dotted around in such a manner as to afford good shade for the cattle at all times of day, and also to form an artistic landscape feature. The trees are not allowed to grow along the fences, which are always clean—the grass growing to the very edge of the hedges or continuing under the fences. The effect of such care over a large area of country is very beautiful, and an example which we may well profit by.

The new barn at Castalia is almost completed, and will be a great improvement in the facility of feeding and handling the cattle. It is 58 by 110 feet and 43 feet to the ridge, well lighted, and built in the modern style of two inch plank frame—not a heavy piece of timber being in the barn. The passages behind the cattle are 10 feet wide for a manure spreader to go through every morning, thus keeping the barn clean and putting the manure where it will do the most good with the least waste; also forming a wide lane for the calves to exercise in in stormy weather. There are many other features in this barn which are worth studying, and visitors will find a good opportunity to see the cattle comfortable in all kinds of weather.

I am glad to see more and more advertisements of Hereford cattle in the columns of the *Planter*. Keep up the good work. The West, always eager to take hold of a good thing, was not slow to recognize the merits of the Hereford for feeding purposes, and “the peerless grazing breed” have found their way into every section where good cattle are raised. The field of opportunity in Virginia, where pure bred bulls of the right type and breeding are so much needed, is very great, and with such bulls already here, there is no excuse for cattlemen to breed or feed “scrubs.” There is always a demand for good beef.

*Albemarle Co., Va.*

MURRAY BOOCOCK.

## CONFINING COWS CONTINUOUSLY DURING WINTER.

*Editor Southern Planter:*

I am well aware that some exceedingly able, well-educated dairymen have for several years practiced keeping their cows closely and continuously confined in their stables four or five months during the winter season. They assert that the animals have done well; that no injurious consequences have been observable, and recommend the practice to others. They claim that it is much less trouble, and that the cows give more milk under this arrangement.

This would seem to settle the matter and leave no ground for argument, but nature's laws cannot be infringed without sooner or later incurring the penalty. Some diseases are very insidious in their approach—stealthily, silently and secretly creeping upon the animal's system, making no sign until their deadly fangs are fastened firmly upon the victim's vitals. When tuberculosis or consumption shows itself, it is generally too firmly seated to be removed by medical skill, and the only cure is slaughter and the fertilizer manufactory.

Tuberculosis and pleuro pneumonia are contagious diseases, but there can be no doubt whatever that they break out spontaneously, without previous contact with infected animals, under conditions favorable for their germination. If this were not so, where did the first case come from? Did the Lord create one infected animal to inoculate others and keep the scourge in the world? Pleuro-pneumonia broke out in the herd of N. C. Elsbree, of Bradford county, Pa., and the cattle had not been in contact with any other cattle for years.

Animals which were created for an active life, as well as human beings, must have regular exercise, or their health will fail, if not break down altogether. This fact in regard to the human family is established beyond all controversy. Nobody, that I am aware of, ever disputed it. All the doctors, from the earliest ages down to the present time, have agreed that regular exercise of the body was necessary to the preservation of good health. Prof. F. D. Chaumont says: “A man of sedentary occupation ought to take exercise of a physical kind, varied from 50 to 100 foot tons per diem.” Prof. Charles S. Royse says: “We may give the digestive apparatus the best material for the formation of blood; we may furnish the lungs with the purest air for vitalizing the blood; we may secure the proper amount of sleep under the most favorable circumstances; we may so clothe the body as to afford it the best possible protection; but if we fail to take the proper amount of exercise, there cannot be a harmonious development of the physical man.”

Heart is a hope place, and home is a heart place, and she sadly mistaketh who would exchange the happiness of home for anything less than Heaven.

The *Library of Universal Knowledge* says: "Exercise is an important element of hygiene. To preserve all the functions of the body in healthy action, it is necessary to secure their due and regular action or exercise." Dr. Dunn says: "Everything that tends to lower the health and vigor of the system, increases the susceptibility to disease." Inaction will certainly lower the health and vigor of the system. There can be no question that human beings must take regular exercise to preserve good health; and reasoning from analogy, cows must also. The analogy is perfect so far as regards the means of locomotion. Cows have good legs, and can run as fast and travel as far in a day as the average man. In their wild state they take a great deal of exercise, and are travelling half the time. No valid reason can be given why cows should not have exercise as well as mankind. Even clams and oysters, not provided with legs, manage to crawl about and exercise their bodies in the mud. They tell us that cows get exercise enough in lying down and getting up, and stepping back and forth in their stalls. They might, with equal propriety, say that a man could get sufficient exercise in turning over in bed.

The convicts in the Eastern penitentiary of Pennsylvania are taken out into the yard every day (about twenty at a time), and made to run around in a circle like circus horses. The convicts love it as well as children love to play, and they know the exercise is for the benefit of their health.

To retain our present strength and increase it, we must regularly use what we have. Man, horse or ox will lose much strength if they do not work or take exercise for four or five months. Oarsmen and pugilists go into training for weeks before their contests come off in order to develop the strength of their bodies and the staying power of their lungs. Of equal importance to exercise for the preservation of health, is pure fresh air. Dr. Gunn says: "Pure air may be considered the prime necessity of life." In New England, statistics show that agriculturists who pass most of their days out of doors, live to an average of sixty four years, while the average attained by persons who have indoor employment does not exceed forty one. Pure air is perhaps of equal importance to wholesome food. Does it appear reasonable that the air in a stable where from ten to forty cows are confined constantly day and night, can possibly be kept as pure as the air of out of doors? No building on earth can be ventilated so well as the free winds of heaven ventilate the barn yard and the fields. Every person knows that on entering the stable in the morning, after the wind has changed to the south and it is raining, that he encounters a vitiated atmosphere.

Human ingenuity has never yet been able to devise a means of ventilation whereby the air in congress

ional halls, parliament houses, churches and theatres can be kept as pure and wholesome as that on the outside. To talk about stables being perfectly ventilated with the dung and the urine, the breath of numerous animals, and the effluvia of their bodies present, is perfectly preposterous.

Fifty years ago, when farmer's cows were wintered in the barn yard, we heard nothing about tuberculosis and pleuro pneumonia, and even now it is mostly found in rich men's stables, where they keep their high priced cows, and have stopped every crack and crevice where fresh air could enter, except the tubes they call ventilators.

Sunlight, for the promotion of full health, is almost as necessary as pure air. In many hospitals, rooms are provided where patients can take a sun bath. That is the best that can be done until the patient is able to walk out of doors. It is not the sunshine that is reflected, refracted and intercepted by a few windows in the stable that invigorates the cows, but the bright, piercing rays that dart down unobstructed from the luminous surface of the King of Day, full of healthful magnetism.

J. W. INGHAM.

*Bradford Co., Pa.*

## BACON, AND A "BACON BREED"

*Editor Southern Planter:*

A gentleman who is a recognized national authority, in a published statistical estimate of the meat supply of the world, has the following among his conclusions:

"The world's population is getting far and away ahead of the available meat supply. The human race has eaten the live stock of the world to a standstill. In the progress of man and of animal life, the multiplication of the former has so outstripped the latter that the decennial ratio of the two has increased to an alarming extent in the last fifty years. We have entered upon a period of permanently high meat prices in this country."

This condition of affairs should put our Southern farmers to thinking. There is opportunity presented here that, if improved, will bring many thousands of dollars into the pockets of our people. It is true that in many sections of the South our farmers cannot compete with the natural grass producing regions in the production of beef. But there is no section of the world that is better adapted to the production of the highest class of pork or the finest quality of bacon. This is proven by the fact that Virginia hams have, for a hundred years, commanded the highest market prices.

To produce the highest quality of meat, the hog needs a variety of food. An exclusive corn diet tends to produce lardy meat, which cannot be converted

into that quality of bacon that is demanded by the class of consumers who are willing to pay the highest prices. An exclusive corn diet also tends to sterility, and this has done much to destroy the vitality and breeding qualities of the best known breeds of this country.

There is no country on earth where such a variety of the best hog feed can be grown as right here in Virginia, and in our Southern States. Field peas, Soja beans, oats, corn, rape, sorghum, Kaffir corn and peanuts, all grow to perfection here, and afford a bill of fare that is unsurpassed for the production of the highest type of the bacon hog. Besides the best facilities for growing the greatest variety of forage and feeds, we have a very decided advantage over the North and West in our milder climate, which is another important factor in the economical production of pork, as no domestic animal suffers more from cold than the hog.

There is also as much in the breed as in the feed. A bacon hog must possess the characteristic, or quality, of producing bacon, instead of lard, as much so as the dairy cow must have the tendency to produce milk or butter fat, instead of beef, or *vice versa*. If we wish to produce the highest quality of family bacon, that will command the highest market prices, we must grow a type of hog that will produce it.

In our travels, in recent years, through portions of the Dominion of Canada, in search of St. Lambert Jerseys, our attention has been called to the improved large Yorkshires, as possessing more of the qualities of the ideal "bacon breed" than any other with which we are acquainted, and, though we have been great admirers of the Poland China and Berkshires for a quarter of a century, we have abandoned them in favor of the large Yorkshires.

This breed is not so well known in the South as other breeds, and, for the benefit of your readers, we append a few extracts, giving the opinion of well-known authorities on their merits as a profitable bacon breed.

Prof. John A. Craig, Professor of Animal Husbandry at the Iowa Experiment Station, made a test of various breeds lately. Writing in reference to this, he remarks:

"We took all of our experiment hogs into Chicago, and I followed them right through the slaughter tests there. In our results, I find that the Yorkshire has given the greatest gain on the least feed."

Hon. Richard Gibson, an influential breeder of Canada, in the *Breeders' Gazette*, writing about "The Improved Yorkshires," says:

"To them we Canadians owe our present standing in the English markets, where we have ousted the Danish and Irish bacon from the second place, and sent them down to third and fourth rank. Some peo-

ple will tell you, 'Oh, it is Canada peas;' others say, 'Oh, it is dairy slop.'" Again it is claimed, "They feed no corn in Canada," but none are right. We feed corn in Canada, and lots of it. I have the reputation of sending the best hogs to our buyer. He never asks to see them, because he knows exactly what he will get, but, nevertheless, I feed lots of corn, because I can grow it. Here is the rub. One may shove all the peas he chooses into a Poland China or Cheshire, and he will have fat meat. Just the same, I can feed corn to Yorkshires and get lots of lean. It is all in the breed. Can one by feeding a Holstein increase butter fat up to that yielded by a Jersey? It is the breed. Neither by high feeding can a Jersey be made to produce the yield of milk of the Holstein, or put on flesh like a Shorthorn, but she can make richer butter than either. Again, it is the breed. It is the same with swine. When you want good bacon, you must get a bacon breed. Your folks want bacon now, and as the trade develops all intelligent farmers will want bacon breeds and the Improved Yorkshire, which has done so much for us, will be popular with you."

Roanoke Co., Va.

A. M. BOWMAN.

### BILTMORE BERKSHIRE SALE.

*Editor Southern Planter:*

I enclose with this priced catalogue of our Third Annual Brood Sow Sale of Berkshires just held which I feel will be to your interest to devote a little more than the usual space to on account of the unparalleled average secured (\$221.90) at the sale on account of the high quality of the offering and the large number of prominent breeders attending, as you will see, from nearly every State.

Although the Farms held mail bids, probably averaging nearly \$100.00, only five of these secured animals, and of these three were unlimited. The other 56 head were sold to breeders right in the ring, and who made these bids as the result of the quality of the animals before their eyes.

Col. Bailey, the auctioneer, knocked down the whole 61 head at an average of 2½ minutes to the animal.

Probably the sensation of the sale was the boar, Manor Faithful, who, notwithstanding the fact that he was sold first of all at a time when the bidding seldom commences at an auction, went for \$615 to the Filston Farms, the contending bidder being Mr. J. M. Overton, of Nashville, Tenn. There was not another boar found in England combining so much quality and size without any serious defect, with probably one exception, and he could not be guaranteed a breeder. The sow, Manor Corydon Duchess, was most unfortunately lame, owing to a felon, but in spite of this she sold for \$505, Filston Farms again being the fortunate buyer, and many present thought she would have reached \$1,000 had it not been for this temporary lameness.

One of the most gratifying features of this sale was

that these high prices were made by contending breeders of such high reputation and so widely scattered that it is impossible to impute any intention of forcing prices up so as to boom the breed. They simply represent the demand now before the breeders for an extra good individual that will, in addition, form a desirable outcross for the home bred animals.

There were over 65 buyers present, but of this number only 19 secured animals.

The gavel with which Col. Bailey knocked down the sale was presented to him by the Farms, and he has promised to use it until this record is broken, which the Farms think will be a long time ahead.

Very low special rates were secured at the Kenilworth Inn, probably one of the most sumptuous winter resort hotels in the South, and where transactions between the breeders were very active after dinner during the days preceding and after the sale. The whole herd of Berkshires was inspected with much interest both before and after the sale, and some of the offers were so tempting that several sales were made at what would have been considered a long price a few months ago.

The sow, Her Majesty, did not bring what was expected by the Management, especially considering the very fine litter that she has raised since her importation.

At the completion of the sale a sealed envelope containing an offer of the Biltmore Farms of six animals of \$50 each in cash, if the buyer would leave them and call their bid off, was opened by the auctioneer, but in each instance was promptly refused. Three of these animals, one of which Manor Faithful, went to Filston Farms and the other three were purchased by Mr. Guy C. Barton, of Nebraska, whose representative also refused the offer.

Such prominent breeders were present, as Mr. N. H. Gentry, Sedalla, Mo.; F. E. McEldowney, Portland, Ore., and H. C. Taylor, Orfordville, Wis., representing the Ladd Estate; J. E. Dodge, from Hood Farm, Lowell, Mass.; W. J. Lovejoy, Roscoe, Ill.; W. R. Harvey, Sibley, Ill.; J. G. Yeager, Shelbyville, Ky.; W. F. Lillard, Lawrenceburg, Ky.; J. M. Overton, Nashville, Tenn.; G. A. Swartwout, Filston Farms, Glencoe, Md.; J. K. Honeywell, Lincoln, Neb.; Lorring Brown, of Belmont Farms, Smyrna, Ga.; James Gibson, Jr., New York City; W. H. Carpenter, New Middleton, Tenn.; J. W. Akin, Cartersville, Ga.; W. B. Griffin, Paris, K.; W. J. Milner, Cartersville, Ga.; William Edwards, Jr., Plymouth, Fla.; T. H. Baltzell, of Indiana; H. W. Fugate, of Fugate's Hill, Va.; M. K. Munson, of Ridge Farm, Vinemont, Ala.; Brent Van Swearingen, Simeon, Va.; J. L. Ellis, Baldoek, S. C.; M. O. Dowd, Lowell, N. C.; W. B. Beaty and brother, Mt. Holly, N. C.; A. P. Walker, Rushville,

Ind.; Jas. T. Anderson, Marietta, Ga.; Geo. T. Montgomery, Marietta, Ga.; H. Roquemore, Mansfield, Ga.; G. M. Middleton, Shelbyville, Ky.; L. Letterle, Harold's Creek, Ky.; T. B. Carney, Murfreesboro, Tenn.; A. H. Tipton, Greenville, Tenn.; Dorr Clark, Fredericksburg, Va.; W. I. Johns, Baldoek, S. C.; H. T. Pancoast, of the Forest Home Farm, Purcellville, Va.; W. H. Hicklin, Greenville, S. C.; T. J. White, of South Carolina; B. Harris, Pendleton, S. C.; F. T. Meacham, Morganton, N. C.; S. L. Trogdon, Greensboro, N. C., and others.

Biltmore, N. C.

GEO. F. WESTON.

It is very gratifying to us to see that at last Southern hog breeders are realizing the truth of what we have been so long telling them, that the secret of success in hog breeding, as in all live stock breeding, is good foundation stock, and that it will always pay to buy the best, even though the price be a long one. We congratulate Biltmore Farms on the record made.—ED.

### THE BROOD SOW.

*Editor Southern Planter:*

As my article on the hog in the November *Planter* is causing a little comment, I will explain my plan of handling the sow and litter.

I will say, in the first place, I have no special breed, but a good cross of Berkshire and Poland China.

I raise three litters one year and two the next from my sows. I arrange the pen so that the little pigs can creep through the fence, and I teach them to eat while on the mother. I begin taking them off two and three per week until I have all off by the time they are four weeks old, taking off the largest first.

I withhold all slop food a day or two before I begin taking off the last pigs, so that when all are off the sow's milk will have ceased, and she will always come in use within a week if in good condition, but never have her fat. If fat, stop all milk foods a week before weaning, feeding the pigs plentifully away from the sow. This method gives the pigs a good start, without check, when separated from the mother.

With good feed, I sell them from five to seven months old with big interest on my money invested.

Goochland Co., Va.

N. S. WATKINS.

### Hog Pasture,

I want to go into the hog raising business. Will alfalfa, German clover or sapling clover make a good hog pasture?

Dinwiddie Co., Va.

SUBSCRIBER.

Either German (Crimson) clover or sapling clover will make a good hog pasture. Alfalfa ought not to be pastured. It will not stand grazing. Cow peas or cow peas and sorghum or Soy beans will make you the best hog pasture for summer. Rape for the fall, artichokes for winter, and clover for the spring.—ED.

## The Poultry Yard.

### EGG-LAYING COMPETITION OF BREEDS.

These competitions are very popular in England, but have been little followed in this country. The last winter one was conducted in New South Wales, and the results are published in detail in the *Agricultural Gazette*. The competition arose out of a controversy between two breeders regarding the merit of Silver Wyandots and Buff Orpingtons. The minister of agriculture became interested, and it was finally decided to open the contest to all breeders who should contribute six pullets each of any one breed. The government put up yards 57 x 17 feet and pens 6 x 5½ feet for each flock of six birds. The fowls were in charge of the poultry expert at the Hawkesbury Agricultural College.

Prizes were given for the greatest total number of eggs laid by each pen and for the greatest aggregate weight of eggs. A record was kept of the market value of the eggs, total quantities of food consumed, and the average cost per hen. The first prize of \$50 for total number of eggs, and of \$15 for greatest aggregate weight, was awarded to a pen of Black Orpingtons.

There were 41 pens entered, which makes it the largest competition of its kind ever conducted. All but one pen paid for its food. The average value of the eggs was \$1.54 per hen, and cost of food 66 cents, leaving a profit of 88 cents each. The first pen of Black Orpingtons gave a profit of \$2.18. The following table shows the average results of the various breeds, also the record in detail of those pens which laid a total of 400 eggs or more during the six winter months, April to September being winter in New South Wales :

#### AVERAGE RESULTS OF THE VARIOUS BREEDS.

No. and Breed.	Total Eggs.	Av. per Pen.
6 Imperials.....	426	\$71 00
24 Silver Wyandots.....	1 681	70 04
48 Black Orpingtons.....	3 127	65 14
30 Buff Orpingtons.....	1,949	64 96
18 Buff Wyandots.....	1,145	63 61
30 White Leghorns.....	1,746	58 50
12 Anconas.....	672	56 00
6 Golden Wyandots.....	317	52 83
6 "Birtrees".....	317	52 83
18 White Wyandots.....	818	47 11
6 White Orpingtons.....	273	45 50
12 Buff Leghorns.....	493	41 08
12 Andalusians.....	464	38 66
18 Minorcas.....	589	32 72
246 Hens.....	14,047	57 10

Prepare for this in time, and guard against the greatest of all danger in growing turkeys—inbreeding.

Make full preparation for growing early pullets. Begin now to plan for this. Get the incubators and brooders in shape for spring work. Try them ahead of time and see if they work right. You may save a lot of eggs by so doing. Be sure they are in good working order before putting in the eggs.

When brooders are properly made and run, they will do good work; but each is as important as the other. After the maker has done his part, you must do yours. It is quite as important for the brooder to be run right as it is absolutely necessary that the incubator be properly managed; look out for this.

Strong, vigorous stock is the proper kind to use for breeding; this holds good in fowls as in all kinds of stock. The same rule holds good throughout nature. If we hope for the best results, we must make use of the best means to gain the desired end, whether after better crops—fruit, vegetables or live stock—the principle of production is the same. Good quality is not to be gained through the use of inferiority.

### COST OF PRODUCING A BROILER.

One of the most successful broiler raisers in this country markets his chicks at 1½ to 2 pounds weight, at an average cost to raise of 25 cents each. He is able to market a broiler chick for every two eggs put in his incubators (including infertiles), and his carefully kept estimate of cost, extending over several years, is as follows :

Two eggs.....	5 cents.
Labor.....	7 "
Feed.....	8 "
Picking.....	5 "
Total.....	25 "

At the price he paid the farmers for eggs his average cost is not quite two cents an egg, as the price paid for picking is one to two cents above the market price for picking broilers, his estimate of the total cost is a liberal one. He said: "I would rather pay that price and have the chicks carefully picked, each man picking 50 or 60 a day, than have a picker earn the same amount of money by hurriedly picking 100 a day. It is quite easy for a picker to 'skimp' his work, and the broilers would be a cheaper looking lot in consequence, shrinking the price perhaps four or five cents a pound." In other words, quality pays in broilers as well as in other things, and the fact that this man's broilers frequently bring him five cents a pound above the highest market quotations, approves the policy of paying the picker a good enough price to insure having the chicks carefully picked.

Broilers bring the highest prices in April. At this season of the year they bring 40 to 50 cents a pound, which price gradually scales down to 20 cents or a little less in August. Later in the year the price again advances, the advance being most rapid in February and March.

Now is the time to plan for the coming season; eggs and poultry of all kinds have been in good demand; and this is sure to continue, and all should profit by these conditions.

No one kind of poultry has been so scarce and high in price as turkeys. The stock in storage has been so reduced as to insure good prices another season.

## The Horse.

### NOTES.

Prominent among the stallions in the stud of the Hon. William C. Whitney at La Belle Farm, Lexington, Ky., is Ballyhoo Bey, winner of the Futurity in 1890. Ballyhoo Bey is a brown horse, foaled 1893 by Kingston, dam Ballyhoo, Duke of Magenta; second dam Baby, by imported Strachino; third dam Elliptic, by imported Eclipse; fourth dam the ever famous mare Nina, by Boston. Baby and Elliptic, the second and third dams of Ballyhoo Bey, were bred in the former noted Bullfield Stud, Hanover county, Va., while Nina passed most of her life there. A great fountain head of speed and race horse quality was this great daughter of Boston. Another of Nina's descendants now prominently before the public is The Commoner, who heads the famous Belle Meade Stud, Nashville, Tenn. He was sired by Hanover, dam Margerine, by Algerine. Algerine was got by Abd El Kader, formerly a member of the Bluefield Stud, out of Nina. He was foaled 1873, and his full sister, Algeria, came in 1875, while the dam was barren in 1874 and 1876, and September 19, 1879, the great daughter of Boston succumbed to the weight of years at the age of 31, and was interred on the hill side overlooking the training track.

Mr. W. R. McComb, of the Union Stock Yards, this city, has sold to Trainer George R. Richmond, who has charge of the Deep Run Hunt Club stables and track, the bay filly, one year old, by Orphanwood, dam Vida B. Wilkes, by Brignoli Wilkes, second dam Vida B., by Almont M., and third dam Mary Bell, the dam of Urbana Belle, 2:20½, and Rex, 2:22½. Both the sire and dam of this filly—who, by the way, is quite promising—are the property of Mr. McComb, who also owns Joyful Maiden, 2:19½; Medinawood, both by King Nutwood, and others as well bred and speedy, too. Orphanwood, who is large, handsome of King Nutwood and Young Mollie, by Baron Luff, 2:27, will be kept in the stud this season at the McComb Farm, Fishersville, Va., and the bay stallion will doubtless be well patronized by breeders in that section.

In Burlingame, 2:18½, trotting, the splendid son of Guy Wilkes, and Ed. Kearney, thoroughbred son of Tom Ochiltree, Mr. Robert Tait, of Spring Garden Farm, near Cool Well P. O., in Amherst county, Va., offers the services of a grand pair of stallions, and breeders in that section can make no mistake in patronizing such horses, especially those who own good mares. Burlingame is of fine size, bred in the richest lines, and his get take after him, which shows his potency as a sire. Ed. Kearney is one of the finest looking thoroughbred stallions to be seen, while he is grandly bred, and will sire not only race horses from thoroughbred mares, but grand hunters, jumpers and cross country horses from general purpose mares. The fees of both Burlingame and Ed. Kearney are moderate, and intending breeders should write for extended pedigrees and other desirable information concerning them.

The International Stock Food Company of Minneapolis, Minn., whose advertisement appears in the *Southern Planter*, offers an article of prime merit and one that has borne the test in their stock food, which is sold at a price that enables three feeds to be had for one cent. It has the largest sale of any similar preparation in the world. Mr. M. W. Savage, the head of the concern, is also proprietor of the International Stock Food Farm, home of the famous pacer, Dan Patch, 1:59½; the great trotter and sire, Directum, 2:05½, and Roy Wilkes, 2:06½, also famous as a sire. Last season Dan Patch was timed in 1:59½ at Readville, Mass., and during the coming one is more than likely to pace a faster mile than has ever been seen done by any harness horse. Not only are the stallions at this establishment great, but the brood mare band is one of the choicest in the country as well.

The stockholders of the Peninsular Fair Association, Tasley, Va., met recently and elected the following officers: Judge John W. G. Blackstone, president; N. W. Nock, vice president; Thomas S. Hopkins, secretary and treasurer. The executive committee is made up of W. H. Parker, G. W. Kilman, T. H. Melson, J. H. Ayers, W. T. Wright, H. O. Finney, John W. G. Blackstone, John R. Hickman, and G. F. Parker. The Sixth Annual Fair of the Association will begin August 4th and continue four days. The Tasley Fair marks the beginning of the Maryland and Virginia circuit of fairs and race meetings, which will be followed by that at Pocomoke City, Md., thirty-five miles distant on the N. Y. P. and N. R. R. Four stakes of \$500, two each for trotters and pacers, will be included in the speed programme of each association.

Wealth, 2:17½, the fine, big son of Gambetta Wilkes and Magnolia, by Norfolk, who heads the Chapman Stud at Gordonsville, Va., is just six years old, and has probably never served more than half a dozen all told in his life; yet from one of these, served when he was three years old, there is a two-year old owned by M. E. Doyle, of Lynchburg, Va., who is described as a great prospect for speed and is entered in something like \$60,000 worth of stakes. The dam of Mr. Doyle's precocious youngster was sired a son of Belmont. Wealth will make a short season in the stud and then be placed in training, when good judges predict a record of better than 2:10 for the handsome brown son of Gambetta Wilkes before snow flies this fall. Col. W. H. Chapman, the owner of Wealth, is in a position to accord him good advantages, hence the horse will be sent to Joe Rea, of Danville, Ky., in whose masterly hands Wealth will be trained and raced this season.

Recent winners at New Orleans include Cogswell, black horse, 7, by Jim Gray, dam Leola, by Eolus, second dam Vigiline, by Vigil. Cogswell was bred in the Ellerslie Stud of A. D. Payne, Charlottesville, Va.

BROAD ROCK.

Mention the *Southern Planter* to your friends.

## Miscellaneous.

### BROWNLOW'S GOOD ROADS BILL.

#### A Practical and Conservative Measure.

A representative of the press called upon Hon. W. P. Brownlow, member of Congress from Tennessee, and asked him whether his bill, recently introduced in Congress, and providing for national aid to road improvement, could not properly be condemned as a paternalistic and impracticable scheme, pleasing to visionaries, but regarded by conservative men as designed to loot the treasury and to complicate the functions of the national government.

"The answer to that question," said Col. Brownlow, "may be found in the bill itself, and in the editorials and articles appearing in the leading newspapers, agricultural and scientific journals of the country."

"I am afraid," he continued pleasantly, "that like some others, you are talking about my bill before you have read it, for it is not proposed to build roads at government expense alone. The general policy, as stated in the bill, shall be to bring about, so far as may be, a uniform system of taxation for road purposes, and a uniform method of construction, repair and maintenance throughout the United States, and to co operate with any State, or civil division thereof, in the actual construction of permanent highways."

If you see anything paternalistic and impracticable in that, you differ from the best editors of the most conservative journals in the country. It has been said that a just cause will raise up friends to fight its own battles. This is certainly the case with my bill, for even the editor of the *Washington Post*, who claims to be against it, says:

"The *Post* is surprised at the amount of favor, or rather lack of disfavor, with which it has been received by the press. Even the Democratic papers, some of them prominent, and in all respects reputable, have discussed it without a word of condemnation."

In dealing with the question of paternalism; the editor of the *Manufacturers' Record*, which journal represents important industrial, railroad and financial interests, says:

"Many objections will be made to this bill of Mr. Brownlow's. Some of these objections will come from honest men—men who were taught a different theory of government from that which exists to day. The greatest objections, however, will come from two classes—first, those who affect to regard it as paternalism in the government, and those who belong to a class of politicians who, to be consistent, must be unprogressive; who sit in darkness on the dry branches of a dead era and brood over the past, and hoot at those who prefer to live among the green branches of prosperity and influence. Such politicians as these consider prejudices as an evidence of wisdom and patriotism. They vent their indignation against all who do not sing the lugubrious song of their infinite pessimism."

The objection raised because of the so called paternalism in this bill is puerile, inconsistent and irrational. It is pure demagoguery. The regulation of public affairs by the government is not paternalism. The building of postoffices, the carrying of the mails,

the collection of the revenues, the regulation of commerce and the building of highways, are all objects in which every class is interested. These things do not enter into the private life of a citizen. Should the General Government prescribe "what we shall eat, or what we shall drink, or wherewithal we shall be clothed," it would be paternalistic in character. It would indeed be an enervating paternalism, destroying individuality and repressing energy. The government, in aiding to build roads, would stimulate industrial activity, while it would, at the same time, arouse the highest ambition in the citizen, command his loyalty and insture an ardent patriotism.

To illustrate that my bill is regarded as practicable by conservative men, I quote the following from *Colman's Rural World*, which represents the farmer of the great Middle West, and which is edited by Hon. Norman J. Colman, the first Secretary of the U. S. Department of Agriculture:

"The feeling is growing that some sort of systemized effort is necessary involving a broader scope than has heretofore been generally accorded. That the effective solution of the good roads problem is too great a task for merely local effort, is shown by the futile results. The business for constructing highways is a job the average farmer should not be expected to tackle. He has his hands full managing one business already that requires all of his thought and most of his time. It has been suggested that co operation of National, State and local interests is logical, practicable and essential. The logic of State co operation is shown by the fact that the benefits accruing from the establishment of public highways extend far beyond their locality. Whatever the unit of organization, whether State, county, township or road district, there is no doubt that concerted action is necessary, and that all who share in the benefits should divide the costs.

"The invoking of National aid in building roads is so expansive a topic that it would fill all the pages of the *Rural World* and then run over. We have but to say at this time that the most rational thing we have seen in this connection is the bill introduced in the present Congress by Hon. Walter P. Brownlow, of Tennessee. The fundamental principles of the bill are sound and equitable. It provides for the establishment of a bureau of public roads in the Department of Agriculture. This we have long advocated as being the first step in the preliminary educational work which must precede actual business of organization and construction.

"The Brownlow bill provides that the director of this bureau may co operate with any State or county, and that one half of the expense of road construction shall be paid by the United States Government only when the work actually progresses through local effort and only when the road districts have raised the other half required.

The constitutional provision is ample justification, and the rural free delivery system demands National aid. The tremendous growth of rural routes, and the unanimity of opinion on their value in bringing about the revolution in country life, encourage the belief that the government will give this matter the serious consideration that it deserves."



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ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,  
Editor and General Manager.  
B. MORGAN SHEPHERD,  
BUSINESS MANAGER.

TERMS FOR ADVERTISING.  
Rate card furnished on application.

TERMS OF SUBSCRIPTION.

The **Southern Planter** is mailed to subscribers in the United States and Canada at \$5.00 per annum; all foreign countries and the City of Richmond, Va.

Remittances should be made direct to this office, either by Registered Letter or Money Order, which will bear our risk. When made otherwise we cannot be responsible.

We invite Farmers to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

Address— **THE SOUTHERN PLANTER,**  
RICHMOND, VA.

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PUBLISHER'S NOTES.

Patronize Our Advertisers.

In this issue of the *Planter* will be found advertisements from all the old reliable houses with which farmers in the South have been doing business in the past, and also offers of goods from scores of others who have never previously patronized our columns. We are most anxious to make this advertising pay our patrons, and therefore appeal to every reader of the *Planter* to read the advertisements as well as the body of the journal. To do this will be a liberal education in itself, and it will bring home to every farmer what an enormous business is done with farmers.

When you require anything on the farm just turn to the advertising columns of the *Planter* and it is ten to one that you will there find it offered. Patronize these men. They are reliable men or their advertisements would not be found in the *Planter*. We will see that no one who deals with our advertisers is fleeced or faked. When you write to any advertiser always say you saw the advertisement in the *Planter*. This helps us to make the journal more helpful to each farmer, as it secures us the patronage of the advertisers. We could not afford to issue *The Planter* for 50 cents per year without a liberal support from advertisers.

WITH OUR ADVERTISERS.

Dr. Cecil French wants all kinds of live wild birds and animals. He has an ad. elsewhere in this issue.

Messrs. Heatwole & Suter are offering some nice Scotch topped Shorthorn cattle. Look up their ad.

Dr. R. K. Gregory, a well-known physician, has something very complimentary to say in another column regarding the Keeley Institute at Greensboro, N. C.

The Rife Engine Co. of New York resumes its advertising with this number. The Rife Hydraulic Ram is well known to numbers of our readers, and to those who have not investigated its merits, we beg to suggest that they get a catalogue at once.

The Call-Watt Co. is advertising Agricultural Implements and Machinery in this number.

WOOD'S "TRADE MARK"  
**Farm Seeds**

are the best that can be obtained—free from weed seeds and impurities and of strong germinating qualities. It is very important if you desire to secure good stands and good crops to purchase the highest grade seeds obtainable. This you can always do by purchasing "Wood's Trade Mark Brand" of Farm Seeds.

**Wood's New Seed Book for 1903**  
mailed on request tells all about

- Vegetable and Flower Seeds,
- Grass and Clover Seeds,
- Seed Potatoes, Seed Oats,
- Tobacco, Seed Corn,
- Cow Peas, Soja, Velvet and Navy Beans, Sorghums,
- Broom Corn, Kaffir Corn,
- Peanuts, Millet Seed, etc.

Write for Seed Book and prices of any Farm Seeds required,

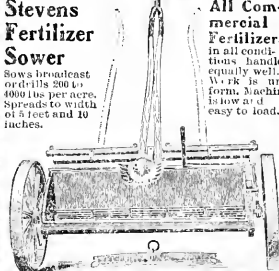
**T. W. WOOD & SONS,**  
Seedsmen, Richmond, Va.

**Sows or Drills**

**Stevens Fertilizer Sower**

Sows broadcast or drills 200 to 4000 lbs per acre. Spreads to width of 3 feet and 10 inches.


**All Commercial Fertilizers** in all conditions handled equally well. Work is uniform. Machine is low and easy to load.



**Broad Tired Wheels Make Light Draft** and avoid rutting fields. Shafts or tongue for one or two horses. Quick adjustment for drilling or broadcasting, 1 1/2 or 30" spreading. Sows makes cost in saving fertilizer. For price and testimonials.

**Belcher & Taylor A. T. Co.,**  
Box 25 Chippewa Falls, Mass.

Don't Monkey with the **"PEERLESS,"** anything but



If it is clean, unbroken peas you want. The "PEERLESS" is easy to operate, light to handle, strong and durable, elegantly finished. It will clean peas to perfection. Also milled, sorghum seed and velvet beans. J. E. Sanders' latest improved, fully guaranteed. We pay freight. Write today for prices, address,

**PEERLESS PEA HULLER CO.,** Box V, Dalton, Ga

A new advertiser in this issue is the S. Freeman & Sons Mfg. Co. They have a splendid windmill, in which our subscribers should be interested.

The Etna Life Insurance Co. publishes its annual statement in another column. If our readers will take the trouble to compare this statement with the one published last March, they will find that this well known old company is getting its share of life insurance.

Currie Bros., of Milwaukee, are advertising clover seed, which it is claimed will make 42 tons to the acre. In this section, if we can make as many tons as are represented by the first figure above, we think we are doing well. This, however, is Egyptian clover, which it is claimed yields 42 tons to three cuttings. It might be well to investigate this new grass.

The Belcher & Taylor Agricultural Tool Co. has two ads. in this number. We invite the attention of our readers to both of them.

Mr. Henry Blosser is advertising Short-horns again with us this season.

Mr. A. M. D. Holloway, Philadelphia, has an ad. of the Hardie Spray Pumps in this number. He is the Eastern representative of this concern, as well as the Lansing Tubular Silo, which will also be found advertised in this issue.

We have a new advertiser of fencing in this issue in the person of the International Fence and Fireproofing Co. Look up the card among the fence ads.

The Meadowvale Farm of Lutherville, Md., is also a new comer in this issue. There are two ads. of this firm—one offering live stock and the other poultry. It is worth while to look up these ads.

Some nice Line-bred Plymouth Rocks are offered by E. F. Somers.

The American Stock Food Co. offers to send a trial package of its food under conditions mentioned in its ad.

The E. B. Fence Co. of Racine, Wis., is after the trade of the farmers of this section.

A public sale of Thoroughbred Stock at Hagerstown, Md., is booked for March 12th. Mr. H. L. Strite, manager of the

CITY OF TOLEDO, } ss.

LUCAS CORNYN,

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the city of Toledo, county and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of CATARRH that cannot be cured by the use of HALL'S CATARRH CURE. FRANK J. CHENEY.

Sworn to before me and subscribed in my presence this 6th day of December, A. D. 1886.

SEAL

A. W. GLEASON,  
Notary Public.

Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.

Sold by druggists, 75c.

Hall's Family Pills are the best.

FOR MAN OR BEAST—YAGER'S LINIMENT IS JUST RIGHT.

**YAGER'S**

Applying to RHEUMATISM AND JOINTS

Applying to SPRAIN

TRADE MARK

**LINIMENT**

FOR

**MAN OR BEAST**

POPULAR

SOOTHING & EFFECT

**QUICK HEALING POWERS.**

IN THE TREATMENT OF DISEASES REQUIRING AN EFFICACIOUS EXTERNAL REMEDY.

**BEWARE OF IMITATIONS.**

PREPARED ONLY BY

**GILBERT BROS. & CO.**

SOLE PROPRIETORS

**BALTIMORE, M.D.**

U.S.A.

REGISTERED SERVICE OFFICE

WHEN YOU GET YAGER'S FOR 25 Cts., WHY TAKE A SUBSTITUTE?

EXACT SIZE OF BOTTLE.

**TAKE NO SUBSTITUTE.**

sale, has a half-page ad. elsewhere in this number. Our information is that some splendid stock in the shape of Shorthorns and Berkshires is going to be offered. We feel satisfied that any of our readers who can attend the sale will find it profitable to do so. For further particulars, look up the ad. and address Mr. Strite

Some nicely-bred Red Polled cattle are offered by W. S. Foster, Blacksburg, Va. Look up his ad. for further particulars.

Yager's Liniment, for man and beast, is advertised as usual in this number. Nearly all the drug and country stores have it in stock.

Notice the change in the ad. of the Forest Home Farm in this issue.

The International Stock Food Co. has a full-page ad. elsewhere in this issue. They are offering a large cash sum for an article, for which any farmer or student of an agricultural college can compete. Look up the ad. and enter the competition.

The well-known house of the A. B. Farquhar Co. has a couple of ads. in this issue, to which we invite the attention of our readers.

The Castalia Herefords are in nice shape this spring, as evidenced by a letter from Mr. Boccock and a half page ad. of them in this number.

The Electric Wheel Co. of Quincy, Ill., has two ads. in this number, to which we ask the attention of our readers.

"How to Grow Melons" is the title of a pamphlet, which B. W. Stone & Co., Thomasville, Ga., will mail free.

Yager's Sarasparilla with Celery is offered in third of a page space in this issue. The makers furnish splendid testimonials as to its value.

Fleming Bros., Chemists, 22 Union Yards, Chicago, are advertising their well-known remedies with us. Look up the ad. and send for interesting free catalogue treating the various diseases of horses and cattle.

The Bowmont Farms advise us that they are having numerous inquiries for large Yorkshire hogs.

The Pasteur Vaccine Co. is advertising its well-known Black Legline in another column.

Look up the ad. of the Ames Plow Co. They are offering a lot of useful and valuable tools for market gardeners.

Herefords and Do. sets are offered by H. Armstrong.

Sprayers are advertised by the F. B. Smith Mfg. Co., Buffalo, N. Y.

Farm Bells, Spraying outfits and Farm Machinery are offered by Eclipse Hardware and Mfg. Co., Shiloh, Va.

Hurraw & Son have a Sprayer about which they would like to tell our readers.

R. W. Haw, Jr., of Centralia, Va., is offering some nice Brown Leghorns. Get his prices.

J. M. Hughes sends us a good recommendation as to fair dealing with his customers. He has two ads. elsewhere in this issue.

The splendid Hackney stallion "Cis-mont" is making the season at Keswick.

FOUNDED  
1802.

GOLD MEDALS:  
Paris, 1900. Pan-American, 1901.

# Thorburn's Seeds

For over a hundred years have been universally recognized as the standard of excellence. They received the GOLD MEDALS (the highest award) both at the Paris Exposition of 1900 and at the Pan-American, 1901.

## Our Catalogue

—the 102d successive annual edition—contains a more complete assortment and fuller cultural directions than any other seed annual published. It is beautifully illustrated, not with highly colored exaggerations, but with the finest half-tones from life photographs. It contains 128 large size pages, and in addition 16 full page half-tone plates, and is in every respect and without exception the most complete, most reliable, and most beautiful of American Garden Annuals. We will mail it free on receipt of 10 cents in stamps, which amount may be deducted from your first seed order.

## Market Gardeners

are invited to send for our special price-list of high-class vegetable seeds for truckers and large market growers. It contains all sorts of approved merit.

**J. M. THORBURN & CO.,**  
36 Cortlandt Street, NEW YORK.



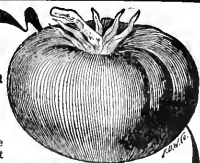
## The Tomato

never has been produced that can equal in  
flavor and fine form our

### NEW CENTURY TOMATO.

Bred and trained for years, this tomato is extra large and heavy, hardy, early, free from blight, and will not crack nor scald. Pronounced by growers remarkably solid, full fleshed and free from seed. The right size and color to bring the price on the market, it pleases the eye and brings most money. Ships and keeps unusually well, 800 bus. per acre is the record for this tomato and the seed is all controlled by us. Write to-day for our new illustrated catalogue, showing our New Leader Cabbage, Dark Fortune Cucumber, Ruby King Radish, Rocky Ford Cantaloupe, Alaska Peas, Valentine Beans, Gradus Peas, and all of our big line of garden and field seeds. It's free. Write now.

**J. BOLGIANO & SON, Dept. P 7, Baltimore, Md.**



When corresponding with Advertisers, always mention  
The Southern Planter.


**Planet Jr.**

The No. 8  
"Planet Jr."

## Horse Hoe and Cultivator

is without doubt the best, best known and most largely used one horse cultivator in the world. There is not a civilized country on the globe in which it is not known and used. This could not be so if it did not possess true merit and worth. It has a large number of attachments which make it readily adaptable to all uses and nearly all crops. Note the two levers. The one standing upright is for regulating the width. It changes the width of the tool for wide or narrow rows. The other lever operates the wheel and depth regulator simultaneously to a nicety. It is made of the very best material throughout and with reasonable care will last indefinitely. It is a great favorite with potato growers, truck farmers and general farmers. It is but one of our fifty seeding and cultivating implements, including plows and combined Seed Sowers, Wheel Hoers, Hand Cultivators, Walking Cultivators and One and Two-horse Raising cultivators, Special Sugar Beet Tools, etc. Our new 1902 catalogue is fine. It contains over 100 illustrations with full descriptions and prices. It costs you nothing and will make you money. Write for it at once.

S. L. ALLEN & CO.,  
Box 1107-X  
Philadelphia,  
Pa.



## GET A GOOD WIND MILL

Don't buy a poor wind mill. Don't pay a double price. Send direct to our factory for catalogue of the

### Freeman Steel Wind Mills

and four post angle steel towers. A complete line of pumping and power mills of the highest grade at extremely low prices. We can save you money on a good article.

S. Freeman & Sons Mfg. Co.,  
110 Hamilton St., Racine, Wis.

A complete line of Feed and Feed-lice Cutters, Corn Shellers, Wood Saws, etc., at low prices.



## Wagon World A-wheel.

Half a million of these steel wheels have been sent out on our wagons and to fit other wagons. It is the wheel that determines the life of any wagon, and this is the longest lived wheel made. Do you want a low down Handy Wagon to use about the place? We will fit out your old wagon with Electric Wheels of any size and any Blue tire, straight or staggered spokes. No cracked hubs, no loose spokes, no rotten felles, no resetting. Write for the new catalogue. Has free.

Electric Wheel Co., Box 146 Quincy, Ills.



Fee, \$10, with the usual return privilege or \$15 to insure. There is a half-page ad. of Mr. Linden Kohl, the owner, elsewhere in this number.

The F. S. Peck Co. have an interesting offer for poultrymen in another column.

### MAGAZINES.

The frontispiece of the March Century, a half-tone reproduction of the March Century, a half-tone reproduction of the March Century, possesses unusual interest. This picture of a noted American artist, the work of a fellow-painter equally distinguished, holds high rank among the best examples of American portraiture, and, it is hoped, will find permanent place in the Metropolitan Museum of Art in New York City, a testimonial to Mr. Chase, "on account of his unceasing devotion to American students and American art." Other illustrations of more than ordinary interest in the March Century are Ernest Blumenschein's eighteen drawings of typical characters and scenes vivifying Ray Stannard Baker's "The Great Northwest," G. W. Peters' strong sketches for Jacob A. Riis' "In the Gateway of Nations," W. L. Jacobs' sympathetic picturing of "The Passing of Elk-kauh Ritter" and Fanny Y. Cory's dainty conceptions for Madison Cawein's "There are Fairies."

Ray Stannard Baker's series of articles on "The Great Southwest," published last year in the Century, won favor that means a welcome for the new series on "The Great Northwest," whose beginning is the leading article in the March Century. To many readers the story of the Northwest's march of events, which in the last eight years have moved "with a rapidity which must always remain a world's wonder," will have the charm, aside from its picturesque telling, of land and life as novel and unfamiliar as if from another world. The illustrations, from drawings by Ernest Blumenschein, add much to the interest and value of the narrative. Jacob A. Riis' "In the Gateway of Nations," contains authoritative information touching phases of life little known to most Americans, and leaves the reader with a kindly feeling for these humble pilgrims from the Old World to the New. Allied in interest is the article immediately following, Gustave Michaud's "What Shall We Be?" a discussion of the coming race in America, illustrated from photographs furnished by the author. Our native stock, Mr. Michaud says, is becoming a small minority, and the nature, extent and probable influence of the human current flowing from the Old World to the New are matters of vital importance. Mr. Michaud's figures and inferences are followed by comments thereon by Franklin H. Giddings, Professor of Sociology at Columbia University. George Buchanan Fife's "The So Called Tobacco Trust," another of the Century's notable series on the great business combinations of the day, is very readable.

St. Nicholas this month not only tempts its young friends to read, but sets them to thinking about their books and gives them some helpful hints on how to read for the best results. The editor of the

### THE IMPROVED SCREW STUMP PULLER

Write to Prices.



Chamberlain Mfg. Co., Olean, N. Y., U. S. A.

## STUMP PULLERS



All Sizes and Prices. Catalogue Free.

MOHLAND & COMPANY,  
BURLINGTON, IOWA.

## HERCULES STUMP PULLER



Clears an acre of heavy timberland each day. Clears all stumps to a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa

### BOSTROM'S IMPROVED FARM LEVEL

Pat'd 1902.

WITH AND WITHOUT TELESCOPE



Is no MAKESHIFT, but the best one made for Terracing, Ditching and Drainage. Price \$5 and \$10, including Tripod and Rod. Send for descriptive circulars and Treatise on Terracing, etc. Free.

Bostrom, Brady Bldg. Co.,  
813 1/2 W. Alabama St., Atlanta, Ga.

## WATER RAISES ITSELF

to any height, any distance by the force of the natural stream with the



### RIFE HYDRAULIC ENGINE.

Best for farms, country residences and irrigation. Pumps 30 ft. high for every foot of fall. Sold on 30 days trial.

RIFE ENGINE COMPANY,  
128 Liberty St., New York.

LATEST

(Newly Patented.)



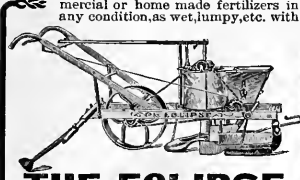
IMPROVED

THOUSANDS IN USE.

Ask your hardware dealer for lists or write  
W. H. BROWN MFG. CO., DECATUR, ILL.

# Corn Planting

and fertilizing go hand in hand. You can plant in hills, drills or checks and put in the ground all commercial or home made fertilizers in any condition, as wet, lumpy, etc. with



## THE ECLIPSE

**Corn Planter and Fertilizer Distributor, With Improved Row Marker.**

Adapted as well to Peas, Beans, Beets, etc. Hills 6 to 45 inches apart. Distributes 50 to 450 lbs. fertilizer per acre. Wide and easy adjustment. Light draft, weight 150 lbs. Easy to handle, & model for accuracy and durability. Investigate our Eclipse Two Row Two Horse Planter. Agents wanted in new territory. Write for circulars and terms.

**BELCHER & TAYLOR A. T. CO.,**  
Box 25, Chicago Falls, Mass.

Books and Reading department invites the girls and boys to send in lists of the book friends they have made since 1903 began, to tell whether they like or dislike "Water Babies," Lamb's "Tales from Shakespeare," and "Alice in Wonderland," with reasons for their judgment, and to write, illustrating if they wish, accounts of their favorite place for reading, prizes being promised for the best work. The classification of books as "spectacles," "kaleidoscope" and "microscope" books, and the suggestions on how to read and test worth-while books should be of great help to thoughtful girls and boys.

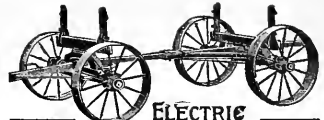
The March Lippincott's Magazine contains a new novel by the author of "Fruit Out of Season." This, Mary Moss' latest story, is called "Julian Mordohla," and Lippincott's is again so fortunate as to secure it. It is a story of society, yet having a curious element not met with in the usual society novel. It is handled with the characteristic breeziness and refreshing vigor that was a strong feature in Miss Moss' earlier work, and critics predict for her a future of no ordinary kind.

There are nine short stories in the March Lippincott's of pleasing variety and by many names well known in magazine-dom: Cy Warman's animal stories are as popular as are those of the "rail road." This, entitled "The Fidelity of a Dog," is strictly good. "Told After Dinner," by Ella Middleton Tybout, may "come home" to some Senator or Member of Congress at Washington. Phoebe Lyde calls her story "Tiberius the Truant," after a pet lamb, "Tiberius." A peculiarly powerful tale by Clara Elizabeth Ward is called "The Regeneration of Mary Mather." It threatens a tragedy but ends happily. "The Other side of Boss," by Jerome Case Bull, is a spirited story of a Western logging camp. "Piscator and the Peri," a young fisherman's love story, is by Henry Wysham Lanier, who is, by the way, a son of the gifted poet, Sidney Lanier. He possesses the family talent in a marked degree. The stock exchange is the scene of a remarkable good story called "The Bull in Lamb-Skin," by Edward Childs Carpenter. A story of the mines of Chnton Dangerfield, called "The Wheel of Fortune," is a happy illustration of the best man winning with a woman's timely aid. The March number closes with an entracte entitled "Ten Minutes," by A. H. Shirres.

In a paper by Mrs. Sara Yoke Stevenson in the March Lippincott's Magazine some present day abuses are lightly pointed out, interspersed with anecdotes. The title is "Intellectual Communism." Eben E. Rexford gives sound advice to cities as well as villages in his article entitled "Rural and Village Improvement Societies."

### THE FENCE QUESTION.

The increased number of inquiries we are receiving of late in regard to the best and most economical means, evidences the fact that the question of Fencing is one of the most important matters in the minds of the farmers to day, and that



**ELECTRIC Handy Farm Wagons**  
make the work easier for both the man and team. The tires being wide they do not cut into the ground; the labor of loading is reduced many times because of the short life. They are equipped with our famous Electric Steel Wheels, either straight or stagger spokes. Wheels any height from 54 to 60 inches. White hickory axles, steel hubs. Guaranteed to carry 4000 lbs. Why not get started right by putting in one of these wagons. We make our steel wheels to fit any wagon. Write for the catalog. It is free.  
**ELECTRIC WHEEL CO., BOX 116, QUINCY, ILL.**

**FARMER BOYS**  
You can make good money selling our Economy Hugges and Harrows to your neighbors. We beat the world on quality and price and pay liberal commissions. Write at once for catalogue and general list. A crecker.  
**Jack Top Hugges \$40**  
Economy Harrow \$10  
Box J Cincinnati, Ohio

**OUR LOW HITCH DISC HARROW**  
Best, simplest, strongest and most durable Disc Harrow made. All steel. Double lever. Low hitch. Center draft. All sizes. With or without seeding attachments. Write for circulars and prices  
**TOLEDO PLOW CO., Toledo, Ohio**

**Roderick Lean FARM Implements.**  
Made by experienced workmen of special material. Acknowledged by farmers superior to all others.  
**Sold on Their Merits.**  
Spike Tooth Harrows, Spring Tooth Harrows, Disc Harrows, Land Rollers, Hand Carts.  
Write for catalogue.  
**RODERICK LEAN MFG. COMPANY, Mansfield, Ohio.**  
Wheels or Shoes on Rear.

**Corn Planting**  
must be well and carefully done, as the future crop depends upon it. For all purposes, in any soil, on all kinds of ground nothing equals the  
**SPANGLER CORN PLANTER.**  
Saves time, labor, money and insures the crop. You know when it is working, you can see the corn on its way to the ground. Slide with or without fertilizer attachment. New device for sowing peas, beans, radishes, corn, etc. will also make the Spanglers Low Down Barrow Fertilizer best. Write for circular and terms.  
**SPANGLER MANUFACTURING CO., 5010 6th St., York, Pa.**

**WE PAY \$26 A WEEK** And expenses to men with rigs to introduce Poultry Compound.  
**INTERNATIONAL M'FG. CO., Parsons, Kan.**

# Profitable Planting

always results where a Keystone Corn Planter is used. Drops the kernels in hill or drills any distance apart and sows any kind of soil fertilizer with utmost satisfaction. Works well in any kind of soil. Does not crack the grain and plants beans, peas, etc. Frame is steel, making a durable machine which is a pleasure to use. You'll never regret the purchase of a

**Farquhar Keystone Corn Planter**  
A. B. FARQUHAR CO., Ltd.,  
York, Pa.



Send for free illustrated catalogue of farm implements and machinery.

# DAISY Corn... Planter



Agents wanted. Write for Catalogue and special terms.  
Durable, Accurate, Efficient.  
A single row or 2 planter, made with or without fertilizer attachment. Has either double or cone-shaped wheels. Has frame or dropping belt. Dropping and fertilizer feed regulated by its chain belt. Chain wheel for dropping corn. Drops 1 cent from 12 to 18 inches or greater from 22 to 38 inches apart. 6 extra feed wheels for fertilizer attachment drills 29 to 65" fertilizer per acre. Ground wheel in front, be raised or lowered for deep or shallow planting. Extras can be supplied for fertilizer or drill, peas, beans, cutters, corn, etc. Write for Catalogue L.  
**HENCH & POMEROY CO., York, Pa.**

# Cream SEPARATORS

All about them and other things for the dairy and creamery. **A. H. REID, Philadelphia.**

**IF WE DID NOT KNOW OUR SPRAYER AND SPRAYING MIXTURE**

the Best ever devised, we would not buy expensive space to tell you about them.



WRITE TO-DAY and we will send you a Book showing the benefits derived by the use of our Mixtures and Spraying Outfits.

Lenox Sprayer & Chemical Co., Inc.  
Dept. 11 PITTSFIELD, MASS.

**Get the Best**

A Good Spray Pump earns big profits and lasts for years.

**THE ECLIPSE**

is a good pump. As practical fruit growers we were using the common sprayers in our orchards—found their defects and then invented The Eclipse. Its design is practically forced on manufacturing on a large scale. You take no chances. We have done all the experimenting.

Large fully illustrated Catalogue and Treatise on Spraying—FREE.



MORRILL & MORLEY, Benton Harbor, Mich.

**A BIG CROP OF FRUIT**  
and dollars in your pockets, if you spray your trees and vines with the wonderful

**HARDIE SPRAY PUMPS**

They put the Spray in with such force that tree and vine is covered with a spray as fine as fog and it stays there. Each part of their machine is fitted so accurately that there is no leakage. That's why they work so easy. Our catalogue fills the wholest part. This FREE, a postal card will bring it.

A. M. HOLLOWAY, Eastern Agent, Builders Exchange, Philadelphia



**SPRAY PUMPS**

**SAVE MONEY**

BY BUYING ONE OF OURS. They will do as much work, being all brass are lighter to handle and are more durable, will generate a higher pressure thereby making them the easiest pumps to operate on the market. Write for catalogue and get treatise on spraying free. Agents wanted. Mention this paper. J. F. Gaylord, Successor to P. C. Lewis Manufacturing Company, Catskill, N. C.



**Krausers' Liquid Extract of Smoke**

Smokes meat, perfectly in a few hours. Made from hickory wood. Delicious flavor. Cleaner, cheaper. No smokehouse needed. Send for circular. E. KRAUSER & BROS., Milton, Pa.

more thought is being given to it each year. There is nothing a farmer can so foolishly waste money on, or that offers a greater field of economy, than the item of Fencing. A cheap fence in quality, as well as in price, is not economy, but a good and strictly up-to-date fence in every particular at a reasonably low price is true economy. In this day and age of improvement the ordinary fence is not good enough for the progressive farmer. It takes something more than the ordinary, and the fencing made by the Coiled Spring Fence Company, Winchester, Ind., it is claimed, fills all these requirements. All of the line wires are of high-carbon coiled spring wire, making it self-regulating in every particular. It is sold to the farmer at wholesale price, and is within reach of all. It is, as advertised, bull-strong and chicken-tight, and sold at a price below many of the styles of fence now on the market. The Coiled Spring Fence Company, Winchester, Ind., whose advertisement you will find elsewhere in this issue, will take pleasure in sending any one catalogue and full particulars regarding this Fencing for the asking.

**PROF. BLAIR ON SPRAY OUTFITS.**

In his address before the Apple Growers Congress, at its first meeting in St. Louis in November last, Prof. Blair made these sensible statements in regard to spraying outfits:

"I would say we must be careful about the apparatus we use in spraying. Just any old pump and any kind of nozzle will not do. We must have the best apparatus obtainable, and must use a pump of great power, to produce the mist-like spray which is so necessary. As commercial growers, we must consider the advisability of using more powerful pumps than many of us have been using. And, too, we must pay more attention to getting the mixture properly made. These are the details of spraying to which I would call especial attention."

The Field Force Pump Company, of Elmira, N. Y., claim for their sprayers magnificent power, which, with their excellent nozzles, make the finest, most mist-like spray, covering all sides and every part of leaf, fruit and flower. Their automatic agitators keep the mixture thoroughly stirred, preventing spoiling foliage with too much poison. The automatic brushes used on their agitators prevents the clogging of the pump or nozzles.

**IN 1845 AND NOW.**

The inside front cover of the Deering "Golden Era" Catalogue for 1903 contains a story without words. A section of the Chagoy River as it was in 1845 is pictured. It shows an Indian wigwam, Indians in canoes and upon the banks of the river; there are no signs of civilization.

On the same page is shown the river at the same point, as it is to-day, full of ships and lined with docks. The banks contain the great Deering works, 85 acres of buildings and a veritable hive of industry. A marvelous change and one that has taken place in less than fifty years.

**SPRAYER**  
THROWS A STREAM 60 FT. OR MORE.

IT is beyond question the most perfect and effective SPRAYER and FIRE EXTINGUISHER ever invented, and supplies a universal want. In variety of service, simplicity of construction and ease of operation, it has no equal. Ask for catalogue and price, which costs you nothing. AGENTS WANTED.

**F. B. SMITH MFG. CO.,**  
333 MAIN ST. BUFFALO, N.Y.

**A Kant-Klog SPRAYER**

We want to send into every town and county a sample of our new self-operating Kant-Klog Sprayer. No farmer, fruit or vegetable grower can afford to be without one. They increase crops both in quantity and quality, and double your yearly profit.

**TO AGENTS: \$26.00 A DAY!** In what one hour a new agent made. Another has sold and delivered 660 machines and has 100 more sold for later delivery. With the complete detailed instructions we send our agents any man of ordinary ability can do as well. For further information address,

Rochester Spray Pump Co., 21 East Av. Rochester, N. Y.

**SPRAY PUMPS**

Save your fruit and make money. The Daisy is 15 yrs. old and 200,000 in use. Has every improvement—rubber hose, perfect nozzles and valves. No. 1, tin \$1.50; No. 2, iron \$2; No. 3, brass, \$4. We pay express. Agents wanted. Catalogue free.

**HURRAW & SON, Box 2, Wilmot, Ohio.**

**FREE**

From anxiety over wash day, are all who use a DILLEY QUEEN WA HER. We guarantee it to be the best. A trial machine sent at factory price. Agents wanted for exclusive territory. Write for catalogue with full description. Surely please you.

**LYONS WASHING MACHINE CO., Lyons, Mich.**

**The WEBER 14 H. P. Gasoline Engines** for cutting, grinding, shredding, cutting, breaking, etc. Free catalogue gives all sizes.

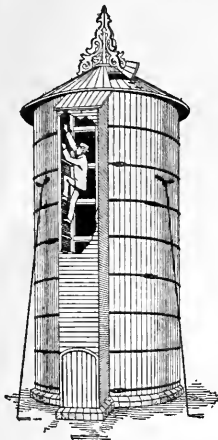
1 Weber Gas & Oil Engine Co., Box 10, Kansas City, Mo.

Mention the Southern Planter when writing advertisers.

**THE "LANSING" PERFECT TUBULAR SILO**

IS THE BEST SILO MADE.

Continuous Doorway. Have no other.



Insist on having the Lansing, IT WILL SAVE YOUR ENTIRE CROP.

**A. M. D. HOLLOWAY,**

Builders' Exchange, Phila., Pa., U. S. A.

Write for Catalogue and price.

**THE CHIEF CONSTRUCTIVE FORCE IN AGRICULTURE.**

Two generations ago our grandfathers harvested their wheat and oat crops, with the McCormick Reaper; and little did they dream that the crude machine they used then would be the forerunner of such marvellous advancement in the methods of harvesting grain as has been developed in recent years. To-day more than two and one-half million agriculturists harvest their crops with McCormick machines. Since 1831, the year in which the first successful reaper was constructed in a blacksmith shop at Steele's Tavern, Va., the McCormick has been one of the chief constructive forces in developing the agricultural resources of the world. For more than three-score years, the McCormick has represented the highest attainment in the manufacture of harvesting machines, and this name has become a household word throughout the world. "A Model Machine" is the title of a new book which has just come from the press. It is an interesting publication, and should be in the hands of every one who needs or operates a harvesting machine. When writing, please mention the *Southern Planter*, and ask for a 1903 McCormick Calendar, if you have not received one, which will be sent, together with the book, without charge. Address the nearest McCormick agent.

**THE ETNA LIFE.**

The Etna Life Insurance Company of Hartford, Conn., publishes in another column its fifty-third annual statement. This shows that the business done in 1902 was one of noteworthy growth in every direction, and the resulting big figures put the Etna Life as the leader among the great life insurance companies of New England.

The total premium income for the year was the large sum of \$10,224,260, and the total payments to policy holders was the sum of \$6,368,099.

The detailed statement of the company shows that the investments of the Etna are conservatively and wisely made, and the abundant strength of the company is recognized by all familiar with financial matters. Its president, in fact, as well as in name, is Ex-Governor Morgan G. Bulkeley, who has given its affairs his closest attention. When he became its head twenty years ago its assets were about \$25,000,000. To-day they are about \$63,500,000. Under his management the Etna has developed into its present great proportions, and it stands a proof of his and his associates' large business and executive ability.

**THE ACME HARROW.**

Mr. Drane H. Nash, of Millington, N. J., the maker of this well known harrow, desires us to call attention to the unusually favorable conditions under which this harrow is sold. It is sent to any farmer who will order it, and he will be allowed ample time to try it on any kind of ground under any conditions.

As Mr. Nash has distributing points throughout the country, there will be no delay in getting a harrow promptly. Look up his advertisement in this issue.

**On the Sowing Depends the Growing.**

Both depend upon the drill. The Improved Low-Down Pennsylvania Force Feed Fertilizer Grain Drill

Shows any kind of grain in any quantity—any kind of grass seed or fertilizer in any condition, because it's force feed in fact as well as name. Easy on the man—it's low down. Easy on the horses—it's light draft. Send for free illustrated catalogue of farm implements and machinery.

A. B. Farquhar Co., Ltd. York, Pa.

**Announcement**

We have obtained the Court's decree against two additional manufacturers who have been infringing our patent. The title of law is: "The Weeder, seller or user of an infringing device are all liable in damages to the owner of the patent infringed." The Janesville Machine Co. and the Keystone Farm Machine Co. are the only firms licensed to use a flat tooth covered by our patent, and we finally warn sellers and users of all other makers. So admirably have the "Hollok" Weeders done the work for which they were designed, that one maker after another sought to copy it. However, by the various Courts' decisions, these makers are compelled to abandon the manufacture of a Weeder having flat teeth, and they are now experimenting with other shapes; but it is the flat tooth that made the "Hollok" Weeder famous, and in view of the manner in which our patent has been sustained, it is dangerous to use an infringing tooth. Write for descriptive circulars and prices.

**HALLOK WEEDER & CULTIVATOR CO.,**  
Box 839 York, Pa.

**YOU OUGHT TO KNOW BETTER**

About the B. B. Stays. They make a cheap strong fence with barb or coil wire. Easily handled as nails, self locking, can't slip, and no machine necessary. They are made of heavy, hard wire, and won't wilt down. Try a basketful to stiffen the old fencing (barb or woven wire), and you will use nothing else to build new fence. We sell coil wire too.

The B. B. FENCE CO.,  
14th and Clark Sts., Racine, Wis.

**HARD STEEL**

**WIRE FENCE**

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance, and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

THE HARD STEEL WIRE FENCE CO.  
Cuyahoga Falls, Ohio

**Guinea Spiral Spring Wire FENCES AND GATES**

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

**INTERNATIONAL FENCE AND F. CO.**  
Columbus, Ohio.

**PAGE**

**Calves Fenced**

With Page Fence never grow into breachy cattle.

**PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

**LAWN FENCE**

Many designs. Cheap at wood. See page Catalogue free. Special Prices to Customers. Wholesale Address **COLLED SPRING FENCE CO.** Box Q, Winchester, Ind.

**High Carbon STEEL WIRE FENCE**

**INDIANA STEEL & WIRE CO.**  
COLUMBUS, INDIANA. BOX 354, MUNCIE, INDIANA.

**FENCE! STRONGEST MADE.**

Build strong, Chicken tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free. **COLLED SPRING FENCE CO.** Box Q, Winchester, Ind. U. S. A.

**WE'LL PAY THE FREIGHT**

and will carry Wagon, Steel tire, etc. \$7.25 With Rubber tires, \$10.00, 1 pair, wheels 2 to 4 in. tread. Top Engines, \$25.75. Write for price for free catalogue. Send for free catalogue and parts direct. Wagon Umbrella FREE. W. V. BOOTH, Cincinnati, O.

**Salzer's Rape** gives rich crop from 25 a ton

**SPELTZ** - What is it? - Tells

**BEST NORTHERN GROWN SEEDS**

**FARM SEEDS**

**SALZER'S SEEDS NEVER FAIL!**

**1,000,000 Customers**

Protest record of any seedman on earth, and yet we are reaching out for more. We desire, by July 1st, seven more and hence this unprecedented offer.

**\$10.00 for 10c.**

We will mail upon receipt of 10c, in stamps our great catalogue, worth \$10.00 to any wide awake farmer or gardener. We get together with many farm seed samples, Beans, etc., Bearless Barley, Potatoes, etc., and we will send you a stamp with our list of but four stamps.

Please send this advertisement with 10c. to Salzer.

**J. M. SALZER, SEED & CATALOGUE CO.**

**GRIFFITH & TURNER SEEDS**

**For Every Climate.**

That is our business. We grow and sell you what has been developed and adapted to your particular section, North, South, East and West.

**GRIFFITH & TURNER'S TESTED SEEDS**

do not depend on deceptive methods to sell them. A dollar's worth of seed for every dollar of pump, feeds live seeds that make crops. We carry a complete line of Farm, Garden, Pottery and Dairy supplies. Write for a free catalogue No. 10, free. Handlettered than ever; contains much information. Every farmer and gardener should have it.

**GRIFFITH & TURNER COMPANY,**  
205 N. Pace Street, Baltimore, Maryland.

**SEEDS.**

**SEED POTATOES, GARDEN SEED, FIELD SEED.**

**D'GGS & BEADLES, Seedsmen,**  
1711 E. Franklin St.,  
RICHMOND, - VIRGINIA.

Send to Catalogue.

**FIVE-EAR CORN**

I have been planting this corn for 4 or 5 years, and never expect to plant any other kind. On ordinary land it makes from 25 to 30 bushels per acre. On 1/2 acres last year I gathered over 70 bushels. It is a firm, white corn, and keeps well; ears under medium size. Averages about three ears to the stalk, some stalks having as many as five and six ears. Every farmer ought to plant it. Send 15 cents in stamps for a trial - enough to make you two or three bushels. Will send one peck by express, collect, for 75 cents.

**W. M. HOBBY,** - Sylvania, Ga.

**GINSENG SEED**

We offer for sale a limited quantity of fresh seed, which we guarantee to be first quality, \$10 per 1,000. Address: **COMMERCIAL GINSENG CO.,** Crozet, Va.

**THIRTY-SIX YEARS OF CONTINUOUS SUCCESS.**

Just think what that means. Thirty-six long years in business, each year more successful than the previous one, with never a backward movement, always growing larger, ever increasing in popular favor. How many that were doing business thirty-six years ago are even in existence to-day? Very, very few. In this age of development and fierce competition, a concern must do business right, treat its customers right and sell what is right, to even hold its own much less advance. To do otherwise means that the concern of to-day is likely to be out of the running to-morrow. The graveyard of business failures is full to overflowing. But thirty-six years of continuous success and still growing. Think of it! How has it been accomplished? In just one way. By selling absolutely pure whiskey, direct from our own distillery to the consumer, saving him the enormous profits of the dealers, and carrying out to the letter every statement or offer we make, thereby creating a confidence with our over a quarter of a million satisfied customers that cannot be broken. Read our offer elsewhere in this journal. The Hayner Distilling Co.

**"THIRTY YEARS SELLING DIRECT."**

This is the headline with which our friends the Elkhart Carriage and Harness Manufacturing Co. of Elkhart, Ind., announces their readiness for this season's campaign. To have been continuously in business for so long a time and all that time to have been selling direct to the consumer, is in itself noteworthy and speaks louder than anything else of the high quality of their goods and their honorable and liberal methods in dealing with their customers. The Elkhart people make every vehicle and harness they sell, and sell only to the consumer. Their catalogue is illustrated with large photographic views of the latest styles, and will be sent free to any reader of this journal. Write to-day and address as above.

**MARCH ON!**

The artistic hanging calendar of the Champion Harvesters begins with the spring month and carries one clear through to the next spring. It shows a handsome farm team refreshing themselves at the water-trough, and is in brilliant colors and handsome enough to please every one. This art calendar is offered free to all of our readers who will send their name on a postal to Champion Division, International Harvester Co. of America, Chicago, and make request for same. We know this is an opportunity of which many will take advantage.

**1,000,000 CUSTOMERS.**

The J. A. Salzer Seed Company, of La Crosse, Wis., claim to have this vast number of patrons. When you come to think of it, there must be a "why." An inspection of their new catalogue will throw some light on the subject. Send for it, and refer to their advertisements and see what tempting offers they make.

**42 TONS CLOVER**  
To the Acre.

*Egyptian Clover - Direct from the Nile Valley.*

Imported by us into the United States for the first time. Ready to cut 48 days after sowing. First cutting 1 1/2 tons, second cutting 15 tons, third 13 tons of green forage per acre, all in one season. The Dept. of Agriculture at Washington publishes a special bulletin endorsing it. The supply of seed is limited. Write at once if interested. Price per lb. 20c; 10 lbs. \$2.50; 100 lbs. \$20.00.

**LARGE ILLUSTRATED CATALOG** describing this wonderful Clover and thousands other things of great value to the Farmer or Gardener, mailed free Write now.

**CURRIE BROS.** Seedmen, Dept. 71, MILWAUKEE, WIS.

**APPLE TREES**

▲▲▲▲

The Bonavista Nurseries will have some exceptionally fine apple trees for orchard this year. Wine Saps, Paragon (M. E. Twigg), York Imperial (J. F. Winter), Albemarle Pippin, etc.

We did not have a complaint last season. Every tree is perfect and guaranteed, taken from the nursery block the day it is shipped, carefully packed.

Our prices are the lowest.

**CHAS. F. HACKETT, Manager,**  
Greenwood, Va.

**Georgia Melon Seed.**

**"HOW TO GROW MELONS," FREE.**

Write for prices of Select Pure Melon Seed.

**B. W. STONE & CO.,** Thomasville, Ga.  
Mention THE SOUTHERN PLANTER.

**Strawberry Plants**

We grow them on virgin soil, consequently they are free from disease and true to name. Len'ing varieties, \$1.65 per 1,000 and up. Every one says we have the finest plant-bed they ever saw. 25 acres in plants. Circular free.

**JOHN LIGHTFOOT,** Sherman Heights, Tenn.

**MONEY IN STRAWBERRIES**

**IF YOU GET GOOD PLANTS.** One of my customers the past season sold \$600.00 worth of Strawberries from one acre. I sold him the plants for \$20. You can do the same if you buy the best - and that's the kind I have. Catalog! **H. LIGHTFOOT,** Ch. Hanoga, Tenn.

**LATE SEED IRISH POTATOES**  
— FOR SALE. —

1902 was another good year for the **CLAREMONT PEACHBLOW POTATOES.** A late variety, has been grown here for 10 years or more, and never failed to make a crop when planted July 1st, first yields from 15 to 250 bu. to the acre. See description in last May issue of this paper. Price, \$3.50 per bu., f. o. b. here, as long as stock last.

**J. M. HUGHES,** Claremont Surry County, Va.

Mention the *Southern Planter* when corresponding with advertisers.





## Life and Accident Insurance.

53<sup>d</sup> ANNUAL STATEMENT.

(Condensed.)

# Aetna Life Insurance Company,

HARTFORD, CONN.

MORGAN G. BULKELEY, President.

Assets, Jan. 1, 1903, . . .	\$63,493,545.73
Premium receipts in 1902, . . .	10,224,260.93
Interest receipts in 1902, . . .	2,592,539.18
Total receipts in 1902, . . .	12,816,800.09
Payment to Policy Holders in 1902, . . .	6,368,099.76
Legal Reserve, on Policies, and all claims, . . .	55,879,111.66
Special Reserve in addition to Reserve above given, . . .	2,113,933.00
Guarantee Fund in excess of Requirements b. Company's Standard, . . .	5,500,501.05
Guarantee Fund in excess of Legal Requirements, . . .	7,694,434.05
Life Insurance issued and revived in 1902, . . .	30,489,838.00
Life Insurance in force Jan. 1, 1903, . . .	213,762,977.00
Accident Insurance in force Jan. 1, 1903, . . .	199,550,204.00

Paid Policy holders since organization,  
\$132,383,973.96.

MEIGS & HEISSE, Mgrs.,  
Herald Building, Baltimore, Md  
W. W. HARDWICKE,  
General Agent for Eastern and Central Virginia,  
No. 7 N. Tenth St., Richmond, Va.  
J. B. MOORE & CO.,  
Gen. Agents, Accident Department

## WANTED

Practical poultryman desires correspondence with men having capital with a view of establishing a PERKIN DUCK RANCH—raising ducklings for the early markets. Many having means and water facilities do not realize that there is such a large profit on the capital invested in this business. Best of references as to ability and character. ADDRESS

C. J. CARE SOUTHERN PLANTER.

### PALMORE'S

## Law and Collection Association,

Established 1884. Claims collected in all parts of the United States. No collection—no charge.

P. O. Box 503. 905½ East Main Street,  
RICHMOND, VIRGINIA.

A NEAT BINDER for your back numbers can be had for 25 cents. Address the Business Office.

### AN OPEN LETTER FROM DR. GREGORY.

GREENSBORO, N. C., Jan. 1, 1903.

COL. W. H. OSBORN, President  
The Keeley Institute, Greensboro, N. C.:

Dear Colonel,—I send you this letter to congratulate you on the success of your work with The Keeley Institute.

Like all other good and grand discoveries and inventions in the healing art, *The Keeley Treatment*, now so well known and successfully used, met with bitter opposition, but it has lived and flourished, proving that "Truth is mighty and will prevail."

Eleven years ago, October, 1891, The Keeley Institute was opened in Greensboro, N. C., under your management. Being a practicing physician of the city, and having the pleasure of the acquaintance of the gentlemanly officers of the Institute, and feeling the greatest interest in the practical testing of the discovery of Dr. Keeley, I watched with close care the results; and unhesitatingly say, that from my personal knowledge and personal observation of the Keeley Treatment, in cases in which it is indicated, that it is the best and most successful plan of cure now known. Facts prove the truth and value of it.

Year after year the good work and success have rewarded your efforts. Business has steadily increased. The year just ended shows a registration of 207 patients with a total of 3,500 since the Institute was opened. Over 100 men from Greensboro and Guilford county have been cured and returned to their families and homes, and patients have been received from nearly every State in the Union. It would be a great pleasure if I could tell of the joyful and glad hearts this Institute has made, but I know that words cannot express the gratitude that the many wives, mothers, children, and friends have felt at the restoration of their loved ones. In my own heart I rejoice with you and ask God's blessings on The Keeley Institute and its officers.

In the management of the Institute every auxiliary is used. The officers know that the patient is *diseased* from drink or drugs, or both, and the co-operation of the patient must be had in his treatment. He is a sick man, and must be treated as such under the direction and guidance of that skilled resident physician—Dr. B. B. Williams.

The Institute is an ideal home, the splendid residence of Gov. Morehead, with all to make it attractive and every comfort and convenience which modern invention has brought out. In connection with the Institute and for its use is a magnificent farm with its fine Jersey cattle, poultry, etc., to supply the Institute with the necessities and luxuries to build up the broken-down man.

It is a wise and essential requirement that the patient must reside in the Institute while undergoing treatment, where all necessary influences can be brought to bear upon him and under the kind and watchful care of its officers.

Now, in conclusion, I congratulate you again, and assure that I feel the deepest interest in the Institute and its continued success and prosperity, and will always

# SCRATCH! SCRATCH! SCRATCH!

From morning till night. Hot! Itching! Sore! Ashamed to be seen! Face covered with pimples. Hair falling out! Who isn't sorry for the sufferer from eczema?

And it is so unnecessary! There's a cure for eczema as sure as to-morrow will follow to-day. YAGER'S SARSAPARILLA WITH CELERY gets right down to the source of the disease—the blood. It draws out the impurities, which otherwise would come through the skin. It puts functional activity in such perfect order that each part of the system does it work and does it well.

A. A. Wilson, of Portsmouth, Va., was afflicted with eczema and itching sores. He writes: "Permit me to thank you for the great benefit I have derived from the taking of YAGER'S SARSAPARILLA WITH CELERY. My body was broken out all over with pimples and sores; and my flesh constantly itched. I heard of YAGER'S SARSAPARILLA WITH CELERY, and the wonderful cure it has made for others, and concluded to give it a trial. The results are most satisfactory. My face is becoming as smooth as an infant's."

If you are troubled in any way with any disease resulting from impure blood, you can absolutely rely on YAGER'S SARSAPARILLA to effect a cure. Try it. You can get it at any drug store, 50 cents a bottle. Made by Gilbert Bros., Baltimore, Md.

## IT STOPS THE COUGH

"The quickest remedy for a cough I ever saw" is the way one Maryland maiden expresses her appreciation of HONEY-TOLL. It stops the cough almost instantly. It cures the cold quickly. It benefits the health permanently. Sold by all druggists, 25c a bot.

GILBERT BROS. & CO.,  
BALTIMORE, MD.

WHAT ABOUT

## GLEASON'S HORSE AND CATTLE POWDER?

HAVE YOU TRIED IT YET?

## Tobacco Profit

Seventy-one dollars and twenty cents per acre was the increase in value of the tobacco grown at the Kentucky Agricultural Experiment Station, by feeding the growing crop with one hundred and sixty pounds of

## NITRATE OF SODA

costing less than four dollars.

Every tobacco farmer is interested in knowing how it was done; every farmer can do as well or better.

Your name and address on a Post Card will bring our Bulletin "Food for Plants," telling about this and other actual trials.

WILLIAM S. MYERS, Director,  
Room 12 John Street, NEW YORK.



take pleasure in doing anything in my power to direct in the future, as I have done in the past, the poor unfortunates to *The Keeley Institute, Greensboro, N. C.*

With my highest regards and best wishes for your continued success in the future. I am very truly yours,  
R. K. GREGORY, M. D., *Greensboro, N. C.*

### A MIDNIGHT MISHAP.

Uncle Ned returned from his 'possum-hunt about midnight, bringing with him a fine, fat 'possum. He built a glowing fire, dressed the 'possum, pared and split the sweet potatoes, and pretty soon he had the "possum an' 'taters" in the oven. While the meal was cooking Uncle Ned amused himself with his favorite old banjo. When the 'possum had been brown and crisp, he took it out of the oven and sat it on the hearth to give it time to cool. Mentally congratulating himself upon the glorious repast he thought soon to enjoy, he sat silently for awhile in the old arm-chair, but presently was snugly wrapped in the arms of "tired nature's sweet restorer—balmy sleep."

It happened that two young fellows who were pretty well acquainted with Uncle Ned's habits had been stealthily watching about the house, waiting this particular chance. As soon as they were convinced that the old man was safe in the arms of Morpheus, they crept into the house and hurriedly helped themselves to Uncle Ned's supper, including even the coffee and bread. When they finished the hasty meal, by way of attempting to cover up their tracks they smeared Uncle Ned's hands and mouth with the 'possum gravy and then beat a retreat.

After a time Uncle Ned aroused from his peaceful slumber. It is needless to say that he had dreamed about his supper. At once he dived down to inspect the viands when, lo and behold, the hearth was empty! Uncle Ned steadied himself and studied awhile.

"Well," said he finally, 'I must 'a' et dat 'possum; I must 'a' et dat 'possum in my sleep!"

He looked at his hands. They were greasy. He smelt his hands. As he did so he said:

"Dat smells lak 'possum grease! I sho must 'a' et dat 'possum."

He discovered grease on his lips. Out went his tongue.

"Dat tas'es lak 'possum grease," he said. He got up. He loo'ed about the room. There was no sign of intruders. He rubbed his stomach. He resumed his seat, and, giving up all for lost, he said:

"Well, ef I did eat dat 'possum, it sets lightan on my appetite dan any 'possum I eveh et befo'."—SILAS XAVIER FLOYD, in the *March Lippincott's*.

One day the mate of a trading-schooner, overhauling the log, found that the captain had written in it, "Mate drunk today." The mate expostulated with the captain, saying, "What is the use of putting that down?" The captain said: "It happened. Why shouldn't I write it down?" The next day the mate wrote the log, in which afterward the captain found the record, "Captain sober to-day."

Mention the *Southern Planter* when corresponding with advertisers.

Warranted to give satisfaction.



## GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases of Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of *Caustic Balsam* sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

## A Package of the Famous American Stock Food FREE.

Send us the names of ten of the best farmers and stock raisers in your vicinity, and we will mail you, post-paid, a sample package of *American Stock Food*.

## THIS IS THE COMING STOCK FOOD.

Every package guaranteed. Every full-sized package has on it picture of Uncle Sam. None genuine without.

AMERICAN STOCK FOOD CO., Fremont, Ohio.

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You can treat these diseases yourself and cure them in 15 to 30 days. Fleming's *Fistula and Poll Evil Cure* is easy to apply, perfectly safe to use, and your money is promptly refunded if it should ever fail to cure.

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Newton's Hoars, Cough, Distemper and Indigestion Cure. A Veterinary Specific for Wind, Thrust and Stomach Troubles. Strong recommendations. \$1 per can. Dealers, mail or F. P. C. Newton Horse-Heard Co. ( ) Toledo, Ohio.

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Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

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Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also **GRAIN AND STOCK FARMS** From 100 to 1,000 acres at low prices, all the way from \$5 to \$50 per acre. Write for Catalogue.

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No man here can send you a definition, state price and learn how. Est. '96. Highest references. Offices in all cities.  
W. A. Ostrander, 1885 N. A. Bldg., Philadelphia

## JESTS OF SENATORS.

### INCIDENTS OF THE LIGHTER SIDE OF LIFE IN THE SENATE.

John C. Calhoun, when Vice President, did not believe that, as the presiding officer of the Senate, he had any right to call Senators to order for words spoken in debate. John Randolph of Roanoke abused this license by opening a speech with the words: "Mr. Speaker—I mean Mr. President of the Senate, and would-be President of the United States—which God, in his infinite mercy, avert," and then launching into one of his characteristic tirades.

Calloun's name recalls nullification. When this heresy was at its most rampant stage, the Northern Senators depended largely upon John Holmes, of Maine, as champion of their side of the chamber, on account of his ready wit John Tyler tried to badger him one day by asking what had become of that political firm once mentioned by Randolph as "James Madison, Felix Grundy, John Holmes and the devil."

"The partnership," answered Mr. Holmes, promptly, "has been legally dissolved. The senior member is dead; the second has gone into retirement; the third now addresses you; and the last has gone over to the nullifiers, and is electioneering among the honorable Senator's constituents."

Clay and Webster were not habitual humorists, but both had the gift of entertaining as well as enthralling their audiences. Clay ran most to illustrate an anecdote. While he was in the House, a prominent politician deserted the Whig party in the hope of starting a general revolt. To his dismay, he found himself quite alone, and then bent all his energies to getting back into good standing. The incident reminded Clay of a story. Said he:

"A stage-coach took aboard a passenger who insisted upon riding with the driver, and who diligently drew upon the contents of a bottle carried in his great-coat pocket. When his potatoes at last overcame him, he fell off. The coach stopped long enough for some charitable travelers to alight and pull the poor fellow out of the mud.

"Ha!" he exclaimed, as he looked down at his tattered garments, "we had quite a [his] turnover, didn't we?"

"Oh, no," answered one of his rescuers, "there was no turnover. You only fell off!"

"I say," he persisted, "there was a [his] turnover, and I leave it to the company."

"Every one joined in assuring him that the coach had not upset.

"Well," he remarked ruefully, as he tried to climb back to his former perch, "if I'd known that [his] I wouldn't have got off!"

On a certain afternoon, the Senate clock got a fit of striking in the midst of one of Webster's most effective speeches. After it had struck fourteen or fifteen, Webster held up one finger. "Mr. President," said he, "the clock is out of order. I have the floor.—*Leupp's Humors of Congress, in March Century,*

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and brooders, which embody the greatest discovery of modern times in the field of scientific poultry raising. They are the only incubators now in use in the U. S. and are used extensively in England, Germany, Holland, Belgium, France, Italy, and other foreign countries. Send for a copy (merely to pay postage, as the book is free for book No. 177) to

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The Sure Hatch Incubator is a high grade machine throughout. Over 100 eggs can be operated there, and when it is considered that we pay the freight and that the machines are all larger than rated capacity and are sent out dry, you can see that the capacity is the cheapest of any good incubator on the market.

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## INVENTIONS WHICH HAVE BROUGHT WEALTH.

BY MARY WASHINGTON.

No. 2.

Amongst the most useful and famous inventions of the last 25 years is Mr. George Westinghouse, known chiefly for his great invention of the air brake which is used in every country where railroad travel is practiced. This invention has been of the greatest utility in saving life and property. As a result of it, a locomotive engine can, in a minute, apply the brake to a train of as many as 60 cars, and should a car break away, the brakes set themselves automatically.


Mr. Westinghouse followed the invention of the air brake by that of the Westinghouse engine, which has also passed into wide use. He carries on many large electrical and machine works both in this country and Europe, bringing out both his own inventions and those of others, for he is ready to give prompt and remunerate recognition to any inventor, either in this country or Europe, whose work is valuable in the field that interests Mr. Westinghouse.

Gifted with inventive faculty and great mechanical ability, his technical education and service in the engineering branch of the United States Navy have given him both theoretical and practical knowledge which have immensely forwarded Mr. Westinghouse in his career. Amongst the benefits he has conferred on the world, I may mention the utilization of natural gas. Conveying the gas by pipes from its natural wells to wide areas of use is due almost entirely to his personal and unremitting efforts. His inventions (and especially that of the air brake) have brought him a large and well merited fortune, and it is said that his various factories in this country and in England, France, and Russia represent a substantial, productive investment of probably one hundred million dollars.

The inventor of the type writer was W. M. Jenrie, of Irlin, N. Y., who was a mechanic working by the day when he started on his invention. He is now a wealthy man—is superintendent of a type writer manufactory. C. L. Sholes is also entitled to part of the credit of the development of the writing machines of the present day. He began as a mechanic, but died rich, and a universally known type-writer of the day was, to a great extent, his creation. It is remarkable how many patents have been granted, of late years, to mechanics and other persons working for day wage. For instance, Mergenthaler, who invented the linotype machine, and received millions for it, was an expert mechanic, engaged in making telescopes and other scientific apparatus. His contrivance is now in use, all over the civilized world, the mechanical compositor having taken the place of the human type-setter in nearly every great printing establishment.

Frank A. Johnson was a mechanic in Minneapolis when he invented a typesetting machine which has made him a wealthy man.

Alexander P. Morrow was a mechanic employed by a bicycle company when he



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## EGGS FOR HATCHING.

Purebred B. P. ROCK, BLACK MINORCA, S. C. B. LEGHORN. Fine stock, excellent layers. 31 guarantee eggs to be true to name, fresh, and to arrive in good condition. 75 cts. per 15, \$2 per 43, \$1 per 100.

Miss S. M. HITEK, Ellisville, Louisa Co., Va.

## EGGS FOR HATCHING.

White Wyandottes, Barred Plymouth Rocks, S. C. White Leghorns and Pekin Ducks. Prize winners at New York, Boston, Philadelphia, Cleveland, Hagerstown, Pan-American and Charleston. Some extra fine stock for sale. For prices and description, address

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From White Holland Turkeys, White Plymouth Rock and Rose Comb White Leghorns.

White Plymouth Rocks are the best all purpose fowls. My stock is of the finest strains. H. C. W. Leghorns are the champion layers. Nest Eggs Combs do not freeze. Send for circular.  
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M. P. Duck Eggs, \$2.00 for 11. Even the best is never too good, you'd better buy of me.  
THE CEDARS WM. G. OWENS,  
P. and S. FARM, Middleton, Va.

## EGGS EGGS EGGS

That will hatch out DOLLARS. Not real dollars, but Turkeys and Chickens of the best strains in this country, which will net the owner more real dollars of profit than any other. I handle "Nothing but the best" in my line. My prices are higher than some others, but the quality more than makes the difference. National Bred. Mammoth Bronze Turkeys, sitting \$3.25. National strain, Barred Plymouth Chickens, sitting 15, \$1.50.

## PIEDMONT POULTRY PLACE,

Miss E. Callie Giles, Prop., Whittle's Depot, Va.

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M. B. Turkey, \$2 per doz.; Pekin Duck, \$1 per doz.; White Wyandotte, \$1 for 13; B. P. Rock, \$1 for 13; S. C. B. Leghorn, \$1 for 15.  
Miss Clara L. Smith, Croxton, Caroline Co., Va.

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## WHITE HOLLAND TURKEYS.

\$2.25 for 9; \$4.00 for 18.

## WHITE PLYMOUTH ROCKS,

\$1.25 for 13; \$2.25 for 30.

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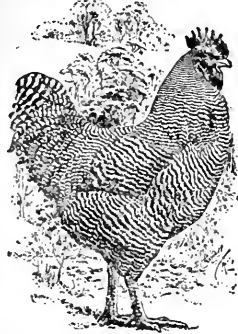
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## Barred P. Rocks S. C. B. and W. Leghorns.

15 eggs, \$1; 30, \$1.75. PEKIN DUCKS—11 eggs, \$1; 22, \$1.75. \$4.00 inspection guaranteed.

Rev. J. W. HECKMAN, - Spottsylvania, Va.

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**BREEDERS OF**

Highest-Grade Barred Plymouth Rock, White Wyandotte, Black Minorca and Partridge Cochin Fowls. We won 19 prizes at late Richmond Show. Breeding stock and eggs for sale at all times. If you mean business, write for Handsome and Valuable Illustrated Catalogue and Poultry Guide. Write to-day.

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We have the winning pen of Madison Square Garden Show. Gobbler weighs 45 lbs.; hens, 26 lbs.

**PEKIN DUCKS.**

Prize-winning drake at Philadelphia and New York Madison Square Garden. Young ducks weigh 14 lbs. per pair.

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A limited number fowls and Eggs for Sale. Also pure bred POLAND CHINAS, SHETLAND PONIES, HORSES, and RED POLLED CATTLE, the milk, butter and beef breed. ALBEMARLE PROLIFIC SEED CORN.

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**SILVER LACED WYANDOTTES**

My best pen of Silvers will be headed this season with a fine cock direct from Mr. J. T. Orr, out of his famous laying strain of Silver-Laced Wyandottes. EGGS at \$1.00 per setting of 15 at Express Office, Salisbury, N. C.

Mrs. JOHN D. A. FISHER,

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**White Leghorns.**

EGG RECORD, 2213 eggs in one year from eighteen hens.

Eggs, \$2 per 15; \$5 per 60.

Write for circular to-day.

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invented the coaster brake which bears his name, and which has made him a wealthy man.

Hugh Cook of Dayton, Ohio, was a worker for ages when he made the invention on which the most efficient cash register in the market is based, from the proceeds of which he receives about \$25,000 annually.

F. A. Planagan had a little jewelry store in Washington City, when his fortune took a rise by his devising a method of cleaning oil wells by dropping an electric stove down into them. Prior to this invention, when oil wells became choked with paraffin, they were cleaned by exploding nitroglycerine cartridges, which were both costly and dangerous. The electric stove process is safe and cheap, and has made the inventor rich.

I have heard that the inventor of the safety-pin made a fortune by this invention, but I do not know "what's his name or where's his home," or any authentic details about him.

The Americans have shown more invention than any other nation in regard to the daily wants and conveniences of life. Edison alone has taken out 750 patents, numbers of them applications of electricity to common daily needs. But we must not forget nor fail to acknowledge our debt to the great inventors of other nations, notably the Scotch, English, German, French and Italian. To Scotland is due (in the person of James Watt) the invention of the modern condensed steam engine, with the incalculably great results that followed in this invention. It was Hargraves, an English carpenter, who, in 1767, invented the spinning jenny which gave means of spinning twenty or thirty threads with no more labor than had been employed on a single one. This was followed by Arkwright's still more important invention of the spinning frame which it is interesting to connect with the subsequent invention of the cotton gin in America. The two gave an enormous impetus to the cultivation and manufacture of cotton, and like the two wings of a bird, caused commerce to soar aloft, where formerly it had crept.

To Germany, in the person of Gutenberg, we owe the invention of printing, an obligation so vast, so overwhelming that all words fail in making an adequate acknowledgment of it.

To Italy is due, in the person of Galileo, the invention of the telescope, with all its valuable offshoots, as for instance, spectacles for the use of old persons, or others suffering from weak or imperfect vision. Nor did the great inventors of Italy become extinct with Galileo, for it is an Italian of the present day, Marconi, who has successfully established the system of wireless telegraphy. But it was primarily Morse's invention of the telegraph which has paved the way to Marconi's invention, and all others along that line.

To France, in the person of Daguerre, is due the invention which paved the way to modern photography with all its wonders and beauties. I remember the pale, shadowy pictures called "Daguerotypes" in my childhood, and afterwards succeeded by a better style of pic-

**.. HOLLYBROOK FARM .**  
**EGGS FOR SETTING**

**From Thoroughbred Poultry.**

In our poultry yards we have the following thoroughbred poultry, all first-class stock, originally started from the best stock in this country, and carefully cross-mated so as to give strong and vigorous stock and the best laying strains of the different breeds that it is possible to obtain:

**BARRED P. ROCK.** \$1.00 per sitting.

**BLACK LANGSHAN.** \$1.00 per sitting.

**BUFF PLYMOUTH ROCK.** \$1.50 sitting.

**LIGHT BRAHMAS.** \$1.50; per sitting.

**SILVER LACED WYANDOTTE.** Price, \$1.50 per sitting.

**WHITE WYANDOTTE.** \$1.50 per sitting.

In addition to careful breeding, we pay special attention to the handling and packing of our Eggs, so as to ensure good fertility and a good hatch.

We have also for sale a few first-class young cockerels of **BUFF PLYMOUTH ROCKS,** **SILVER LACED WYANDOTTES** AND **LIGHT BRAHMAS.**

Price, \$1.50 and \$2 each, crated for shipment.

**HENRY W. WOOD,**

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**LEGHORN POULTRY YARDS**



Have for sale a limited number of Single Comb Brown and White Leghorn Pullets and Roosters. Best layers known. Prize-winning stock. Price, \$1.00 to \$1.50 each. Eggs in season at \$1.00 for 15; \$5.00 per 100. Satisfaction guaranteed. Address

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**BROWN LEGHORNS**

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Eggs from prize winners and good layers \$1.50 per setting. Reduction on larger lots.

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The undersigned can furnish them in limited quantities at \$2.50 for 100.

F. O. B. at Claremont, Va.

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 It is the cheapest food on earth. It pays others, and will pay you. It makes the poultry business interesting. BECAUSE IT PRODUCES RESULTS—WY. STOPPER'S TRIAL ORDER. Our Booklet and Egg-Record—F. E. E.

THE FRED S. PECK CO.,  
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**WANTED!**

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**LIVE WILD BIRDS AND ANIMALS.**

I pay \$5 apiece for WILD TURKEYS.  
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Barred, Buff and White P. Rocks, Light Brahmas, White Wyandottes, Buff Cochins, Partridge Cochins, Black Langshans, Black Minorcas, S. C. Brown Leghorns and S. C. White Leghorns. Stock for sale cheap. Prize winner eggs, \$1 for 15. A hatch of % or order duplicated at half price.

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**32 Varieties**

FINE ILLUSTRATED CATALOG

**Best Poultry**

for stamp, if you mention this paper. All poultry keepers should have it. JNO. E. HEATWOLE, Harrisonburg, Virginia.

**BLACK MINORCAS.**

These fowls are noted for their prolific laying and non-setting qualities, and are very highly bred.

Eggs, \$1.50 per setting of thirteen.

WINSTON & BRANCH,  
 2024 Floyd Avenue, Richmond, Va.

**Black Langshans.**

Fine stock and free range. Only bred kept. Splendid winter layers. A few birds for sale.  
 Cocks, \$2.50; Hens, \$1.50; Eggs, \$1.50, per 15. Satisfaction guaranteed.

A. W. JOHNSON, Parksley, Va.

**White and Barred Rock COCKERELS**

Single bird, \$1.00; trio, \$2.50. Eggs for hatching, 75 cts. for setting of 15. JERSEY BULL, No. 54171. J. B. JOHNSON, Clover Hill Farm, MANASSAS, VA.

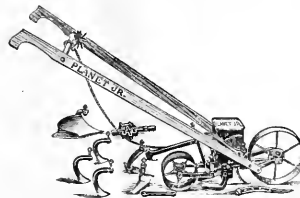
**BARRED and BUFF PLYMOUTH ROCKS**

Cockerels, \$1.00 each.  
 Buff eggs, \$1.50 per setting; Barred, \$1.00.  
 FRED NUSSEY, - Summit, Spotsylvania Co., Va.

ture called ambrotypes. But imperfect as the daguerreotypes, they were headed in the right direction, and without the invention (or discovery) that lies at their basis—namely, that the sun can be utilized as a picture-taker, modern photography could not have come into existence.

**THE PLANET JR. NO. 4 DRILL.**

The little hand implement shown herewith, Planet Jr. Combined Drill, etc., is probably a familiar sight to most of our readers. This Planet Jr. No. 4 is a most serviceable all around tool. The thing that distinguishes it especially is its compactness. By means of its attachments, the purchase of a single tool gives you the service of four—seedler, hoe, cultivator and plow—every one suited to its own particular work. Though for years it has been considered a splendid tool, it has received valuable improvements for



1903. For every purpose short of the large operations where a Planet Jr. tool-horse tool might profitably be substituted, this is a good tool to buy. Converting it from one tool to another is the work of a minute. Its perfect work, its special adaptation to the thing which needs to be done, and its easy running put a premium on good cultivation. It will be found advertised elsewhere. Descriptive catalogue and free information by the manufacturers, S. L. Allen & Co., Philadelphia.

**AN OBJECT LESSON.**

A few weeks ago, *Southern Education Notes* published a list of counties in the South in which more than 20 per cent. of the native white men are illiterate. About one of those counties in Virginia a man who has traveled much in the South, and knows the people, writes as follows:

"Perhaps my experience in travelling in that county twenty-five years ago may be of interest. A few years before I went into the county, the people discovered that a good deal of the white poor soil was especially adapted to the raising of a very fine grade of tobacco. Farmers who had scarcely eked out an existence before this discovery were now sometimes able to realize as much as \$500 or \$600 from the sale of a single acre of fancy wrappers. But the great tide of prosperity in the growing of this tobacco came and passed away without benefitting very largely the people of the county. I never saw so much drunkenness and debauchery in my life. One day I went to as many as three houses in the course of my travels in which I found men too drunk to attend to business. They got big prices for

**BARRED PLYMOUTH ROCK COCKERELS.**

We have ten cockerels which we could have sold readily at \$2.50 each, but the late cold snap slightly frosted their combs, not enough to make them sick, but still enough to detract from their appearance, we will sell for \$1 each, if offered at once. They can be returned if not satisfactory, and we will refund the dollar. Eggs, \$1 for 15; Incubator \$3 per hundred. No C. O. D. shipments to any one. SUNNYSIDE POULTRY FARM. Reference: Christiansburg, Va. Bank of Christiansburg.

**The Racket Poultry Farms,**

A. S. JOHNSON, Man., Parksley, Va.  
 Breeder of High-class Land and Water Fowls.  
 BLACK LANGSHANS, RHODE ISLAND REDS, S. C. BROWN LEGHORNS, TOULOUSE GREENS, PEKIN DUCKS and BELGIAN HARES.  
 Geese eggs, 25cts. each. Langshans, Rhode Island Reds, \$1.25 sitting, others, \$1.00. Our birds are bred from winners at largest shows, and have the range of three farms. Satisfactory guarantee.

**BARRED PLYMOUTH ROCKS A SPECIALTY.**

Line bred for twelve years; beautifully barred, large and healthy, farm-raised birds for sale all seasons.  
 Eggs, \$1 per sitting 15, two sittings, \$1.50.  
 Cockerels, \$1 to \$2; Pullets, \$1.  
 E. F. SOMMERS, Somerset, Orange County, Va.

**WHITE WYANDOTTES and BUFF P. ROCKS.**

Beautiful birds, and grand layers.  
 Cockerels, \$1.50 each.  
 Eggs, \$1 per 13; 65 per 100.  
 EDMONTON POULTRY YARDS, Liberty Mills, Va.

**S. C. BROWN LEGHORNS**

Long bred for fine plumage, strong vitality and laying qualities. One sitting of 16 eggs, 75 cts.; two sittings of 32 eggs, \$1.25; per 100 eggs, \$3.50. ADDRESS: J. N. HANGER, - Lasley, Va.

**Barred Plymouth Rocks**

—EXCLUSIVELY—  
 Strong, healthy, vigorous, farm-raised stock; bred for laying; 75 cts. per setting.  
 WM. B. LEWIS, Irby, Nottoway Co., Va.

**PIT GAMES**

Red Horses, Eggs, \$1.50 per sitting (15). Also a few RED HORSE and IRISH RED COCKS for sale at reasonable prices.

A. S. CRAVEN, - Greenwood, Va.

**PIT GAMES.**

BLACK DEVILS and RED HORSES.  
 These Cocks won 90 per cent. of battles fought in 1901 and 1902, and have never lost a battle when gameness at cutting qualities could win. Eggs, \$2 per sitting and stock for sale.  
 THOS. W. JARMAN, Yancey Mills, Va.

**WANTED**

50 FINE BROWN LEGHORN HENS and 1 Cockerel to be delivered to Burkeville, Va. E. M. SANDYS, 16 Eighth Street, Pittsburg, Pa.

S. C. B. LEGHORN ROOSTERS OR HEMS, 75 cts. each; Eggs, 75 cts. for 15.  
 MRS. A. W. DAVIS, - BLANTON, VA.

# SHORTHORNS

## SPECIAL OFFERING FOR 30 DAYS.

Owing to the scarcity of feed, I will offer **20 Cows and Heifers, and 14 Young Bulls** for immediate sale, at prices ranging from \$75 to \$150 each.

Parties desiring to purchase should not miss an opportunity to see these cattle.

This offering consists of popular American and Scotch families. All animals either Recorded or will be Recorded in purchaser's name, and a certified copy of registration furnished with each animal.

D. M. KIPPS,

Success, Warren Co., Va.,

## ELLERSLIE FARM

**Thoroughbred Horses  
AND SHORTHORN CATTLE,  
Pure Southdown Sheep  
and Berkshire Pigs.**

FOR SALE. R. J. HANCOCK & SON,  
CHARLOTTESVILLE, VA.

COOK'S CREEK HERD,



**Scotch-Topped  
Shorthorns**

Herd Headed by Governor Tyler, 1854-58  
Young Bulls and Heifers for sale. Inspection  
and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

EAST RIVER SIDE

## SHORTHORNS FOR SALE.

One choice Red Bull, of 1 enough  
for service.

ADDRESS

JAMES F. CLEMMER, - Summerdean, Va.

## VIRGINIA VALLEY HERD

Of Registered Shorthorn Cattle.  
Choice young bull, cows, and heifers bred.  
Also Poland-China Hogs and Barded  
Plymouth Rock Chickens.

PRICES REASONABLE

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### FOR SALE

Fine, Thoroughbred JERSEY BULL CALF,  
6 months old.

I have the finest seed corn in this section.

C. N. STACY, - Amelia C. H., Va.

**S. G. W. LEGHORNS.** Pure stock. Bred to lay. Eggs, \$1 per 20.  
IDEAL POULTRY YARDS, Kopp, Va.

their tobacco, handled a good deal of money, knew no higher sense of enjoyment than to spend it for whiskey, and all the evils which follow in the trail of its use came to them.

"Later it was discovered that certain lands in Kentucky would grow the same tobacco equally as well and better. The price of tobacco went down and the greatest opportunity that the people of that county ever had to become wealthy passed away. Not more than one man in twenty was permanently benefitted by tobacco culture, and a great many were seriously damaged." The writer adds: "Permanent prosperity is impossible in any illiterate community. We may strike oil, find coal, iron and gold, but the people who live where such wealth is stored will not be benefitted unless they are sufficiently educated to take advantage of the opportunity to improve such natural resources and make them a means of permanent social betterment."

### A BRIGHT THOUGHT.

She was a fair young thing from Bos'on with an inquiring mind, and having run the blunt old sealing captain into the farthest corner of the Labrador coasting steamer and cut off from him all means of retreat, she begged of him to tell her of his perilous vocation.

"But, Captain," she asked, "how is it you catch so very many dear, little, tiny seals?"

"Well, you see," replied the Captain in his husky voice, hesitating as he hunted for a word other than "females" which he thought objectionable, "you see, the ladies pup on the ice."—CAROLINE LOCKHART (SUZETTE), in *March Lippincott's*.

### IMPROVED POLAND-CHINAS FOR VIRGINIA.

Mr. J. B. Gray reports the demand for Poland-Chinas unprecedented, and in order to fill orders has made the following additions to his herd of Poland-Chinas from the leading breeders of Ohio: Two sows by Penfede Perfreter, and two sows by Ohio Black Chief, 52101, and two sows in pig by Big Ideal, 53426, and a young boar by J. H. Big Chief, 46085, out of Beat Sunshine. The breeder of this boar says that he is the best all-over pig that he has ever seen or raised, and Mr. G. says that it is impossible to conceive of a more perfect spine in a Poland-China pig.

### VALUABLE CATALOGUE.

We have looked over the catalogue we have just received from Morrill & Morley, of Benton Harbor, Mich., makers of the Eclipse Spray Pumps and our advertisers. From cover to cover it is full of valuable matter, compiled from years of practical experience and representing tests that have cost the makers thousands of dollars. Any of our readers who are using spray machinery will find it to their interest to write for a copy of the above catalogue and to give it careful study. Write direct to the makers, Morrill & Morley, Benton Harbor, Mich., and mention this paper when writing.

## RED POLLED CATTLE FOR SALE.

One purebred registered bull, three-year-old.  
Price, \$125.

One purebred registered cow, four-year-old,  
due to calve in April. Price, \$150.

One purebred registered heifer, two-year-old,  
due to calve in June. Price, \$125.

Price on the lot, \$350. F. O. B. cars Christiansburg, Va.

Will keep cattle until April 15th, for buyer.

These cattle are all purebred and registered in American Red Polled Cattle Club Herd Book, and are all in fine, healthy condition.

W. M. S. FOSTER, Blacksburg, Va.

## MEADOWVALE FARM

OFFERS FOR SALE SOME CHOICE

**JERSEY and QUERNEY CATTLE,  
BERKSHIRE SWINE, WHITE WY-  
ANDOTTES, BARRED PLYMOUTH  
ROCKS and WHITE LEGHORNS.**

The cattle offered consist of Young Cows, Yearling Heifers, Heifer and Bull Calves and Bulls old enough for service. Berkshires of all ages and both sexes. The poultry is all fine breeding stock and healthy.

Meadowvale Farm has won in the past three years over 600 First and Special Prizes at the Leading Fairs and Expositions, including, New York, Boston, Philadelphia, Hagerstown, Pan-American and Charleston. For Description, Pedigree and Prices, address

LEWIS E. BENEDICT, Prop., Lutherville, Md.

## V. P. I. Farm Bulletin

Splendid ANGUS BULL for sale.  
1 year old in April.

We are now booking orders for  
DORSET RAM LAMBS. No more  
BERKSHIRE PIGS now.

D. D. NOURSE, Prof. of Agr.  
Blacksburg, Va.

FOR SALE  
**ANGORA GOATS.**  
Registered and Graded. "One to carload  
lots." Pairs, \$10.00; trios, \$17.00.  
Write for carload prices.



JEHEMY IMPROVEMENT CO., - Saxe, Va.



# \$100 CASH PRIZE FOR ANY STUDENT OF AN AGRICULTURAL OR FARMER



We hereby offer \$100 in cash for the best article to be written on breeding and raising hogs. Describe ten sows that you would select for breeding. Describe boar that you would select for a cross with these sows. Describe how and what kind of grain, grains or mill stuffs you would feed sows until pigs were farrowed. Tell how many pigs you would expect from the ten sows and describe how and what you would feed sows after pigs were farrowed. State when you would commence feeding pigs and what you would use. State when you would wean pigs and what kind of feed you would give them from that time until they were six months old and what you would expect to make them weigh at the expiration of six months. State why you would expect such results from your care and kind of feed used. Describe kind of pens and yards you would use for each condition. Our aim is to have you write an article describing in a practical way just how you would raise hogs to obtain the best results. The breed of hogs selected will not be considered in the decision. The use of "INTERNATIONAL STOCK FOOD" will not be considered in the decision. The decision will be published in every leading Farm Paper in the United States and Canada. Mail your article to The American Swineherd, Chicago, Ill., on or before May 10th, 1903. The judges will be J. W. Baynes, editor and proprietor of American Swineherd, Prof. Thomas Shaw of The Farmer, St. Paul, Minn., and Henry Wallace, editor of Wallace's Farmer, Des Moines, Iowa. These gentlemen are rendered in May, 1903. The winning article is to be our property and at the same time write an article that will be of great practical value to every stock man. Try for it. \$25 You may be the winner. All articles must be mailed to The American Swineherd, Chicago, Ill., on or before May 10th, 1903. Mark your envelope "International Stock Food" Offer.

well known throughout the entire country and the decision will be circulated throughout the world and will attract universal attention of all swine raisers. Who will win the \$100 Cash and the Honor and at the same time write an article that will be of great practical value to every stock man? Try for it. \$25 You may be the winner. All articles must be mailed to The American Swineherd, Chicago, Ill., on or before May 10th, 1903. Mark your envelope "International Stock Food" Offer.

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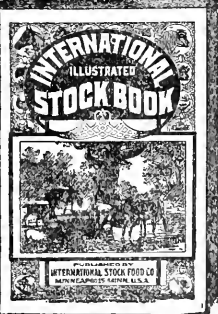
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## JERSEY HERD

IN AMERICA. FOUNDED 1852.

**BULL CALVES**, and for the first time, Heifers bred to Imported Golden Peter, and Heifer Calves and a few aged Cows.

**BERKSHIRES**, all ages, sired by Imported Storm King, or Imported Egan 2nd, Size, good shape and large litters.

Visitors welcome. Address for Book of The Farm, or prices

**FILSTON FARM, GLENCOE, MD.**

### Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

### JERSEY BULLS and HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25.00. Heifers, same age, \$35.00. **POLAND-CHINA PIGS**, \$5.00 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

## Hackney Stallion FOR SALE.

Only 4 yrs. old, and is a prize winner. Send for particulars.

I also have some very fine purebred S. L. WYANDOTTE COCKERELS. Eggs in season at \$1 per setting of 16.

Dr. H. H. LEE, - Lexington, Va.

## Woodland Farm DORSETS

Of 16 rams, 9 to 14 mos. old, we now have on hand, 4 are not quite good enough to head any herd in the United States. The best ram Harding could find in England now heads our flock. Are buying a few ewes; none to sell, but are booking orders for October dropped ewe lambs.

WOODLAND FARM, Mechanicsburg, O.  
(J. E. Wing, Willis O. Wing, Chas. B. Wing.)

## DORSETS AND HERFORDS

H. ARMSTRONG, - Lantz Mills, Va.

### FOR SALE.

♂ Reg. HERFORD BULLS

From 6 mos. to 3 yrs. old.

♂ REG. HEIFERS

From 6 to 18 mos. old. At reasonable prices. HAYFIELDS STOCK FARM. Cockeysville, Md.

### HAWKLEY STOCK FARM.

Large **ENGLISH BERKSHIRES**  
**B. P. ROCKS FOWLS,**

Eggs from same, \$1 per 13.

J. T. OLIVER, Allen's Level, Va.

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Virginia Experiment Station, Blacksburg, Va. Resume of the Official Work in Relation to the San Jose Scale.

Virginia (Hampton Nature Study Bureau), Hampton, Va. Care and Management of Horses.

## READERS OF THE PLANTER

In want of a PIANO will find it to their interest to write to us. We assure them there is such a thing as buying an honestly-made instrument at a moderate price.

We make **CASH and TIME SALES**, and are willing to take part payment in **Stock and Farm Products.**

Write and state your wishes.

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STAUNTON, VA.

## COLLIE PUPS!

By prize-winning imported sires and trained dams. Eligible. Fit for bench, ranch or farm. Price, \$10, either sex. Also a book on the care and training of the Collie for all practical uses. Price, 50c. Copy of book free to purchaser of Collie.

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Large English Berkshire Hogs, Bared Plymouth Rock Chickens

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. ♀♀-EGGS IN SEASON.

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Registered and unrecorded. Stock first-class, and breeding the best.

## SHROPSHIRE SHEEP

First class yearling rams, and ewes of all ages. Several FINE FARMS for sale.

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## 150 Jacks, Jennets & Mules 150



Best assortment I ever owned. Can suit you exactly. Write for description and prices.

Also will sell two Feroceron stallions at close figures.

BAKER'S JACK FARM, Lawrence, Indiana.

## FINE JACKS.

Mules are equal to Gold Dollars, from "youth to old age." Several nice ones and 2 very fine Jennets for sale. Buy Jack now and get him ready for spring. Write your wants to

L. L. THOMPSON,

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## JACKS and JENNETS FOR SALE.

Enclose 2 cent stamp for new catalogue.

W. E. KNIGHT & CO.,  
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## MARKET TOPPERS FOR SALE, LOW.



One thoroughbred Angus cow, unregistered, coming 3 yrs, with heifer calf at foot Price, \$75.  
 Four three-fourths Angus heifers, two coming 3 yrs., two coming 4 yrs., bred to reg. Angus bull. Price, \$50 each.  
 Four seven-eighths Angus heifers, coming 2 yrs., bred to reg. Angus bull. \$50 each.  
 Three seven-eighths Angus heifers, coming 1 yr. \$30 each.  
 Four one-half Angus heifers, coming 1 yr. \$20 each.  
 One bull calf, out of a thoroughbred Shorthorn cow, by a reg. Angus bull. Price \$50.  
 One 9-mos.-old reg. Angus bull. Price \$100.  
 One 12-mos.-old reg. Angus heifer. Price, \$100.  
 All of the above cattle are black, and as well polled as a thoroughbred Angus.  
 Eight beautiful reg. Angora goats, six does which will kid soon, two fine bucks. Price, \$100 for the lot.  
 One fine reg. Angus Bull Calf, 5 mos. old, at \$75.  
 One pair Bay Mares, with black points, coming 5 yrs. old. Weight, 1,300 lbs. each. Well broken to harness and all farm machinery. An ideal farm team. Heavy enough for farm work and active enough for good drivers, and gentle enough for anybody to handle. If sold very soon, will take \$325., which is very cheap.  
 Address **W. M. WATKINS & SON,**  
 Cottage Valley Stock Farm,  
 Randolph, Charlotte Co., Va.

SEED CORN  
FOR SALE

By **W. M. WATKINS & SON,**  
 RANDOLPH, CHARLOTTE CO., VA.

## Snow White Dent.

This variety has proven the grandest milling corn in the world, and far above all other varieties of White corn in average yield. Last year from one bushel planted on ordinary high land, without fertilizers, we gathered sixty barrels of fine corn. Price, \$1.50 per bus.

## Pride of Cottage Valley.

A large earred, deep grained early white corn with 16 to 24 rows on a cob and stalks 13 to 15 feet high, usually two ears to the stalk and yielding an abundance of fodder. This corn is very productive and makes the best meal. Price, \$1.50 per bus.

## White Champion.

Earliest corn on record. Ears 10 to 12 inches long, with 18 to 20 rows on the cob. Good-sized grains. Planted June tenth, cut, and in sheok by Sept. tenth. From one gal. planted, we gathered 12 barrels of good corn on ordinary high land. Price, \$2.50 per bus.

## Early Yellow Variety.

Popularly known as Huron Dent, the most productive ear and most reliable early yellow corn ever introduced. Planted May 10th, cut, and in sheok by the latter part of August. Price, \$1.00 per bus.

**ANGORA GOATS** are handsome, hardy and profitable. For large circular address **E. W. COLE & CO.,** Big Clifty, Ky.

Virginia Weather Service, Richmond, Va.  
 Report for January, 1903.

Wisconsin Experiment Station, Madison, Wis. Bulletin 97. Licensed Commercial Feeding Stuffs.

Imperial Department of Agriculture for the West Indies, Barbados, W. I. Seeding and other Canes in the Leeward Islands.

Do, in Barbados. Hints on Onion Cultivation. General Treatment of Fungoid Pests. Plaintalk to Small Owners. West Indian Hams.

## HE KEPT HIS VOW.

From an anecdote told by William Elroy Curtis in his "Yankees of the East" it may be inferred that the attitude of the small boy toward a fence is the same in Japan as in other countries.

Mr. Gobel, the missionary, built himself a modern house on what is known as "The Bluff" south of Yokohama, and surrounded his grounds with the first fence that was ever built in that part of the world. It was made of bamboo palings, and the boys of the neighborhood used to annoy the good missionary greatly by rattling sticks against it as they ran along the street.

The British admiral lived just above him, and had a very natty Tommy Atkins for an orderly. He wore a little round cap on the northeast corner of his head, and always carried a little cane of rattan in his hand. One morning, having been sent with a message, he appeared before the admiral with his face bruised and his uniform battered and torn and covered with dust.

"Mersey on us!" exclaimed the admiral, in astonishment at the spectacle. "What has happened to you?"

"Hi beg your parding, sir," replied Tommy, "but as Hi was coming, along hip the 'ill a-rubbing me stick against the missionary's fence, sir, 'e come hout in 'is pajamas and said as 'ow 'e 'ad vowed by the grace of God to lick the 'ide off the next man who did that, and 'e done hit, sir."—*Youth's Companion.*

## THE OLD BOY.

Mrs. C. was horrified to discover that her little seven-year-old daughter was rapidly acquiring the habit of alluding very freely to the devil, and at last she told her determinedly that a repetition of the obnoxious word would bring severe punishment.

The child knew that her mother was in earnest, so she set a seal on her lips. At last she seemed to have forgotten it; but one Sunday Mrs. C. who had been too ill to go to church, asked her if she could tell what the minister had preached on in his sermon.

"Oh, yes, m'," she answered; "he preached about Our Lord going up into the mountain and being tempted by—by—the gentleman who keeps hell!"

"She didn't intend to run any risks of being punished."—*Lippincott's.*

"Does your cook ever wear your wife's clothes?"

"I guess not. Why, my wife hasn't anything the cook would be seen wearing."

## POLAND-CHINAS

I am now taking orders for highly-bred P. C. Eggs, 3 to 12 weeks old, for May and June delivery, sired by Chief Best 4355 and + + orish Perfection 5547, won and grand-son of Chief Tecumseh 2nd 2818 5 and Chief Perfection 2nd 4395, respectively, and of matured sows of Perfection and Chief 13. Price \$1.50 per 15. Breeding. Also a young sow sired by Chief Best and bred to M. Perfection 5 for 2nd litter.

PLYMOUTH ROCK EGGS of Thompson and Warner breeding, \$1 for 15, and \$4 per hundred. Have run of farm, and keep no other kind.

THOS. R. SMITH, Lincoln, London Co., Va.

ALBEMARLE PROLIFIC  
SEED CORN

For 4 years past, the entire crop at Arrowhead farm has been sold for seed, and those who put off ordering until the last, could not be supplied. We have several thousand bushels for sale. Price, \$1.75 in small lots; half bus., \$1.00; peck, 65c. No smaller orders shipped. If the land is good and properly prepared before planting, and properly worked after planting, over 100 bus. per acre should be the yield. More forage will be grown than from any other variety.

ARROWHEAD STOCK FARM, Charlottesville, Virginia.

## THE SUPERIOR QUALITIES OF OUR PLOWS IS UNQUESTIONED.



Made from best material. Best workmanship. Best plows on the market. Both right and left hand. Sod, stubble and a general-purpose mould board. Either steel or chilled. Wood, iron and steel beams. We make over 10 different styles and kinds of plows, including the celebrated Suren. Full line of other agricultural implements. Write for catalogue and prices.

THE TOLEDO PLOW CO., Divis. S, Toledo, O.

## M. B. TURKEY EGGS

From heavy-weights with brilliant plumage. \$3.00 doz. B. P. Rock and Pekin Duck Eggs, \$1.00 per 15. A two-year-old Scotch Collie female, bred from prize-winning imported stock, well trained, \$25.00. Pups, \$10.00.

C. H. BENNETT, Goodman, Va.

## WHISKEY

4 full quarts Corn Whiskey 10 years old, \$3.50  
 4 " " " " " 6 " " " 2.50  
 4 " " " " " 4 " " " 2.00

20 years old, for invalids and other loved ones.....\$5.00

Plain packages. Express paid. Purest and Best Whiskey, and Oldest House in America. Established 1788-135 years ago. Just as Corn-bread is more wholesome and palatable than Rye bread—so with the Whiskey—so say all Doctors—try it and be convinced. Nothing on earth as beneficial to weak lungs as this absolutely pure mountain beverage.

THE OLD NICK WILLIAMS CO.

Lock Box No. 11. Williams, N. C.

**RUPTURE CURED** while you work You pay \$1 when cured. No cure, no pay. ALEX. SPEERS, Box 844, Westboro, Mass.

## NELSON AND THE COXSWAIN.

Just before the Battle of Trafalgar a mail was sent from the English fleet to England, and word was passed that it might be the last chance to write before the expected engagement. The letters had been collected from the ships, the letter-bags were on the vessel which was to take them, and she had got some distance on her way, under full sail, when Lord Nelson saw a midshipman approach and speak to Pasco, the signal officer. Then Nelson showed the side of his nature which so often won the sailors' hearts.

Pasco uttered an exclamation of disgust and stamped his foot in evident vexation. The admiral called him and asked what was the matter.

"Nothing which need trouble your lordship," was the reply.

"You are not the man to lose your temper for nothing," rejoined Nelson. "What was it?"

"Well, if you must know, my lord, I will tell you. You see that coxswain?" pointing to one of the most active of the petty officers. "We have not a better man on the Victory, and the message which put me out was this: I was told that he was so busy receiving and getting off his mail-bags that he forget to put his own letter to his wife into one of them; and he has just discovered it in his pocket."

"Hoist a signal to bring her back!" was Nelson's instant command. "Who knows that he may not fall in action tomorrow? His letter shall go with the rest."

The despatch-vessel was brought back for that alone. Captain Mahan tells this story on the authority of the son of Lieutenant Pasco, who used to say that the sailors idolized Nelson. Evidently it was with reason.

## HE GAVE THE REASON.

Uncle Silas, an inveterate horse dealer, was one day called upon by an amateur in search of "something fast."

"There," said Uncle S., pointing to an animal in a meadow below the house, "there, sir, is a mare yonder who would trot her mile in three minutes were it not for one thing."

"Indeed!" said the amateur.

"Yes," continued Uncle S.; "she was four years old last spring, is in good condition, looks well and is a first rate mare, and she could go a mile in three minutes were it not for one thing!"

"That mare," resumed Uncle S., "is in every way a good mare; she trots square and fair, and yet there is one thing only why she can't go a mile in three minutes."

"What in the name of thunder is it, then?" cried the amateur, impatiently.

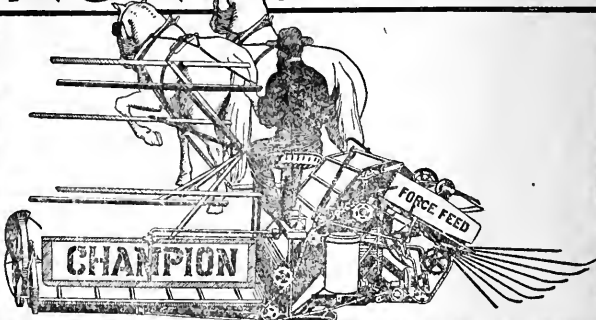
"The distance is too great for the time," was the old man's reply.

"I don't care for looks or riches," she said. "The man I marry must be a hero."

"You are right," my child, said the father, "he must."

**A NEAT BINDER** for your back numbers can be had for 25 cents. Address the Business Office.

## NONE AHEAD



**T**HERE is no binder ahead of the Champion for strength and durability, besides it has valuable improvements which greatly increase its capacity for handling difficult conditions of grain, and are useful in the usual and ordinary conditions. The most important is the force feed elevator which delivers the grain positively but gently to the packing arms where it is made into bundles, and chocking in the elevator and waste of grain are prevented. Next is the eccentric power-driving wheel on the binding attachment which gives the needle an increase in power of 162.3 per cent over the common wheel, and permits the Champion to bind large and tight bundles in the heaviest grain without jerk or strain on the machine or on the team. Write for catalog describing these and other practical improvements on the Champion binder, also on the Champion mowers and Champion hay rakes. Handsome colored calendar sent free also if requested.

CHAMPION DIVISION, INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO.

## GLEN ALLEN HERD OF

## ..ABERDEEN-ANGUS CATTLE..

Headed by ALLENHURST KING IV 47199,

Assisted by VICTOR G., No. 37693.

I am now offering for sale a few choice young bulls of serviceable age, at a bargain. Any one wanting bulls from prize-winning families at a moderate price, will save time and money by calling on or addressing

**GLEN ALLEN STOCK FARM, W. P. ALLEN, Prop., Walnut Hill, Va.**

## SUNNY HOME HERD OF

## ABERDEEN-ANGUS CATTLE.

BARON ROSEBOY (The great son of the world-famous

GAY BLACKBIRD) in service.

Nearly all the leading families of the breed represented by females sired by the most famous bulls of the age. We challenge comparison on both as to individual excellence and pedigree. Another car of grand cows just arrived, personally selected from one of the best herds in central Illinois. The tops out of one hundred head. Six animals of the same family and strain as ROSEGAY (for two years the champion of America), others equally good. All young stuff of weaning age sold; am booking orders for future delivery.

Write your wants; we are bound to please you.

**A. L. FRENCH, PROPRIETOR, FITZGERALD, N. O.**  
Rockingham Co., 24 miles south-west of Danville, Va., on D. & W. Ry.

When corresponding with Advertisers, always say that you saw their advertisement in The Southern Planter.

The Review of Reviews for March opens with an editorial tribute to the late Dr. J. L. M. Curry, the veteran leader of the movement for popular education in the South. In the same magazine, Mr. George Perry Morris reviews the long public career of the late ex-Senator Henry L. Dawes, of Massachusetts, the steadfast friend of the American Indian. "The Sultan of Morocco and his Present Troubles" is the subject of an article by Dr. Talcott Williams which embodies full and accurate information regarding political and social conditions in Morocco; Mr. Walter Willman describes the workings of the United States Steel Corporation's great profit-sharing and stock-distributing plans; there is a character sketch of the Hon. George B. Cortelyou, the first Secretary of the Department of Commerce and Labor, by Mr. H. B. F. Macfarland; Dr. J. M. Buckley describes the methods by which the Methodist Episcopal Church has raised its "Twenty-Million-Dollar Fund," to celebrate the opening of the twentieth century; Mr. Winthrop L. Marvin sketches the recent remarkable progress of Germany as a ship-building nation; "The Lumber Industry of the Pacific Coast" is described by Alvin Hovey-King; Mr. Thomas C. Martin gives the latest information as to "Long Distance Power-Transmission in Canada"; and the work of the first federal Parliament of Australia is reviewed by the Hon. Hugh H. Lusk. Other important topics of the day are editorially treated in "The Progress of the World."

# IRON AGE

For over two generations the Iron Age implements have been helping farmers to do better. Every year in that time we have given making these labor savers better than before. Today they are successful beyond question; durable beyond comparison; economical beyond doubt.

Improved. Reliable. Durable. Efficient.

No. 6. Iron Age Double and Single Wheel Hoe, Hill and Drill and Seeder.

No. 60. Iron Age First Best Cultivator.

Write to-day for a free copy of the new Iron Age Book, full of facts that will save you money, time and strength all through the year.

**BATEMAN MFG. CO., Box 167, Grenloch, N. J.**

POPULAR GOODS—POPULAR PRICES.

## Matthews' New Universal

(Improved) **HAND SEEDERS AND CULTIVATORS.**

Suitable for every class of work.

STANDARDS OF AMERICA

**STAR PATTERN Planter and Fertilizer BILLINGS**

Is the latest, and it drops at twelve different distances.

For CORN, BEANS, PEAS and BEET SEED.

If you want them, we furnish Marker and Trip Attachment for rowing both ways.

## New Universal Wheel Plows.

THREE STYLES.

The best made. Light and strong.

**AMES PLOW CO., 56 MARKET ST., BOSTON, MASS.**

For Sale by GRIFFITH & TURNER CO., Baltimore, Md.

# JERSEY CATTLE

Bred from high-testing St. Lambert Cows.

## LARGE YORKSHIRE HOGS.

The BACON BREED now leading all other breeds for making high-priced bacon.

**INDIAN GAMES**—The king of table fowls.

**WHITE WYANDOTES**—The best general-purpose fowl.

**WHITE LEGHORNS**—All sold out.

Address **BOWMONT FARMS, SALBURN, VA.**

# SIR JOHN BULL and UNGLE SAM

Have become so famous that I found a multiplication of their progeny necessary to the filling of orders; hence I have added a large number of pure-bred Imported and American Sows, no akin to my old herd, and most of them now in farrow to Imported Berkshire Boars of a new strain.

**HUNTING DOGS and PUPS FOR SALE.**

**A DURHAM BULL CALF,** a picture, cheap. Write for particulars.

**THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.**

When corresponding with advertisers, always mention  
The Southern Planter.

The Cosmopolitan Magazine for March contains a number of noteworthy articles. "The Police System of Europe," by Avery D. Andrews, formerly Police Commissioner of New York, embodies many of the results of the investigations of the author on his recent official visit to Europe, where he went to study the police systems of the leading countries. It is capably illustrated. "The Selection of a Home," by Clarence A. Martin, Professor of Architecture at Cornell University, is the first of twelve articles on the general subject of "How to Administer a Household." Louise Parks Richards contributes an interesting personal sketch of the great painter, Von Lenbach. Two other character sketches deal with James Brooks Dill, the prominent corporation lawyer, and Edward Henry Harriman, the Western Railroad Czar. Elbert Hubbard, in article on "A Gladiatorial Renaissance," makes out a strong case against football as it is played to-day, and Tom Masson discusses how many men a girl should be engaged to before she marries. "The Woman of Fifty," by Mrs. Wilson Woodrow, deals with the victory of modern woman over her hereditary enemy, Time. Other articles are: "The Young Napoleon," by Field-marshal Viscount Wolseley, K. P.; "Mankind in the Making," by H. G. Wells; "Insurance as a Profession," by Charles F. Thwing, LL. D., President of the Western Reserve University; and "Beauty in the Modern Chorus." The March Cosmopolitan also contains four complete stories in addition to Henry Seton Merriman's new novel, "Barlasch of the Guard."

BOOKS.

**HOME FLORICULTURE.** A Practical Guide to the Treatment of Flowering and Ornamental Plants in the Household Garden. By Eben E. Rexford. Illustrated, 5 x 7 inches, 300 pages, cloth. Orange Judd Company, New York. Price postpaid, \$1.

This fascinating book is written by one of the most experienced amateur floriculturists and most pleasing writers in this country. His intimate knowledge of the wants of the people has convinced him what is wanted in this direction is not scientific text-books, but plain, practical, easily understood information, which will enable those who love flowers to grow them successfully. It has been written from the author's life long personal experience among flowers, and not from theory. Every detail in the principles and practice of plant growth and management is concisely, clearly and minutely explained, and yet there is not an unnecessary line in the book.

It treats on the soil for plants in pots, potting, watering plants, insects and how to fight them, care of house plants during summer, fertilizers, diseases of plants, winter precautions, dormant plants, appliances for the amateur's use, small greenhouses. Very complete lists and descriptions of plants best adapted to window culture are given, also of the best outdoor annuals, hardy perennials, shrubs, and plants for various purposes. The closing chapter, entitled "After Thoughts," forms a unique and pleasing combination of floricultural odds and ends, without which the book would have been deprived of one of its most instructive and attractive features. Over 70 excellent illustrations add considerably to the artistic appearance of the book.

We can supply the book at the published price.

PAMPHLETS, &c.

**The Menace of Arid Lands.** An Address delivered at the Farmers' National Congress at Macon, Ga., by Gilbert M. Tucker Editor of the *Country Gentleman*. Mr. Tucker takes up strong ground in opposition to the irrigation work which it is hoped to put upon the back of "Uncle Sam." He thinks it would be well to let this alone until the farmers of the East have had a period of prosperity long enough to enable them to show what Eastern lands can be made to produce. No objection whatever to the owners of arid lands doing all they can to make their lands productive at their own expense. This is what the Eastern farmer has to do.

Report of the A. O. U. Committee on the Protection of North American Birds, and of the National Committee of Audubon Societies. The good work done by these Societies deserves every support from farmers. The birds are his true friends and ought to be protected by him in every way possible.

We tender thanks to Senator Martin for copy of the Congressional Directory, 2nd session 57th Congress.

# A TRIUMPH



## IN MACHINE MANUFACTURE

IS THE **MCCORMICK BINDER . . .**

During 1902 more McCormick machines were sold than in any previous year, a fact which attests the widespread popularity of the world-renowned machine. The seventy-two years success of the McCormick has made this name a household word throughout the world.

The McCormick is the machine to buy for 1903.

Write for beautiful McCormick calendar and copy of 1903 book entitled "A MODEL MACHINE."

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**W. K. BACHE, Gen. Agt. for McCormick Machine,**  
RICHMOND, VIRGINIA.

## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

**Reg. BERKSHIRES** From noted strains, Imported Headlight, Lord Highclere and Sunrise.

### DORSET SHEEP.

**B. PLYMOUTH ROCK CHICKENS,** Fifteen Cockerels for sale.

N. and W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

## "THE OAKS" SHORTHORNS FOR SALE

2 Reg. Bull Calves; 2 Reg. Cows; 1 three-year-old Reg. Bull (immune) raised south of Petersburg, Va. All right in every particular.

**B. B. BUCHANAN, Bedford City, Va.**

## BILTMORE FARMS, - BILTMORE, N. C.

### Headquarters for GOLDEN LAD JERSEYS,

Also get of TREVARTH and GEN. MARIGOLD. \* \* \*

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.

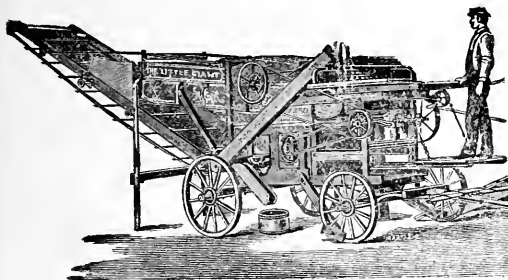
### \* \* \* BILTMORE POULTRY YARDS. \* \* \*

**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

### Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO **BILTMORE FARMS, BILTMORE, N. C.**

The most popular Machine in use for Peanut Picking and Grain Threshing are the



## HEEBNER'S, LITTLE GIANT AND PENNSYLVANIA

Machines, and they have splendid improvements for 1903. They are built in first-class manner, and are strong and durable. The price is within the reach of all. We guarantee them to do the work satisfactorily. We will mail catalogue and testimonials, and quote prices on application.

RUBBER, LEATHER  
and  
GANDY BELTING.

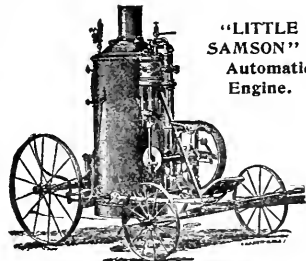
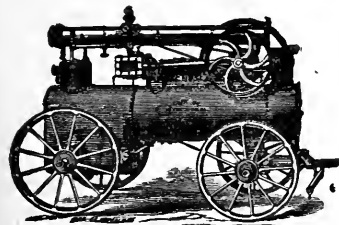
FRICK'S "ECLIPSE"  
ENGINES and BOILERS.

ERIE ENGINES and BOILERS.

THE CELEBRATED

"CHASE" SAW MILLS  
and

"DE LOACH" MACHINERY.



"LITTLE  
SAMSON"  
Automatic  
Engine.

This cut shows our 5 and 7 h.-p. "Little Samson" Vertical Automatic Engine, for running threshers, peanut pickers, cutting feed, sawing wood, etc.  
Larger sizes also furnished.

STRATTON & BRAGG CO., 20-22 N. Sycamore St., Petersburg, Va.

## PRICES FOR CANNING CROPS.

At a recent meeting of the Farmers' Produce Association of Central New York at Oneida, the following schedule of prices for products grown for canning factories was adopted:

Evergreen sweet corn, 65c. per 100 lbs.; Country Gentleman and Crosby corn, 80c.; tomatoes, \$10 per ton; beets, \$15 and \$18; peas, \$2.25 per 100 lbs.; cucumbers, \$12 per ton. It was also agreed that in cases where members of the Association deliver peas at the factory, and do not take away the vines, the operators of the factory shall pay the farmer for the vines at the rate of \$3 for each acre the farmer has devoted to the culture of peas. This schedule, in the form of an agreement, is to be circulated among the farmers of the adjoining towns for their signatures.

Canners are now making contracts with the farmers in our county for growing peas. The seed supply is short, and the growers must pay \$4 per bushel for the seed. The price to be paid for "picked" peas is 70 cents per bushel for "viner" peas, 2½ cents per pound shelled peas, weighed as they come from the vines. It is not quite time for making contracts for tomato-growing. The canners claim that \$8 per ton will be their limit, but it will not be surprising if the price will be \$9 per ton around this place. At this amount per ton, another year of good yields will leave the farmers in fine financial condition.—W. G. Dawson, Dorchester county Md., President Peninsula Horticultural Society.

## HYMNS UP TO DATE.

An old gentleman of eighty-two, whose occasionally cynical speeches are always tinged with good humor, was asked his opinion of modern church music.

"It's all very fine," he said dryly, "and I like to hear it; but there's one thing I've noticed. It may be just chance, but I've noticed it a good many times.

"When I was a boy, the people went to two services a day, and sometimes three, and they sat on hard seats with straight backs, and sang with all their hearts—

"My God, the spring of all my joys."

"Now the congregation lean comfortably back in softly cushioned pews and listen to the choir singing—

"Art thou weary, art thou languid."

I may be mistaken, but it comes home to me, every now and then, that hymnology is changing to suit the times.

"She used to say she'd never marry a man who wasn't as beautiful as a Greek god. What is her husband like?"

"Well, he's left-handed, cross-eyed, stammers, and has a 'game' leg. He may be a Greek god turned inside out, though."

Stranger (meeting old friend in New York).—How do do? Still living in New York, eh?

Gothamite (who has just had half a dozen narrow escapes from vehicles, s.b.way explosions and dead wires).—Y-e-a—still living.

# MAUD MULLER

raked hay  
in the  
old fashioned  
way.

## DEERING

### IDEAL

## RAKES AND MOWERS

are used nowadays  
by up to date farmers.

DEERING DIVISION  
INTERNATIONAL HARVESTER CO.  
OF AMERICA  
CHICAGO, U.S.A.



# CISMONT DORSETS..

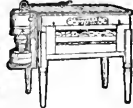
CISMONT STOCK FARM offers well-developed young Dorsets of the best blood of England and America.

Prices reasonable.

G. S. LINDENKOH, Keswick, Albemarle Co., Va.

# THERE'S A HEN ON

All the time, doing her duty and making you easy money, when you install The Hawkeye Incubator. Made in sizes to suit your needs, from 60 eggs to 200, all of the finest and most approved construction and guaranteed in every particular. Our little price includes everything needed. Warranted out incubators on 30 DAYS' FREE TRIAL. Send for free illustrated catalogue describing fully all sizes of Hawkeye Incubators and Brooders, mentioning this paper, or send 10c. and we will send you catalogue and a leading poultry paper for one year.



HAWKEYE INCUBATOR CO., Box 49, Newton, Iowa.



## INCUBATORS ON 30 DAYS' TRIAL. THE WORLD'S BEST STANDARD HATCHER.



free for the asking. THE STANDARD F. C. INCUBATOR CO., Dept. 8, Rochester, N. Y., U. S. A.



Thousands of these incubators are in successful operation in the United States, Canada, South Africa, New Zealand, Sweden, England, Holland, and Germany. These machines operate to perfection and always bring off a large brood of strong, healthy chicks. Catalogue with full particulars





\$18.50

for this team harness, cut from oak-leaves for the neck, in 18 lines: Hook & Trench pack, 95¢; Harness, \$1.45; to \$1.50. Double, \$1.80 to \$1.95. **Send for Our Catalogue**



\$18.60

Made in 8 sizes for this 12-16 all steel barrow has removable L-shaped bumper. Durable proof



\$8.30

steel lever barrow; cuts 10¢; 60 teeth, 2 sections.



\$8

Mowers' New Model garden drill, large size with 11 tools.



\$28.75

Calumet check row planter with automatic reel and 80 rods wire.



\$9.95

for this 2 horse cultivator. Reels at \$15 to \$18.



\$10.50

One-Horse Corn Planter. Cuts wheat, oats and grass seed 4 to 10 acres an hour. Fine other series. Send for catalogue.

for this team harness, cut from oak-leaves for the neck, in 18 lines: Hook & Trench pack, 95¢; Harness, \$1.45; to \$1.50. Double, \$1.80 to \$1.95. **Send for Our Catalogue**

The Most Perfect Made. We have other style drills for \$15. We save you about 12.5¢ in price.

Steel Beam Cultivator, plain, with 5 shovels. It has 483 pages, size 9x11 inches. cut this ad out and send it to us we will mail the catalog FREE.

Never miss, drops in hills and dills. We challenge the world with this planter. Write us in total. Postage is 15¢, but if you will

Calumet check row planter with automatic reel and 80 rods wire. Never miss, drops in hills and dills. We challenge the world with this planter. Write us in total. Postage is 15¢, but if you will

for this 2 horse cultivator. Reels at \$15 to \$18. \$15.95 for riding cult. 30 cultivator. Series 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 combinations. **Most Wonderful Cultivator Bargains ever offered. Also Plows.**

80¢ Crank Reeler. Cuts wheat, oats and grass seed 4 to 10 acres an hour. Fine other series. Send for catalogue. **MARVIN SMITH CO., 65-67-59 N. Jefferson St., CHICAGO, ILL.**

## ANNEFIELD HEREFORDS,

“PRINCE RUPERT,” No. 79539.

Winner Sweepstakes at Kansas City, 1901. Herd rich in “Anxiety” blood.

## BERKSHIRE HOGS

FINEST STRAINS OF BLOOD.

INSPECTION INVITED

CORRESPONDENCE SOLICITED.

EDWARD G. BUTLER, - “Annefield Farms,” Briggs, Clarke Co., Va.

A distinguished lawyer and politician was travelling on a train when an Irish woman came into the car with a basket, bundle, etc. She paid her fare, but the conductor passed by the lawyer without collecting anything. The good woman thereupon said to the lawyer, “An’ faith an’ why is it that the conductor takes the money of a poor woman an’ don’t ask ye, who seem to be a rich man, for anything?” The lawyer, who had a ruse, replied, “My dear ma’am, I’m travelling on my beauty.” The woman looked at him for a moment, and then quickly answered, “An’ is that so? Then, ye must be very near yer journey’s end.”

A Scotchman in London noticed a bald-headed druggist standing at his shop door, and inquired if he had any hair restorer.

“Yes, sir,” said the druggist; “step in side, please. There’s an article I can recommend. Testimonials from great men who have used it. It makes the hair grow in twenty-four hours.”

“Aweel,” said the Scot, “ye can gie the top of yer head a bit rub wi’ it; and I’ll look back the morn, and see if ye’re telling the truth.”

The druggist returned the bottle to the shelf, and kicked the errand boy for laughing.

In an Iowa court, recently, a lawyer arguing his case became very earnest. Then he paused a moment and said: “I see Your Honor shakes your head as to that statement, but I desire to reaffirm what I have remarked.” The court retorted: “I have not intimated how I shall construe your evidence or what my decision shall be. Your remarks are uncalled for.” “You shook your head,” was the reply. “That may be true,” retorted the court. “There was a fly on my ear, and I reserve the right to remove it any manner I see fit. Proceed with your argument.”

“Excuse me, but I am in a hurry. What do you want?” he was asked. “A job.” “Do you?” Well,” snorted the man of business, “why are you in such a hurry?” “Got to hurry,” replied the boy. “Left school yesterday to go to work, and haven’t struck anything yet. I can’t waste time. If you’ve got nothing for me to do, say so, and I’ll look elsewhere. The only place I can stop long is where they pay me for it.” “When can you come?” asked the surprised merchant. “Don’t have to come,” he was told. “I’m here now, and would have been to work before this if you had said so.”

## BACON HALL FARM.

# HEREFORD REGISTERED CATTLE

“TOP” BREEDING, CALVES NOT AKIN.


MOTTO—Satisfaction or no Sale.

E. M. GILLET & SON, - Glencoe, Maryland.

**C. C. Taliaferro,**  
NASONS,  
VA.  
1902

“MOUNT SEARON  
HEREFORD CATTLE  
& MUSCOV DUCKS  
STOCK FARM.”

Registered SHROPSHIRE SHEEP  
Registered POLAND-CHINA PIGS.




NOW OFFERS

FOR SALE

**HEREFORD CATTLE.**—Calves, entitled to registration, \$75 to \$100. Grade Calves by “Sir Edward” \$25 to \$40.

**SHROPSHIRE SHEEP.**—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10, and \$12. Ewe Lambs, July delivery, \$8, and \$10.

**POLAND-CHINA HOGS.**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, 8 to 12 months and over, \$15 to \$20.

**M. BRONZE TURKEYS.**—Toms, \$4. Hens, \$3. Eggs, per setting of 12, when in season, \$4.

**MUSCOV DUCKS.**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25; trios, \$3. **BARRED PLYMOUTH ROCKS.**

**ROUEN GEES.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.00

**WILLIAM L. JR., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.**

### WHOLESALE PRICE ON AGRICULTURAL CHEMICALS AND FERTILIZERS.

The demand continues strong for the leading ammoniates, without, however, any special feature. Nitrates are firm and business is of moderate proportions, while inquiry from the Western farmers is expected to develop before long. Prices for potash salts have been fixed for the year, and will remain unchanged until the first of March next, when the customary enhancements take place.

#### AMMONIATES.

Nitrate of soda, spot, per 100 lbs.	\$ 2 05
Cotton-seed meal, per ton, c. i. f. N. Y.	28 00
Sulph. ammonia, spot	8 15
Dried blood, New York, low grade	2 65
Dried blood, Western, high grade, fine ground	2 75
Fish scrap, at New York	10
Tankage, per unit	10

#### PHOSPHATES.

Acid phosphate, per unit	60
Bone black, spot, per ton	17 00
Ground bone, per ton	23 50
S. C. phosphate rock, ground, per 2,000 lbs.	5 50
S. C. phosphate rock, f. o. b. Ashley River, 2,400 lbs, dried	3 50
Florida high grade phos. rock, f. o. b. Fernandina, per ton	7 00
Tennessee phosphate, f. o. b. Mt. Pleasant, domestic	3 60
Double manure salt (48 a 49 per cent. less than 2½ per cent. chlorine), per lb, shipment	1 09

Basis 48 per cent.

High grade manure salt (90 a 93 per cent. sulphate potash), shipment	2 08
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Basis 90 per cent.

Manure salt, in bulk, 20 per cent. per unit, O. P.	64
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#### POTASH.

Kainit, future shipment, per ton	9 05
Keiseret, future shipment, per ton	7 35
Mar. potash, 80 p. c., future shipment	1 80

—N. Y. Jour. of Commerce, Feb. 17, 1913.  
[Only highest prices quoted.—S. P.]

#### SUREHOLD TRUSSES

Mr. Alex. Speirs, Westbrook, Maine, has testimonials from cured patients in every State in the Union and in Canada who have used his Surehold Trusses and the medicine he recommends with permanent beneficial results. He asks an opportunity of sending to every sufferer from hernia and kindred ills his free information for their benefit.

There is some pleasure in coming upon an anecdote in which the barber does not have the last word. Judge relates this dialogue: "Hair's very thin, sir." "It was thinner than that thirty years ago." "Indeed, sir! You surprise me. Why, you don't look more than thirty now, sir!" "Thirty yesterday!"

"Why do you insist upon my pet bulldog riding in the baggage car?" asked the indignant matron.

"Because he has a grip, ma'am." chuckled the porter.

# POLAND-CHINA BOARS

THE KIND THAT GETS BIG.

Send your check and we will send you as good a pig as money will buy anywhere, sired by a son of "Proud Perfection." We pay the expressage. No guesswork what the cost will be. If you don't like the pig give it a good feed, send it back, expressage prepaid, and we will return your check.

We are careful in selecting animals and would not sell a poor one at ANY PRICE, for it would spoil our trade. PRICES:—2 months old, \$10; 3 months old, \$11; 4 months old, \$12. No more sows or sow pigs for sale.

**BULLFIELD FARMS, - Doswell, Virginia.**

## LARGE ENGLISH BERKSHIRES

IMPORTED IN 1902.

OUR HERD IS CHOICE, BUT NOT LARGE.

Would you like your boy to get interested in Stock-raising and Farming? Then why not buy a pair of CHOICE BERKSHIRE PIGS and give him a start. WRITE

**FOREST HOME FARM, - Purcellville, Va.**

## EGGS for HATCHING

From Fowls of High Merit, Fresh, and a Good Hatch Guaranteed of the following varieties:—

**PLYMOUTH ROCKS, BROWN LEGHORNS, WHITE LEGHORNS and PEKIN DUCKS at \$1.00 per sitting of 15. BRONZE TURKEY Eggs, \$3 per doz.**

Jersey and Gu-rnsy Cattle and Berkshire Pigs. Four handsome Great Danes and three Fox Terrier Puppies.

**M. B. ROWE & CO., FREDERICKSBURG, VA.**

#### EASTERN SHORE POULTRY FARM.

**S. C. WHITE, BROWN and BUFF LEGHORNS.**

THE EGG MACHINES OF POULTRYDOM.

The record at such shows as Washington, D. C., Philadelphia and New York proves the quality of my stock is second to none. I always breed my winners.

Correspondence cheerfully answered.

**A. C. VAN DEMAN, LEGHORN SPECIALIST, PARKSLEY, VA.**



### OLIVE'S PRIDE.

The GREATEST OF ALL NEW STRAWBERRIES It contains more points of excellence than any other variety introduced in recent years. WRITE FOR FREE CATALOGUE; it tells you all about this grand variety and forty other varieties of choice stock free from all diseases. Second crop Seed Potatoes, etc. **J. W. HALL, MARION STATION, MD.**

**1,000,000 STRAWBERRY PLANTS** 100 Varieties. If you wish the best and earliest, you must plant them. Thompson's Earliest, Mark, Mrs. Mark Hanna Howell and Aroma will prolong the season from 5 to 6 weeks. 200,000 Early Jersey, Wakefield Cabbage and Lettuce Plants ready to plant any time. Hardy Chrysanthemums, Dahlias, Tobacco Dust, etc. Address Originator, MARK T. THOMPSON, Rio Vista, Va.



## Buy a PLANO and get LASTING SATISFACTION

For five years past you have not seen our advertisement in this paper—we've been "crum full" of business; had no need for more. Our factories have been growing, but the satisfying quality of our machines remains the same—a quality that's hard to match at any price.

The Plano Binder holds the world's record for accurate tying; is the only harvester with a Fly Wheel, Lever Driven Binder, Friction Clutch Reel, etc.

The Jones Vertical Mower, though one of the simplest mowers made, shows many valuable features found in no other. Its Lifting Lever brings the bar straight up to pass a tree or stump.

The Plano Husker and Shredder and Corn Binder are among the latest triumphs of farm implement construction; get double profit from the corn crop.

The Plano catalogue tells more about them—it's free.



**PLANO DIVISION**  
International Harvester Co. of America, Chicago, Ills.







**CATALOGUES.**

How to Make Money with Poultry and Incubators, Complete Catalogue Cyphers Incubator Company, Buffalo, N. Y. This is one of the finest catalogues we have ever seen gotten out by any Incubator Co. It reflects the highest credit on the Co.

Peter Henderson & Co., Courtland St., N. Y. Everything for Garden. Price 20 cents. Like everything else gotten out by this Co., this catalogue is a credit to the firm. Their old standing has given them a reputation of which they are jealous.

Weber Gasoline Engines and Hoists, Kansas City, Mo. This firm has adapted the gasoline engine to all kinds of work, and makes it a success.

W. F. Allen, Salisbury, Md. Strawberry Catalogue. Mr. Allen is an old grower with an established reputation.

Jno. W. Hall, Marion Station, Md. Mr. Hall makes a speciality of strawberries and second-crop potatoes for seed. He has built up a trade in these and means to keep it if quality and price are counted.

Morrell & Morley, Benton Harbor, Mich. Eclipse Spray Pumps and Spraying Apparatus. Makers of some of the best pumps and sprayers in use.

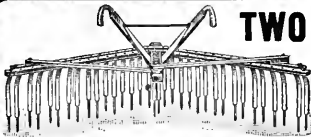
Field Force Pump Co., Elmira, N. Y. Spraying Pumps, Well Pumps, Force Pumps, Nozzles, etc. A reliable house.

Wm. Cooper & Nephew, Illinois St., Chicago. Makers of Cooper's world-known Sheep Dip.

Hammond's Slug Sho'. Benj. Hammond, Fishkill on Hudson, N. Y. Insecticides and Fungicides.

Diggs & Beadles Inc., 1711 Franklin St., Richmond, Seedsmen. A very neatly gotten-up catalogue.

Mention the Southern Planter when corresponding with advertisers.



## TWO CROP ESSENTIALS

are cultivation and keeping down weeds. More important than deep cultivation is keeping the surface stirred, breaking the crust due to rains, and allowing the light, air, moisture and warmth to penetrate quickly to the roots of the growing plant. For doing just these things the ideal implement is the

# KEYSTONE Adjustable Weeder and Shallow Cultivator.

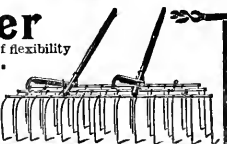
It kills the weeds at first showing, the top soil is pulverized and kept mellow, the plant roots are not disturbed and the moist soil is not brought up to dry in the sun. Adjustable in width. Narrows to 30 inches, widens to 7½ feet. Strong, runs steady, no cumbersome shafts. Furnished either with round teeth or with flat to suit different soils, as we are licensed by the Hallock Weeder Company to use their famous flat teeth. Weeder booklet mailed free. We also make 10 styles Corn Planters, 12 styles Cultivators, 20 styles Corn Shellers, hand and power, Harrows, Field Rollers, Feed Cutters, etc. Write for catalogue C.

**KEYSTONE FARM MACHINE CO., 1554 N. Beaver St., York, Pa.**

# A Perfect Weeder

in all soils, under all conditions. The all important feature of flexibility of teeth is near perfection in the **YORK IMPROVED.** Made of square spring steel with round points, and set staggered in strong but flexible angle steel frame. Wide clearance, no clogging, teeth too strong to break. Multiples producing qualities of soil and does not warp or bruise growing plant. Adjustable handles and shafts. Write for free descriptive circular.

Spangler Manufacturing Co., 501 Queen Street, York, Pa.



# SPRAYING IS EASY

and you have an outfit always ready at a moment's notice for a small or large job in the

## GARFIELD KNAPSACK SPRAYER.

Best sprayer made for nine-tenths of all work, as Cotton, Tobacco, Potatoes, Gardens, Strawberry, etc. Easily carried and worked, simple and durable. Copper tank concealed to fit back, and all brass pump. Nothing to corrode. We also make the Empire King and Orchard Mopach, mounted sprayers for large operations, and others for all purposes. Fully described in free catalog. Write for it. **FIELD FORCE PUMP CO., 223 Eleventh St., Elmira, N.Y.**



# HOLSTEINS THAT PAY.

Purchasers are offered selections from our herd, both male and female; our cows are of the leading strains, including De Kols, Pauline Pauls, Mechthildes, Hengervelds, Netherlands, Aggies, etc. They are 11 well bred and milking from 40 to 65 lbs. per day. Herd headed by Ury ALWINA Count Paul De Kol and DeKol 29 Butter Boy 3rd No. 2.

**THOS. FASSITT & SONS, Ury Stock Farm, Sylmar, Md.**

If the two young people of whom "Anvers" tells this story were not reconciled by their own absurdity, they at least furnished amusement for others.

They had been engaged, but had quarreled, and were too proud to make up. Both were anxious to have people believe that they had entirely forgotten each other.

He called at her home one day to see her father—on business, of course. She answered the door-bell.

Said he: "Ah, Miss Jepkin, I believe. Is your father in?"

"No, sir," she replied, "father is not in at present. Do you wish to see him personally?"

"I do," he answered, feeling that she was yielding, "on very particular personal business," and he turned proudly to go away.

"I beg your pardon," she cried after him, as he reached the lowest step, "but who shall I say called?"

The little daughter of the house sat down beside the minister, and began to draw on her slate. "What are you doing?" asked the clergyman. "I am making your picture," said the child. She worked away earnestly, then stopped, compared her work with the original, and shook her head. "I don't like it much," she said. "'Taint a great deal like you. I guess I'll put a tail to it, and call it a dog."

The pamphlet, "Stassfurt Industry," just published, contains an interesting description of the famous potash mines in Germany, from which all the potash imported into this country and used for manuring is derived. The chapter about the use of potash in agriculture as one of the important ingredients of a complete fertilizer, adds largely to the value of the book, and among the many fine illustrations, those showing the experiments at Southern Pines, N. C., are of particular interest to practical farmers. Copies of this pamphlet can be had free by writing to the German Kali Works 93 Nassau St., N. Y., and mentioning the *Southern Planter*.

The Morewood Poultry Farm sends us its annual catalogue. It is descriptive of their prize-winning Plymouth Rock White Wyandottes, Black Minorcas and Partridge Cochins. This catalogue is nicely gotten up and will be sent free to all applicants.

A county curate in England who was newly married called on a great lady of the village, and, as he presented his wife, introduced her with the flippant and horribly ill-bred quotation, "'A poor thing, madam, but mine own.'" The lady, looking at the curate severely, replied: "Your wife ought to have introduced you as 'A poorer thing, but mine own.'" "

"These aren't the kind of biscuits my mother used to make," he said. "Oh, George," she faltered, on the verge of tears. "Well, they're not," he repeated, emphatically. "They're enough sight better." And then the sun came out again.

## LONG'S WHITE TARTAR OAT

The Ideal Oat for the American Farmer.

Remarkably early, of robust and vigorous constitution. Immense yielder. Described and illustrated in our Catalogue of this season. 75c. per peck; \$2.00 per bush, of 32 lbs.; 10 bush, \$1.85 per bush; 55 bush, \$1.75 per bush; 100 bush, \$1.65 per bush.

Our AMERICAN FARMERS' MANUAL for 1903, a book of 44 pages (85 illustrations) devoted entirely to Grass and other Seeds for the Farm, mailed free on application to those who state where they saw this advertisement. Correspondence invited.

PETER HENDERSON & CO., —35 & 37—  
CORTLANDT ST., NEW YORK.



## — AMALGAM — STEEL BELLS

(WARRANTED)

15 in., 40 lbs. \$1.48; 17 in., 50 lbs. \$1.88; 19 in., 75 lbs., \$2.48.  
F. O. B. Shiloh, Richmond or New York.

Southern agents for "Eclipse" Orchard Spray Pumps, made by Morrill & Morley, Benton Harbor, Mich.; Cat. free. We pay freight on same. Frick Co.'s Engines, Thrashers, Saw Mills, etc., easy payments. Cat. free. Gas and Gasoline Engines, Caning Machinery, Buggies, Surreys, Wagons, etc. Original "Dandy" Belting, 7 in., 4 ply, per ft., 20c; 8 in., 2 1/2"; 10 in., 28c. Division of Saws, Nails and Holders. Orders from this point wholesale to consumers.

ECLIPSE HARDWARE and M'FG CO., Box R, Shiloh, Va.

## BLACK-LEG-INE

Pasteur Blackleg Vaccine ready for use. FAHC DOSE SEPARATE.

Single Blacklegine (for common stock): 10 dose box, \$1.50; 20 dose box, \$2.50; 50 dose box, \$6.00. Double Blacklegine (for choice stock) \$2.00 for 10 doses, first lymph and second lymph inclusive. Blacklegine Outfit for applying Blacklegine, 50 cents.

## Pasteur Vaccine Co.,

CHICAGO - NEW YORK - FT. WORTH - SAN FRANCISCO.

## RICH HARVESTS

WILL BE REAPED BY

## SPRAYING NOW.

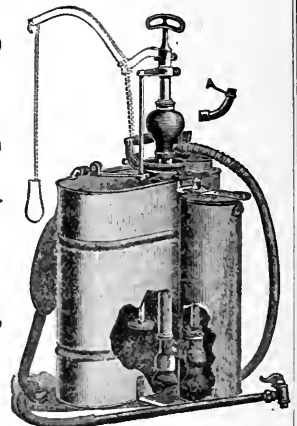
All kinds and sizes of SPRAY PUMPS.

Write for new catalogues and price-lists.  
Our pumps are used by the Virginia and North Carolina Agricultural Departments.

SYDNER PUMP AND WELL CO., Inc.,  
Box 946, RICHMOND, VIRGINIA.

GASOLINE ENGINES, WIND MILLS,  
RAMS, TANKS.

WATER SUPPLY CONTRACTORS.  
ARTESIAN WELL DRILLERS.



The Weed Kerosene Sprayer, with detachable kerosene tank, a bucket, knap sack and kerosene sprayer all in one.

# Hackney Stallion Cismont,

A. H. S. B. 399.

## IN THE STUD AT CISMONT FARM,

One and a half miles from Keswick, Va., on the C. & O. Railroad.

Telephone Connection with CHARLOTTESVILLE and RICHMOND, VA.

For approved mares, \$10.00 the season with return privilege, or \$15.00 to insure.

G. S. LINDENKOHL, Owner, Keswick, Albemarle Co., Va.

# IMPERIAL FRUIT AND POULTRY FARM

Is now booking orders for Eggs from the best strains and careful matings of

**Barred Buff and White Plymouth Rocks,  
Silver-Laced and White Wyandottes,  
S. C. B. Leghorns and Mammoth Pekin Ducks,**

**AT \$1.00 PER SITTING.**

**EGGS FROM BLACK DEVIL PIT GAMES,**

Never known to run. The grittiest of all games. **\$2 per Sitting.** We give 15 Chicken and 13 Duck Eggs for sitting.

**Offer Fifty Barrels White French or Jerusalem Artichokes at \$2.50 per 3 bus. bbl.**

The cheapest of all hog feeds. I raised 500 bushels on one acre of only fair land. Order at once. Write name and address plainly. Remember, the express is no more on 2 or 3 sittings than on one. Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded.

**P. H. HEYDENREICH, = Staunton, Va.**

HUMORS OF TRAVEL.

I love the cheerful Western liar. He has more humor in him than the Eastern liar. He is at his best when talking to the tenderfoot. John Gould and I sat together on a Minnesota train; John resembles a deacon in the church and I carry a meek and subdued countenance. The big burly man in the seat in front turning to us announced that he was from the Black Hills. We expressed our wonder. "That's a bad country out there," he went on. "You go into a butcher shop and the best cuts are eight cents; that is because the meat is all rusted." The men go out at night and shoot a steer and bring in his meat, leaving the hide where it lay. "You see the brand is on the hide and they don't dare take that. A man can swear to the hide but not to the meat."

"How are the cattle thriving out there?" I asked. "Fine. There have been no storms to amount to anything. If you want to know about bad storms in Dakota you can find all about them in the Eastern papers; you don't find them anywhere else. Yes, it is a fine cattle country, but after all it takes nearly four acres to support a steer a year." I expressed wonder and suggested that I had supposed that nearly forty acres would be required. "Yes, along the bluffs the land has all slid off into the river and left the rock bare. There it takes a good deal of country. I asked if there were many Texas cattle in his country. "No, none at all. You see the Texas cattle have the tuberculosis so bad that the Government had to shoot more than 150 at one time and since then they have not allowed them to come in. Texas cattle have tuberculosis, and in Texas it is very bad. I am breeding the black Angus Galloway Aberdeens; they are fine cattle and very hardy. The Government agents kill a good many cattle to keep from losing their jobs. You see if they did not pretend to find some sick stock there would be no use for them and they might lose their jobs. You would laugh to see how they inspect horses for the cavalry. They will throw out three or four from each bunch, but that fellow will just put them into some other man's bunch and next time they will be passed all right and some others thrown out. In that way the Government agents keep their jobs."

This is a sample of his talk. When I quietly told him that I had been a rancher myself and had traveled over every range State except Arizona, he crew in hi. horns and began to talk of mining operations, concerning which he had similar wonders to relate, such as finding wealth untold in digging a hotel cellar and blowing away all surrounding buildings with dynamite to get at the masses of ore. John Gould and I are having plenty of fun out here.

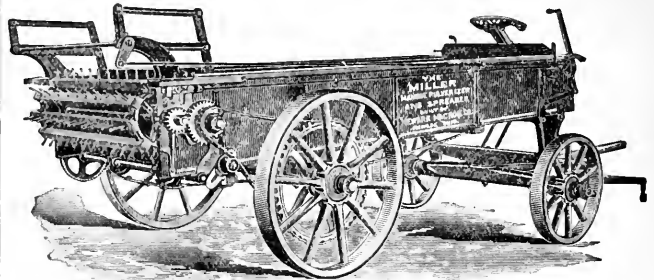
JOSEPH E. WING.

Registered P. Chines Berkshire, C. Whites. Fine large strains. All ages, mated not skinned, 8 week. plgs. Bred sows. Service boars and Poultry. Write for prices and free circular. P. F. HAMILTON, Cochranville, Chester Co., Pa.



The Miller MANURE SPREADER and PULVERIZER

Is a machine every farmer should have. It will SAVE YOU its cost in a short while. IT MAKES FRIENDS WHEREVER SOLD.

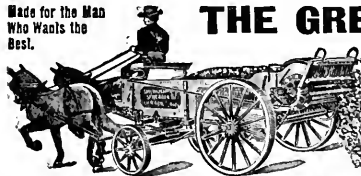


Agents wanted. Write for catalogue.

THE NEWARK MACHINE CO., - Newark, Ohio.

Mention the SOUTHERN PLANTER when you write.

Made for the Man Who Wants the Best.



THE GREAT WESTERN Manure Spreader

Is the only Spreader made that has an ENDLESS APRON and many advantages which it possesses. It's always in place and ready to receive the load without any turning back either by hand or complicated, easily broken machinery. The foot and rear axles are of same length which, with the

**Broad Tires Prevents Rutt** of field, meadows, etc. and makes wet, dry, frozen, light, chafy, packed or caked. Spreads lime, plaster, wood ashes, cotton-seed and hulls, etc. Can be changed instantly to spread thick or thin while the machine is in motion—2 to 2 1/2 loads per acre. Has the only successful **END GATE AND BEATER AND HOOD PROTECTOR IN USE.** Made of best material in every way and sold under a **POSITIVE GUARANTEE** as to quality, capacity and durability. All parts breaking within one year under a **POSITIVE GUARANTEE** will be replaced without charge. Write for free Illustrated and Descriptive Catalogue—the best and most complete spreader catalog ever published. **SMITH MANURE SPREADER CO., 59 N. JEFFERSON STREET, CHICAGO, ILL.**

ACME Pulverizing Harrow Clod Crusher and Leveler SENT ON TRIAL

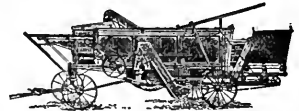
SIZES 3 to 13 1-2 Feet. Agents Wanted



To be returned at my expense if not satisfactory. The best pulverizer—cheapest Riding Harrow on earth. We also make walking Acmes. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes. Made entirely of cast steel and wrought iron—**indestructible.**

Catalog and Booklet, "An Ideal Harrow," by Henry Stewart, mailed free. I deliver free on board at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, etc. Address **DIANE H. NASH, SOLE MANUFACTURER** MILLINGTON, NEW JERSEY. **PLEASE MENTION THIS PAPER.**

RUMSEY-WILLIAMS COMPANY



GASOLINE ENGINES and GRAIN THRESHERS.

ST. JOHNSVILLE, NEW YORK.

**LET THERE BE FREE BUYING COMPETITION.**

The United States Circuit Court says that all of the big packers and the little ones too, for that matter, engaged in buying live stock at Chicago, must quit their secret methods employed to hold down prices. This is as it should be. The injunction of the Court against the so-called beef trust, if obeyed, must mean a broader market for farmers' shipments of meat animals to this great packing and distributing centre. The arraignment against the long time actions of the cattle-buyers is concise, far reaching and just.

The Court finds a clear case of combination. It finds that the defendants are engaged in an unlawful conspiracy under the Sherman act, this being manifested in various ways: That the big packers of live stock direct their buyers at the yards to refrain from bidding against each other; that they not infrequently bid higher prices for a few days in order to induce large shipments from the country, subsequently depressing the market to a point much below the normal level; that they have secret agreements about fixing the prices of meats and the quantities to be shipped, and that they use harmful methods in restricting trade, requiring their agents throughout the United States to impose uniform cartage and delivery, thus increasing to dealers and consumers the cost of meat; and, finally, that unjust agreements are made with the transportation companies for rebates and other discriminative rates.

This condition of affairs, succinctly described by the Federal Court, has long been so understood by common agreement in trade circles. But if the national law, framed to regulate trusts, means anything, it should be enforced. The great packing interests of the country have done much in the last twenty years to solve the question of economical distribution of meat animals, and are given proper credit for this. It does not follow, however, that they can be permitted to crush out all competitive bidding in what should be a free and open live stock market at Chicago, at Missouri river points, or elsewhere.

Gilhooley—O! jist bought me a bottle of hair restorer.

Mulcahey—But your hair ain't falling out.

Gilhooley—That's jist it! If O! shtart usin' it now, O! won't git bald when me hair does fall out.

Offended Mother—Now, Bobby, don't let me speak to you again!

Bobby (helplessly)—How can I prevent you, mamma?

**Ayrshires, Berkshires and Oxford-Downs.**  
Ayrshire calves of both sexes, Berkshire pigs and boar, and 2 Oxford-Down Rams For Sale.  
MELROSE CASTLE FARM,  
ENOS H. HESS, Manager, Casanova, Va.

**FOR SALE Aberdeen-Angus Cattle**

Choice breeding. Registered bulls ready for service. Address A. O. PARR, care A. C. PARR, Jeffersonson, Va.

**Split Hickory Buggy Bargains**

Sold direct to user from factory at factory prices, sent anywhere on 30 DAYS' FREE TRIAL and guaranteed for two years. Our 1903 catalogue is now ready and contains hundreds of exclusive styles of vehicles and harness of every description. It is free and you should send for it before buying a vehicle or harness. We manufacture every vehicle we offer for sale. If you get a Split Hickory you are sure of getting something that will please you and a bargain. Remember you can only buy a Split Hickory of us direct as we do not sell jobbers or dealers.

This is our  
**SPLIT HICKORY HUMMER**

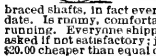
Has 30 or full rubber top, split hickory wheels, best steel axle springs, finely finished, neat, strong and substantial, the best value ever offered at the price. Sold on 30 days' free trial and if it don't prove itself a bargain and if you don't consider you have saved \$15.00 send it back.

And here is our  
**SPLIT HICKORY SPECIAL**

the buggy that won a such favor in every state in the union last year. Impossible to give description here. Has 100 points to merit. Nothing like it ever offered vehicle buyers before. We only ask a comparison with a \$85.00 buggy at retail and in your judgment, it isn't better don't keep it. Costs you nothing for the trial.

Write at once for our free catalogue of vehicles and harness; a penny spent for a postal pay save you \$25.00. Remember there is only one place to get Split Hickory Vehicles and that is at our factory. We have no agents.

ELKHART CARRIAGE MFG. CO.,



Our  
**SPLIT HICKORY WINNER**

It not only wins trade for us, but praise from every user. Has genuine leather top, spring cushion and back, boot, carpet, double braced shafts. In fact everything complete and up-to-date. Is roomy, comfortable, easy riding and light running. Everyone shipped on trial, no questions asked if not satisfactory; just send it back! It isn't \$30.00 cheaper than equal quality at retail.

This is our  
**Split Hickory "FASHION" SURREY**

Roomy, comfortable, strong and substantial. Equal to surreys that retail for \$100 to \$125. Everyone shipped on 30 days' free trial and guaranteed two years.

Write at once for our free catalogue of vehicles and harness; a penny spent for a postal pay save you \$25.00. Remember there is only one place to get Split Hickory Vehicles and that is at our factory. We have no agents.

Station 41, Cincinnati, Ohio.

**30 YEARS SELLING DIRECT**

Large Catalogue FREE Sent for it.



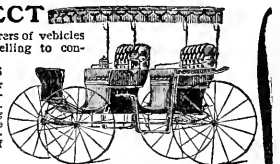
No. 64—Top Buggy, with 3 1/2 In. Kelly Rubber Tires, \$92.50. As good as sells for \$45 more.

We are the largest manufacturers of vehicles and harness in the world selling to consumers exclusively.

**WE HAVE NO AGENTS**

but ship anywhere for examination, guarantee safe delivery. You are out nothing if not satisfied. We make 150 styles of vehicles and 25 styles of harness.

Visitors are always welcome at our Factory.



No. 327—Surrey, Price \$83. As good as sells for \$30 more.

ELKHART CARRIAGE & HARNESS MFG., CO. Elkhart, Ind.

**DEAL DIRECT WITH THE FACTORY**

Don't pay retail price for carriages or harness. Write for our catalogue and learn about our system of selling direct from factory to customer. Two profits are saved to you. Satisfaction is guaranteed, or you can return the purchase and we will pay freight charges both ways. We have the largest assortment of buggies, surreys, phaetons, carriages, and other high grade vehicles, as well as harness, horse rugs and other horse accessories, in America. Write for the catalogue to-day.

THE COLUMBUS CARRIAGE & HARNESS COMPANY,  
Factory and General Office, COLUMBUS, O. } Write to  
Western Office and Distributing House, ST. LOUIS, MO. } nearest office.



245  
Styles  
Vehicles  
and  
Harness



**CUT THIS AD OUT**

and send to us and we will mail you Free our 1903 Special vehicle and harness catalogue. It has always been the most complete book printed, and for 1903 it is more complete than ever. It is the standard from which others figure—we lead, the others follow. Top Buggies \$27.50. The greatest buggy offer ever made at \$61.70 Top Buggies with guaranteed rubber tires at \$45.00. 45 styles to select from. Surreys with canopy and extension tops, \$60.70 to \$112. Phaetons, Driving Wagons, Spring Wagons, etc. 116 styles vehicles, 68 styles harness to select from.

**WE GUARANTEE** every vehicle for 2 years and guarantee safe delivery. We will ship you any vehicle without any money with order. Don't buy until you get our catalogue and see our wonderful offers.

MARVIN SMITH CO., 55-57-59 North Jefferson Street, Chicago, Illinois.

When you write to an advertiser, always say you saw the advertisement in THE SOUTHERN PLANTER.

### THE SAN JOSE SCALE PROPOSITION.

By R. S. EMORY, KENT COUNTY, Md.

You could not begin the new year with a proposition that is of greater interest to fruit-growers than the eradication of the San Jose scale. It is of interest to every horticulturist in this country, and most people who expect to grow fruit in the the future must consider the scale in a very careful way in planning their orchards. The insect is now becoming so generally disseminated, one can scarcely find an orchard of any very great extent that is exempt from it. I know of several peach orchards, now dead as the result of attacks of this pest, as a result of carelessness or indifference on the part of the owner, who did not consider the matter in a serious light. When these trees should have been in their prime and yielding good returns, it was necessary to dig them up and burn them. We have to grow the trees before we can get the fruit, and in many cases the pests get beyond our control unless we keep a close watch on the creatures all the time.

I know of one peach orchard five years old from which about 5,000 baskets of fine fruit were picked and sold in 1901, while not a peach was gathered last year. The scale was so bad the trees were torn out and destroyed. Another orchard six years old had over 2,000 baskets picked from it last year and is now nearly dead, and will have to be taken up in the spring. These are illustrations of what this pest can do in a short time, if it is not taken in hand. In my own case, I am satisfied that we shall be obliged to practice different methods of fruit-growing, if we retain control of our orchards. Hereafter I shall practice more intensive culture, plant my trees nearer together head them near the ground and give more careful attention to larger area containing a larger number of trees than for merely.

As a pioneer in the use of the whale-oil soap method, I still believe that this material can be used to good advantage in most cases. But in all my practical experience nothing has been so effective as the gas treatment. In peach orchards I shall hereafter depend on the use of hydrocyanic acid gas until the trees are five or six years old, or even longer, if I can handle the apparatus conveniently. My plan would be to fumigate the young trees the second, fourth and sixth year after they were planted, thus making three fumigations. When properly handled, nothing has been so satisfactory as the gas treatment on my place.

I am now constructing a series of small box tents, which were designed by Prof

### OUR FIVE TOOTH CULTIVATORS ARE UNEQUALED

All steel. Single and double levers. Furnished with front and rear wheels, seven tooth extensions, spring teeth attachments, Cultivator sweeps, reversible and adjustable Horse Hoe Caters Hillers. Best in the world. All kinds of other agricultural implements. We can save you money. Write us for catalogue and prices.

THE TOLEDO FLOW CO., Divis. S., Toledo, O.

# Your money back

if you are not satisfied

DO YOU SUPPOSE that a company with a capital of \$500,000.00, paid in full, and the proud reputation of 36 years of continuous success, would make such an offer and not carry it out to the letter?

DO YOU SUPPOSE we would jeopardize our standing with the public and our chances of still greater success by failing to fulfill any promise we make?

DO YOU SUPPOSE we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods?

WE KNOW we can please you and save you money, for HAYNER WHISKEY goes direct from our distillery to you, with all its original richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE and saving you the big profits of the dealers. That's why it's best for medicinal purposes. That's why it's preferred for other uses. That's why we are regularly supplying over a quarter of a million satisfied customers. That's why YOU should try it.

## Direct from our distillery to YOU

Saves Dealers' Profits! Prevents Adulteration!

# HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

## 4 FULL \$3.20 EXPRESS QUARTS 3 PREPAID

We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? We ship in a plain sealed case; no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo., must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

### THE HAYNER DISTILLING COMPANY

ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.  
156 DISTILLERY, TROY, O. ESTABLISHED 1856.



CHARTERED 1870.

# Merchants National Bank

OF RICHMOND, VA.

Designated Depository of the United States, City of Richmond and Commonwealth of Virginia. Capital Stock, \$200,000.00  
Being the Largest Depository for Banks between Baltimore and New Orleans, this Bank offers superior facilities for Surplus and Profits, \$600,000.00  
direct and quick collections.

JNO. P. BRANCH,

President.

JNO. C. BRANCH,

Vice-President.

JOHN F. GLENN,

Cashier.

DIRECTORS—John P. Branch, B. B. Munford, Chas. S. Stringfellow, Thos. B. Scott, B. W. Branch, Fred. W. Scott, Jas. H. Dooley, Jno. K. Branch, A. S. Buford, R. C. Morton, Andrew Pixinn, Jr., J. P. George, Alex. Hamilton, Sam'l. T. Morgan.



Johnson, in his book on "Fumigation Methods," as the "Emory Fumigator." With a sufficient number of these small box fumigators, I have proved, by actual experience that I can keep the pest in check and secure crops of fruit at a smaller expense than when I resort to spraying. When the trees get beyond the height where I can fumigate them readily I will resort to spraying.

#### THE OLD-TIME PEDLER.

"Don't the peddlers come through any more, daughter?" I've been here for a whole summer and fall, and not one have I seen. When your father and I lived on the farm, they used to drive up twice or three times a week when the weather was good."

The question was asked by an aged woman whose home is now in a neighboring city, but whose summers are spent with her daughter and son-in-law on the old homestead, whose red brick and cobble-stone front stands hospitably smiling upon the level stretches of the great ridge road just as it has stood and smiled forty-eight years. The reply to the old woman's query was that of late years the peddlers had begun to drop off with their visits, until at last they came so seldom that the little children did not know what the red wagons signified.

The vehicles were built all along the same general line, like barges or steam tugs. The length was about ten feet, the height eight. The box was oblong, and in front an elevation arose over the forewheels for the seat, which sometimes was protected by a huge sun umbrella. Sometimes two, but generally one horse hauled the outfit, and a weary time he had of it, too, with his oat bag slung under his poor old neck and his hide worn bare from the constant shifting of the thills. The red body of the wagon on both sides was planted with scores of little white knobs. This opened up the treasure house within, and each marked the location of a tiny door. Within, the wagons were compact and complete "general stores." One could buy anything under the sun small enough to be carried—cloth, tinware, iron utensils, straw and felt hats for men and women, boots and shoes, ready made suits—but these came later—canned goods, patent medicines, dried fish, tobacco—generally on the sly—needles, pins, threads, yarn, matches, and stuck up in front or looped underneath, brooms of all sizes and qualities. Often a snow-shovel and a trio of scoops and spades were laid carefully on the roof. Up in front, under the driver's seat, was a jug of molasses and prepared honey, or some delicacy for the kitchen or table.

#### THE REPUTATION OF OUR . . . . . ROLLERS IS WORLD WIDE.

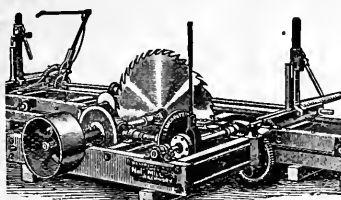


Strongest, most durable and easiest running rollers made. Self-rolling hubs. Revolving shafts. Wood, iron and steel rollers. Steel and wood frames. Cheapest and best rollers made. We make over 40 different styles and kinds of rollers and can suit you no matter what kind of roller you may want. All kinds of other agricultural implements. Write for catalogue and prices.

THE TOLEDO PLOW CO., Divs. S, Toledo, O.

## The DeLOACH SAW MILLS ARE SURE WINNERS.

Eight sizes, from Farmers' 4 h p up to 200-h. p. If interested, write for large illustrated catalog of DeLoach Patent Saw Mills to suit any power from 4 to 200-h. p.; Shingle Mills, Planers, Edgers, Trimmers, Stave and Lath Mills, Boilers, Corn and Flour Mills, Water Wheels, etc. To introduce our New Farmers' Saw Mill, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



We will deliver on cars at factory our No. 0 Pony Farmers' Saw Mill, with Duplex Dogs, Improved Head Blocks and Hatchet Set Works, complete as shown in cut, except it has Carriage made in two 4-foot sections, with Rope Drive instead of Rack and Pinion, without Saw or Belt, for \$15.00 Spot Cash. With 36" Solid Saw, \$127.50; 40", \$132.50; 44", \$140.00; 48", \$150.00. With 36" Inserted Saw, \$147.50; 40", \$152.50; 44", \$160.00; 48", \$170.00.

Best Rubber Belting, 4-ply, 6", 20 cents per foot; 8", 30 cents per foot, net. No discount from these prices.

**Our Warranty:** This mill is warranted to be made in a workman-like manner of first class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. Any one with ordinary intelligence can set and operate without the assistance of an experienced sawyer; will easily cut 2,000 to 2,500 feet of first class board lumber per day with only 4-h. p.; 3,000 ft. with 6-h. p.; 4,000 ft. with 8-h. p.; is adapted to any kind or size power up to 15-h. p.

DeLOACH MILL MANUFACTURING CO., Box 600, ATLANTA, GEORGIA, U. S. A.

The DeLoach is the only mill made that is shipped to all parts of the world. Over 10,000 in use.

CAPITAL \$50,000

## BANK OF MANCHESTER MANCHESTER, VA.

A. D. SHOTWELL, Pres., CLARENCE VADEN, Vice-Pres., S. R. BRAME, Cashier.

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CLARENCE VADEN, W. J. CARTER, KENNETH SMITH, R. A. BOWEN.

A general banking business transacted. Every facility extended consistent with sound banking interest paid on time deposits. We solicit your business.

ASSETS, \$900,000.

## Virginia Fire and Marine Insurance Company, of Richmond, Va. Insures Against Fire and Lightning.

ALL DESCRIPTIONS OF PROPERTY IN COUNTRY AND TOWN, PRIVATE OR PUBLIC, INSURED AT FAIR RATES, ON ACCOMMODATING TERMS.

AGENCIES IN EVERY TOWN AND COUNTY.

WM. H. PALMER, PRESIDENT.

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\* VIRGINIA DIVISION. \*

## Farmers Mutual Benefit Association.

A Fire Insurance Association, chartered by the State for the farmers of Virginia, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address,  
MENTION THIS JOURNAL.

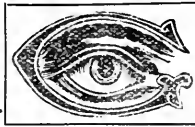
CHAS. N. FRIEND, General Agent,  
CHESTER, VIRGINIA.

When corresponding with advertisers, say you saw their advertisement in the Southern Planter.

The jewelry which the pedler carried he kept close o his person with great show of caution, and the more brassy it was the more closely he pretended to guard it.

Does any one who reads through this list of invaluable appurtenances to the happy home wonder that the pedler's advent was welcomed by all departments of the house fifteen or twenty miles from the nearest store, and perhaps fifty or one hundred from the nearest city? When the cloud of dust would arise over the brow of the hill on a June afternoon, up would go the cry, "Jim the pedler's coming, Ma, Run and get Henry, and tell him to have the rags ready."

Then, when the pedler had arrived, would begin a game of win and lose such as has been played since the days of the flood wherever one man had what another man had not, but thought he needed. Little money changed hands in this trade. It was barter, primeval, barbaric barter, except that the things traded for bore the mark of the machine instead of the flint. The medium of exchange was generally rags, "paper rags," as they were known. This included rubber boots, copper and brass junk and lead pipe. In those days paper was made from rags, and the wood-pulp process was still dim in the future. Good rags, no matter of what wool or consistency, had a distinct market value, and the pedlers, recognizing this, depended on the farmers' wives to hoard the supply. In exchange, he gave them the commodities mentioned, making, of course, a comfortable profit



## How are Your Eyes?

We are the largest optical establishment South, and give proper adjustment of SPECTACLES and EYE GLASSES. Complete manufacturing plant on the premises. Mail us the pieces and we will from them duplicate your Glasses. Glasses by mail our specialty.

### Our PHOTO DEPARTMENT

is also complete with CAMERAS, KODAKS and PHOTO SUPPLIES. Developing and printing finely executed.

Our line of GRAPHOPHONES, with latest records. OPERA GLASSES, FIELD GLASSES, Incubator and Dairy THERMOMETERS, etc., etc., is also complete. Lowest charges in all cases.

THE S. GALESKI OPTICAL CO., 9th and Main Sts., Richmond, Va.

## RURAL BOOKS OF EVERY DESCRIPTION

AT LOWEST PRICES.

SOUTHERN PLANTER, - Richmond, Virginia.

# CASTALIA REGIS. HEREFORD CATTLE

HERD OF . . .

## CHIEF STOCK SIRES:

**Imported SALISBURY 76059** (19083) bred by John Price, Court House, Pembridge, Herefordshire, England. Sired by Boniface (9600, the sire of the First Prize winner at both the Smithfield and Birmingham Fat Stock Shows (England) in 1897. The sire of Boniface is The Grove 3d 2190. Snowfall (v. 24, p. 555) the dam of Salisbury is in the herd of His Majesty King Edward VII. The sire of Snowball is the great breeding bull Pioneer (14025) by Monarch 20001, the winner of the First Prize at the Royal Show at York, in 1883. Monarch is by Lord Wilton 4057 and is generally considered one of the best of Lord Wilton's sons.

AND

**LARS Jr. 85297**, bred by Thomas Clark, Beecher, Ill. Sired by Lars (50734), a winner at the World's Fair at Chicago, First and Champion Prize winner as a Two, Three and Four-year-old at all principal Fairs; also headed the herd winning Grand Sweepstakes at the great Live Stock Show of America; at Madison Square Garden, N-w York, 1893. The dam of Lars Jr. is Judy 55711, one of the best breeding cows in the Castalia Herd, by Peerless Wilton 12774, the well known sire of prize winners; and the dam of Judy is Jessie 3d, by Sir Richard 2d, the English prize winner and producer of show animals.

**FOR SALE** A very choice lot of BULL CALVES and YEARLING BULLS by above sires; also a few COWS IN CALF, or with calf at foot.

All of the cows at Castalia are well bred, being by such good sires as Wild Tom, Earl of Shadeland 22d, Beau Real, etc. Visitors met at station when notice is given in advance. The prices are right; it will pay intending buyers to see these cattle.

**MURRAY BOGCOCK, Owner, Castalia, Keswick, Albemarle County, Va.**

out of the transaction. Good rags brought, twenty years ago, from a cent and a half to two cents and a half a pound. The pedler was fair; that is, if he was not exactly fair, he was as fair as he could be, and both sides parted satisfied, the housewife with her new granite iron tea-kettle and he with his huge ragbag bulging out a little further than it did two miles down the road. The ragbag was an index of the state of trade. When the wagon started out it hung limply behind, like a punctured balloon. It was a huge affair, made of coarse burlap, blackened and stained by time and use. Sometimes huge squares of new burlap stood out in startling contrast against the old face of the bag, in spots where holes had been patched with coarse twine. Into this grimy receptacle the matted rags were hurled with a short, stout, iron hook like an elephant goad.

The capacity of these great bags was amazing, and on homeward trips they would protrude with mastodontic fatness from the rear of the red wagons as far as the length of the vehicle itself, and the poor horse would tug and sweat at his increasing burden as the camels did under the soaked sponges in the fable. The rags were weighed on drop scales attached to the rear of the wagon, and of course the honesty of the spring within the brass and iron case had an important effect upon the fairness of the barter. At times doubts would surge up in the shrewd housewife's mind, especially when the pedler's scales indicated a weight three or four pounds lighter than her own had

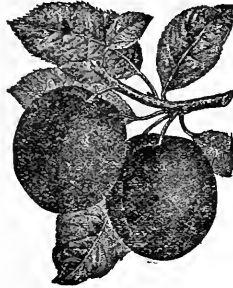
—FOR SALE.—  
**BEAGLES and ENGLISH HARRIERS**  
Well broken to hunt. Also Barred Plymouth Eggs, \$1 per sitting. Apply to  
**R. E. CREE, - CROZET, VA.**

... FOR SALE ...  
**8 PUREBRED SHORTHORN BULL CALVES,**  
Dropped last spring; will weigh about 500 lbs. In nice order. For further information address,  
**WOODS & FISHBURNE, Executors of Warner Woods' Estate, Charlottesville, Va.**



**PATENT YOUR IDEAS**  
\$100,000 offered for one invention; \$5,500 for another. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.  
**CHANDLEE & CHANDLEE, Patent Attorneys**  
972, F Street, Washington, D. C.

Mention the *Southern Planter* in writing



## Japan Plums

And all other desirable standard and new varieties of PLUMS, APPLE, PEACH, PEAR and ORNAMENTAL TREES, SHRUBS, ROSES, Etc.

**HEADQUARTERS FOR TENNESSEE PROLIFIC STRAWBERRY.**

The Most Reliable Variety Ever grown in the South.

Three hundred and fifty acres under cultivation. Write us if you contemplate planting. Catalogue free. AGENTS WANTED. WRITE FOR TERMS.

**W. T. HOOD & CO.,**

OLD DOMINION NURSERY.

RICHMOND, VA.

# GREAT COMBINATION SALE

SHORTHORN CATTLE and BERKSHIRE HOGS,

On the Fairground at Hagerstown, Md., March 12, 1903.

**50 REGISTERED SHORTHORNS,**

Including Cows, Heifers and young Bulls; 15 high grade Shorthorns by registered sires, including Cows, Heifers and young bulls.

**30 REG. BERKSHIRE HOGS,**

Including Sows, younger Sows not bred down to pigs and young boars. Also one imported

**CLEVELAND BAY STALLION.**

**TERMS.**—6 months credit on sums exceeding \$25 by giving approved notes. For catalogue giving description and pedigree of each animal, write to manager of sale.

H. L. STRITE, Leitersburg, Md.

**ON MARCH 11th, F. W. Mish** will have a large sale of REGISTERED STOCK near Hagerstown, consisting of Percheron horses, Aberdeen-Angus and Dutch Belted Cattle, Poland-China and Berkshire Hogs, Oxford and Shropshire Sheep. For sale list write to

F. W. MISH, Hagerstown, Md.

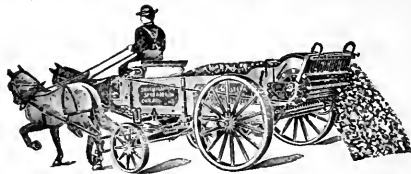
registered. But the sight of a polished gray granite iron surface peering craftily out from the shelf behind the half-opened door of the wagon would prove too strong, and her lips would remain silent when her heart was filled with distrust. Rags were not destroyed in those days, but were hoarded up in flour sacks in the cellar from fall until summer, for they were legal tender bank notes of the pedler's realm. But those primitive times have passed to return no more. The suburban trolley car has done its clearing work, and the wood-pulp process has completed the change. The red wagons stand falling to pieces in forgotten sheds, and the bags have rotted away. The pedler's reign is over.—*N. Y. Tribune.*

HER PART IN THE PLAY.

"I was coming along New Jersey Avenue the other day," said Senator Dubois, quoted by the New York "World," "and I saw two little boys playing horse, as I thought. One boy was in a small cart, and the other boy was drawing him. Trailing along behind the cart came a most disconsolate-looking little girl, a sister of one of the little boys." I stopped the boy, whom I knew, and said to one of them, "Tommy, what are you playing?" "We're playing automobile" replied Tommy. "I asked, 'why don't you let sister play, too?'" "She is playing," said Tommy. "She's the gasoline smell."

THE GREAT WESTERN MANURE SPREADER.

The Marvin Smith Co. of Chicago has been advertising this well known machine in our last few issues. They have just gotten out a nice catalogue giving full particulars, and we hope many of our readers will apply for it. It will be sent free.



We are showing herewith a small cut of this Spreader that our readers may have some idea as to its construction. It has a great many improvements this season, in addition to other special features. Its Endless Apron enables it to be always ready to take on a load. The combined Hood and End Gate serves the dual

purpose of keeping manure from the Beater during the process of loading or in starting. It acts as a hood and shield while spreading. You had better send to-day and get a catalogue.

# Rural Books!

Every farmer should have these books on his library table.

They are invaluable.

- Feeds and Feeding.** Henry, . . . \$2 00
  - Fertility of the Land.** Roberts, . . . 1 25
  - Crop Growing and Crop Feeding.** Massey, 1 00
- All Cloth Bound, Post Paid.**

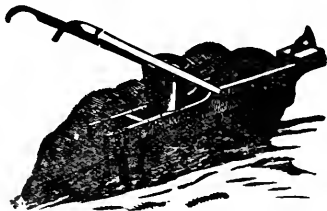
Let us order your magazines and other literature for you. We can furnish almost any periodical and save you money. Get our prices.

THE SOUTHERN PLANTER, Richmond, Va.

# PLANTERS

CARDWELL'S, EUREKA and CENTENNIAL FERTILIZER ATTACHMENT are the best, therefore they are the cheapest.

They Plant..  
**CORN,  
BEANS,  
ENSILAGE  
CROPS.**



And Distribute  
**FERTILIZER**  
any distance apart,  
and any quantity.

We make **THRESHERS, HORSE POWERS, PEANUT MACHINERY, STRAW CUTTERS WELL FIXURES,** and all Implements formerly made by **H. M. SMITH & CO. and J. W. CARDWELL & CO.**

**THE CARDWELL MACHINE CO., = Richmond, Va.**

# Farm Implements and Machinery.

## CASH PRICES FOR MARCH, 1903.

ADDRESS **ASHTON STARKE,**  
**RICHMOND, VIRGINIA.**

### DISC HARROWS (complete with Whiffletrees).

8 disc—16 inch .....	16 50
10 disc—16 inch .....	17 75
12 disc—16 inch .....	19 50

### All Steel Lever Spike Tooth:

2 section, 50 teeth .....	10 00
2 section, 60 teeth .....	11 00
Spring-Tooth Harrow, 18 teeth .....	12 50

### PLOWS.

1 horse Syracuse Chilled .....	3 50
Light 2 horse Syracuse Chilled .....	6 50
Regular 2 horse Syracuse Chilled .....	6 75
No. 11 Imperial Chilled, R. H. ....	7 50
No. 10 Oliver Chilled, L. H. ....	5 25
No. 13 Oliver Chilled, R. & L. ....	5 50
No. 10 South Bend, R. H. ....	5 25
No. 15 South Bend, R. & L. ....	5 75
No. 7 Farmer's Friend .....	2 75
No. 8 Farmer's Friend .....	2 85

### CORN SHELLERS.

Shenandoah Valley .....	5 50
"Favorite," Giant, Milwaukee, Right Hand..	4 75
"Star," Right Hand .....	5 00
Left Hand Shellers .....	4 50

### GENUINE MALTA SHOVEL PLOWS.

Double Shovel Plow .....	2 25
"    "    No. 2 .....	2 00
"    "    No. 3 .....	1 75
Single Shovel Plow, Genuine .....	1 70

### FIELD ROLLERS.

All Steel, 30 inches diameter, 3 sections, 6 ft... 25 00

### CULTIVATORS.

5 tooth Steel Frame .....	1 75
Cultivator and Harrow, 14 teeth .....	2 50
Disc Cultivator on wheels, pivot frame .....	28 00
Walking Wheel Cultivator .....	15 00
Combined Riding and Walking Cultivator .....	24 50

### FEED CUTTERS.

Smith's Lever Cutters .....	2 75
1 blade Revolving Cutter .....	9 00
Hand and Power Cutter, with pulley .....	15 00
Bark Mill, for horse sweep .....	25 00

### CORN PLANTERS.

Single row, with fertilizer .....	18 00
Single row, without fertilizer .....	10 50
Double row, with fertilizer .....	38 50
Double row, without fertilizer .....	28 00

### WEEDER.

Keystone Expanding .....	8 00
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### WHEAT DRILLS.

Bickford & Huffmann Disc Drill, with Fertilizer and Grass Seeder .....	66 50
Hand Corn Planters .....	75
And so we might continue through our almost limitless stock.	

Whenever or whatever you need in our line, write to

**ASHTON STARKE, - Richmond, Va.**

# Our Clubbing List.

The following list of papers and periodicals are the most popular ones in this section. We can SAVE YOU MONEY on whatever journal you wish.

DAILIES.	PRICE	WITH
	ALONE.	PLANTER.
Times-Dispatch, Richmond, Va.....	\$ 5 00	\$ 5 00
The Post, Washington, D. C.....	6 00	6 00
The Sun, Baltimore, Md.....	00	40
News-Leader, Richmond, Va.....	3 00	3 00

TRI-WEEKLY.		
The World (thrice-a-week), N. Y.....	1 00	1 25

WEEKLIES.		
Harper's Weekly.....	4 00	4 00
" Bazaar.....	1 00	1 40
Montgomery Advertiser.....	1 00	1 00
Nashville American.....	50	75
The Baltimore Sun.....	1 00	1 35
Breeder's Gazette.....	2 00	1 75
Hoard's Dairyman.....	1 00	1 35
Country Gentleman.....	1 50	1 75
Times-Dispatch, Richmond, Va.....	1 00	1 25
Religions Herald, Richmond, Va.....	2 00	2 25
Central Presbyterian, " ".....	2 00	2 50
Christian Advocate, " ".....	1 50	1 75
Turf, Field and Farm.....	4 00	4 00
Spirit of the Times.....	4 00	4 00
Horseman.....	3 00	3 00

SEMI-MONTHLIES.		
Wool Markets and Sheep.....	50	75
Dairy and Creamery.....	58	75
Commercial Poultry.....	50	75
All three.....	1 50	1 15

MONTHLIES.		
North American Review.....	5 00	5 00
The Century Magazine.....	4 00	4 25
St. Nicholas ".....	3 00	3 25
Lippincott's ".....	2 50	2 50
Harper's ".....	4 00	4 00
Forum ".....	3 00	3 25
Scribner's ".....	3 00	3 25
Frank Leslie's ".....	1 00	1 35
Cosmopolitan ".....	1 00	1 35
Everybody's ".....	1 00	1 35
Munsey ".....	1 00	1 35
Strand ".....	1 25	1 65
McClure's ".....	1 00	1 35
Argosy ".....	1 00	1 35
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- MAMMOTH CLOVE
- CRIMSON CLOVE
- WHITE CLOVE
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- BOKHARA CLOVE
- JAPAN CLOVE
- RUR CLOVE



- TIMOTHY ORCHARD GRASS.
- RED TOP or HEADS GRASS.
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- TALL MEADOW OAT GRASS.
- JOHNSON GRASS.
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- OATS and CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are RAGLAND'S PEDIGREE TOBACCO SEEDS.

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## Is the BEST WAREHOUSE

in Richmond, the BEST MARKET for all grades of Tobacco. It is the home of sun and air cured Tobacco and headquarters for flue-cured and shipping types. Here are located the head offices and stemmeries of all the large corporations, Regie representatives and the largest number of independent factories and buyers in the United States.

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Has just received  
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**STOVES, RANGES, FURNACES,  
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SHOULD HAVE AS MANY COMFORTS AND CONVENIENCES AS THE GENTLEMAN IN THE CITY.

With a **WIND MILL** or **CASOLINE ENGINE** farm work can be made easy and at a small cost.

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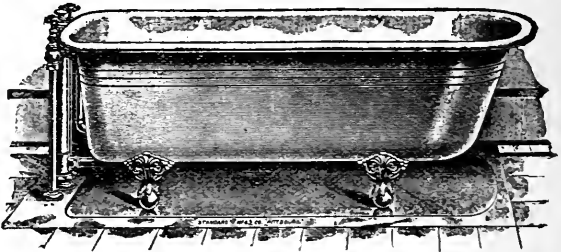
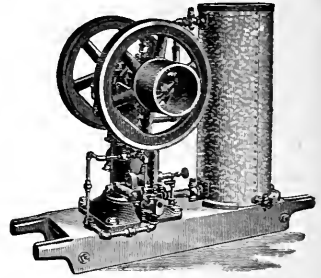
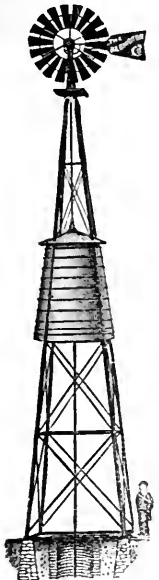
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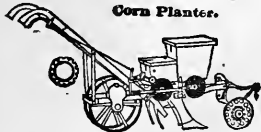
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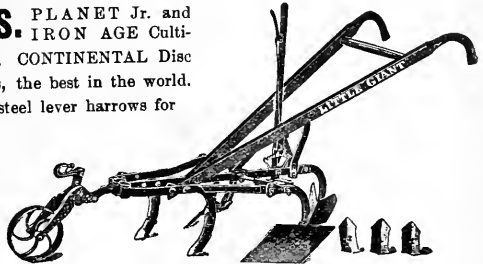


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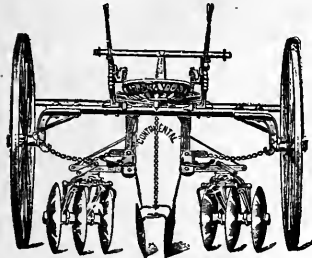
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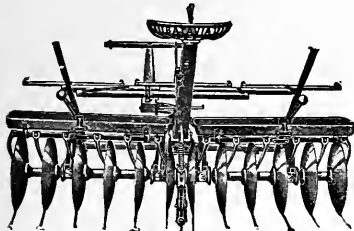


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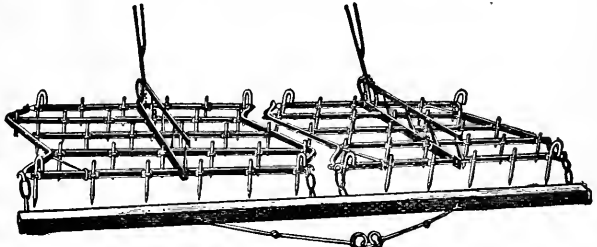
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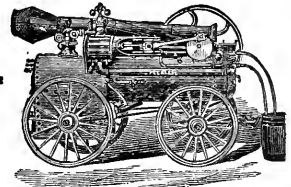


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**THE WATT PLOW CO., 1452 E. FRANKLIN and Richmond, Va.  
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## JUST FOR FUN.

Auntie (finding Jackie sobbing in a corner): "Why, Jackie, what has happened to make you feel so badly this morning?"

Jackie: M—ma m—issed some jelly.

Auntie: Ho, ho! I see. And her suspicion fell upon you, eh?

Jackie: No, auntie; it was her slipper.

New Boarder (at winter resort).—Do you call this bleak, forsaken place crowded? I thought that you advertised that there was a perfect host here every winter?

Landlord (blandly).—Yes, indeed; I am the perfect host, and my wife is a perfect hostess.

## A TOAST.

A Toast to those who come to grace,  
This day our board,  
And, with the cheer of smiling face,  
to share our board!

They are our friends, and friends are sent—

O plan benign!—

To be the home's best ornament,  
Heav'n spare me mine!

And may our larder e'er contain  
Of meat and drink

Enough to forge for friendship's chain.

Another link! —*Columbus Dispatch.*

A Neat BINDER for your back numbers can be had for 25 cents. Address the Business Office.

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**For COTTON** When used on land with a fair amount of vegetation or with COMPOST (which is better) the crops are as good as from any Fertilizer. It prevents RUST and SHEDDING and keeps the plants green much longer in dry weather.

**PEANUTS** With the same conditions as above, it is a COMPLETE FERTILIZER for this CROP. Our customers say it is equal to the BEST FERTILIZERS ON THE MARKET.

**DARK HEAVY TOBACCO** Haul out your farm pen scrapings, plow under and broadcast 500 to 600 lbs. per acre (the earlier the better), and you will get a heavy crop of Tobacco and a fine crop of Wheat and Clover or other grass, and by proper rotation will have a rich lot for any crop.

**BRIGHT TOBACCO** Our customers say that 200 lbs. per acre in the drill with other Fertilizer will prevent the Tobacco from FIRING and giving it a GOOD BODY and increase its value \$20 per acre. For Wheat, Oats, Clover and other grass it is exceptionally good.

It prevents RUST, SCAB and SMUT in WHEAT and all say it is the best thing for clover they ever used. Fruit Growers will find a WONDERFUL IMPROVEMENT by its use on their Orchards and Vineyards.

**Our EXCELSIOR TOBACCO FERTILIZER**

Has been tested for six years and has proved equal to and in some cases superior to the high-grade ammoniated goods on the market. We put in no useless filler and the farmer gets the 2000 lbs. to the ton of valuable fertilizer for the crops and THE LAND. Hence they say their succeeding crops are much better than from other fertilizers

**Our SPECIAL CORN FERTILIZER** For land where there is not an abundance of vegetation is equal to any.

General agents for **BLACK DEATH BUG KILLER** for destroying Potato Bugs, Tobacco Worms, and all insects injurious to vegetation; and Sifters and Insecticide distributors for applying it.

**PLAIN SHELL LIME**

Constantly on hand at lowest prices.

**No. 1 WOOD-BURNT LIME**

In car lots at lowest market price from kilns.

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## MACHINERY, FARM IMPLEMENTS, VEHICLES

### and HARNESS.

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**TO OUR FRIENDS AND PATRONS:—**

We have just contracted for a large supply, during the entire season, of a standard fertilizer, adapted to all the crops raised in Virginia, and we are prepared to supply our customers direct from our warehouse, corner Fifteenth and Franklin Sts., at the lowest possible prices and upon favorable terms. We call special attention to the "OWL" Brand Guano, prepared especially for Trucks, Tobacco, Corn, Etc.



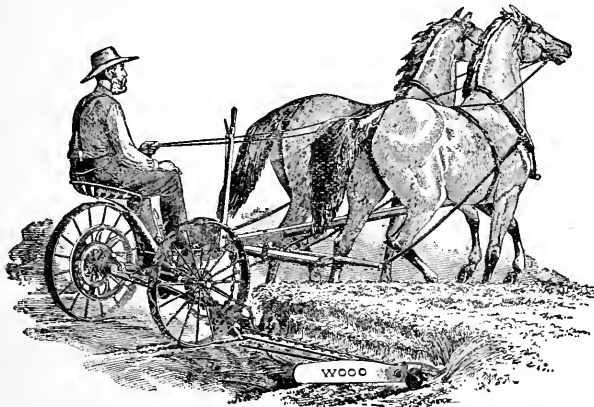
Correspondence solicited, and we will cheerfully quote prices and furnish analyses upon application.

THE WATT PLOW CO., Richmond, Va.

## THE TRAP HAS BEEN SET, BUT THE FARMERS "ARE ON TO IT."

### IN 1903

## THEY ARE GOING TO BUY THE WALTER A. WOOD MACHINES.

**WHY?**

Because it is the Best Machine Made.

Because it Belongs to no Combination.

Because its Repairs Cost Less.

The Wood Binders, Reapers, Steel Hay Rakes, Tedders, Corn Harvesters, Knife Grinders the world knows and the world endorses.

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## WALTER A. WOOD MOWING and REAPING MACHINE CO., Richmond, Va.

## NO TROUBLE TO HELP SEARCH.

A woman stopped at a cloth-counter in one of the large department-stores recently, and asked to be shown some dress-patterns suitable for early autumn wear. The salesman began on the lowest row of shelved compartments, and pulled out and opened box after box until the counter on either side of him was piled as high as his head with goods. Three times he climbed a ladder to the upper rows and staggered down under a weight of boxes of patterns until, when the woman took a survey of the shelves, but two patterns remained unopened. Then she said, very sweetly, "I don't think I'll buy any today. I'm sorry to have troubled you, but you see I only came in to look for a friend."

"No trouble whatever, madam," he replied, politely. "Indeed, if you think your friend is in either of the remaining two boxes, I don't mind opening them too."—*Philadelphia Times.*

## WHAT HE WAS DOING.

Mother—"You naughty boy! You've been fighting."

Little son—"No, mother."

Mother—"How did your clothes get torn and your face get scratched?"

Little son—"I was trying to keep a naughty boy from hurting a good little boy."

Mother—"That was noble. Who was the good little boy?"

Little son—"Me."—*Pittsburg Bulletin.*

# The Chesapeake & Ohio Railway

EXTENDING FROM CINCINNATI AND LOUISVILLE, AND  
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THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

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FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest ROUTE.

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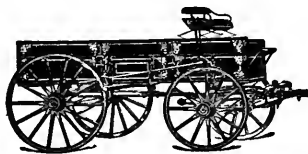
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J. T. DUNN, Manager.

# If You Want YOUR GOOSE TO LAY "THAT GOLDEN EGG"

## FEED HER PROPERLY.

I mean buy your supplies right. You should lay aside a few Gold Pieces yourself, you might ask how it can be done—easy, dead easy—stop paying high, country prices. The mail comes to your home six times a week, I can get a letter from you every day.

## GET MY PRICES, I WILL BE GLAD TO MAIL YOU OR YOUR FRIENDS MY PRICES EVERY NIGHT.

The railroads almost pass your house. Uncle Sam spends millions yearly to give you mail and railroad accomodations. You need not come to town, let Uncle Sam do your shopping. He can knock the spots out of you in buying—just try him. No matter how small your order I will be glad to have it and ship promptly. Here is what your groceries will cost you

### JUST ONE-HALF WHAT YOU ARE NOW PAYING.

Arbuckle's Green Coffee .....	9½	Cotton-Seed Meal, Nothing Finer.		Gibson's Fine Old Rye Whiskey; fit for a king, get a quart.....	75
Granulated Sugar.....	4½	510 Tons Cotton-Seed Hulls—an excellent Winter Seed, Cheap and Nutritious, per hundred.....	50	O'Grady's Pure Malt. Try a bottle of Malt for that hacking cough. It is a sure cure. It is good for dyspepsia. Indigestion it cures at sight. Warms the inner man; makes new rich blood, and stimulates the whole system. It has saved many and many a man and his family. 75 a quart. The price is insignificant compared to the benefit it will do you.	
Best Family Flour.....	4 25	This is as good as Coarse Meal for stock.		Country Cured Bacon Sides.....	19½
Byrd Island—have no other.	9	60,000 lbs. Rock Salt for Stock—try a bag, keep it in the Trough, improves Stock very much, \$1.00 for 100 lbs.		100,000 bushels finest Oats.....	40
10,000 lbs. Nice Family Pork.....	25	Chalmer's Gelatine. 3 for.....	25	60,000 bushels fine Corn.....	56
7 Boxes Axle Grease.....	12	Seedless Raisins in Packages.....	9	Water-ground Corn Meal, made of the finest White Corn, and ground by one of the finest mills in Virginia. Bushel.....	72
800 Bbls. White Oil.....	12	Cleaned Currants, per lb.....	8	I have everything that is required by a farmer from a 1,000 acre farm to a mouse trap. Write for my price list that will give you more information than a gossiping woman.	
1,000 Bushels Seed Rye.....	68	New Citron for Fruit Cake.....	12	Clover Seed, prime Crimson Clover Seed.....	2 90
500 Tons Fine Timothy Hay, hundred	75	Home Made Mince Meat.....	8	Choice Crimson New-Crop Clover Seed.....	4 25
300 Tons Choice Clover Hay, hundred	70	100,000 lbs. New Mixed Nuts.....	11	Fine Winter Turf Oats (seed).....	75
10 Large Cakes Fancy Soap.....	25	Virginia Hams. Choicest of Meat. I have a Nice Lot of Hams Made in Smithfield, Va.....	14	Prime Winter Seed Oats.....	60
Crystal Washing Soda, Light, Smooth, and Durable, makes Washing Easy.....	30	Fine Sweet Cider, per gallon.....	20		
Washing Powders, 8 for.....	25	Home-Made Black Berry Brandy, 5 years old and nice.	20		
Fine Gun Powder Tea.....	40	Family Tonic, quart.....	20		
Ben Mocha and Java Coffee Roasted Large Fat Mackerel in Nice Buckets or Kits, about 15 lbs.....	1 25	Northampton Apple Brandy, 6 years old—pure—Apple Juice—nothing finer made—gallon.....	2		
New River Herrings, 750 fish in the barrel, Large and Fat.....	5 50	Clemmer's Fine Old Mountain Rye Whiskey, double distilled, sweet and wholesome, quart.....	40		
New Cut Herring, barrel.....	5 50	Juniper Gin, sure cure for bladder and kidney troubles; relieves the cutting, stinging ache in your back, quart.....	45		
Finest Cream Cheese.....	15				
Baker's Chocolate—2 Cakes.....	25				
New Table Raisins—6 Lbs.....	60				
Fine French Candy.....	8				
Pure Lard.....	9½				
610 Tons Pure City Made Shipstuff, hundred.....	1 00				

I have an immense stock of NEW YEARS' GOODS, CAKES, CANDIES. FRUITS of all kinds, and I will ship any quantity required.

**D. O'SULLIVAN, Eighteenth and Main Sts., Richmond, Va.**

**NO WONDER THE CHILD OBJECTED**

A New York Professor had a wife and family, but, professor-like, his thoughts were mostly with his books. One evening his wife returned home from late afternoon visits to find the children to be quiet. Nowhere were the children to be seen. She demanded of the man of books what he had done with the youngsters. The Professor explained that they had become rather noisy, and so, without calling the maid, he had snuffed them into bed.

"I hope they haven't given you much trouble," Mrs. Professor said.

"Oh, no," said the Professor. "With the exception of the one in the cot over there, perhaps. He objected a good deal to my undressing him and putting him to bed."

Mrs. Professor went to inspect the cot. "Why," she cried, "that's little Freddie Jones from next door."—*The World's Events.*

"I suppose," said the physician, smiling and trying to appear witty, while feeling the pulse of a lady patient. "I suppose you consider me an old humbug?"

"Why, doctor," replied the lady. "I had no idea you could ascertain a woman's thoughts by merely feeling her pulse."

A NEAT BINDER for your back numbers can be had for 25 cents. Address the Business Office.

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We sell the BEST Seeds for this section. Our long experience and study of the farmer's needs and the climatic and soil conditions enables us to make this statement.

Have you seen our NEW SEED BOOK for 1903? If not, send for a copy to-day. It is well worth your while to do so.

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CORN PLANTERS with and without Fertilizer Attachment.

CULTIVATORS—Iron Age pattern, Disc, Riding and Walking Shovel Cultivators.

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Implements, Machinery and Vehicles for all Purposes.

WRITE FOR PRICES.

**BOILING IT DOWN.**

An amusing story is told of the editor of a go-ahead London evening newspaper who in the eternal rushing to press to get ahead of the opposition was constantly impressing upon his reporters the necessity for condensing all news.

A terrific boiler explosion had taken place on board a big ship lying at Portsmouth.

"Get down there as hard as you can," he said to one of his men. "If you catch the eleven-forty from London Bridge you'll be there soon after two and can just wire us something for the fifth edition; but boil it down."

And the reporter went. Soon after three o'clock that afternoon they got a wire from him:

"Terrific explosion. Man-o'-war. Boiler empty. Engineer full. Funeral to-morrow."—*London Tit-Bits.*

**KNEW HIS BUSINESS.**

If I were the mayor," remarked the stranger who had attended a meeting of the city council, "I wouldn't permit the aldermen to waste so much time in useless wrangling over trivial matters."

"The mayor knows what he is about," replied the citizen. "When they're wrangling they're not doing any mischief."—*Chicago Tribune.*

"Of course, John is a thoroughly English name."

"Oh! I don't know."

"O, but it is. The 'h,' you'll notice, isn't sounded at all."

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**Cured Without Pain at Your Home.**

**THE BEST OF SANATORIUM FACILITIES  
IF DESIRED.**

If you are addicted to these habits you can be cured and restored to your former health and vigor without pain or the loss of an hour from your business at a moderate cost. The medicine builds up your health, restores your nervous system to its normal condition; you feel like a different person from the beginning of treatment; LEAVING OFF THE OPIATES AFTER THE FIRST DOSE. You will soon be convinced and fully satisfied in your own mind that you will be cured.

Mr. T. M. Brown, of DeQueen, Ark., says: "Over seven years ago I was cured of the opium habit by your medicine, and have continued in the very best of health since."

Dr. W. M. Tunstall, of Lovingson, Va., says: "I am glad to say that I firmly believe that I am entirely and permanently cured of the Drink Habit, as I

have never even so much as wanted a drink in any form since I took your eradicator, now eighteen months ago. It was the best Dollars I ever invested."

Mrs. Virginia Townsend, of Shreveport, La., writes: "No more opium. I have taken no other remedy than yours, and I make no mistake when I say that my health is better now than it ever was in my life, and I owe it to you and your remedy. It has been twelve years since I was cured by your treatment."

For full particulars, address Dr. B. M. Woolley, 201 Lowndes Bldg., Atlanta, Ga.

There are many times during the year when you can probably do your neighbor or friend a good turn. Perhaps he wants something new for the farm; perhaps the wife or daughter wants something new in her department. If she does not know just where to buy it, recommend that she look through our paper and purchase from its advertisers. In this way you will be doing the editor a great favor, and that favor will be returned to you many times over in the addition of new and interesting features to the paper. Always mention the paper when writing advertisers; note our guarantee on this page.

**A SAFE HATCH.**

When 40 per-cent. of the eggs used brings chicks to maturity, they are called safe hatches by a large and successful poultryman, who runs several incubators and keeps a record of hatches and broods.

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THE FINE HACKNEY STALLION

### ♣ HEIDRIK ♣

Bay horse, foaled 1898; 16 hands high. This horse has great natural action, and is capable of getting the highest class harness horses.

FEE, \$10 00 the Season or \$15 00 to Insure.

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## Stallions at Spring Garden

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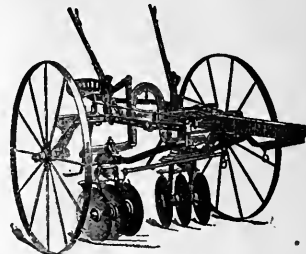
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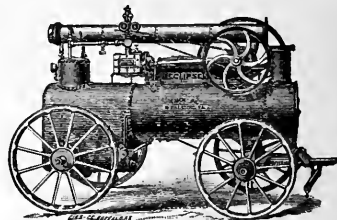
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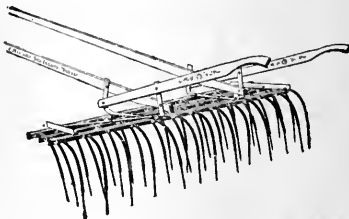


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Richmond, April, 1903.

No 4.

## Farm Management.

### WORK FOR THE MONTH.

The month of March has given us a most welcome change in the weather conditions over the Southern States. Up to the 2d of February, whilst we had only very little severely cold weather, we had almost continuous rains, and February itself was, with the exception of the years 1897 and 1899, the wettest February we have had since the records were kept, giving a record of 4.97 inches for this State. The month of March up to this writing (20th) has been spring-like and genial—indeed, in many sections, has been warmer than could have been wished, and unless we are to have a continuance of such weather, is likely to cause premature blooming of fruit trees, with consequent great risk of loss of crops. The warmth of the weather, with the abundance of moisture in the soil, has caused vegetation to make a rapid advance, and wheat, oats, grass and clover are, generally, looking and promising well. We have heard little complaint of winter killing of the wheat and oat plant, but some complaint of damage by fly in some sections. The continuous rain of February caused some delay in the sowing of tobacco plant beds, but with the warmth of this month this seed, when sown, will germinate quickly, and probably no harm has been done to the prospects of the crop. We may, we think, with confidence assert that we enter upon the crop season with good prospects. The only drawback would seem to be that plowing of the land

has been delayed with those, and unfortunately there are many, who did not avail themselves of the fall and early winter months. Whilst very many more now use these months as they ought to be used in getting forward the preparation of the land for spring crops, there is yet much room for improvement. The sowing of the spring oat crop has also been delayed, and we fear much that many crops will be put in too late to make a profitable yield if hot weather should set in as early as is often the case. We believe that much better can be done with the land than seeding to oats at this late period of the spring. In the South spring oats are mainly grown as a forage crop. To put the crop in after February, or at the latest, the first half of March, is to run a great risk of a crop hardly worth the cutting for hay. Far better would it be to leave the land unseeded in most cases until after the corn crop is planted, and then sow to one of the numerous summer forage crops of which we can grow so great a variety, and which make a yield so much greater per acre of the best and most nutritious feed for stock.

Where a farmer can grow, but say at best, two tons to the acre of oat hay, he can readily grow twice or three times that weight of peas and sorghum, sorghum alone, or of German millet or Pencillaria (Cattail millet), or of Soy beans, or even of corn, and can cut some of these crops and harvest them in time to follow with another crop of the same kind. Indeed, we know of

men who make three crops of peas and sorghum hay or two crops of millet in the season. Teocinte, also in the Southern portion of this State, and in all the States South of this will make two or more crops of the finest feed either for green feed or for fodder from one seeding. We would urge this matter on the attention of our readers.

We hear excellent reports of the Crimson clover crops from almost every section. The mildness of the winter has favored the growth, and there will be a heavy yield per acre. We would urge our readers not to let the crop stand too long before cutting for hay. It is a perfectly safe crop to feed to stock of all kinds when made into hay if cut just when coming into bloom, but if allowed to stand until the seed forms it is not safe to feed to horses (we have never heard of any trouble caused to cows). The hulls of the seed mat together in the stomach and form hard balls which cannot be passed through the bowels. We have had several such balls sent in, taken from horses, and which had caused their death, as large as an orange.

The preparation of the land for the corn crop and the planting of it will be the chief work calling for the attention of farmers during this month. A careful consideration of the subject in the light of the numerous experiments made in different States compels us to the conclusion that the successful and profitable production of corn depends more upon the perfect preparation of the land for the crop *before planting*, and the subsequent cultivation of the crop, than upon the quantity and quality of the fertilizer used on the crop. Whilst the average production of corn in Virginia is about 20 bushels to the acre; in North Carolina about 13 bushels, and South Carolina about 10 bushels, yet Virginia upland has made, in one experiment, nearly 100 bushels to the acre, and Virginia lowland nearly 200 bushels to the acre. South Carolina has made the largest crop to the acre of any State in the Union—nearly 250 bushels to the acre. In all these cases of great yield the preparation of the land before planting was such as to put the soil into nearly a perfect condition as a seed bed, not merely just on the surface, but to a depth of 12 to 15 inches. Corn is a crop with an enormous capacity for root development, and it is upon this development that the power of the plant to produce a great yield largely depends. If the soil is deeply and finely broken the roots will fill the whole soil for an area of 6 feet around each plant and to the depth of the finely broken soil. With such an enormous feeding area and the known capacity of the crop to utilize even tough and largely unavailable plant food for other

crops, and the fact that it exercises this capacity during the hottest months of the year when nitrification is most active in the soil, there can be no reason why we in Virginia, North and South Carolina should rest content with such miserably poor yields of this crop as are common. With a yield of 20 bushels to the acre how can there be profit in the production of corn even at 50 cents per bushel? The average cost of the production of the crop was ascertained for the United States several years ago by the Department of Agriculture, and was fixed at \$11.81 per acre for the South. This cost included an item of \$3.00 per acre rent for the land. At this figure, with 20 bushels to the acre, the cost of the corn is 59 cents per bushel, showing even at a sale price of 50 cents a loss of 9 cents per bushel on the cost of production. The Maryland Bureau of Statistics has recently investigated this question of the cost of corn production in that State, and fixes the cost, under ordinary conditions of cultivation, at \$10.10 per acre, or 50 cents per bushel with 20 bushels to the acre. We want to see this year an effort generally made to alter this condition of affairs, and make the production of the corn crop a profitable one. It is a most important one to this State, as the total crop of last year was over 41,000,000 bushels. As we have above stated, the first step in this work should be a better preparation of the land. Where the land was deeply broken in the fall and early winter months this better preparation can be brought about by the use of the harrow, roller and cultivator in most cases, but if the soil is at all packed hard in the bottom do not hesitate to replot after well breaking the surface with the harrow and cultivator. It will pay well to adopt this course. There should be at least a foot deep of finely broken soil before seed is planted. Where the land is still to plow it is too late now to turn up the subsoil on to the surface. Plow an inch or two deeper than last year, and then break the subsoil with a subsoil plow or coultter, but do not bring it to the surface. Then harrow, reharrow, roll and cultivate until the whole of the field is a bed of finely broken soil. As the subsequent cultivation of the crop during growth has a large bearing upon the yield, do not break or plant an acre more than you will be able to care for as it ought to be done during growth. Better to plant a short crop and care for it well than pitch a large one and have subsequently to neglect it. Land not planted can subsequently be put into a forage crop of some kind and a good return be obtained from it in the way of feed for stock. Do not plow the land until it is dry enough to leave the plow in a crumbly condition; wet clods turned up now are very apt to remain clods until next

year with all the plant food in them securely locked away from the use of the crop. Land plowed wet is land ruined for at least one year, and often for very many years.

Whilst, as we have stated, we believe that much more depends upon the perfect preparation of the land than upon the fertilizer used, yet we are compelled to say something as to fertilizing the crop, as we have so many enquiries upon the subject. A careful examination of the result of the experiments made in the different States upon this question show that with but very few exceptions, there is no fertilizer which can be used with profit on the corn crop except farm yard manure. We do not want to be understood as asserting that fertilizer is of no use to the crop, but that its use is rarely profitable. It can be so used as to materially increase the yield, but with a crop having a comparatively low market value like corn the increase of yield required to be made to be profitable over the cost of the fertilizer is so large as to be rarely reached. A crop of 30 bushels to the acre removes from the soil 40 lbs. of nitrogen, 41 lbs. of potash and 13 lbs. of phosphoric acid. This would point to the necessity for using a fertilizer rich in potash and nitrogen, yet many of the best crops have been grown with the use of a fertilizer in which a low percentage of both these ingredients have been applied. The explanation of this so far as the nitrogen is concerned may probably be found in the fact that corn makes its growth at a period of the year when nitrification is most active in the soil, and with its great root growth the plant is able to seize upon this nitrogen over so large a surface as to meet all its requirements. Whilst as to the potash, the natural supply of this in the soil of most of the land east of the Blue Ridge is sufficiently large to meet requirements of a plant able like corn to utilize plant food in a somewhat tough and unavailable condition as compared with the ability of most plants to utilize such food. In experiments made at the Virginia Experiment Station, the needs of the crop, as shown by what plant food an average crop removed from the soil, were sought to be met by the application of 80 lbs. of muriate of potash, 80 lbs. of dissolved bone black and 254 lbs. of nitrate of soda. With this application the yield of the plots over those upon which no fertilizer was applied were as follows: Where only the potash was applied the increase was 3 bushels to the acre, where only the phosphoric acid was applied the increased yield was 5 bushels to the acre, and where only the nitrogen was applied the increased yield was 2 bushels to the acre. The best yield made in the experiments was where 120 lbs. of potash, 120 lbs. of bone black and 381 lbs. of

nitrate of soda were applied. This increased the crop 6 bushels over that on the unfertilized plot, but the cost was greater than was justified by the increase, as where only half this amount of fertilizer was used the yield was only 1 bushel less. The conclusion to be drawn from the experiments is that the most important factor in a corn fertilizer is the phosphoric acid, which can just as well and as cheaply be supplied by acid phosphate as bone black, and that with this should be used a small proportion of nitrogen and probably with advantage in some sections such as the sandy lands of the coast plain a small amount of potash. Where land is very deficient in vegetable matter cotton seed meal has been found to be a useful help in the making of the crop, and we would certainly advise its use in the cotton sections. It supplies nitrogen and a small percentage of phosphoric acid, and being only slowly available, helps the crop all through the growing season. Whenever farm yard manure is available do not fail to use it. Its results are certain, and nowhere on the farm can it be better used than on this crop. Wherever fertilizer is used in excess of 250 lbs. to the acre apply it broadcast and work it well into the land. If only 250 lbs. or less be applied put it in the row and mix it well with the soil before planting. The best fertilization for the corn crop is to let it always follow a clover and grass sod upon which the farm yard manure has been gotten out during the winter. If a heavy yield is to be looked for there must be a heavy growth of stalks to carry the ears. It is no use expecting a great crop with rows 4 feet apart and the stalks 3 feet apart in the rows. There are not sufficient stalks on the land to make a great yield. The rows should not be more than 3 feet apart, and the plants should be 2 feet apart in the rows. If the land will not make a good yield planted at this distance it is not in good enough fertility to be utilized profitably for a corn crop, and ought to be improved by growing peas and having manure applied to it. In planting the crop use a planter that will throw out a furrow and drop the seed in the bottom of the furrow, and then cover it, say, 2 or 3 inches. This allows the crop to be cultivated more closely to the plants without injuring them in the early stage of growth, and later permits of the soil being worked to them, and thus gives them a better hold on the land to withstand the wind.

If cut worms are likely to be troublesome poison them before planting the corn. It is no use doing so after the corn is up, as they will prefer the corn to the poison. Mix Paris green with bran moistened so that it will stick together in balls and drop these over the field or dip bunches of green clover in Paris green mixed in water and drop these in the field.

Push on the planting of the cotton crop as fast as the condition of the land will allow. In our last issue we gave advice as to the planting and fertilization of this crop, and to that we refer our readers.

In this issue will be found an article on the preparation for the tobacco crop.

### PREPARING FOR AND FERTILIZING THE TOBACCO CROP.

The tobacco crop is one of so much importance to the South Atlantic Coast States that we are not surprised to receive numerous requests to discuss the question of preparing the land for it and the fertilizer necessary to be used to produce it profitably. In 1892 Virginia produced 136,789,250 lbs. of tobacco on 182,259 acres; North Carolina produced 142,520,950 lbs. on 219,263 acres, and South Carolina 25,629,948 lbs. on 34,912 acres, and Maryland 31,300,625 lbs. on 34,081 acres. The indications now are that, notwithstanding the action of the so-called "trusts," the area in tobacco will this year be still larger than the last. This would seem unmistakably to point to the fact that tobacco production is still a profitable business, and we believe this to be true, notwithstanding the complaints as to limitation of buyers. The truth is, that the demand for the weed grows apace, and, though there are fewer buyers, those on the market have much greater demands to supply than ever in the past, and by their enormous command of capital they have extended their businesses so as to command world-wide trade instead of, as formerly, merely local consumption, and they can therefore afford to give good prices for good tobacco. Poor they do not want. For good tobacco there is, and seems likely to be, an almost unlimited demand, and these coast States being in a latitude and an isothermal belt, where conditions are most favorable for its production, the growth of it here is likely each year to become larger. Under these circumstances it is wisdom on the part of our tobacco planters to give greater consideration to the problems involved in its culture and curing. Tobacco is a crop that requires for its successful culture more care in the preparation of the land and the fertilizing of it than in the past has been given to it. It is a plant that is more influenced in its growth by soil conditions than almost any other crop. Whilst almost every kind of land in these coast States will grow tobacco, yet each different kind of land and the condition of that land as to fertility and mechanical condition so changes the character of the growth as to make it practically a different

crop on each different kind of land. The influence of the soil and the character of the plant food in it and its degree of availability so affects the "cure" of the crop as to make some of it most desirable upon the market, whilst other lots will go begging for a buyer at the price of trash. One of the most essential requisites for a successful tobacco crop is the most perfect physical and mechanical condition of the soil before planting. This is necessary for two or three reasons. Primarily and mainly, it is necessary because of the fact that the crop has only a short season of growth, about 100 days on the average, and it starts out on this season of growth one of the smallest and most delicate of plants. To enable such a plant with naturally a limited root growth to acquire the size and leaf area necessary to make it profitable in that short period it must have the finest mechanical condition of the soil, so that the tiny rootlets may run freely and be able to lay hold of and utilize the plant food within their limited area, and this plant food must be in a most available condition. Hence arises the necessity not only for a fine mechanical condition of the soil, but also a fine physical condition. The soil requires to be well filled with vegetable matter, so that it may hold moisture and that the acids developed by this vegetable matter may give aid in dissolving and rendering available the natural and applied plant food in the soil. Very much of the failure to grow tobacco successfully in recent years in the South arises from the fact that the vegetable matter in the soil has been depleted so much by constant cropping and the failure to return vegetable matter to the soil, either in the shape of humus producing crops or farm-yard manure, as to leave the soil lacking in this essential to successful quick growth. The first step therefore required to be taken by tobacco planters is to break their tobacco fields early and set about the complete pulverizing of the soil. The land should be plowed, harrowed, rolled, and replowed, harrowed and rolled until a deep bed is made as fine as an ash heap. To do this, however, on land devoid of humus will be waste of labor and money. Therefore select only such land for planting as is well supplied with this necessary ingredient. If lacking it must be supplied by farm-yard manure or other vegetable matter. Commercial fertilizer will never make good this deficiency. With reference to the fertilizing of the crop Professor Patterson, the director of the Maryland Experiment Station, discussing experiments made at that station, says:

"In applying fertilizers or manure to most crops, of course it is always desirable to increase the yield, and in general that is the primary object of fertilization,

and it is only in the increased yield that we commonly look for profit from the application of manure. With tobacco we find ourselves confronted with a very different condition of affairs, it often being easy to produce an increase in the yield, but the product will be of an inferior quality, and in consequence its total value much less than it would have been without fertilization. Again, fertilizers will often show little, if any, increase in yield, but cause a decided *improvement* in *quality*, and thus give return by the tobacco bringing more per pound than it would have otherwise done. The Maryland Agricultural Experiment Station has been making experiments along this line and studying the effect of our chief fertilizing elements upon the feeding habits of the tobacco plant, and their ultimate effect upon its quality, particularly the burning quality. These experiments, though conducted upon Maryland soils, yet have brought out many facts that are equally applicable to the crop wherever grown. These experiments showed the potash salts to be the most potent factors in changing the composition and quality of the tobacco produced. It was shown very plainly that muriate of potash, kainit and *low grade* sulphate of potash were unfit for use as tobacco fertilizers, and should never be applied to lands that were ever to be cultivated in tobacco, because the chlorine which these potash salts contain is taken up very freely by the tobacco plant, and chlorine always produces a tobacco with bad burning qualities. On the other hand, *high grade* sulphate of potash always *improved* the burning qualities. Carbonate of potash (ashes) produced tobacco with the best combustibility. The application of potash was, in most cases, accompanied by an increase in yield, but in many cases the increase was small.

Phosphoric acid proved to have but little direct bearing upon the combustibility, but generally produced a very decided increase in the yield. Lime and magnesia compounds, in small quantities, seemed to produce a tobacco that cured badly and had an inferior texture; the duration of glow was considerably longer with the lime and magnesia tobaccos, but in many cases the ash was of a bad color. On the whole, while lime and magnesia will often very materially increase the yield, yet the quality is such that their application cannot be recommended.

The salient principles in the use of fertilizers for the tobacco crop may be summarized as follows:

1st. Apply fertilizers with reference to improvement of quality rather than quantity, and never sacrifice quality of tobacco for quantity.

2d. Many things that produce marked increase in yield make tobacco of inferior quality.

3d. Use concentrated fertilizers as the extraneous matter—matter, not plant food, very often has the effect of making inferior tobacco.

4th. Tobacco lands should not be cropped by plants that take out of the soil relatively much potash and little chlorine.

5th. Never apply any fertilizer to tobacco that contains much, if any, chlorine.

6th. Chlorine always causes tobacco to burn badly.

7th. Never apply common salt to tobacco lands.

8th. Do not furnish the potash of a tobacco fertilizer by means of muriate of potash, as it produces a bad quality.

9th. Do not apply kainit to tobacco or tobacco lands, as it produces a bad quality of tobacco.

10th. Do not use *low-grade* sulphate of potash in tobacco fertilizers, as it causes inferior quality in the tobacco.

11th. High-grade sulphate of potash always improved the quality of tobacco, and generally increased the yield.

12th. The tobacco having the best combustibility was grown with carbonate of potash, but the cost of carbonate of potash often excludes its use.

13th. Never apply lime to land immediately before planting it in tobacco. In fact, its bad effects upon curing will sometimes last for several years.

14th. Phosphoric acid generally increases the yield, but does not affect the quality.

15th. Nitrogen produces in most cases an increased yield; but no marked effects on quality could be detected.

16th. Yard manure is not well adapted to tobacco, as it is apt to contain detrimental chlorine compounds, and contains relatively too much nitrogen and too little phosphoric acid and potash.

Having thus discussed the general principles affecting the production and fertilization of the tobacco crop, we think it may be well to conclude with two or three specific formulæ for the fertilization of the crop. These were tested in this State by one of the most intelligent, studious and successful growers, the late Major R. L. Ragland, and may therefore be taken to be reliable. He tried six different system of fertilization one year. On Plot No. 1 he applied 50 lbs. of sulphate of ammonia, 80 lbs. of dried blood, 50 lbs. of sulphate of potash and 114 lbs. of acid phosphate. This plot produced tobacco of the value of \$131.20. Plot No. 2, fertilized with 72 lbs. of nitrate of soda, 80 lbs. of dried blood, 120 lbs. of sulphate of potash and 114

lbs. of acid phosphate, produced tobacco of the value of \$127.90. Plot No. 3, fertilized with 160 lbs. of dried blood, 120 lbs. of sulphate of potash and 114 lbs. of acid phosphate, produced tobacco of the value of \$146.60. These three plots were the most successful of the six tested. He remarked that where dried blood and nitrate of soda were used, in combination or separately, there was scarcely any field firing, much less than where no fertilizers were used.

### CORN CULTURE.

*Editor Southern Planter:*

So many inquiries have come to me about the growing of corn that I take the liberty of replying to them through the columns of the Southern Planter.

There are some general impressions regarding seed and the corn plant which are erroneous, and which I believe affect very much the yield of corn in our State. In the first place it is a general practice in preparing seed to cut off the tips and butts of the ears and plant only the middle grains. This is unfortunate, for the small grains on the tip of the ear have more vitality and are the best on the ear; the butt grains are slightly better or certainly as good as the middle grains. An experiment in the field or garden will convince the skeptical of the truth of this. Seed corn should be taken from good sound ears and the whole ear should be used. If prolific seed is used the lower and smaller ear which comes out last will have the tendency to multiply ears to a much greater extent than the large ears above. If the large top ear is continually used it will soon grow only a one-eared corn.

Another popular error is that the corn plant has shallow roots. It is often the case that the roots of the corn plant are all near the top of the ground, but it is because the ground has been so poorly prepared that the roots cannot go deeper. If the land permits it the roots will go six feet and more into the ground, and the intermediate space will be filled with roots. It is of first importance in cultivating corn to break the ground as deeply as possible, otherwise our clay subsoil will stop the roots near the surface. I use a three-horse plow and run a two-horse subsoil plow in the furrow. The subsoil plow is rather expensive, and I have gotten almost as good results in most soils, in some soils better results, with a long heavy coulter with projecting tongue. I have in this way broken bottom land 22 inches, hillsides 14 to 16 inches. The benefit of this is three-fold, it allows the roots to go deep into the soil to feed; it stores up the winter and spring rains and insures against dry weather in summer, and by taking

the rains down into the soil it prevents washing. By plowing in this way "worn out" lands will soon be brought back to fertility. Shallow plowing is the curse of our farming; it means twisted corn when hot and dry weather comes, "short" corn at harvest, galls and gullies. The subsoil when acted upon by sun and air becomes valuable for plant food and restores fertility to the soil. After the land is deeply plowed it should be put into perfect order before planting. All clods left at planting time can be counted on to roll around the rest of the season, or, if buried, to lock up the fertility. It is easier to cultivate corn *before* planting than *after*. In our section I have found it better not to plant too early. Hill land planted by May 10th and low grounds by May 20th is early enough. I would rather have it put in then than a month earlier, especially if the land is thoroughly worked in the meantime.

The cultivation after planting should be shallow and level. A weeder, if started early enough and kept going, is a splendid implement, one hand and horse going over 20 acres a day and doing all that is needed. If you let the weeds get a few days start the weeder is no earthly account. Kill the weeds when they first "hatch." After the corn gets a foot or so high a five-tooth cultivator should be used, nothing heavier. The soil should be gently stirred and kept clean. Any breaking of the roots of the corn plant is injurious, and even in a wet season, when it is least harmful, it will lessen the yield.

Another caution seems to be needed. Do not plow land when wet, especially clay soils. Next to shallow plowing this is ruining more land in Virginia than any other cause. Take up a handful of the soil near the bottom of the furrow and squeeze it hard three or four times, then throw it on the ground, if it goes to pieces the land will do to plow, but if it hangs together in a clod, or like putty, it is too wet. Land plowed too wet will take several years to recover. Winter plowing and freezing is the best way to get it back to proper tilth.

In planting I like to lay off the rows with a one-horse plow, running several times in the row, and put the seed down in the ground deep, then cover lightly. After the corn is up, at each working the soil works to the corn. This helps the corn later on to stand up when heavy rains and winds come. Covering too deep retards the sprouting and growth.

Where land is rich and well plowed put more seed in the ground. On bottom lands with the kind of corn I grow I try to have the rows 2½ feet apart and a single stalk every twelve inches in the row. This looks very thick, but it pays if the land is plowed deep enough to

let the roots down into the ground. A good Valley farmer was driving into my farm with me, and looking at the growing corn, said: "Mr. Woods, if you don't thin that corn you will get nothing but fodder." It yielded a fraction over 163 bushels (shelled corn) to the acre: I believe we are making the same mistake with all other crops—wheat, oats, and especially grass. We do not put enough seed on the ground, or better still, *in* the ground, for all seed ought always to be well covered.

I think we do not appreciate the possibilities in our hands when we plant our crops. We have too little faith. A farmer who does not believe that more than 60 bushels of corn can be raised to the acre is not apt to raise more. It will be an accident if he does. But the man who knows what has been done will try to come somewhere near the mark. The best authentic crop of corn, as far as I am informed, was 250 bushels of shelled corn on one acre of land. Most of us cannot attain this perhaps, but we can easily double or triple the crops we are raising by a judicious selection of seed and by *intensive* farming. The average yield credited to Virginia in the Agricultural Department Reports should suggest something to us Virginia farmers. We all ought to have the latest work on Corn Culture, and read it and practice its teachings.

Albemarle Co., Va.

SAMUEL B. WOODS.

### SHALL IT BE COW-PEAS OR SOY BEAN

*Editor Southern Planter:*

The year 1902 gave the writer a season of experience with rich results. He has contended that when better known the Soy bean would, as a farm and feed crop, be second only to corn. Events of 1902 bring the matter right to the door of the dairyman, feeders, breeders and farmers.

All kinds of ordinary hay and fodders can be perfectly cured and housed. The farm press bears evidence that curing cow-pea hay is a difficult problem, too often a total failure.

In ten years' experience more than one-third of the time we have either lost all or a large part of our pea hay. Our best seasons we have lost a large part of the best of it, the leaves. If rained on after they are cut the leaves, stems and vines turn black, the leaves shatter off, we get into the barn a lot of stringy stuff with a hempen fiber so tough stock cannot masticate it, and have a big waste. The quality of the feed is seriously injured.

For hogging off, for pasture, or to plow under I regard the cow-pea a wonderful crop.

In this correspondence I have given tables taken from the bulletins of the Department of Agriculture, of Washington, D. C., showing that as a means of taking nitrogen from the air and fixing it in the soil the Soy bean stands first, clover second and cow-peas third.

I have also shown from the letter of Mr. James Bellwood, of Virginia, that he has thrashed "over one hundred bushels of Soy beans from one acre of rich 'James river' bottom land." No man in Virginia has higher standing or character than Mr. Bellwood. I copied from these bulletins that analysis shows that one bushel of Soy bean seed has a feeding value equivalent to more than three bushels of corn. Then (I don't say it, but the United States says) this one acre of beans was worth more than 300 bushels of corn for feeding purposes.

I have also given tables showing that corn fodder and Soy bean hay, equal parts, make a perfectly "balanced ration."

The difficulty in getting seed that would grow, and harvesting Soy beans, have kept them in the background. With our better knowledge both are overcome.

The Soy bean is so rich in nitrogen that if thrashed and put in bulk with the least moisture in the seeds the will heat enough to injure the germ. That part of the crop the farmer wants for seed he should let stand until the leaves fall off then cut, shock and let stand until the seed is dry, thrash and put in sacks (do not bulk) and store in a dry place. Thus treated, every seed will grow. The idea is to thoroughly eliminate moisture. A common separator thrashes them as easily as oats.

### HARVESTING AND CURING THIS CROP.

Previous to 1902 I have been able to cut and bind a few bundles in a comparatively green state. They cured out perfectly, but following the cutting we had ideal curing weather, hot with fresh winds. I feared to put it out to the public lest wet, muggy weather might cause them to heat and mould. In 1902 I determined to test the mater and found a machine that could cut and bind them in their greenest stage. The weather was cloudy, with showers every few days. I selected about three acres of very heavy beans from 3½ to 5 feet high, in full bloom (their greenest stage). I cut them in the afternoon, leaving them on the ground to wilt and dry out a few days before shocking. That night a hard shower wet the bundles thoroughly. They were shocked the next day as we would wheat.

A few days after they were shocked we had a down-pour; the dense and immense foliage turned the water off like a duck's feathers, then we had four weeks of

cloudy and showery weather, ideal to test the question whether Soy beans cut green and tightly bound would cure out into perfect animal feed. They were left six weeks, until perfectly cured and dry, and when fed out not a moulded bundle was found.

Two days before I cut the beans I cut four acres of cow-peas. The continued wet weather caused us to lose the pea foliage, it rotted. I got a fair crop of pea seed.

The superiority of the Soy future over any other crop will be emphasised in our venture farming by growing Soy beans alone for feed, pasture and to plow down.

*Olney, Illinois.*

ROBERT C. MORRIS.

### RANDOM NOTES ON MARCH NUMBERS.

*Editor Southern Planter:*

*Mr. Clark's Grass.*—The wonderful results that have been secured by Mr. Clark, in Connecticut, as noted in your editorial remarks, show conclusively the value of heavy fertilization for grass, and the crops he has made show that this lavish fertilization is done at a profit. Then, too, as we have often insisted, the corn crop is the place where the farm manure pays best and furnishes humus to enable the fertilizers to act more efficiently through the retention of moisture in the land. What crops of grass could be made on the mellow lands of Eastern North Carolina and Southeastern Virginia by Clark's method? The black peaty soils of Eastern North Carolina naturally produce grass in abundance, and on these soils the potash that Mr. Clark uses would pay as well as there. You are right, so far as most of the Piedmont soils of Virginia are concerned, in supposing that they need little potash, but on the sandy soils of the coast plain potash is an important matter.

*Flat Culture of Cotton.*—I have recently gotten letters from all over the South showing that here and there the growers are realizing that the old plan of ridging and hilling is not best for the cotton crop any more than for the corn crop. The leaven of improvement is working all through the cotton country, and flat culture will soon come to be the method of the improving farmers, and ere long the man who grows but half a bale per acre will be looked upon as behind the times as a farmer. Keep on urging the need of humus in the cotton field. They cannot get humus with cotton on the land every year, and the fertilizers will never have their best effect till the cotton farmers go to farming and quits cotton planting.

*All Flesh is Grass.*—And I am glad to see that the farmers in the cotton belt are gradually losing their dread of Bermuda and are beginning to realize that grass and forage and cattle are as important in the im-

provement of the land for cotton as they are for the crops of the North. When the cotton farmers fatten three beeves for every bale of cotton they raise they will grow more cotton on fewer acres and at a smaller cost per pound.

*Fertilizers for Peas.*—On the sandy soils where Mr. Tyson lives there is no doubt that his mixture of acid phosphate and potash will be the thing for peas, but on the red clay uplands I had rather depend on the acid phosphate alone or a much smaller percentage of the potash. I used here last year a fertilizer with but 1 per cent. of potash on peas with marked results. The recommendation of a fertilizer for any crop will depend on the land where it is to be used, and no one but the farmer can tell what his land needs, and he needs to experiment to find out. Every thoughtful farmer should study his soil and thus avoid the buying of what he does not need.

*Improving Mountain Land.*—On the land in the North Carolina mountains I am sure that the best pasture can be made of the so-called English or Canada blue grass, *Poa Compressa*. On these rich lands it will be what Bermuda is to the lower South, and it thrives on land where there is no limestone, while the Kentucky grass does not.

*Peas and Sorghum.*—My advice is to put the peas by themselves and the sorghum by itself. Sorghum among the peas will make them hard to cure, for sorghum never cures dry. Sorghum is valuable as a forage but the peas are better without it. There is no difficulty in curing peas by themselves, and I have the hay to show that it is so. My hay has the leaves all green in color and not a speck of mould, and it went into the barn the third day after it was cut, and was cured there. It is easier to balance the ration with the crops grown separately than to try to grow two plants where but one should grow.

*Ginseng.*—Hardly a day passes that I do not get an inquiry about the cultivation of ginseng. The imaginative newspaper reporters have told such wonderful tales about it that the men who are always ready to drop the crops they know for others they know nothing about, are all now seeking to know more of ginseng. My advice is to stick to wheat, cotton, corn and peas and let the men who want to, experiment with ginseng. Like silk culture, there is nothing in it for most of us, certainly not in the warmer sections of the South.

W. F. MASSEY,

*Editor of Practical Farmer.*

When corresponding with advertisers mention the *Planter*.



**NITRATE OF SODA ON TOBACCO PLANT-BEDS.***Editor Southern Planter:*

Mr. H. P. Baker, of Cumberland county, Va., says in March Planter that he used 10 lbs. to 100 square yards, which would be at rate of 500 lbs. to the acre. He applied it when some plants were the size of a quarter. I should have supposed that so heavy an application would have burned the tender young plant. I have, a number of times, experimented with nitrate soda on tobacco plants, but never with such positive or immediate action. In fact, I have been somewhat disappointed in results and have concluded that I put nitrate on too late, after plants were up, and felt convinced that the proper time to put it on was a little before plants came up. I tried to put at rate of 150 lbs. to acre, which I supposed was sufficient, as we put on a pound to the yard of the highest grade plant bed fertilizer when we sowed seed.

Nitrate of soda is very lumpy, and I found difficulty in getting it fine enough to sow evenly, for if you sow good sized lumps and they dissolve right around the plants it will be apt to burn them. I have seen plants burned entirely up in this way, and have also seen a small piece of "Green Sward grass" burned up completely by a heavy application of nitrate.

My experience is that if you are going to put it on plants after they are up, that it should either be dissolved in water and sprinkled on or else be sown on bed while it is raining. If you knew positively it was going to rain before night sow just before the rain. I feel sure that my failures with nitrate of soda were caused by putting it on too late. I have never had plants much benefitted by it in time to plant but have gone back to the bed after we had finished planting and found it wild with green plants. I believe that nitrate is invaluable for plants if applied at right time and in proper manner, and that you can have plants as early as you choose.

It is just such extravagant accounts as Mr. Baker's which first started me to experimenting with nitrate, not only on plants, but on numbers of other things, greatly to my disappointment.

I believe that you can greatly benefit the tobacco raisers by explaining to them the proper manner of putting nitrate on plant beds. The next issue of your paper will be out before the tobacco plants are up. Myself and a number of my neighbors would have been greatly benefitted by the proper information on this very important subject several years ago, and would have saved us the expense of buying our experience. To the ordinary farmer the whole subject is a sort of a mystery. Anyone expecting to see such miraculous results as nitrate turning grass "a vivid green" in a week after applied will be disappointed as I was. I read about nitrate of soda years ago, and sent to New York to the importer to get 300 lbs. A friend of mine did the same. We tried it and gave it to others to try in every conceivable manner without slightest results on anything. We were so much disgusted that I waited ten years before trying it again. We expected too immediate action.

After reading Planter to-day I concluded to scribble

this with the hope that you might spare the time to take it into consideration.

*Albemarle, Co., Va.*

J. S. Wood.

Whilst we have never used nitrate of soda on tobacco plant beds we have used it largely on farm and vegetable crops of various kinds, and can, therefore, speak with confidence as to its action. Nitrate of soda is peculiar amongst fertilizers in that it is the only one in use which is naturally in the condition in which plants take nitrogen. All plants assimilate nitrogen in the form of a nitrate. In all other forms of nitrogen fertilizers the nitrogen is chemically when applied in some other form than a nitrate, and has to undergo a chemical change in the soil before the plants can utilize it. It first passes into the form of a nitrite and then into a nitrate, which absorbs time. In the form of sulphate of ammonia it is a sulphate, and has to pass through several chemical changes before assimilable. In the organic form, such as dried blood, fish scrap, cotton seed meal, it has to decompose before the nitrogen takes the form of a nitrate. A knowledge of these facts should regulate the use of the different nitrogenous fertilizers. Another feature about nitrate of soda in which it differs from other fertilizers is its extreme solubility. It melts as quickly as salt. If, therefore, when applied the plant is not in a state of root activity so that it can immediately utilize the nitrate, the chances are strongly in favor of a heavy loss of the nitrogen by leaching. This was clearly demonstrated by Sir J. B. Lawes in one of his experiments. He applied nitrate of soda to a plot of tile drained land, the drains of which discharged into tanks. On part of the plot there was a growing crop, on another part there was no vegetation. He applied equal quantities of nitrate of soda to each plot. On the part where there was a crop with active root growth the nitrate was all assimilated by the crop and little or no trace of it could be found in the drain water in the tank. On the other plot, where there was no vegetation, nearly the whole of the nitrate of soda was recovered from the drain water in the tank. Bearing these facts in mind, the proper time to apply nitrate of soda to any crop is after the plants have commenced to grow, when root action is active. We would always apply just previous to a gentle rain if possible, but a heavy dew will readily dissolve it. We have frequently seen the result of applying nitrate of soda within a week after the application, when conditions of root growth and moisture were favorable. The nitrate should be in as fine a condition as possible when applied, all lumps being broken by beating with the back of a shovel or running a roller over it on a hard floor before sowing.—Ed.

## GRASS SEEDING—CORN GROWING—HAY GROWING.

*Editor Southern Planter:*

In your March edition you again advise sowing on permanent meadows seeds of grasses that will die out, relying upon other varieties to endure and to keep the land covered. You have often recommended clover for the same purpose.

This is all wrong. Where grass dies out weeds, brushes, etc., will grow up. If you want a meadow or a pasture to last, say five years, sow only grasses that will last, and do not mix in anything that will not last. This very common mistake is one of the reasons why grass lands are not lasting here.

Here is a problem for you: Corn can be raised to profit in Kansas, Nebraska and other Western States at 25 cents per bushel; 40 to 50 bushels per acre is considered a good crop there.

Now, here corn sells at 50 cents per bushel. As there is little difference in the cost of cultivation, provided the corn is planted with check cable, so that the disk cultivators can be worked both ways across the field, it would seem that the Virginia planter could afford to spend 25 cents per bushel in fertilizer for every bushel of corn if he can thus increase his harvest to 40 or 50 bushels per acre.

I read your account of the Clark system of hay culture. Over \$40 per acre net profit looks big to a Westerner who has seen real good hay sold at \$3 per ton. I take it, however, that Virginia soil is either not suited to such intense culture or that Virginia farmers are able to make more profit by other crops, else the Clark system would be followed by those who have the means. Has our Agricultural Experiment Station ever given the system a trial? I have some red soil, some chocolate color soil, some gray, wet soil and some river bottom, and would like to know whether it is suited to the Clark system, especially since some of the gray soil does not seem to be much good for anything else.

Apropos of flat cultivation of corn. Why not publish a few articles on the Campbell system of soil culture?

I notice many inquiries in regard to alfalfa. Farmers should read Coburn's work on the subject. The price, I think, is 50 cents, and it is worth \$5 for every acre of alfalfa. Seed should be sown with press-drill, 30 lbs. to the acre, drill twice, 15 lbs. each way. It does not pay to sow alfalfa unless the soil has been infected with tubercles. Probably most soils will require liming. After the first year disk and cross-disk and roll every spring. Sow between 1st and 20th of September. Alfalfa will stand grazing well after the second year.

*Hanover Co., Va.*

GREENIORN.

We are not in agreement with our correspondent on the subject of grass seeding. The most permanent grasses are slow to take hold of and cover the land, hence the wisdom of seeding with them some of the less permanent varieties to occupy the land for two or three years until the permanent ones have gotten good hold. These prevent weeds killing out the permanent grasses

in the first two years, and in their decay provide food for the permanent grasses. The clover, whilst it lasts and in its decay supplies nitrogen for the use of the permanent grasses, hence its value in addition to its hay value. There is no reason why corn cannot be grown here as profitably as in the West, seeing the much greater price for which it sells. The greatest crop ever grown on an acre—250 bushels—was grown in the South, and several crops in excess of 150 bushels to the acre have been grown in this State. What is more needed to secure this end than periodical doses of fertilizer is the enhancement of the permanent fertility of the land by the addition of humus to our soils. The corn crop is best fertilized with the coarse, home-made farm yard manure. It is difficult to fertilize the corn crop with commercial fertilizers with profit. Read what Professor Massey says in this issue as to Clark's method of growing hay—we agree with him.—Ed.

## THAT LITTLE FARM WELL TILLED.

*Editor Southern Planter:*

I do not believe that either you, or I, or anybody else can over estimate the advantages growing out of the "intensive" cultivation of the soil in Eastern Virginia.

The motto of our farmers should be "not how much, but how well and how thorough." The aim should be not how many acres can I till, but how much can I get per acre.

Take a worn and "run down" farm in Eastern Virginia, worn by the tenant system, which robs the soil, and by shallow plowing—there are two good farms underneath the worn one. There are two good farms upon which the sun has never shone, which have never been brought to light and life by the influence of the frost, air and sunshine.

Deeper plowing, subsoiling and tile drainage, aided by the splendid influences of the clover and pea crops, will bring up these two idle farms to the surface, or will bring up their hidden stores of plant food and make these stores available, instead of lying there dormant as at the present time.

A few weeks ago we sent the Planter a short article showing what one of our farmers had done on two acres of land planted to early potatoes, followed by a crop of turnips sowed with clover.

The showing was a good one, but a reader of the Planter has sent us a statement still better. With your permission we will make a brief statement. We do this for the encouragement of your readers who have small farms and who wish to get the most out of them.

The gentleman referred to writes that in March last

year he planted two acres of Irish potatoes. In June, before digging his potatoes, he planted corn between the rows.

The last of June he dug one hundred and seventeen barrels of marketable potatoes, then went on and cultivated the corn, which was making a very rapid growth. When he finished working his corn in August he sowed the land to clover and turnips. The turnips grew very large, some of them being six inches or more in diameter, making an enormous yield, which he failed to measure.

In the fall the case stood like this. He had taken from the two acres 117 barrels of fine potatoes, had 60 bushels of shelled corn, \$9 worth of fodder, also a splendid crop of turnips, and the land was seeded to clover with as splendid a stand as he ever saw. This clover he expects to cut in May, 1903, and turn down the stubble and prepare the ground for sweet potatoes.

Our correspondent stands ready to prove the truthfulness of all his statements, and it goes to show the advantage of cultivating small areas of land and doing it well, and we mention these matters for the encouragement of farmers in general, and for those in particular who own small farms. We can but say to them that if they will do their work thoroughly and study the agricultural journals, especially the Southern Planter, and be governed by its teachings, they will find themselves making more money, and making themselves more independent from ten acres of land than the Western farmers do off one hundred and sixty acres.

The whole of Eastern Virginia will some day be one vast garden. It will all be farmed intensively; every acre will be brought into subjection and put under thorough cultivation.

If cows are kept, there will be two or three cows kept to the acre. If sheep are kept, they will be kept just as they are now on the high-priced lands in England, and all farm work will be thorough, practical and intensive. Why should not these things be done? The soil and climate permits and encourages it, and the markets are at our doors, and all things combine to demand that man shall do as much for himself here as nature has done for him.

The man above mentioned, who raised 117 barrels of fine potatoes, 60 bushels of shelled corn, \$9 worth of fodder, and so many turnips that he could not measure them, from two acres of ground, and now has that same two acres in a splendid stand of clover, has demonstrated what can be done, what should be done, and what will be done all over this fair section of ours a few years hence, when the leaven of development and improvement has permeated and penetrated the whole mass.

May the shadow of the Planter never grow less and may its influence ever broaden, deepen and expand until the agricultural interests, especially of Eastern Virginia, shall be thoroughly and properly developed.  
Norfolk, Va.

A. JEFFERS.

## POTASH.

Mr. Stubbs, of Gloucester county, wrote several articles in the "Planter" on the subject of "Potash," which, together with my own experience, proved to me conclusively that it does not pay to buy "potash." From the way he wrote I had supposed that he was an authority on the subject, and that his opinions deserved consideration. I think Mr. Stubbs was so positive that he urged that agricultural papers should not continue to advise its patrons to use potash in order to benefit manufacturers at the expense of farmers.

I have been greatly surprised that Mr. Stubbs' experience has made so little impression. I think Mr. Stubbs alluded to potash on "tobacco" principally. His opinion, however, has made no impression, as all tobacco fertilizers continue to come with a high per cent. of potash. All Mr. Stubbs' experiments were in Gloucester, where the soil is supposed to be devoid of potash, whilst our soil here has it sufficiently, according to Professor Massey and many others.

Experience has pretty conclusively shown here that tobacco wants "phosphoric acid" and nothing else. Still when farmers see agricultural papers urging use of potash, especially on tobacco, they imagine that perhaps their experience is wrong, and continue to buy it.

This is contradictory to all theory, and as Mr. Stubbs says, he imagined that of all plants tobacco stood more in need of potash.

I think I've heard that Mr. Stubbs is not only a practical farmer, but also a scientific man. I should imagine that his opinions ought to have a great weight.  
J. S. Wood.

Albemarle Co., Va.

Dr. Stubbs, who is a most able and scientific chemist, and director of the Louisiana Experiment Station, is also a farmer in Gloucester county, Va., where he owns the old ancestral home of his family. This plantation is managed under his direction by his nephew, who has had a scientific education. In the course of experiments which he conducts regularly every year on his Virginia farm in a scientific manner, he has arrived at the conclusion that potash is little needed, even on the Eastern lands of this State, except it may be for tobacco, Irish potatoes and some vegetable crops. On the middle and Western lands he does not think it at all necessary except for these special crops. His opinion ought to have weight as he is a most careful experimenter and has had a long experience both theoretical and practical.—Ed.

### SOWING CRIMSON CLOVER SEED.

*Editor Southern Planter:*

For years I have been sowing crimson clover, both to turn in and for grazing. As a fertilizer it is estimated to be worth about \$10 per acre. It gives better spring grazing, while it lasts, than any grass we have. The seed ranges in price from \$2.50 to \$4 per bushel, and up to a year or two ago I had great trouble in getting "a stand."

I determined, if it could be done, to save my own seed. I wrote to the Aultman-Taylor people for prices on clover-hulling machinery, and found it cost too much for a small quantity—\$500 to \$800—so I concluded I would cut it with my mowing machine, rake in wind rows when the dew was on, and then beat out as you would black field peas or oats, when only small quantities (of oats) are needed.

It was more than a success. I not only got more seed than I needed, but seed that cost me but little, and which would always germinate. Since then (about three or four years ago) I have never had to buy any seed. This season I cut less than two acres and I secured enough seed to sow over forty, and I have beautiful stands wherever sown. I will be more than glad to give further information about this to anyone interested.

Several of my friends are now sowing their seed with the same results I have mentioned. The seed will be no trouble to sow, though they are in the husk and look like Orchard grass. A man can sow a drift of five or six feet. It cost me less than \$5 to save the seed. So on forty acres at 75 cents an acre (one peck at \$3 per bushel, the present price) I save \$25, and, what is best of all, get perfect results.

*Isle of Wight Co., Va.*

C. F. DAY.

### FERTILITY WITHOUT HUMUS.

*Editor Southern Planter:*

It is usually taken for granted by farmers that common clay contains no plant food. They think the latter exists only in humus or decayed vegetable matter. Such an impression comes from the fact that in worn-out land the humus has disappeared and nothing but clay remains.

It is true that little plant food that is available exists in such clay, for the nutrient element has been weathered out, or carried away in crops. There is plant food still remaining, however, but it is not in a chemical condition suitable for absorption by the plant.

That plant food exists abundantly in clay that has not been exhausted, we have many proofs. Near my place there is a fill in the public road, the dirt for which was taken from a red clay hill that contained no humus whatever. Yet the sides of that fill now sustain a vigorous growth of blackberry briars. The briars must

obtain their plant food from the clay, the elements of which have been made soluble by the incidental manipulation and exposure to the weather.

In a similar manner I have seen peach trees growing on the sides of railway embankments where it did not seem at all probable that there could have been any humus. At least it could not have existed in sufficient quantities to have produced the observed result.

A few years after the siege at Knoxville, during the Civil War, I noticed rank vegetation growing on the mounds of clay thrown up from the rifle-pits on the picket line. Poke stalks were especially vigorous. In this case it may be argued that the roots of the large plants penetrated to the original surface and fed on the humus there found, but this would not seem to account for the growth being more vigorous than on the adjacent surface where there was no superimposed clay.

I have also noticed a decided improvement in crops where clay has washed down upon low land at the foot of a hill. In all the cases mentioned, the clay must, of course, have sufficient length of exposure to the action of air, rain and frost. If a lot of raw clay should be turned up in the spring, and at once planted, the result would prove disastrous.

Still another evidence that humus is not essential to fertility is furnished by irrigated lands in arid districts. There has been no opportunity for vegetable mold to accumulate on these lands, and yet they are exceedingly productive. The plant food lies in abundance near the surface because there have been no rains to wash it away, nor has it been exhausted by crops.

I do not set forth these facts as newly discovered, but as overlooked by the general farmer. The exhaustion of our fields is, perhaps, as much a result of shallow and imperfect cultivation as of a loss of humus. In fact, it has been claimed that deep and thorough cultivation will make humus. It may be better to say that it will preserve humus and make plant food more available. We certainly may say that the better the cultivation the less need for a fertilizer and the more its effects. To use an expensive fertilizer on poorly cultivated lands is anything but a paying business.

*Knox Co., Tenn.*

K. N. CRAST.

Whilst it is undoubtedly true that most clays are rich in plant food, yet it is equally true that unless these clays become filled with humus they cannot be kept in a condition in which plants can utilize that food. In hot dry weather they bake into bricks, whilst in wet weather they become puddles. Neither conditions are conducive to plant growth. The presence of humus prevents both these conditions and makes clay soils some of the most productive soils in the world. A clay soil devoid of humus can never be kept in a productive condition by cultivation alone, as it practically becomes impossible to work in either very dry or wet weather.—  
Ed.

Mention the *Planter* to your friends.

## IMPROVING MOUNTAIN LAND PASTURES.

*Editor Southern Planter:*

I take pleasure in describing the value of our mountain lands. As my father owns several thousand acres, I have had some experience in the management of the same. In regard to Mr. Reynolds' letter, will say that we have lands at an altitude between 2,500 and 5,000 feet, and we think that these lands make the finest pastures in the South.

The land is very black and deep, with very rich soil, composed of rotten vegetable matter, which grows a very heavy growth of wild weeds or rattle weeds. In order to get a good stand of grass the land should be cultivated one year, or sow the grass seed (Orchard, Herds and Blue grass) the same year in the corn. This land will make 40 bushels of corn to the acre, and the pastures will last from 30 to 50 years. Mr. W. D. McCracken, of Crabtree, N. C., keeps his short horns on his pastures until Christmas in good condition.

As the land is cold it should be free from shade or trees. The grass is very tender from early spring until very cold weather. The land will keep one short horn three years old on every two acres for several months. The sod will be equal to any lawn or bottom land hay field, and after a good stand of grass will get better without renewal almost to the end of time.

A very economical way of setting mountain lands is to clean up the undergrowth, deaden all standing trees, sow seed March 1st, then keep enough calves (year olds) on same to keep the weeds down, and then the grass will spread to a solid sod.

Our mountain land will make cattle fatter than any other land in pasture, but will not grow them as large on account of the lack of lime in our soil. And as to finishing cattle, I am sure that you cannot find a soil that will equal ours in West North Carolina.

Mr. R. E. Osborne, of Waynesville, N. C., finished cattle on his mountain pastures, making a gain averaging 437 lbs. per head in one season.

*Haywood Co., N. C.*

ALDEN HOWELL, JR.

## COAL ASHES.

*Editor Southern Planter:*

Seeing an item in the Planter some time ago stating that there was no fertilizing value in coal ashes, and recently several articles relating to the cause and prevention of potato scab, will give you a little of my experience in Pennsylvania. Some years ago I had a piece of land cleaned off and had it broken up for Irish potatoes. The land had been a sugar bush timbered with sugar maple, therefore, I considered it plenty rich

enough without manure, but when I planted I put a pretty good sprinkling of coal ashes right on the potatoes in the furrows of part of the lot, then covered as usual. When I dug them in the fall the part that had the coal ash application had considerably larger and nicer tubers and they were entirely free from scab. I have since used coal ashes occasionally, and I always found nice clean tubers where so treated, and this leads me to believe that there is some fertility in coal ashes, and that they might be used to advantage as a preventive of potash scab.

*Goochland Co., Va.*

It is possible that ashes may be a preventive of scab, though we know of no chemical reason why they should so act, but certainly they have no value as a fertilizer as they contain no plant food.—Ed.

## KILLING STUMPS—LICE ON HOGS.

*Editor Southern Planter:*

I noticed in the March issue of the Planter a query by L. C. A., who wished to know a simple and cheap way to kill stumps, such as gum and poplar. Having received so much valuable information through the Planter I can, and will, furnish the desired information:

With a hoe pull away the dirt around the stump till the roots nearest the surface are exposed. The dirt must be pulled away about 12 or 15 inches from the stump, then place dry brush around the stump and burn till the exposed roots are well heated, and the stump will surely die, never putting out another sprout. I clear some land every year, and all stumps too large to take up with a hoe I kill in this way. I have killed many stumps with an armful of corn stalks applied in the above way. I think kerosene oil would do as well, though the brush or corn stalks is cheaper and available. If the stumps have no roots near the surface dig around the stump about 8 inches deep and burn as above directed. While I am writing I will give a remedy to rid hogs of lice. Take a small wooden paddle and dip in gas tar and apply to the hog where the nits are most found, say on both sides of the neck and hams. If the first application does not suffice make the second in a week or ten days, and it will utterly exterminate the lice. This can be done while the hogs are eating slop, which saves the trouble of catching and holding them.

M. C. HAWKES.

*Nottoway Co., Va.*

Mention the *Planter* when corresponding with advertisers.

### ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter* Richmond, Va., not later than the 15th of the month, for replies to appear in the next month's issue of the *Planter*.

#### Soja Beans.

I should be greatly obliged for the experience, through the columns of the *Southern Planter*, of any of your patrons as to the growing, cultivation, etc., of Soja beans in connection with ensilage corn for ensiling together. Also as to the growing, harvesting, threshing and feeding of Soja beans as a grain crop for grinding into meal to take the place of cottonseed meal, bran, etc., and as a forage crop to be made into hay.

*Shenandoah Co., Va.*

W. H. NEWMAN.

In this issue you will find an article dealing with Soy beans as a fodder crop. In last month's issue you will also find an article, "All flesh is grass," recommending them. They can also be grown with corn for the silo, but we prefer to grow them alone and then cut and fill into the silo with the corn load for load. This makes excellent silage, and you get a much heavier yield per acre than when grown together with the corn. When grown for the grain alone they should be planted in drills 2 feet apart and 10 inches apart in the row and be allowed to stand until the pods begin to turn yellow, but not until they are ripe, or they will shell out badly. Then cut and bind in bundles and set up in shocks like wheat until cured thoroughly. They may then be thrashed out with the separator, taking out the whole or part of the concaves and running the machine slowly. They should not be put in large bulk until thoroughly dry, as they heat quickly. We shall have more to say about this crop when writing on forage crops in our next issue.—Ed.

#### Corn Fertilizer—Composition of Fertilizers.

I have a field that has been pastured for several years which I propose to plant in corn. Will it pay me to use commercial fertilizer? If so, what? When and how should it be applied?

I am offered a fertilizer said to contain 4 per cent. potash, 10 per cent. phosphate and 86 per cent?

Now, can't I get this 80 lbs. potash and 200 lbs. phosphate and use them without hauling and handling 1,720 lbs. sand, or whatever it may be? If so, where can I get them, and how and when apply?

What and how much should I use for cow-peas, and when and how apply? Also for Irish potatoes.

*Henrico Co., Va.*

"W."

In this issue you will find in an article on "Work for the Month" our views on corn fertilizing. Phosphorus, the element from which phosphoric acid is obtained, is unavailable for use as a fertilizer. It is

so highly combustible that on exposure to the air it bursts into flame and has to be kept under water to preserve it for use in scientific experiments. Phosphoric acid for use as a fertilizer is always in some combination; most generally as a phosphate of lime, as in bone and South Carolina rock. In this combination it is largely in an unavailable form or only slowly available. To render it available the rock or bone is treated with about an equal quantity of sulphuric acid. When the acid is mixed with the rock or bone it combines with two-thirds of the lime, forming sulphate of lime (plaster), and leaving the phosphoric acid previously united with all the lime united with one-third of the lime as mono-phosphate of lime. This mono-phosphate is then in a condition to give up its phosphoric acid to the crop, the same being in that form soluble in water. The buyer of a ton of acid phosphate, analyzing 10 per cent. phosphoric acid, does not therefore haul and handle sand or useless material to the extent of 1,500 lbs. to the ton, but 800 lbs. of phosphate of lime containing 200 lbs. of available phosphoric acid and 1,200 lbs. of sulphate of lime (plaster), which in itself is available as a fertilizer. In no other form can you get phosphoric acid for use as a fertilizer than as a phosphate of lime. In the case of potash—this is a natural mineral production brought into this country from Germany. In the mines it exists in combination with other salts and minerals. Kainit is the form in which it is most largely combined with other elements. Kainit analyses usually only 12 per cent. of potash and the other 88 per cent. is largely chloride of sodium (common salt). In the form of muriate of potash there is usually about 45 to 50 per cent. of potash, and the other 50 per cent. is made up of other salts and acids. In buying muriate of potash or sulphate of potash, which is even purer than muriate, you will get the least admixture of any other element in any form of potash, and therefore have less to haul and handle to get the same quantity of pure potash. You can get the 80 lbs. of potash you mention in something less than 200 lbs. of muriate of potash and the 200 lbs. of phosphoric acid in 1,500 lbs. of 14 per cent. acid phosphate.

For cow-peas apply from 250 to 350 lbs. to the acre of acid phosphate. For Irish potatoes a good fertilizer may be made up of 300 lbs. nitrate of soda, 600 lbs. cotton seed meal, 800 lbs. acid phosphate, 300 lbs. muriate of potash to make a ton. Use from 400 to 1,000 lbs. to the acre.—Ed.

When corresponding with advertisers mention the *Planter*.

### Sorghum and Millet—Plowing for Wheat.

I want to know how will sorghum and millet do to sow for feed for stock. Will they mature together? If so, how much to the acre, and when to sow it, and at what stage to cut it. I also want to know about breaking land for wheat at this time of the year and then let it lay till July, as I can plow then with less rain. By plowing now is it against the land or not? I have about forty acres of old field that has been cleared of pine and stumps and has been run for years and is too thin for clover, and as labor cannot be had it is left to lay. I don't want it to grow up again in brush. I broke part of my land last spring at idle times, and if I had not done so then it would not have been in wheat to-day, as it was so dry. I could plow where I broke in the spring when I could not crack the other land. I never had a finer looking wheat crop at this time of the year.

*Guildford Co., N. C.*

D. B. SMITH.

Sow the sorghum and millet separately, as they will not mature together. Millet and peas and sorghum and peas make good hay when grown together. Break the land for wheat as soon as convenient, and keep working it during the summer and up to within a short time of seeding, and you will make a wheat crop.—Ed.

### Grass for Name.

I send you to-day under separate cover a sample of grass that seems to grow vigorously in a piece of low land I have. Will you please give me the name of the grass? I would like to put the land in it for a permanent pasture. It stays green nearly all the winter and can't be killed easily.

*Princess Anne Co., Va. . .*

THOS. S. LAND.

It is impossible for us to name a grass from a small sample of the first spring growth. We must have the seed stalk with the seed head on it and the root. If you will send us these later, we will endeavor to help you.—Ed.

### Blight on Apple Trees.

Some of my young apple trees are affected with what I call blight. The ends of some of the twigs are dead. You will find some twigs enclosed. Will you kindly tell me in the next issue of the *Planter* what kind of insects are on them, and if they are very injurious? Also suggest a remedy; and oblige a subscriber.

*Accomac Co., Va.*

LEE R. PHILLIPS.

The dead twigs have suffered from twig blight, a disease of the same nature as that called "fire blight" in pears. It is a bacterial disease for which no remedy has yet been found except to cut out the dead twigs below the point to which the disease has run. The apple being much more resistant to the disease than

the pear, it does not often cause more than temporary injury. Spray the trees with Bordeaux Mixture as advised in our Spray calendar published in last month's issue.—Ed.

### Corn Fertilizzr.

In next issue of your excellent paper kindly tell what a good fertilizer for corn should contain, and how much per acre should be applied (broadcast) on land from which a medium crop of clover hay was cut last season. This land will produce 20 or 25 bushels corn per acre without the use of any fertilizer, if season is good.

*Northumberland Co., Va.*

SUBSCRIBER.

See our article, "Work for the Month," in this issue—Ed.

### Seeding Crimson Clover and Vetch.

Will you please tell me if I can put in vetch and crimson clover seed with peas, say in July, and get a stand of the vetch and clover, or will the peas shade it to death? I expect to mow the peas off for hay in the fall.

*Iredell Co., N. C.*

O. E. SHOOK.

We have known crimson clover to be seeded with peas in July and August, and to make a stand, but it is a risky proceeding, as if the peas are at all a heavy crop they will smother the clover. It is too early to sow vetch in July. This crop can well be seeded after the peas are cut for hay, and unless the peas be cut very late the crimson clover can also be then seeded, though not with quite as good a chance of success as if seeded in August.—Ed.

### Cut Worms and Tomatoes—Fertilizer for Tomatoes—Grubs in the Backs of Cattle.

I have been troubled with worms cutting off my tomato plants as soon as they are set out; what is a preventative? How much fertilizer must I use to insure a good crop of tomatoes on land which will produce from 5 to 6 barrels of corn per acre? Is it proper to remove the so-called "wolves" from the backs of cattle or let nature pursue its course in expelling them? Which do you consider the better method of cultivating corn, flat or in beds, and what the best implement to use in working it?

*Westmoreland Co., Va.*

F. E. OMOHUNDRO.

Previous to setting out the tomato plants, and when the field is clear of vegetation of any kind, mix Paris green with bran moistened so that it will stick together in balls. A little molasses mixed with it will help it to stick and make it more attractive to the worms. Drop the balls at intervals over the field. The worms will find them and be poisoned. Or dip bunches of green clover in Paris green mixed in water, and drop these at intervals over the field. In this issue you will find an article dealing with the tomato crop in which you will

find our views on this fertilizer best suited to meet the needs of the crop. These so called "wolves" are one stage in the life history of a fly which troubles cattle when flying about. They should be squeezed out of the hole, which will be found at the top of each cell, and be killed, and thus lessen the number of pests for another year.—Ed.

### Johnson Grass.

Professor Massey strongly condemns Johnson grass and sustains his argument with the experiences of farmers residing in the cotton and sugar regions. Do you know any farmer residing north of Richmond, Va., who has experimented with this grass? Bulletin No. 11, on Johnson grass, of the United States Department of Agriculture, throws no light on this inquiry, for the investigations of its author, Mr. E. E. Ball, were confined to the States of Alabama, Louisiana, and Texas, and is therefore of no more weight for us farmers in Northern Virginia than bulletins devoted to cotton and sugar. We need a permanent pasture grass, which will be to our lands what Blue grass is to my old home limestone farm in Ohio.

Can you aid to that end?  
Alexandria Co., Va.

R. S. LACEY.

We have heard of several farmers to the north of this city who have tried Johnson grass and are satisfied with it. It makes a good growth, and, cut early enough, makes good hay. It is valuable as a pasture, but should not be grazed too closely. It may be killed out by close grazing in this State and by exposing the roots to the winter's frost. Bermuda grass makes the best summer pasture of any grass we know of for the eastern and middle sections of this State, and Virginia Blue grass (*Poa compressa*) for the other sections.—Ed.

### Failure of Soil to Grow Crops—Insects in Seed.

Please advise me in your next issue about the following:

1. I have a piece of land which I think is very rich and light, with clay subsoil, which makes a fine yield of collards, corn and snaps, but turnips and salad don't do so well. Salad comes very readily, but is a light, delicate green, and in spring after having been through the bad weather, it puts out very small, but with a very good flavor.

2. I used a piece of land for tomatoes which is very light and rich, with a slight sprinkling of clay and with clay subsoil, and after seeing that they did not make the yield they ought to do, as the vines grew fast enough, I tried nitrate of soda, a small quantity, and in a short while the vines became yellow, and showed signs of dying. This I do not attribute to the soda, as the same land did so on previous occasions. It brings snaps, butter beans, etc. I depend on stock manure, but tried the crops without manure, as I thought the land was

in prime condition, having been manured for previous crops.

3. I kept snaps in hulls in a bag in a dry place for seed, but on looking over my seed the other day I discovered that they were full of insects. What must I do to get rid of these?

Chesterfield Co., Va.

A SUBSCRIBER.

1. The failure of the land to grow turnips and salad would indicate that it is lacking in nitrogen and potash. We would apply 100 lbs. of muriate of potash and 100 lbs. of nitrate of soda and 500 lbs. of cotton seed meal to the acre.

2. We think if you had applied 100 or 150 lbs. of nitrate of soda to the acre on the tomato field that it would have had a good effect, that is, assuming the land to be as well supplied with fertility, as you suggest. It may be that this land also lacks potash as well as nitrogen. It would be well to test this by applying muriate of potash to some part of it.

3. Put the seed snaps into a box and place a saucer full of bisulphide of carbon on the top of them and close up tightly, and this will destroy all insect life in them. Be careful to keep lights away from the bisulphide, as it is very explosive.—Ed.

### Top-Dressing for Meadow—Fertilizer for Young Apple Trees

1. What makes the best top dressing for meadow? Would you harrow after making application?

2. What is the best fertilizer for young apple trees?  
Patrick Co., Va. R. S. MARTIN.

1. In our last issue in our article on "Work for the Month" you will find particulars of the fertilizer used by Mr. Clark in his most successful grass growing experiments. The fertilizers he uses we can endorse as being suitable. The quantity per acre we should much reduce, say to one-half, unless the land had been as perfectly prepared as Mr. Clark's. In a series of experiments made at the Rhode Island Experiment Station, three plots of grass land have been tested with different top dressings for the last four years, with the following results: On each of the plots 130 lbs. of phosphoric acid per acre supplied by 807 lbs. of acid phosphate has been applied in each year. In 1899 and 1900 180 lbs. of muriate of potash was applied to each plot. In 1901 and 1902 200 and 300 lbs. of muriate of potash were applied, respectively. On plot 17 no nitrate of soda was applied, on plot 19 130 lbs. of nitrate of soda was applied per year, and on plot 21 414 lbs. of nitrate of soda was applied per year. The following are yields of field cured hay harvested in 1902 from these three plots thus top dressed:



- Plot 17, without nitrate of soda, but with the phosphoric acid and potash mentioned above.....2,950 lbs. per acre.
- Plot 19, with 138 lbs. nitrate of soda and the acid and potash mentioned above.....4,850 lbs. per acre.
- Plot 21, with 414 lbs. nitrate of soda and the acid and potash mentioned above.....8,200 lbs. per acre.
2. For the young orchard apply 250 lbs. of acid phosphate and 150 lbs. muriate of potash per acre, and sow cow-peas to plow down in the fall and then follow with crimson clover or vetches for a winter cover—Ed.

### Lame Horse.

I want some information about curbs on horses. My horse has a knot on both hind legs just below the knee joint. Can you recommend anything to cure same?

Brunswick Co., Va. C. I. MITCHELL.

Firing is the best remedy for a long standing curb, and even this is not always effectual. The animal should have rest, and high-heeled shoes should be applied.—Ed.

### Cow-Peas and Oats—Cow-Peas and Corn—Killing Persimmons.

We of this section know but little about raising cow peas for hay or forage, and I am going to ask for some information along that line. How would it do to sow peas, corn, and oats together about the 10th of May, to cut for hay when peas are ready, and, if advisable, how much of each should be sown? Expect to put them in with a wheat drill and use small amount of fertilizer. Would you advise planting peas in the hill with corn, where corn is to be cut by hand?

You can say to your inquirer who wants to know how to get rid of his persimmon bushes that if he will cut them off even with the top of the ground during the months of January or February he will find it a sure way to get rid of them. This is best done when the ground is frozen, and it is claimed to be more successful if done at that time. This plan acts equally well with all other kinds of bushes.

Fauquier Co., Va. W. L. RICHARDS.

Cow peas and corn may be sown together in May, but we do not think that oats sown with them will be likely to make much growth. We think sorghum seeded with peas make a better hay than corn. If put in with a drill, half a bushels of peas and a peck of sorghum will be sufficient. If corn is planted with the peas, a peck will be sufficient. The practice of planting cow peas in the hill with corn is being largely practiced in some sections, and with good results. They are so planted even when the corn is to be cut with a machine. For filling the silo, this makes a most valuable crop, as the result is

a much better balanced ration for stock. For a fodder crop, they are excellent. Our Northern Virginia farmers should give more attention to cow peas and other forage crops. There is profit in growing them. The quicker maturing varieties of peas should be planted.—Ed.

### Lime—Nitrate of Soda—Potash.

1. How can we farmers get stone lime?
2. How apply it? How much to an acre?
3. Is it cheaper to buy stone lime by the barrel at 80 cents a barrel, or shell lime slacked at 6 cents a bushels?
4. How do we get nitrate of soda and muriate of potash?

Chesterfield Co., Va.

AN OLD SUBSCRIBER.

1. You will find stone lime advertised in *The Planter* by Reeves' Catt. Write him for quotations delivered at your depot. He will, we think, give you a much better price than you name.

2. Apply from 15 to 25 bushels to the acre in the fall or early winter. Set the lime on the field in the stone in small lumps of less than half a bushel each. Throw half a bucket of water on each lump and then spread broadcast with a shovel.

3. We prefer the stone lime to the shell lime. A bushel of stone lime should slack out to 3 bushels.

4. You will find nitrate of soda and muriate of potash advertised in *The Planter* by E. Mortimer & Co., New York.—Ed.

### Value of Milk Cows.

I have two graded milk cows that eat the same amount of food. One of them gives me 6 gallons of milk and  $3\frac{1}{2}$  lbs. butter per day. It is firm, but white. The other cow gives me 5 gallons of milk and  $2\frac{1}{2}$  lbs. butter that is as yellow as gold. Which one is worth the most on the market or to breed from? Also state what you think they are worth, at a reasonable price.

J. G. ANDREWS.

The one giving the most milk and making the most butter is the more valuable cow either to sell or breed from. The want of color in the butter can easily be remedied by a little butter coloring added to the cream before churning. We have used a little annato or the coloring matter from a good red carrot for this purpose. We could not undertake to place a value on cows we have never seen.—Ed.

### Wood Ashes.

I would like to know the constituent quantities of wood ashes.

Berkley Co., S. C. . . . . JAMES JOYNER.

A good sample of hardwood ashes (unleached) will analyze 5.25 per cent. potash, 34 per cent. lime, with a small percentage of phosphoric acid.—Ed.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The remarkable burst of spring weather which has distinguished the month of March has set all vegetation to growing, and is going to make the months of April and May very busy ones in the garden and truck fields, as all the earliest crops now press for attention. Do not, however, be in too great haste to plow or work land, but wait until it is dry enough to crumble as it falls from the plow, and then it will warm up quickly and work freely all through the season, and clods will be conspicuous by their absence. Continue the work of getting out manure on to the land and apply with it the acid phosphate and potash which you intend to use, and then work the whole thoroughly into the land. These mineral fertilizers require time to become available, and they are so essential to the successful growth of vegetables that their use is to be encouraged by all truckers and gardeners. Before planting any crops lay out a plan of the garden, and so apportion the land as that you may be able to have a continuous supply of vegetables for the table all through the season until frost cuts them off. Work the land as finely as possible, and then lay off the rows so that cultivation may be done by horse labor. Where this is not done, crops are frequently lost from lack of time to give the necessary hand labor to the work.

Irish potatoes and English peas, not already planted, should be gotten in at once, and those planted should be encouraged to grow by cultivation. Whilst the weather is so genial as to encourage the planting of full crops it should be borne in mind that it is yet too early for us to feel safe from frost, and, therefore, it will be wise not to put into the ground more than a small part of the crop except in those sections near the coast, where frost rarely does much injury after this time. The end of the month and the first half of May is soon enough to put in the full crop. Salads, lettuce, radishes, onions and successional crops of English peas may be sown. Onion sets may be planted and cabbage plants be set out if well hardened.

Fall planted cabbages should be encouraged to grow by cultivation, and after they have made a good start a top dressing of 100 lbs. of nitrate of soda to the acre will help them greatly.

The seed of tomatoes, egg plant and peppers should be sown in gentle hot beds in frames, and as the plants become large enough to handle they should be transplanted into cold frames or where they can be protected

by canvas or mats at night and during the cold season.

Sweet potatoes may be bedded in the hot beds to provide plants for setting out in May. In our last issue will be found instructions for making a hot bed.

Strawberry beds should be worked out and the plants be encouraged to grow. If not looking thrifty a top dressing of nitrate of soda, 100 lbs. to the acre, should be applied. After working the beds and top dressing, apply between the rows a mulch of pine tags or trash, free from weed seed of any kind, to keep the berries clean.

See that attention is given to the spraying of the orchard, vineyard and small fruit plantation. In our last issue will be found a spray calendar, giving full instructions on this subject.

Clean up all trash from the lawn and flower garden and dig up the flower beds and give them a dressing of good, rich manure. Plants that have been kept in the house or in pits during the winter should now be exposed to the air on every fine day, and thus be hardened so that they may be ready to plant out in the beds next month. Send to the seedsman for a copy of his catalogue, and make a selection of hardy flower seeds and plants. For a dollar or two enough can be bought to make a good sized garden gay with bloom all summer. Strive in this way to make the home beautiful and attractive. It will do more to keep the young people in the country than much advice. Imbue in them a love of nature and of nature's productions, and they will long more every day to spend their lives with these surroundings.

### TOMATO GROWING.

During the past two years there has been a great development of the canning industry in Maryland and part of this State, and this seems likely to be still further developed this year. The result is that there is demand for information as to the raising of the tomato crop. For canning purposes the crop raised is the medium and late crop. The early crop is grown mainly to supply the markets with tomatoes for the table. The soil best adapted for the crop is a well drained, sandy loam, though it is not so essential that this should be the character of the soil where the crop is not required to be early. One having greater natural fertility and a stronger consistency will grow the crop

equally well, and produce more fruit if well drained and finely prepared. It should be free from weeds, and deeply and thoroughly broken and fined. The fertilization of the land may be either with farm yard manure or partly manure and partly commercial fertilizer, or solely with commercial fertilizer. If farm yard manure alone is used it ought to have been gotten on the land in the winter and be thoroughly worked in previous to planting, and a good shovelful of the best manure should be placed in each hill at the time of planting. Where manure and fertilizers are both used they are usually applied in the hill at the time of planting. This is generally the most successful way. Where fertilizers only are used they should be applied part on the hill at the time of planting and part during the growth of the crop. The tomato is a plant that responds well to heavy manuring and fertilization. Experiments made at the New Jersey Station show that nitrate of soda is one of the best nitrogenous fertilizers for this crop, and that its used in small quantities, 160 lbs. per acre in one application, or in large quantities, 320 lbs. per acre in two applications increased the yield materially. Where the soil is poor naturally in plant food a fertilizer made up of 600 lbs. of acid phosphate, 300 lbs of muriate of potash and 500 lbs. of tankage or cotton seed meal should be applied at the rate of 500 lbs. to the acre previous to setting out the plants and be well mixed in the soil. Then at the time of setting out the plants apply 100 lbs to the acre of nitrate of soda. This should be spread in small quantities around the hills, but not be allowed to touch the plants. Where nitrate of soda is used along with manure the manure should be applied in the hill, or be mixed with the soil, and the nitrate of soda be applied on the hills after setting out the plants. Acid phosphate and potash can be used with advantage along with manure, and should be worked with the soil. The plants should be set from 4 to 4½ feet apart each way, and should be sturdy, stocky plants, which should have been transplanted once or twice from the hot bed before being set out in the field. The seed for raising the plants should be sowed in a gentle hot bed in March or April, and the young plants should be transplanted as soon as they can be handled into a cold frame or on to beds where they can be protected with canvas or mats at night or in case of a cold season. Do not force the growth so as to make the plants spindling, but aim to use stout, stocky plants. When setting them out in the hills plant somewhat deeper than they stood in the plant beds, and this will increase the root growth. Cultivation should begin as soon as the plants are set out, so as to lighten and freshen the soil, which will have been tramped down in the setting. Cultivate deep the first

time, and afterwards shallow so as not to disturb the roots. Frequent cultivation is desirable to encourage rapid growth. The variety to be planted for canning purposes is very much a matter of local adaptability. The Stone, Paragon, Trophy and Perfection are good and reliable sorts. The yield per acre will vary from 5 to 10 tons, and sometimes goes as high as 20 tons. About 8 tons is considered an average crop in canning sections.

#### NOTES ON VARIETIES OF APPLES AT THE AGRICULTURAL EXPERIMENT STATION, BLACKSBURG, VA.

[EXCERPT FROM BULLETIN 130.]

[Continued from March number, 1903.]

*York Imperial* (Johnson's Fine Winter).—This is one of the best known of Virginia standard orchard fruits. It originated in Pennsylvania. The tree is a very vigorous grower, forming a rounded head, fairly compact, of excellent shape; trunk 30 inches in circumference at base, 27 inches at head. The tree develops in certain situations a grave weakness in regard to blight and of recent years this has very much damaged its standing as a commercial variety. Thus far it has not been possible to determine whether this peculiarity is more markedly developed on one soil than another.

Here the first bloom was noted in 1893, and the first fruit in 1897; that year the trees bore a very fair crop of fruit for their size, of fine form, and free from disease; in 1899, the crop was light; in 1901, the crop was fairly heavy, being an average of six bushels per tree. The fruit was of fine character, about 70 per cent. first class. This crop is not at all heavy for the size of the trees, and in this characteristic the variety does not at present compare well with the productiveness of Arkansas. The fruit of *York Imperial*, and also the quality, do not require a description in this State, but to our taste it is lower in quality than Arkansas.

Whether this variety will continue to hold its place as one of our chief market sorts, is a question which must be considered in the gravest manner by growers, and we suggest that observation in every community ought in a measure guide planters. If it continues to show serious trouble from the blight, other more hardy varieties ought to take its place in the planting of commercial orchards.

*Grimes' Golden*.—This is an old variety of Virginia origin, and though well known as the standard of quality of distinctly dessert apples in America, it is not so commonly met with in our fruit plantations as its worth warrants. Here the tree is a good grower, quite healthy; forms an upright, moderately spreading top with well grown wood. The trunk measures 28 inches at base and 26 inches at head in circumference.

This variety bloomed first in 1893 and gave a few fruits in 1895, and a fair crop in 1897 and 1899; in 1901, the crop was much better, but was not measured. The past season it bore a light crop of fruit, though it was the off year. Up to the present, though the trees

are fine and large, they have never borne a heavy crop of fruit. The fruit is medium to large, round, oblong, a beautiful golden yellow color when ripe. Quality as to spiciness and high flavor, unsurpassed. No home orchard should be without this valuable variety, and as grown here, it has every quality to warrant its shipment to market as a fine grade of boxed fruit.

*Roxbury.*—A famous old variety of Massachusetts origin, but which is little grown at the South. The tree is a robust grower, forming a lowspreading head, strikingly characteristic. The trunk measures 28 inches in circumference at base, and 22 at head. It has been entirely healthy at this place, free from blight and fungous diseases.

First bloom was noted in 1895, and first fruit in 1897; in 1899, the trees bore a half bushel each, and in 1901, 2½ bushels each. The fruit is of large size, roundish, oblate, with a distinctly characteristic russet skin, which plainly distinguishes it. In quality, it has a peculiarly fine flavor and aroma all its own, and is unsurpassed in this regard by any other American variety. In this regard, the Southern grown fruit seems to be superior to the Northern grown. We think that especially in the high mountain situations of Virginia, this apple could be grown to perfection, and as it keeps well in cold storage, it might prove a desirable commercial sort.

*Smokehouse.*—An old variety of Pennsylvania origin, and widely known as one of the finest autumn and early and winter varieties, especially for dessert and kitchen use. The tree is a vigorous grower, forming a well-shaped, spreading head. The trunk is 36 inches in circumference at base, and 31 at head. It is practically free from blight, and not overly susceptible to fungous diseases.

First bloom was noted in 1893, and the first fruit in 1895; in 1897, the trees bore a full crop for their size, but in 1899 and in 1901, the crop was very light—only one bushel per tree. Thus far the tree is a shy bearer in this situation. The fruit is roundish, oblate; yellow color, spotted with crimson. The quality is excellent, and the fruit is fairly free from rot and scab. This variety has excellent qualities for the amateur and for the home orchard, but hardly to be commended as a commercial variety. Season, early winter; here, autumn in all lower parts of Virginia.

*Clons.*—Since issuing Bulletin 128, we have a considerable number of requests for Clons. So far as possible each year we will furnish a limited number of cuttings from the Station orchards to interested parties who are willing to bear the expense of preparing and transportation of the same.

WM. B. ALWOOD,  
*Horticulturist.*

Dec. 20, 1902.

## ORCHARD AND GARDEN NOTES.

*Editor Southern Planter:*

The farm garden is too frequently a source of vexation and annoyance to the farmer instead of pleasure and profit. This owing to a bad location, poor arrangement and an insecure fence, that permits fowls to get into the grounds and scratch up the plants and seeds. All these things can be easily prevented. See

to it that the garden fence is made secure at once. It is too late this season to change the location or arrangement. The rush of spring work is now on in earnest, but the garden must not be neglected. If the grounds are enclosed by a good fence, and the rows of vegetables and fruits are made straight across the garden to permit of easy cultivation, many pleasant hours of healthful exercise can now be spent in it. To watch the flowers open and the plants grow after a spring shower is a rare treat to all lovers of nature. Take the boy into the garden and teach him how the different blooms fertilize themselves—teach him the meaning of color in flowers, why the most highly colored flowers are the least fragrant, why the white flowers are usually more fragrant, and why insects are attracted to flowers.

Nature offers to teach us a thousand lessons now if we would only learn. All our work must not be for the dollar. Our greatest efforts should be to make better men and women. I never saw a good garden where an uneducated and unhappy family lived. The garden tells something about the family to the passer-by. What does it tell about you?

Plant some melons in the garden for the boy. If he can invite some of his playmates to his home some warm Sunday afternoon in August to help to eat a fine, red, luscious watermelon, grown by his own hand, and just from the cool spring, he will be more contented to stay on the farm when grown up. Plant some Duke Jones watermelon seed and Ideal or Rockyford canteloupe seed the last of this month. Use a shovel full of well-rotted manure thoroughly mixed with the soil of each hill before planting the seed.

Now is the time to do some top grafting in the orchard. Nearly all orchards have some undesirable trees in them which may be made to bear good fruit by top grafting. While this fact is often realized still the grafting is usually put off and neglected in the great rush of spring work.

Explain all the details of the operation to the bright farm boy, and he will usually attend to it in time. While teaching horticulture for ten years, I found no subject so fascinating to the young man as that of how to bud and graft. It was a marvelous thing to him to learn that by grafting the tree with small pieces and twigs from other trees that same tree could be made to bear early apples, late apples, red apples, yellow apples, &c.—in fact, be a small orchard in itself.

When I was a boy it always appeared to me that the nurseryman had a great secret in propagating and growing so many nice young trees. How he did it appeared

a great mystery, and was past finding out by other people. I was never satisfied until I learned about this secret, and found what the mystery was. It was interesting to me to learn that there were many other young men who had the same desire. Just here let me state, parenthetically, that most nurserymen do have certain rules to follow in propagating particular kinds of fruit, which rules they find from their own experience are best. These particular rules are not published in the books, and the nurseryman does keep them "a secret" as much as possible. These special rules are for the professional nurseryman and not for the farmer.

The first thing in successful top grafting is to have the scion, or piece of wood, you are to use in grafting, more dormant than the tree upon which the grafting is to be done, though grafting is successful sometimes after buds are swollen. I cut off the water sprouts that are the size of a lead pencil before the buds swell and bury them to hold them dormant till the buds on the tree I want to graft on begin to open. We call these sprouts, scions. Label them carefully. The next thing is to have good grafting wax. This you can make yourself.

Melt together in a kettle,  $2\frac{1}{2}$  lbs. of English rosin and 6 ounces of bees wax. Melt 9 ounces of tallow in another vessel. Then stir them while mixing together. Let the material partially cool and then work it like people do the old-fashioned home-made candy or "taffy." Use a little oil on the hands to keep the wax from sticking. You need a sharp, thin-bladed knife, and you are ready for the work.

Limbs from one-half to one inch in diameter are about the right size to cut off and graft into the stubs, though much larger ones can be used. If so, insert a graft on each side. Use a thin, sharp implement for splitting the stub. Make the graft wedge-shaped to fit into the cut nicely. The bark must not be bruised. Now, the "great secret" in grafting is to make the inner bark (cambium) of the graft fit up closely with the inner bark of the tree or stock. When growth starts at these places union will soon take place. Put on the wax carefully to keep the water out, and the job is completed. It is best not to cut off all the limbs on the tree at one time, since one or two should be left to elaborate the sap till the grafts grow up.

Later on I will have something to say about budding.

Let the boy start a small nursery in the garden and plant peach seed, apple seed, plum seed and cherry seed for grafting and budding stocks. Remember this when the seeds ripen. Make cuttings of grape vines and quinces for setting out now. The quince cuttings will

make good stock upon which to bud pears. Of course, this stock will make dwarf pear trees, just the right kind for garden planting. Now is the time to make them, though cuttings made in the fall do best. Cut them about 12 inches long and plant them into the ground in rows 3 feet apart, and 12 inches apart in the row. Do not injure the bark on the end that goes into the ground. Press the dirt firmly around the cuttings.

Plant some Haverland and Lady Thompson strawberries now in your garden for family use.

Montgomery Co., Va.

R. H. PRICE.

### SPRAYING PEACHES.

Professor M. B. Waite, the pathologist in charge of Investigations of Diseases of Orchard Trees, suggests that the following treatment should be given peaches:

First treatment before the buds swell, in addition to copper sulphate, give for San Jose scale and curl leaf, lime, sulphur, salt solution; second treatment, just before the flowers open, Bordeaux mixture, 6-4-50 formula; third treatment, when the fruit has set, weak Bordeaux mixture, 3-9-50 formula; fourth treatment, two weeks later, the same. Peach foliage is sensitive to Bordeaux, even the 3-9-50 formula, which consists of 3 lbs. bluestone, 9 lbs. lime and 50 gallons water, being somewhat injurious.

### TOMATO BLIGHT AND ROT.

Professor M. B. Waite suggests the following treatment:

First application Bordeaux mixture on seedlings in the seed bed when they first begin to form rough leaves; second application 5 to 7 days later, repeat; third application when they begin to grow and form new leaves in the field; fourth, fifth and sixth at intervals of from 10 to 15 days.

### CANELOUPE BLIGHT.

Professor M. B. White suggests the following treatment:

First application Bordeaux mixture when the vines begin to run; second, third, fourth and fifth repeat at intervals of 10 days to two weeks, or in such a manner as to cover the new leaves as rapidly as possible after they are formed.

### CORROSIVE SUBLIMATE FOR SCAB ON IRISH POTATOES.

In our last issue in advising a remedy for the prevention of scab on Irish potatoes the types make us say a solution of 2 ounces of sublimate to 16 ounces of water. What we did say was 2 ounces of sublimate to 16 gallons of water.

## EXPERIMENTS WITH INSECTICIDES ON IRISH POTATOES.

### BUG DEATH, PARIS GBEEN, AND ARSENATE OF LEAD COMPARED.

Three series of experiments were made during the season of 1902 with the purpose of comparing Bug Death, Paris green and Arsenate of lead as insecticides as measured by the readiness with which they kill the potato beetle and particularly, the yield per acre. One set of these experiments (5 plots) was made by the Danforth Chemical Company at Caribou; another (12 plots) by the Maine Experiment Station at Houlton; and another (9 plots) by Mr. E. A. Rogers at Brunswick. The Caribou experiment was also under the care of Mr. Rogers. The insecticides were used in conjunction with Bordeaux mixture, the plots being sprayed five times. The details of the experiments will appear in a bulletin of the Maine Experiment Station to be published as soon as the analyses of the potatoes are completed. The average yield per acre of merchantable potatoes from the plots in the experiments are given here without discussion.

### AVERAGE YIELD PER ACRE OF MERCHANTABLE POTATOES.

EXPERIMENT AT CARIBOU BY DANFORTH CHEMICAL CO.  
Bush.  
per acre.

Bug Death . . . . .	288
Paris Green . . . . .	247
Arsenate of Lead . . . . .	245

EXPERIMENT AT HOULTON BY MAINE EXPERIMENT STATION.

Bug Death . . . . .	319
Paris Green . . . . .	314
Arsenate of Lead . . . . .	318

EXPERIMENT AT BRUNSWICK BY MR. ROGERS.

Bug Death . . . . .	332
Paris Green . . . . .	321
Arsenate of Lead . . . . .	335

Orano, Me. CHAS. D. WOODS.  
Director.

When corresponding with advertisers mention the *Planter*.

## ORCHARD PLANTING IN PIEDMONT VIRGINIA.

Mr. S. B. Woods, the president of the Horticultural Society, writes us that he is pushing the work of planting orchards in the Piedmont section. In one orchard they are planting out 10,000 trees this spring, and in another 20,000 trees. The owners of the latter orchard will then have about 54,000 trees planted. Virginia is fast making her way to the top of the list of fruit producing States. She now stands about the fifth, with over 10,000,000 trees planted.

## LIME-SULPHUR-SALT WASH FOR SAN JOSE SCALE.

In the West, especially in California, where San Jose scale and similar insects have been a great menace to fruit growing, the lime sulphur salt wash has become the dependable means of depression. Tested in the East, some years ago, it received an unfavorable report, as it seemed to wash off the trees by rains before exerting much destructive effect on the insects. But tests made by the Station at Geneva, N. Y., during the past season, show that, properly made, it adheres to the twigs and limbs remarkably well, even during such exceptionally wet weather as we had last spring.

In the tests more than seven hundred trees, in five orchards scattered well over the State, were treated with this wash. Only in one instance, when the foliage was too far advanced, was there any injury to fruit, leaf or twig, and this damage was slight. When applied before the buds began to swell, their opening was retarded a few days, but within two weeks or so all difference between treated and untreated trees, in this respect, had disappeared; but later the untreated trees continued to lose vigor and healthfulness through the work of the scale, while the treated trees were practically cleared of the pests.

The mixture is made by boiling together 40 pounds of lime, 20 pounds of sulphur, and 15 pounds of salt, in about 30 gallons of water. Boil for two hours; then add more water to make 60 gallons, and apply while hot, using a powerful pump and good nozzle.

## PAWPAW AND PERSIMMON.

Considerable interest is being taken in Orange county, Ind., in the cultivation of the pawpaw and the persimmon. Already the latter has been doubled in size, the seeds reduced in size and number, and the puckery taste largely eliminated, so that the fruit, when placed on the city markets, finds ready sale. The growers have received substantial returns for their efforts, and as both wild fruits respond so readily to cultivation, they feel assured that there is a great future for them. Both are beautiful shade trees of rapid growth, and it is urged that farmers plant them along the roadsides for the benefit of the travelling public, where the trees can easily be cared for and given a chance to develop as well.

## KAFIR CORN, SORGHUM AND MILLET AS FEED.

Editor *Southern Planter*:

I have tried Kaffir corn, sorghum and German millet with cow-peas for feed. I drill 1 bushel of peas and 1 peck of German millet per acre. I like the millet the best, it gives a much finer feed, and cures better than Kaffir corn or sorghum. As I have to cut with a mowing machine, I find that the rake will pick it up cleaner than either Kaffir corn or sorghum; but whatever is sown with peas let every farmer sow peas. It is the best cow feed given when properly cured, and brings the land into a better state of fertility at the same time.  
*Stafford Co., Va.* AUG. SORGENFREI.

## Live Stock and Dairy.

### A FARMERS OBSERVATION ON FEEDING.

*Editor Southern Planter:*

Domestic animals cannot provide food for themselves, but are entirely dependent on their owner, who is responsible for their condition, and is rewarded for his labor and kindness, financially, in proportion to his knowledge and skill in the art of feeding. He is also compensated, morally, by the pleasure it always gives the righteous man to confer comfort and happiness on dependent creatures. "The righteous man regardeth the life of his beast." The "Good Book" makes kindness to animals the test of righteousness.

The subject of feeding to the best advantage has engaged the attention of farmers and herdsmen ever since the herdsmen of Abraham and Lot quarreled about the pasture and Jacob fed Lahan's cattle.

That able, careful and candid experimenters should not always be able to arrive at the same conclusions is not surprising nor derogatory to scientific research. It only shows that human knowledge is limited, and that different minds pursuing different courses of reasoning may arrive at different results. Experiments differ in spite of all painstaking, because they cannot be made under the same conditions.

The first and most important thing about feeding for profit is to supply the animals with the kinds of food in the qualities and quantities that will produce the most flesh or milk at the *least possible cost*. This problem most farmers must solve for themselves, because the different cost of feeding stuffs in different localities renders the experience of other feeders (though accurate for the places where made) unreliable in other regions. There is, perhaps, no investigator among the large body of able and educated men who has given the subject of feeding animals more study than the late Professor E. W. Stewart, or whose writings are more valuable than his. But there is such a difference in the capacity of different animals of the same species, age and size, to appropriate and digest food, that neither Professor Stewart nor any other person could prescribe a ration that would be exactly suitable for all. By my own experience in feeding I have found that animals with the most ravenous appetites are not always the ones that fatten the fastest, or can endure the strongest feeding without becoming cloyed. It may be their greed and hasty eating impairs digestion, and a portion of their food passes away without giving up the nourishment, and creates a looseness of the bowels not favorable to putting on flesh or secreting milk. Some of our fat-

tening steers that increased in weight the fastest were of a quiet, stolid disposition, ate their rations with great deliberation, and no matter how much meal was given to them, would never eat enough to cloy their appetites or bring on diarrhea. When they left a little feed in their boxes I took it out before the next feeding time, and gave them a little less for the next meal.

The right quantity to be fed for the cheapest production of flesh or milk and the maintenance of the health of the animals, is the quantity they will eat up clean every time. I know of no better criterion. No animal can gain in flesh if only fed enough to keep it alive.

Inexperienced feeders are apt to feed too strongly, especially at the start. They are in a hurry to get their animals fat, and so crowd them with grain, thinking that is the right road to the end they have in view; but they soon find their animals refusing their food, their dung as thin as water, and that they have lost flesh instead of gaining any. It requires *time* to fatten animals, the business cannot be hurried, and it is better to feed too little grain than too much.

Most steers of 800 lbs. weight, after becoming gradually accustomed to it, will eat 8 quarts of corn meal per day to advantage, besides what hay or stalks they require. If corn and oats were of the same price per hundred I would grind equal parts of them together, and feed about 14 lbs. per day of the mixture. It is relished better, furnishes a more bulky ration to fill the stomach fuller, and does not become so compact as corn meal alone. There is not much doubt that it pays to cut the fodder, whether straw, stalks or hay, into half-inch pieces, wet the mass and mix the meal with it thoroughly, thereby securing a better digestion of the meal by having it raised and remasticated with the cut fodder to which it adheres.

Professor Sanborn does not believe in this mixing meal with cut fodder for cattle, but Professor Stewart recommends it, and my own experience sanctions the practice. When meal is to be put on cut straw, hay or stalks, I have enough rye ground with the corn and oats to make the meal and fodder stick together, so that the animals must eat the whole in order to get the meal. One bushel of rye ground with three bushels of corn and one of oats is sufficient for the purpose, or the oats may be left out entirely if oats are relatively dearer than corn and rye, which is frequently the case. Corn and rye are of the same weight, and usually the same price in this locality. Rye is not quite so fattening as corn, but when ground is a healthful, palatable food

for cattle, and improves the ration without adding to its cost. The most profitable feeding I ever did was to fatten a lot of ten steers which weighed 800 or 900 pounds each when first put up, almost entirely on cut straw mixed with rye and corn meal. I give each steer about a bushel basketful of straw moistened with water, and mixed with 7 lbs. of meal at each feed, and two feeds per day. Dry hay was fed after the cut feed was eaten, but it required very little to satisfy them. A greater gain will be made if each animal is supplied with a few pounds of roots every day in addition to its other food. There is not much fattening substance in roots, but they sharpen the appetite, assist digestion and promote the general health of the animals. There is no doubt that when ensilage is well preserved and fed in addition to hay and grain by adding to the variety of foods, it gives a change of diet which animals, as well as human beings, crave, and is favorable to the preservation of vigorous health, and the formation of flesh and milk.

Animals are not kept on the farm like canary birds, gold fishes and lap dogs, for amusement and playthings, but for profit, and the foundation law of feeding requires foods that will produce the greatest quantity of flesh or milk at the least possible cost. The next most important requirement is to secure the most perfect digestion and assimilation of the food after being eaten. This in my opinion, can only be done by grinding the grain in order that all its parts may be acted upon by the digestive organs of the stomachs. Another thing, the stomachs must be well filled in order that all the organs may have a chance to do something, instead of standing idle spectators of the work going on.

There must be some mistakes in the chemists' tables, as printed in the United States Report of the Department of Agriculture for 1894. The average amount of fat in corn kernels is placed at 5.4. The average amount of fat in corn meal at 3.5. Corn honestly ground will surely contain exactly the same ingredients, and in the same proportions as in the unground kernels. The average amount of fat in unground oats (by the same authority) is placed at 5., and the amount of fat in oat meal at 7.1. Either the chemist, the miller or the printer must have made mistakes.

According to the authority above stated, the richest thing in fats is peanuts without the shucks, 39.6; sunflower seeds, 21.2; cotton seed, with the hulls, 19.2.

J. W. INGHAM.

When corresponding with advertisers mention the *Planter*.

## BUY THE BEST BREEDS.

*Editor Southern Planter:*

We are more and more impressed with the short-sighted folly of the men who buy cheap, inferior sires for their flocks. Every year we receive a limited number, usually about a half dozen, of letters like this:

"Please reserve me your best ram lamb; the best one you have to offer. I want him to be specially strong in ——— points, and I am willing to pay a good price for him."

It is a pleasure to deal with such a man. We frankly describe what we have, and if we think that nothing is good enough we cheerfully say so. Then comes another class of letters like this:

"I want a good ram, cheap in price only."

Well, we haven't got him, because we are not doing business for our health. Finally a man writes:

"Have you any \$10 or \$15 yearling rams for sale?"

We haven't. The ewes we have purchased have cost us an average of about \$35 each, and our rams from \$60 to \$100. When we have to raise rams from as high priced stock as this, kept on high priced land, fed high priced feed and tended by high priced help, and sell for \$10 a head, spending perhaps \$300 a year for advertising them and \$150 worth of time and postage in correspondence, we want somebody to help us out of the business.

But now, suppose a man pays \$25, or \$50, or \$100 for a ram. Suppose he has fairly good ewes—50 head of them. Suppose in a year he raises 50 lambs, 25 rams and 25 ewes. Suppose he sells of these rams 10 head at \$20 each, 10 head at \$25, 3 head at \$30, and 2 head at \$50, a total of \$640. Now, on the other hand, suppose he buys a \$10 ram for a like number of ewes of like quality and raises a like number of lambs. He sells his rams, 5 head at \$10, 10 head at \$15 and 10 head at \$20, a total of \$400. But suppose his customers are not quite satisfied, and, besides, he will want to save his ewe lambs, the best of them, and to gradually help out the average of his flock. Now he has saved fifteen whole dollars, maybe more, on his ram, and his first year's lamb crop has lost him the price of several good rams.

One of our greatest living sheep authorities says: "Always remember that an exceptionally good creature is worth ten ordinary ones." If the extraordinary ram has an earning capacity of \$250 a year over the common one, and if his period of usefulness be only 6 years, it makes \$1,500.

Woodland Farm has one ewe that we value at \$100. We would not sell her for a half more than that. She has twins at side, a ram and ewe. Now, suppose in the



next five years she raises six lambs. If we get \$50 each for 2, \$25 each for 2, and save two ewe lambs worth \$35 each, she will surely earn more than the \$100 calculation. We wish that we had a photograph of this ewe to show you, but have none at present. We shall hope to show you some of her lambs, and in the show ring.

CHAS. B. WING.

*Woodland Farm, Mechanicsburg, Ohio.*

### GRAZING AND FEEDING EXPERIMENTS WITH PIGS.

The following plants were tested as hog food on the farm of the Experiment Station, at Auburn, the hogs doing the harvesting; these plants are available for use in the months indicated:

Spanish peanuts, August to December.

Chufas, November to March.

Cowpeas, July to November.

Sweet Potatoes, August to November.

Sorghum, July to November.

Vetch and oats, March, April and May.

Dwarf Essex rape (spring sown), May and June.

Dwarf Essex rape (fall sown), December, January, February, March and part of April.

In most cases it was found best to feed, in addition to the above crops, from one-fourth to one-half of the usual ration of grain. If we assume that of this grain 5 lbs. was required to produce 1 lb. of increase in live weight, we have left the following amount of growth of shoats attributable to one acre of each crop after deducting the increase due to the grain consumed:

An acre of peanuts in 7 tests averaged a net return of 333 lbs. of growth, now worth \$16.65.

Peanuts alone in two tests averaged 281 lbs., worth \$14.05.

Chufas in two tests averaged 307 lbs., worth \$15.35.

Cowpeas in two tests averaged 229 lbs., worth \$11.45.

Essex rape in two tests averaged 452 lbs., worth \$22.50.

Sorghum in two tests averaged 174 lbs., worth \$8.70.

One acre of the best of these crops (peanuts, rape and chufas), afforded pasturage for one month for at least 25 100-lb. shoats, when a half ration of grain was fed.

It usually requires about 5 lbs. of grain to make 1 lb. of growth in live weight of such shoats as these. However, when they grazed on the crops named below, 1 lb. of increase in weight required only:

1.77 lbs. of grain with peanuts.

2.30 lbs. of grain with chufas.

3.07 lbs. of grain with cowpeas.

2.68 lbs. of grain with rape.

3.70 lbs. of grain with sorghum.

3.13 lbs. of grain with sweet potatoes.

Pigs grazing on sorghum, fully headed out, ate only 12 per cent. less grain per lb. of growth than those supported entirely on corn.

Shoats fed on a mixture of corn meal and of 20 or 25 per cent. cotton seed meal in most experiments ate but

little food and made very slow growth. In other experiments they required only 3.84 and 4.68 lbs. of this mixture per lb. of growth.

The feeding of cotton seed meal as one-fifth or one-fourth of the grain ration for 34 to 38 days in most cases had a poisonous effect on shoats weighing from 59 to 118 lbs. each. No ill effect was noticed prior to the 33d day, and some pigs showed no perceptible ill effects on the 32d day.

Young pigs were more susceptible to injury from cotton seed meal than older shoats.

Peanuts fed up to the date of slaughter made a very soft lard. Chufas softened the lard to an almost equal degree. Sorghum did not soften the lard to the same extent.

Rice polish proved to be a better hog food than corn meal, 78.6 lbs. of polish equaling in feeding value 100 lbs. of corn meal.

J. F. DUGGAR,

Agriculturist, Alabama Experiment Station.

### ANGORA GOATS.

*Editor Southern Planter:*

As I have had a few years' experience with Angoras, probably I can be of service to those contemplating buying them.

I think they are a wonderful animal and that every land-owner in Virginia can handle them at good profit.

They will do well on any kind of grasses and sod land, whilst at the same time they will thrive and fatten equally as well on brush land.

We do not have to dispense with our sheep or any other stock to make room for goats.

Last spring we pastured a fresh sodded field with sheep until June, and poke weeds had grown up in great clusters all over the field. We turned in our Angoras and in less time than three weeks not a stalk over 3 inches high could be found.

Even if we pasture them on our grass land, their fleece will pay for their keeping.

If nannies are properly cared for, will raise a kid every year for 15 years or more, which will bring as much as a well-bred lamb.

Our nannies are always kept to breed from, as the demand for them is rapidly increasing.

Wether Angoras are not butchered young like sheep. They live to a greater age, hence it takes longer to make their growth.

Wethers are generally sold with sheep at about the same price per pound, and after being dressed are called mutton (Angora venison), simply because there is prejudice against the old-time goat, as their meat was not palatable.

A short time ago a gentleman called in to dine with us. Fortunately, we had killed an Angora, conse-

quently had fresh mutton, and as we returned from the dining-room he smacked his lips and said: "Your wife certainly knows how to serve mutton."

It does not require a very high fence to turn Angora goats, but it must stand up straight, or they will walk up the locks.

I do not advise using barbed wire fence, especially of only four strands. The goats are liable to get fast reaching through between the wires.

Woven wire is preferable. Either board or rail makes a good cheap fence for us, as timber is plentiful.

I think it would be requiring too much of 50 Angoras to kill out underbrush on 135 acres of land, and it mostly a thicket. However, it might succeed if the lot is divided into smaller plots and use 50 Angoras on one plot at a time and then cultivate this plot when the Angoras are moved off to another plot.

Stockmen in Texas, New Mexico, Arizona and Kansas and in many Western States have become independent raising Angoras, and why can't we make a success at the business in Virginia?

*Carroll Co., Va.*

J. M. MARSHALL.

### BOAR INCAPABLE OF SERVICE.

At the request of Mr. Thomas S. White, of Lexington, we publish the following remedy, which we recently advised him to use upon a very valuable boar pig, which had become incapable of serving a sow and which completely restored him to service. From the description he gave us, we came to the conclusion that the boar was suffering from ulceration of the sheath, caused either by an accident or from serving a diseased sow. We advised the thorough cleansing of the sheath by syringing with warm water, and then the injection by a syringe of a lotion made of 4 drams of Sulphate of Zinc, dissolved in a pint of water, to be used twice or three times a day.

Recent foals dropped at the Ellerslie Stud of R. J. Hancock & Son, Charlottesville, Va., are as follows:

Mermaid, dam of Merry Day and Eonie, by imp. St. Blaise, dam Palmetto, by Virgil, foaled on March 14th, a chestnut filly by Fon and was bred back.

Aurine, by Eon, dam Sample, by imp. Rotherhill, foaled on March 16th, a chestnut colt, by imp. Fatherless, and was bred back.

Winter Cherry, full sister to Morello, by Eolus, dam Cerise, by imp. Moccasin, slipped her first foal (a colt), by imp. Fatherless, and was bred back.

Mention the *Planter* to your friends.

### NEW MEAT FOODS FOR STOCK.

The farmer who is feeding only corn to his steers or hogs, literally, must have corn to burn. For years it has been a difficult matter to know where protein could be obtained at such cost that the farmer could afford to sell some of his corn and buy a protein feed with which to properly balance the remainder. The results of experiments quoted have surprised the oldest practical feeders of many States and would seem to indicate that the solution lies ready at hand in the large output of by-products prepared in the packing house.

Many men object to the use of animal foods in the shape of blood meal or tankage. We do not find this objection well founded in actual practice. Hogs will greedily eat all kinds of refuse coming fresh from the slaughter-house. Many people have objected to the use of slaughter-house-fed animals, owing to the danger of disease infection. Packing-house foods are free from this objection. In their manufacture they are subjected to such a high temperature that any germs which might cause trouble are destroyed. In the first place, every animal which goes into the packing-house has passed a careful inspection by officers of the United States Bureau of Animal Industry, so that the danger of infection is reduced to a minimum.

These foods are cheap, clean and highly concentrated. It is not necessary to handle a large bulk in order to get the food constituents required. We do not believe in tablet rations, but recommend a wise and carefully planned system of feeding by which an animal will get plenty of bulk food and at the same time plenty of nutritive material. The following table will give a better idea of the relation existing between some of these feeds and the ordinary feeds of the farm. These analyses are authentic:

Feed—	Per cent. protein.	Pounds one ton.
Corn .....	.08	160
Wheat bran .....	.12	240
Oil meal (O. P.).....	.29	580
Cottonseed meal .....	.37	740
Digester tankage .....	.60	1200
Blood meal .....	.87	1740
Soluble blood flour.....	.87	1740

One of the by-product foods mentioned above is likely to become of great interest and importance to practical dairymen. We refer to soluble blood flour. This preparation has been tried and proved to be an excellent food to develop rapid growth in young calves feeding on skimmed milk. Different stations have found that blood meal absolutely cures and prevents scours, which causes so much trouble with skimmed-milk-fed calves.

Digester tankage is a food for hogs only. It is made from pure meat scraps thoroughly dried and carefully ground. Hogs eat it greedily, and, as noted before, make large and satisfactory gains.

Meat meal is a product of higher grade meat scraps, dried and ground, and is meeting with a large demand

from poultrymen who wish cheap winter eggs. Every practical poultryman knows that no food is a better egg stimulant than meat scraps, fresh from the butcher shop. Such scraps cannot be stored except in refrigerators during hot weather, so are not available to many poultrymen. Many of our best breeders of pure-bred swine are thoroughly alive to the fact that if they are going to develop proper bone in their breeding stock they must make a radical change in the methods of breeding, feeding and treatment. It has been a practice in Great Britain and Germany for many years to feed swine, especially early in life, liberal rations of ground bone. Ground bone contains a large amount of digestible protein, from twenty to twenty-five per cent, and is rich in phosphates, containing from fifty to fifty-five per cent. It will be readily seen that this material affords the swine breeder valuable help in overcoming the serious defect in his breed stock. In conclusion, we would say that we believe that a great future is in store for the use of animal foods. We believe that it is a matter of only a few years until every available material from our great packing houses will be converted into palatable and nutritive foods for the growth and maintenance of farm live stock.

Iowa

PROF. J. J. FERGUSON.

### THE CHESTER WHITE HOG.

*Editor Southern Planter:*

This valuable breed of hogs originated in Chester county, Pennsylvania. They are the result of a cross of Bedfords upon the native hogs. Captain James Jeffreys brought a pair of white pigs from Bedfordshire, England, in 1818. These were crossed upon the native hogs and by careful selection and judicious breeding have produced the Chester white hog, a most desirable, well-formed, large-sized, easily fattened hog. The Chester white hog sprung into sudden popularity before there were enough genuine Chesters to supply the demand. As a result farmers sold all kinds of white pigs at fancy prices as genuine Chester whites. As a natural result, the Chester whites got a very bad name and it took them years to overcome this setback. Of recent years the value of the Chesters as good economical pork producers is generally recognized. The record that they made at the International Fat-Stock Show in 1901, at Chicago, gave them quite a boom. The Chesters won Sweepstakes prizes over all other breeds. My experience with the Chesters is that they are very fast growers, very healthy and easily fattened at any age. The sows usually farrow large litters, and they are good mothers. A few years ago I put up the runt pig of a litter of eight. The pig was just eight weeks old and weighed just 20 lbs. when put up, while its mates weighed about 30 lbs. each. The pig was put up on the first day of June, and was reasonably well taken

care of until November 21, when it was killed and dressed 197 lbs.

A neighbor butchered a Chester white pig of last May's farrowing. He killed it the week before Christmas, and it dressed 256 lbs. Some ten years ago I purchased my first Chester white boar and crossed upon a grade Poland China. I was so well pleased with the result that I decided to raise full bloods. They have proved to be the most satisfactory hog that I have ever tried. If there is mast they will take to the mast and do quite as good a job of ranging as the old native scrubs, and they will fatten much faster. If there is no mast they will pay much better for feed consumed than the hogs that have a reputation as rangers.

Albion, W. Va.

A. J. LEGG.

### EARLY LAMBS.

*Editor Southern Planter:*

I would be very glad to have you inform me through the *Planter* what treatment should be given sheep to have them lamb early, say about January, which is the best time to have them in order to be ready for the early market, at which time you always get better prices than later in the season. I expect to keep grade Shropshire ewes and a thoroughbred Shropshire ram, which I think far ahead of all other breeds for all purposes. I have now 14 grade ewes and 25 lambs, therefore, I hardly think the Dorsets can excel that, for the Shropshire is not only prolific, but also good milkers as well. Any information on the breeding subject and how to have early lambs will be gladly accepted.

Albemarle Co., Va.

W. C. S., JR.

The first thing to be done to encourage early mating of the ewes is to get the present crop of lambs off as quickly as possible. After weaning turn the ewes into a short pasture and keep them in fair thriving condition, but with no tendency to becoming fat. In August put them on to a rich, full pasture and feed them a little grain, peas and oats daily, and turn the buck to them at night. They will usually soon accept service.—Ed.

### THE BROOD SOW.

*Editor Southern Planter:*

I see two mistakes in my article, "The Brood Sow," in *March Planter*, page 181, which you will please correct, as they are misleading. I begin taking off the pigs a few weeks before they are a month old. Take off two or three per day until all are off, and withhold all slop food a day or two before I begin taking off the pigs.

Goochland Co., Va.

N. S. WATKINS.

## The Poultry Yard.

### THE BROWN LEGHORNS

*Editor Southern Planter:*

The good qualities of the Brown Leghorn I find are far from being generally known.

So many questions are asked concerning them that I think it would be well to speak of some of their good points through the medium of your most excellent journal.

They are not, as many think, very delicate and hard to raise, on the contrary, I believe they are the hardiest chicken I know. If well cared for a few days after hatching, they need only to be fed to grow right off. I have raised fifteen from one hatch and shut them up only three nights, and I might say fed them very irregularly, as they left their house before I went out to feed, and spent most of their time around the stables.

In fact, I believe the Leghorn thrives best with little attention. They are great rovers, and will come nearer gathering their own food than any breed. They do not like confinement, and never live on good terms with other breeds. I find they lay much better kept by themselves. They have the name of being great egg producers, which is very correct. For all the year round no better layers are known. They never set unless advanced in years, when they cannot be trusted with the eggs to the hatching day. I have often had them kill chickens as soon as they left the shell, and still oftener to spoil the eggs in a few days after being trusted with them. I once set a Leghorn on a few of her own eggs, and put in three Plymouth Rocks to make up the right number. Several visits paid to her henship showed three eggs too few. I noticed that the yellow eggs were the discarded ones, which goes to show the discriminating power of the Leghorn hen.

One question I am often asked is: Aren't the Leghorns easy to frost bite? I never saw large combed chickens less susceptible to cold.

Naturally, the Leghorn is wild, and prefers out-door roosts, often choosing trees and open sheds. I have kept one hundred through the winter and only two show any signs of frost bitten combs, and they stayed with about fifty others under an open shed on an old wagon. I have had the Leghorn for ten years, and my father kept them, the first I ever saw in Virginia, gathering eggs daily in a peck basket, the envy of his neighbors, who were so anxious to exchange eggs with him.

For beauty, style, hardiness and laying qualities, I

cheerfully recommend the Leghorn. They are a little longer getting large enough to eat than the Brown Plymouth Rock, but are in every way as good with that exception, but very few persons would wish to eat such handsome chickens.

*Albemarle Co., Va.*

MRS. JNO. F. PAYNE.

### PULLETS FOR LAYERS.

It is the pullets that do the late fall and early winter laying, and if we would have an abundant supply of eggs at the time of highest prices a goodly proportion of our birds must be early hatched and well grown pullets. An experiment illustrating the doubled profits to be gotten from pullets as compared with year old hens was carried on at the Utah Experiment Station, Logan, Utah, a few years ago, and the results were most instructive. Two pens of old hens averaged 85 eggs apiece, while two pens of pullets averaged 170 eggs apiece—exactly double the number. The doubled number of eggs laid by the pullets does not rightly present the ratio of profit, however, because from one-half to two thirds of the increase comes at a time of decidedly higher prices, hence the proportion of profit is much greater. In this Utah experiment the average value of the eggs per hen was \$0.78, while that of the eggs per pullet was \$1.78. The food, cost, labor and interest on buildings, etc., is no greater for a pullet than it is for a hen, and it would seem to be the part of wisdom to have the bulk of our flocks early-hatched and well grown.

To keep away mites and lice from sitting hens, paint the inside of nest-boxes with crude carbolic acid. This has been used with perfect success for the past two years.

The idea that nature will supply both food and shelter must be banished before the hen can be made profitable. Houses must be built, food must be given and water and grit must be supplied.

Biddy's chicks are as strong as machine hatched ones. If given reasonable common sense care, she will give strong, fast growing chicks that will eventually bring good returns to the owner.

If furnishing eggs for table use is your branch of the poultry business, there is no need of having males in the flock. In fact, it is better to have none. It saves feed; it saves worry of the hens.

Though ducks are water fowl, they do better to be kept dry while wearing their downy cloths. Even waddling through wet grass is not helpful to their growth and development.

Bowel trouble that carries off many chicks when one or two weeks old may be often corrected by taking away their drinking water and giving scalded milk instead.

Hens enjoy scratching for a living. Give them the enjoyment and they will reward you with a good supply of eggs—provided their scratching is rewarded with finding grain.

Wheat contains a larger per cent. of albumen than any other grain and for this reason it is one of the best grains to feed for egg production. It should not be made an exclusive ration, however.

In buying an incubator get one that is run by simple rules—if the rules are long and complicated you may get discouraged before you master them and start the machine before you can run it successfully.

There is not a great deal of difference in the feeding value of buckwheat and wheat, pound for pound. Buckwheat is a good winter feed and may be fed as one feed two or three days in the week if it is not too high priced.

Don't forget about the lice. There may be thousands in your poultry house before you find one. Look for them and take measures to prevent them from getting started. Lice killers are plentiful and cheap, and they save a lot of money by preventing losses.

If the fowls are let out for a run through the only door in the hen house, be sure it is fastened open so they can go in at will, either through the day or at roosting time. The weather is uncertain in March and an open door is often needed to escape a sudden storm.

Every poultry house should have a platform under the roosts to catch the droppings. Such an arrangement allows all the floor space to be utilized for scratching purposes and lessens the work required to keep the house clean and sweet. Have a droppings board and clean it at least twice a week—six times would be better.

This is a good time to start your son or daughter in the poultry business. Let them care for the flock, market the produce and have the returns for their own spending. If they cannot get enough out of the flock to pay for their keep you inquire into the management and suggest the remedy, for poultry will pay if managed rightly.

At the South Carolina Experiment Station the past two seasons several remedies have been tried for sore head. The best results were obtained from the following mixture: Chloronaphtholeum one part, lard four parts. Mix well and grease the whole head. If in an advanced stage, wash the head in warm water to remove scabs before using.

Mention the *Planter* when corresponding with advertisers.

## WHAT A SMALL FLOCK IS DOING.

*Editor Southern Planter:*

I have 20 Plymouth Rock and 16 White Wyandotte hens and six cocks. It has cost me to feed them during January and February 3½ cents each per month, or 7½ cents each for the two months. I have got an average of 31 eggs from each hen in the two months. You can judge for yourself from this whether it pays to put in any time with good poultry. I feed my chickens in the morning first green, cut bone and bran mush; next a liberal supply of green vetch, turnips and beans, and in the evening I feed corn, peas and wheat mixed together.

*Iredell Co., N. C.*

O. E. SHOOK.

## INCUBATORS NECESSARY.

Recently we have been getting numerous letters from our subscribers asking us if we really think incubators necessary to the successful prosecution of the poultry business.

We certainly do think incubators necessary, or we would not use them, recommend them or urge their use by those who raise each year one hundred or more chickens.

We believe an incubator is just as necessary as any other form of improved machinery.

The farmer, the village poultry breeder, and the man in the city who likes poultry, may each derive much benefit from the use of incubators instead of relying on hens, always untrustworthy and never pleasant to handle nor easy to manage.

An incubator may be kept in a kitchen, cellar, bedroom or living-room without any offense to any of the senses.

There is no more odor to an incubator than there is to an ordinary kerosene lamp, and often not as much, for as a rule, the combustion of the oil in an incubator lamp is more perfect than it is in an ordinary house lamp.

As incubators are now made they are not unsightly, and look as well as ordinary house furniture.

We are thoroughly and unreservedly in favor of incubators.

Often we get a letter saying the writer has bought some certain kind of an incubator, but has not made as much of a success of it as has a neighbor who has another kind.

The trouble is almost invariably in the operator.

If our correspondents would trade incubators with their neighbors, they would probably not change their "luck" in the least, and their neighbor would continue to get good hatches and they would get poor ones.

The incubator has come to stay; is firmly fixed, and the poultry breeder who does not use them is falling behind the procession.—*Commercial Poultry.*

If you set any hens this month do not give them all the eggs they can possibly cover, for we may expect some cold days, and eggs are liable to be chilled if near the nest's edge.

## The Horse.

### A LIBERAL OFFER.

Mr. R. Harvey Barton, of Dublin, Pulaski county, Va., writes that he will be glad to allow his stallion Wilberforce, 2:31, by Pilot Wilkes, out of Nellie Green, 2:25, to serve three mares of approved breeding free of charge. If the mares are shipped to him the 1st of May or later he will keep them a month free of charge. He would prefer well bred Hul mares.

### NOTES

The Virginia Horse Show Association is making active preparations for the greatest season of its career, and not only will larger prizes be offered, but more varied programmes be gotten out and a large number of novelties introduced. At a recent meeting in Washington twelve organizations were represented and a schedule of dates arranged that seems likely to meet with general approval. This schedule was prepared by J. T. Anderson, of Richmond; C. W. Smith, of Warrenton, and Charles Milliken, of Berryville. An amendment, however, was offered by J. J. Davies, of Manassas, and adopted to the effect that within fifteen days from the date of the meeting that the various horse show organizations in the association may have the days of the week allotted them changed to some other days in the same week, if desired. The Virginia Horse Show Circuit is an interesting one and yearly enlarges and grows more important. This is as it should be, as some great show horses are developed, while the impetus given the breeding of high-class harness horses, saddlers, hunters and jumpers is very decided and of much benefit to breeders and farmers in general. The dates of this circuit follow:

Leesburg, June 3, 4; Upperville, June 10, 11; Culpeper, July 3, 4; Manassas, July 21, 22; Orange, July 28, 29; Front Royal, August 5, 6; Berryville, August 12, 13; Harrisonburg, August 19, 20; Warrenton, August 26, 27; Charlottesville, September 2, 3; Lynchburg, October 7, 10; Richmond, October 12-17.

\* \* \*

M. W. Savage, of Minneapolis, Minnesota, proprietor of the famous International Stock Food, and of the elegant stock farm bearing the same name, which is the home of the noted stallions Dan Patch, 1:59½; Directum, 2:05½, and Roy Wilkes, 2:06¼, is stocking his great breeding establishment with a band of brood mares in keeping with the sires in use there. Mr. Savage has recently purchased from W. J. Carter, the brown mare Aleyrene, 2:27¾, by Aleyone, dam Bessie Oliver, by Kearsarge, the son of Volunteer and famous old Clara, dam of Dexter, 2:17¾; Dictator, etc. Aleyone is in foal to Red Leo, 2:26¼, by Red Wilkes. The brown colt Featherbone, one year old, by Whalebone, 7872, out of Aleyrene, bred and owned by Mr. Carter, is a trotter and promises to develop both speed and race horse capacity.

\* \* \*

Whalebone, 7872, the son of Abdallah Wilkes and Molly O., by Adallah, 15, owned by W. J. Carter, of this city, is making his third consecutive season here, and so well pleased with his foal are those who bred to him, that his book is fast filling. This horse is not only well bred, but has manners, style, speed and action that fit him for the show ring, and these qualities are uniformly transmitted to his get. That the latter are large and well formed is an item of great importance that should not be lost sight of by breeders, as such horses find ready sale now at paying prices.

\* \* \*

The Ainslie Carriage Company, of south Tenth street, this city, of which David A. Ainslie is the head and moving spirit, reports a fine trade this season, which applies not only to business wagons and the like, but to pleasure vehicles of all classes, including landaus, broughams and family carriages. Particular attention is directed to the stock of the last named, especially to those designed for the use of farmers and others away from cities. The Ainslie Carriage Company is the oldest house of its kind probably in the South, and has enjoyed a long and continued prosperity on account of uniform fair dealing and strict attention to recognized business methods.

\* \* \*

T. O. Sandy, of the Grove Stock Farm, Burkeville, Va., has made a number of sales recently and his patrons are well pleased with his method of doing business. Mr. Sandy is one of the most progressive, up-to-date farmers in the South, and has achieved an enviable degree of success. Through an advertisement in the *Southern Planter* he has recently sold to parties on the Eastern Shore of Virginia, the imported hackney stallion The Duke, by Silver Star, dam Lady Fanny, by Rob Roy. The Duke was brought to the above section by the late Captain Orris A. Browne, of Cape Charles, and from him passed to J. A. Jarvis, Eastville, who sold him to Mr. Sandy. The Duke left a number of promising colts around Cape Charles and Eastville, which induced his return to that section.

\* \* \*

Wickham, the chestnut son of Willful and Ecliptic, who heads the Cedar Grove Farm of Mr. Harry Giddings, Ontario, Canada, is attracting attention as a sire in the Dominion of King Edward. Recently Mr. Giddings sold two of his get in Wire In, 4, and War Whoop, 2, both out of Lady Lightfoot, for \$7,000. Wickham was bred in the Bullfield Stud of the late Major Thomas W. Doswell, and was foaled in 1882. His sire, Willful, son of imp. Australian, formerly headed the Bullfield Stud, while his dam, Ecliptic, was one of the foundation brood mares. She was bred by Major Doswell and sired by imp. Eclipse, dam the ever famous Nina, by Boston. Wickham was a successful turf performer, and though well along in years, he is still rising speed and race horse quality.

BROAD ROCK.

## Miscellaneous.

### VIRGINIA POLYTECHNIC INSTITUTE, AGRICULTURAL AND MECHANICAL COLLEGE, BLACKSBURG, VA.

The wonderful reputation which this most excellent institution has made during the last ten years under the direction of Dr. J. M. McBryde has resulted in such an influx of students during the past five years that the facilities afforded by the existing buildings are more than exhausted, and class rooms and dormitories are so overcrowded as to render good work and discipline difficult. The youths of this State have learned to appreciate the fact that what they need in order to insure success in life is a practical technical education rather than a merely literary training. They see that it is the men who know how to do something rather than those who merely know how to say something who are the ones wanted and who succeed in life. They realize that it is the youth who has had a special technical training for his calling, be it as a farmer, as an engineer or as a scientist who is wanted by the makers of the destinies of the country. As a result of this knowledge they clamor for admission to the technical college. Realizing this fact, and the impossibility of responding to the demand without further help from the State, the Board of Visitors of the Polytechnic Institute are applying to the Legislature of Virginia for an appropriation of \$140,000 to enable them to erect and furnish the required buildings and appliances, and for an annual grant of \$40,000 to enable them to maintain the fabric of the institution, and keep it fully equipped with the necessary scientific equipment to enable it to give the training for which it was instituted. Whilst realizing as fully as any one can do the necessity for keeping down the expenditure of the State and curbing all extravagance in order that she may be able to live within her income and avoid an increase of taxation, we feel constrained to support the Board of Visitors in their appeal, and to ask our readers to urge upon their representatives in the Legislature to give favorable consideration to the appropriation asked. The farmers of the State are deeply concerned in this question. The Polytechnic Institution is the only one in the State where their sons can receive free of cost for tuition special training in scientific agriculture, horticulture and fruit growing, and the president of the college informs us that they are realizing this fact, and that the students in the Agricultural Department now more than utilize all the accommodation which the board have provided. Unless the appropriation asked for is made the college

will have to refuse admission to any more students. It is a serious responsibility for the State to deny to its youth the opportunity of obtaining that training which is needed for success in life. We trust that the Legislature will realize this and make the appropriation, even though in order to do so it may have to deny some other appropriations which are being asked for. We think that the appropriation asked for the alteration of the Capitol (\$200,000) might well be postponed in favor of that for the college. The Capitol and new Library Building has met the needs of the State for public offices up to this time, and we think they might well continue to do for some years to come. The claim of the Polytechnic Institute is for help which is urgently and immediately needed to prevent the necessity for denying admission to the youth of the State to the first rung of the ladder on which they may mount to success. Such a claim as this ought to have priority over everything but the absolutely essential needs of economical government.

### THE WASTING OF THE LANDS.

*Editor Southern Planter:*

I am encouraged by seeing that you put so much stress in your valued monthly on diversity of agricultural products, importance of live stock raising, grass, clover, peas, small grains, &c., as against too much cotton and other cleanhoed crops. And in this connection permit me to say that another ray of hope I have for our Piedmont sections is that the higher prices of meats, &c., coupled with the scarcity of farm labor, may soon lead or drive us hill-side farmers to adopt a more rational system of agriculture, one consistent with the topography of our country, and with the nature of our soil and climate. I mean practices which will tend to hold the sand and soil on the upland, where nature put it, and where it should be kept; for, doubtless, far more land in rolling regions is ruined by washing away than is impoverished by cropping. As a consequence of existing suicidal methods in many instances the beds of the streams are filled with sand, and the low-lands (formerly worth 5 times the upland, acre for acre) are in part, or totally abandoned, except possibly as cow pasture in dry summers.

More and more timber is being cut each year, more land cleared and cultivated if possible, and mostly in such a way as to furnish more and more sand to cover up the bottoms. The question naturally arises: What will we or posterity do forty years hence if this kind of work goes on and increases as it has done in the last forty years? Isn't it high time to call a halt and take our bearings? Talk about draining your bottoms when tons and tons of sand come in with every heavy rain! Go back to your hills and set things right there first,

and give nature a chance; she is as ready to restore as she is to waste, and more so.

I have noticed that some streams having from 25 to 35 feet fall to the mile are almost constantly clogged with sand. On the other hand, the Illinois river runs 250 miles with only about 28 feet fall in that distance, and still remains a river. The different surrounding conditions and methods of working and cropping lands are the key to the true solution of this problem.

I have watched with interest this trend of things for nearly forty years, and I must say that I deem it one of the biggest questions of the day, in a material way, and which must be grappled with in earnest, and the sooner the better. It means millions for weal or for woe.

But I must desist. Go on, Mr. Editor, with your work of reform.

Rowan Co., N. C.

J. K. G.

### PROPERTY GONE IN SMOKE.

*Editor Southern Planter:*

Ever since the beginning the creation of property has employed intelligent people. Property has been the basis of support and arises from the hand of industry and economy. The marvelous waste of the products of labor by blind stupidity and recklessness, and the criminal use of fire, has been a besetting frailty of the ages, but now challenges the attention of modern civilization. The effort has been to succeed by increased toil and study despite the ravages of fires, which have been tolerated as a fatality. Intelligent thinkers consider conflagrations with their horrors, the creatures of cause and responsibility. They are blows directed not only against individuals, but against society and the State, the body politic. In this age of intensive thinking and investigation, the rude and barbarous customs of the past must give place to common sense and improved methods by which immense savings may be accomplished and the general welfare promoted.

That class of people with minds and dispositions hostile to private accumulations and public prosperity must be dealt with and cared for by the government arms. Their number is small and can be diminished by suitable discipline, and fire-waste may be reduced to the unavoidable minimum. It was a maxim at common law that an individual should suffer rather than the public be incommoded, but here the public suffers to indulge the base passion of the individual. The waste referred to in the February paper referred to the waste caused by forest fires. The lack of information in the census returns, and also on the part of the State on fire losses, is strange in view of the immensity and retarding influence upon the property and the country, and the destruction of life.

The Year Book, *American Agriculturist*, 1898, pp. 271-2, represents the fire losses in the United States from 1877 to 1896, inclusive, \$2,337,000,000. In the State of Virginia for 21 years at \$28,427,000. This appears to be insured property; the uninsured should be added, and this would probably increase the loss in Virginia to double. This data is obtained from "the great

problems of 1898 insurance." It is astounding to see the lack of sagacity and practical financial acumen which has permitted this great grievance to run on. If committed by a foreign power it would long since have been declared a cause of war.

Will the Assembly of Virginia take hold of this subject before it adjourns, and inaugurate remedial measures to be perfected as time shall suggest? The burning can produce something besides persimmons, broom straw of institutions of charity, schools, the university, seminaries, hotels, factories, towns, cities, private residences, country homes and property, and not least, precious lives, should command relief, if the ingenuity of man can devise it, increased revenue demands it. Turn attention to saving this waste to the relief of increased taxation.

Augusta Co., Va.

PRO. BONO PUBLICO.

### A BIT OF EXPERIENCE IN FARMING IN VIRGINIA.

*Editor Southern Planter:*

Last October, twelve months ago (1901), I had on a small piece of ground corn, sweet potatoes and peas. That same month I sowed on that same piece one bushel of rye. The third week in the following April (1902), I began to cut it for feeding. The first crop was heavy; three weeks afterwards I cut the second crop, very fair; several weeks after this I cut for the third time a thin but well matured crop. In June I broke the ground with a one-horse plow and sowed peas and planted sweet potatoes, both of these crops doing well. I plowed the vines under the first of October, and seeded to rye again, this being the sixth crop put on the same land in one year.

If any brother can beat this I would like to hear from him. I write this to show you that "Old Fluvanna" and pretty girls.

Fluvanna Co., Va.

S. E. BEALE.

### CONFEDERATE BAZAAR APRIL 15, 1903, RICHMOND, VA.

All over the South we have placed monuments to our private soldiers and sailors and their great commanders.

It now remains for the capital of the Confederacy to crown the whole by raising one to our first, our last, our only President, the head of our civil government—a government as wonderful as it was brief.

We owe this duty to ourselves, and to our children, that they may realize what a sublime record was made for them in history. The whole South unites in this loving tribute to the men who died to uphold that government, and to those who, with no less devotion, steered the Ship of State. What have you done to help us? What will you do to complete the work? We ask both your influence, and your sympathy, that we may build a monument worthy of our people and their deathless past.

This movement is endorsed by the United Confederate Veterans and the Daughters of the Confederacy.



THE

# Southern Planter

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The Southern Planter is mailed to subscribers in the United States and Canada at \$5.00 per annum; all foreign countries and the City of Richmond, 75c.

Remittances should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

We invite Farmers to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent in must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

Always give the Name of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done.

Subscribers failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

The Date on your Label shows to what year your subscription is paid.

No change of name communications or queries will receive attention.

Address— THE SOUTHERN PLANTER,  
RICHMOND, VA.

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## PUBLISHER'S NOTES.

### TO ADVERTISERS.

All advertisements and matter pertaining to advertising *must* reach us by the 25th of each month, please bear this in mind.

### To Subscribers.

The season for subscribing to journals is fast drawing to a close. Work on the farm is beginning to tax the time and energies of the farmer to keep up with it, and little opportunity will now offer for inducing your friends to become readers of THE SOUTHERN PLANTER. We would, however, ask our friends to avail themselves of what time they can spare to give us yet another lift. Most farmers find time to attend the April Courts, as they have generally supplies of some kind to procure or have stock to sell or buy.

When starting out for court, put your copy of THE SOUTHERN PLANTER in your pocket, and when an opportunity offers bring it to the notice of your friends, and secure us a few subscribers. This you can easily do, and at the same time benefit yourself by securing the terms which we offer to old subscribers who send us in two or more new names with the money for them. We have had a most successful subscription season so far, having within the past three months secured more new subscribers than ever before in the same time. We want, however, to add yet more to the list, and you can help us to do so. Will you try? We feel that it is not necessary for us to say one word in commendation of the journal. The thousands who read it and send us testimonials, unasked, as to its helpfulness to them, emphasize this point better and more disinterestedly than we can do.

A Neat BINDER for your back numbers can be had for 25 cents. Address the Business Office.

WOOD'S SEEDS.

# Cow Peas AND Soja Beans

WRITE FOR PRICES.

We have issued two special circulars entitled, "Soja Beans vs. Corn," and "Cow Peas, The Clover of the South," which we will mail free to parties interested, upon request.

T. W. WOOD & SONS,  
Seedsmen, Richmond, Va.

Spring Samples

## FREE

Fine Suitings

with tape measure and self measurement blank.

You Save a half by  
Buying Direct from the Mill.

Suits guaranteed one year. Tailor made or ready made—equal to \$20.00 suits—our prices are

## STYLISH SUITS \$7.50 and \$10.

We buy raw wool and do all the rest under one roof, selling you these fine all wool suits direct. We call special attention to three facts: These suits have all hand shrunk collars, hand made buttonholes, padded shoulders. We invite comparison of our suits with suits costing \$18.00 to \$25.00 that are sold in the usual way. Every garment bears our label and is guaranteed for one year.

Men's all wool and worsted trousers \$2, \$2.50 and \$3. Handsewnly made and trimmed. We have the cheapest, strongest and best all-wool boys clothing. Also cloth by yard or piece and ladies' suitings and shirtings. Write to-day for samples, &c.  
GLEN ROCK WOOLEN MILLS, Somerville, N. J.

CRONK'S

Improved  
Staple Puller



IS AT THE FRONT. Ask your dealer to show it. Three wire cutters, two hammers, two splicing clamps—all in one to pull a Staple Puller that will pull staples when you cut thick wool. A cutter that will reach wire when the button cutter will not. One day's use will save the cost of it. \$1.00, postage paid CRONK & CARRIER MFG. CO., Elmira, N. Y.

## WITH THE ADVERTISERS.

The Studebaker Bros. Mfg. Co., of South Bend, Ind., send us a very beautiful poster, showing a photographic reproduction of the original log cabin and blacksmith shop, which was the beginning of their mammoth enterprise, which is also shown. The lesson of the wonderful progress made by this firm is forcibly presented.

The Granite Poultry Yards are offering eggs from fine laying strains of Barred Plymouth Rocks and Silver Laced Wyandottes.

"The Cultivation and Storing of Sweet Potatoes," is the subject of a little pamphlet advertised for sale by Bryan Tyson in this issue.

T. W. Jarman reports that business is good in Pit Games, as a result of his advertising with us.

Hawkins and other fine strains of poultry are advertised by the Oakland Poultry Farm, Ruffin, N. C.

A. S. Craven is also advertising Pit Games elsewhere in this issue.

Baker's Jack Farm, Lawrence, Ind., issues a little pamphlet, containing 20 reasons why a farmer should raise mules. He will send it free on application.

S. P. Yoder is advertising Silver Laced Wyandottes in another column. He claims the Golden Rule for his motto.

The Onstad Chemical Co. is advertising its well-known Lumpy Jaw Capsules in this issue. This company will gladly mail a circular, giving testimonials as to the merits of this preparation.

Note the advertisement of the Castalia Herefords in this issue. Some splendid stock is offered.

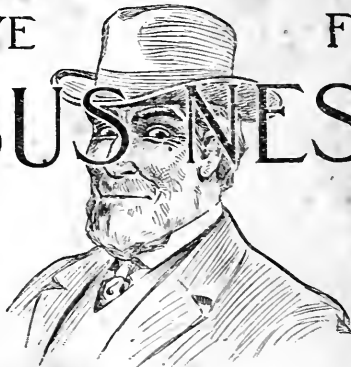
## CATARRH CANNOT BE CURED

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY, & CO., Props., Toledo, O.

Sold by druggists, price 75c.  
Hall's Family Pills are the best.

# THE FARMER WITH AN EYE FOR BUSINESS



## PURCHASES

the McCormick whenever he wants a binder, reaper, mower, rake, corn binder, husker and shredder, or other harvesting machine, because he prefers machines that meet his requirements—machines that give him satisfaction—machines that are worth every dollar that he pays for them.

It will help your farming business to read the McCormick book, "A MODEL MACHINE," which is mailed free.

**W. K. BACHE, General Agent for  
McCormick Machines, Richmond, Va.**

### ORDER AND SEE THAT YOU GET

## Pasteur Black Leg Vaccine

If not obtainable from dealers, refuse substitutes and wire your order to us. Over 20,000,000 calves successfully vaccinated with the original Vaccine during the last eighteen years. Powder form and Cord form both for Single and Double treatment.

**PASTEUR VACCINE COMPANY, Ltd.,**  
CHICAGO - NEW YORK, - FT. WORTH - SAN FRANCISCO.

### Save Time, Labor and Money

by having a threshing and power outfit of your own.

This No. 3 Featherweight Thresher and Cleaner and Roller Bearing Level Feed Engine is the best individual outfit for threshing, etc. barley, oats, etc., or, alfalfa, milo, sorghum, timothy, etc. Will thresh and clean 100 to 150 bushels of grain per day. Also made for row and horse driven. Power can be used for cutting mottage and dry feed, also for all kinds of farm work, to run the saw, grain hoist, pump, grundy water, separate cream, churn, etc. Also make horse power, Feed and Roller, Cotton, Windmill, Saw, etc. Breckner & Sons, 215 Broad St., Los Angeles, Ca.



The Virginia Cattle Food Co. starts its spring advertising in this number. This company is sole proprietor of Mrs. Lea's Milk and Butter Purifier. That this preparation removes all taint of garlic or weeds from the milk, and butter is amply attested by the numerous testimonials, which they will be pleased to send any one interested.

Slug Shot is offered our readers as usual this season by Benj. Hammond, Fishkill, N. Y. This well-known insecticide has been on the market over 20 years, as numbers of our readers know.

Look up the ad. and get circulars and other information in regard to it.

Thomas S. White, of Lexington, Va., offers 65 head of Shorthorn Cattle for sale. One-third of these are registered, one-third are entitled to registry, and the remaining third are grades. If you want some good stock you had better investigate this offering.

Laidlaw, Mackill & Co. have a half-page ad. of their well-known Sheep Dip and Cattle Wash in this issue.

The Filston Farm increases its space in this issue. There is always something good offered by this well-known firm.

In addition to its Keystone Corn Planter, the A. B. Farquhar Co. is advertising its splendid Threshing outfit.

A three-quarter Hereford Bull is offered by Mr. W. C. Reed.

F. W. Walter & Son will sell you a fine Piano and take stock in payment.

Look up the advertisement of the International Stock Food Co.

A NEAT BINDER for your back numbers can be had for 25 cents. Address the Business Office.

**AN EXCELLENT WEEDER.**

A weeder that takes a very high rank with the farmer is the "Keystone Adjustable," the advertisement of which appears elsewhere in our col-



umns. The adjustable feature, which permits it to be used at any extension between 30 inches and 7½ feet, makes

**FOUNDED  
1802.**

**GOLD MEDALS:**  
Paris, 1900. Pan-American, 1901.

# Thorburn's Seeds

For over a hundred years have been universally recognized as the standard of excellence. They received the GOLD MEDALS (the highest award) both at the Paris Exposition of 1900 and at the Pan-American, 1901.

## Our Catalogue

—the 102d successive annual edition—contains a more complete assortment and fuller cultural directions than any other seed annual published. It is beautifully illustrated, not with highly colored exaggerations, but with the finest half-tones from life photographs. It contains 128 large size pages, and in addition 16 full page half-tone plates, and is in every respect and without exception the most complete, most reliable, and most beautiful of American Garden Annuals. We will mail it free on receipt of 10 cents in stamps, which amount may be deducted from your first seed order.

## Market Gardeners

are invited to send for our special price-list of high-class vegetable seeds for truckers and large market growers. It contains all sorts of approved merit.

**J. M. THORBURN & CO.,**  
36 Cortlandt Street, NEW YORK.



**THE HATCHING INSTINCT.** The machine that adapts Nature's requirements and for years has been turning all fertile eggs into strong, vigorous chicks, is the **Petaluma Incubator.** Known everywhere by its works. Case of non-shrinking redwood, heaters of copper, self-ventilating, self-regulating. Devices the most sensitive and dependable. Supplies moisture for dry climates. Used all over U. S., with great export demand. Petaluma Brooder have no superiors. Fair prices and freight paid all over U. S. Write for latest free catalogue. **PETALUMA INCUBATOR CO.,** Box 46, Petaluma, Cal., or Box 46, Indianapolis, Ind.

**INCUBATORS ON 30 DAYS' TRIAL. THE WORLD'S BEST STANDARD HATCHER.**



Thousands of these incubators are in successful operation in the United States, Canada, South Africa, New Zealand, Sweden, England, Holland, and Germany. These machines operate to perfection and always bring off a large brood of strong, healthy chicks. Catalogue with full particulars free for the asking. **THE STANDARD F. C. INCUBATOR CO.,** Dept. 5, Rochester, N. Y., U. S. A.

When corresponding with advertisers, always mention that you saw their advertisement in the Southern Planter.

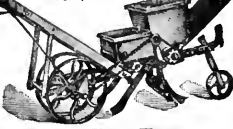
## Profitable Planting

always results when a Keystone Corn Planter is used. Drops the kernels in hill or drills any distance apart and sows any kind of pulverized fertilizer with utmost satisfaction. Works well in any kind of soil. Does not crush the grain and plants beans, peas, etc. Frame is steel, making a durable machine which is a pleasure to use. You'll never regret the purchase of a

### Farquhar Keystone Corn Planter

A. B. FARQUHAR CO., Ltd.,  
York, Pa.

Send for free illustrated catalogue of farm implements and machinery.



## Corn Planting

must be well and carefully done, as the future crop depends upon it. For all purposes, attachment in any soil, on all kinds of ground nothing equals the



### SPANGLER CORN PLANTER.

It saves time, labor, money and insures the crop. You know when it is working, you can see the corn on its way to the ground. Made with or without fertilizer attachment. Now device for sowing peas, beans, castor, rice, etc. We also make the famous Spangler Low Boy Plan and Excavator Drill. Write for catalogue and price. SPANGLER MANUFACTURING CO., 5010 1/2 St., York, Pa.

## HENCH'S 20th Century Steel Ball Coupling Cultivator

With Double Row Corn Planter and Fertilizer Attachment Complete on One Machine.



Parallel beam movement, pivoted axle with lateral beam movement in conjunction with the movable spindles, or either independent of each other. Centric lever for spreading and closing shovel gangs. The most complete cultivator on the market. Have every possible arrangement of the shovel gangs. THE HENCH & DROMGOLD CO. Mrs., York, Pa.

## Butler Cart

Entirely New Departure. Indispensable to Farmer, Gardener, Dairyman or Merchant. 27 Steel wheels and frame; sideboards removable; carries 500 pounds.



This can be used continuously around the farm, garden or house. Fits 36 inch long 15 inch wide, 3/4 inch deep inside. 18 pairs of rubber tires.

First orders from new territory secures agency if desired.  
Roderick Lean Mfg. Co.  
MANSFIELD, O.

it very valuable—more so than a weeder without this feature, inasmuch as the different adjustments of widths permit it to be used for more varied purposes, such as fining and leveling unplanted acres and dragging and loosening the surfaces of grain fields, meadows, etc., as well as between rows, not only as a weed exterminator, but as a shallow cultivator. The absence of shafts make the weeder less cumbersome and enables the operator to work close to the fence. It has a wheel at its front which secures steady and smooth motion, which wheel, by a very simple device, can be made stationary or to swivel. As heretofore, round or flat teeth are supplied on this weeder. For the information of our readers, we would say that the manufacturers of the "Keystone Adjustable" have been licensed by the Hallock Weeder Co. to use a flat tooth covered by their patent, 600,782. If interested in weeders, write the Keystone Farm Machine Co., York, Pa., for a little booklet they are distributing. Kindly mention this paper in writing.

### MAGAZINES.

Of high importance among the magazine articles of the month is "The Restoration of the White House," written for the April Century by Chas. Moore, clerk of the Senate Committee of the District of Columbia, whose accounts of "The Improvement of Washington City" appeared in the Century for February and March last year. Mr. Moore tells in detail the story of the President's house, its first plans, its occasional remodeling, and all the design and accomplishment of the present restoration, an event full of interest to every American. In illustrating the article the Century has employed its best illustrative resources. The exterior drawings by Jules Guerin and the interior by Alfred Brennan, bring out the intention of the architects to a remarkable degree. The frontispiece of the number is a picture by Jules Guerin of the new East Entrance on the occasion of an evening reception. Mr. Brennan has made, among other pictures, double drawings of the new State Dining Room and of the new Blue Room. Miss Cecilia Beaux's portrait of Mrs. Roosevelt (with her daughter Ethel) is published for the first time.

Ray Stannard Baker follows up his general view of the Great Northwest in the March Century with detailed description in the April number of "Butte City, greatest of copper camps." "Few American towns," he says, "arouse a keener interest in the stranger at first glimpse than Butte City"; and most readers are likely to be surprised, if not thrilled, by the figures proving Butte City's claim to its high rank among the country's great wealth producers. In 1790 be-



## GET A GOOD WIND MILL

Don't buy a poor wind mill. Don't pay a double price. Send direct to our factory for catalogue of the

### Freeman Steel Wind Mills

and four post angle steel towers. A complete line of pumping and power mills of the highest grade at extremely low prices. We can save you money on a good article.

S. Freeman & Sons Mfg. Co.,  
110 Hamilton St., Racine, Wis.  
A complete line of Feed and Silage Cutters, Corn Shellers, Wood Saws, etc., at low prices.

Don't Monkey with anything but the

## "PEERLESS,"



If it is clean, unbroken peas you want. The "PEERLESS" is easy to operate, light to handle, durable, elegantly finished. It will clean peas to perfection, also millet, sorghum seed and velvet beans. J. E. Sanders's latest improved, fully guaranteed. We pay freight. Write to-day for prices, address,

PEERLESS PEA HULLER CO., Box V, Dalton, Ga

### THE IMPROVED SCREW STUMP PULLER

Write to Prices.



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

### HERCULES STUMP PULLER



Clears an acre of heavy timberland each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.  
Hercules Mfg. Co., 413 17th St., Centerville, Iowa

### Power in the Stream

is used to bring water to your house, barn or lawn by the



RIFE ENGINE CO., 126 Liberty St., New York.

**THERE IS STRENGTH IN SPLIT HICKORY**

**SPLIT—NOT SAWED.**

That's why we make all our vehicles of this superior material. Why they last, wear and look right. Why they are covered with paint and varnish. Everything perfect. Our

**Split Hickory Winner TOP BUGGY \$40**

we will send you on 30 DAYS' FREE TRIAL. Hitch up to it, use it freely. When the 30 days are up, if you are not more than satisfied send it back—the trial costs you nothing. Our free catalogue tells all about it and our other bargain offers. Send for it today. A full line of harness.

**OHIO CARRIAGE MFG. CO., Cincinnati, Ohio.**

gan the taking of the country's first census. Taking the census of these United States even then was not an easy task. To-day, in spite of all the help of modern mechanical invention, to secure the necessary decennial snapshot of the nation is a herculean undertaking. "The Evolution of American Census-Taking" is discussed in the April Century by no less an authority than the director of the census himself, the Honorable W. R. Merriam. There is another of "The Great Business Combinations of To-Day" series, J. D. Kelley, Commander United States Navy, telling the story of "The So-Called Steamship Trust." "A Picturesque Politician of Jefferson's Time," by J. Fairfax McLaughlin, recounts incidents in the life of Colonel Matthew Lyon. Francis E. Leupp's "Some More Humors of Congress" throws amusing sidelights on that august body, and should prove a mine for all who want another good story to tell. Topics of the Times discuss "The Restored White House," "Shocks to National pride," and "The Genial in Literature;" and the other departments are not lacking.

The leading article in the April-June Forum is a review of "American Politics" by Henry Litchfield West, who deals particularly with the legislation of the last Congress, the fight on the Statehood Bill, the suggested nominations for the next Presidency, and the appointment of colored men to Federal offices. A. Maurice Low discusses the most important "Foreign Affairs" of the quarter, with special reference to the revival of the Eastern Question and to the internal and external politics of Germany. Alexander D. Noyes treats of the events and tendencies of the same period in the world of "Finance." Recent progress in "Applied Science," especially in engineering, is described by Henry Harrison Suplee. Literature is represented by a review of Sidney Lee's "Life of Queen Victoria," contributed by Prof. W. P. Trent. Under the heading of "Music," Joseph Sohn sets forth the "Lessons of the Operatic Season." A paper on "The Educational Outlook" is contributed by Ossian H. Lang. Dr. J. M. Rice's "Educational Research" for the current quarter takes the form of a discussion, based on his investigations in public schools, of the respective importance of talent and training in teaching. The special articles concluding the present number are "The Present Estimate of the Value of Human Life," by Prof. Rudolf Eucken, of Jena, "The Scope of a Permanent Tariff Commission," by Albert H. Washburn, and "A Rambling Discourse on Submarine Navigation," by Comdr. F. M. Barber, U. S. N., retired.

It will be difficult to find a more attractive magazine for the entire household than the April "Success,"

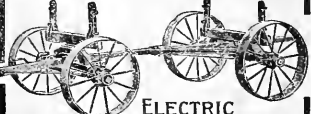
**Wise Man's Wagon.**

The man who has had experience in running a wagon knows that it is the wheels that do most of the life of the wagon itself. Our

**ELECTRIC STEEL WHEELS**

have given a new lease of life to thousands of old wagons. They can be had in any desired height and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hubs, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalogue describing the uses of these wheels and wagons sent free. Write for it.

**ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**



**WE'LL PAY THE FREIGHT!**

and send 4 Buggy Wheels, Steel Tire on, \$7.25 With Rubber Tires, \$14.00 1 pair, with 2 1/2 in. tread. Top Leathers, \$23.75; Harness, \$3.80. Write for catalogue. Begin how to buy vehicles and parts direct. Wagon Umbrella FREE. W. V. BOADIS, Cincinnati, O.

**BOSTON'S IMPROVED FARM LEVEL**

Pat'd 1902.

WITH AND WITHOUT TELESCOPE

Is no MAKESHIFT, but the best one made for Terracing, Ditching and Draining. Price \$12 and \$16, including Tripod and Rod. Send for descriptive circulars and Treatise on Terracing, etc., Free.

**Boston, Ready, Pitt. Co., 81 1/2 W. Alabama St., Atlanta, Ga.**



**STEEL ROOFING**

Strictly new, perfect, Semi-Hardened Steel Sheets, 2 feet wide, 6 feet long. The best finished, Shingle or other roof can use. No experience necessary to lay it. An ordinary hammer or hatchet the only tools you need. Weighs 10 lbs. per sq. ft. Has free epl paint roofing two sides. Comes either flat, corrugated or with crimped.

**\$2.00 PER SQUARE.**

A square means 100 square feet. Write for free Catalogue. 165, on Farm supplies of every kind.

**CHICAGO HOUSE WEAVING CO., 7, 35th & Iron Sts., Chicago**



**Announcement**

We have obtained the Court's decree against two additional manufacturers who have been infringing our patent. The role of the infringer, manufacturer, seller or user of an infringing device are all liable in damages to the owner of the patent infringed. The Janville Machine Co. and the Keystone Farm Machine Co. are the only firms licensed to use a *flat tooth* covered by our patent, and we finally warn sellers and users of all other makes, no admirably have the "Hallow" Hallow! We deduce the work for which they were designed, that one maker after another sought to copy it. However, by the various Court's decisions, these makers are compelled to abandon the manufacture of a Weeder having flat teeth, and they are now experimenting with other shapes, but it is the flat tooth that made the "Hallow" Weeder famous, and in view of the manner in which our patent has been sustained, it is dangerous to again infringe tooth. Write for descriptive circulars and prices.

**HALLOCK WEEDER & CULTIVATOR CO., Box 839 York, Pa.**



**Our 1903 CATALOG Contains GREATER BARGAINS**

than offered by any other manufacturer. Our wonderful offers will surprise you. We use the best material and guarantee every rig for 2 years. If the buggy you buy from us is not better in every way than you can get elsewhere then return it and we will refund your money. A rubber tire top buggy, \$15.00. —145 other equally big values.

Get out this ad, send it to us and we will mail you catalog free.

**MARVIN SMITH CO., Chicago, Illinois.**



**AGENTS WANTED**

In every community to make good money selling our Economy Horse and Harness Co. vehicles are so good and our prices so low that they will surprise you. Write at once for plan and free catalog. Top buggy, good lookers and \$27.50.

**Economy Buggy Co., Box 3, Cincinnati, O.**



**The "Weber Junior" Pumper**

Is all complete, ready to attach to pump. Equals 50 men in manual. Uses but little gasoline. Is equipped with all the latest improvements. Erected, all connections made. Easy to start, any one can operate it. Every one guaranteed. Other sizes up to 60 H.P. Send for catalog. Weber Gas & Gasoline Engine Co., Box 128 Kansas City, Mo.



**DEHORNER Every Dehorner Guaranteed THOUSANDS IN USE.**

Ask your hardware dealer for them or write **E. L. BROWN MFG. CO., DECATUR, ILL.**





## DUST SPRAY.

Write to the  
**DUST SPRAYER M'F'G. CO.**

At

503 Broadway, Kansas City, Mo.,

Asking them for information relative to their Dust Sprayer, which has many advantages, and is something every Fruit Grower, Cotton Planter, Tobacco Grower and Truck Gardener should be familiar with.

**SPRAYER**  
THROWS A STREAM 60 FT. OR MORE.

It is beyond question the most perfect and effective SPRAYER and FIRE EXTINGUISHER ever invented, and supplies a universal want. In variety of service, simplicity of construction and ease of operation, it has no equal. Ask for catalogue and price, which costs you nothing. AGENTS WANTED.

**F. B. SMITH MFG. CO.,**  
353 MAIN ST. BUFFALO, N.Y.

**A BIG CROP OF FRUIT**  
and dollars in your pockets, if you spray your trees and vines with the wonderful

**HARDIE SPRAY PUMPS**

They put the Spray on with such force that tree and vine is covered with a spray as fine as fog and it stays there. Each part of their machine is fitted so accurately that there is no friction. That's why they work so easy. Our catalogue tells the whole story. It is FREE. A postal card will bring it.

**A. M. HOLLOWAY** Eastern Agent  
Builders Exchange, Philadelphia

which has just appeared. It is filled with a variety of good things for people, young and old. The opening article, "Burrowing in the Nether Gloom of the Hudson's Bed," by Frank Fayant, interestingly describes the difficult work now being done in tunneling under the Hudson river, New York, in order to connect New York city with New Jersey by a direct rail route. Owen Kildare, whose life-story, "My Rise from the Slums to Manhood," appeared in the February "Success," creating almost infinite attention, has written a true story of his dog. It is entitled "My Good Old Pal," and is thrillingly interesting. In keeping with Easter-tide, is a touching poem, "An Easter Song," by Richard Le Gallienne. The same writer has also contributed a valuable article on "How to Form a Library," which gives some excellent advice on collecting books for a library at a moderate expenditure. Mrs. Charlotte Perkins Gilman, in an article entitled "The Home as a Food-Purveyor," deals with the problem of home-cooking, and attributes many ill effects to the general mode of preparing food.

G. W. Orton, who won the American cross-country championship in 1897, and who is the two-mile world's steeplechase champion, in the April St. Nicholas tells his young readers about "Training for Interscholastic Athletics," with some helpful points for instructors and parents as well. The same authority will follow this article with another in the May St. Nicholas on pole-vaulting, throwing the hammer, broad-jumping, high-jumping, and other timely athletic sports.

Lippincott's Magazine has won a reputation for its monthly novels. That in the April number, a stunning good one called "The Trifer," is written by Archibald Eyre, an English author of rising fame. "The Trifer," a member of London's smartest society, has a kind heart and an almost too keen sense of humor. He is appealed to by his new sister-in-law to extricate her from an appalling situation. A man to whom she had once been engaged and had jilted for Sir Geryald Trewint has had love-letters printed "for private circulation only." "The Trifer," having himself felt the brunt of his brother's anger, shows quick sympathy for the bride and rashly promises assistance. In executing a plan to effectually stop the whole thing, he is taken for a thief. This leads to some delicate predicaments and amusing escapades. "The Trifer" shows he can be earnest enough in winning the girl he ardently loves.

The number closes with a laughable story by Elliott Flower. An amateur hypnotist puts up a joke on his sister's lover, which might have been

Feed Your Land  
with fertilizers rich in

## Potash

and your crop will crowd your barn.  
Sow potash and reap dollars.

Our five books are a complete treatise on fertilizers, written by men who know. Write for them.

**GERMAN KALI WORKS,**  
63 Nassau Street, New York.



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#### REPORTS.

U. S. Department of Agriculture, Washington, D. C. Bureau of Animal Industry. Circular 39. The Water Content of Creamery Butter.

Office of Experiment Stations. Experiment Station Record. Vol. XIV, No. VII.

Public Road Inquiries. Bulletin 23. Road Conventions in the Southern States.

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Bulletin 25. Proceedings of the Jefferson Memorial and Interstate Good Roads Convention.

Kansas Experiment Station, Manhattan, Kan. Bulletin 116. Destroying Prairie Dogs and Pocket Gophers.

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Ohio Experiment Station, Wooster, O. Press bulletin 248. Fruit list.

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Report for February, 1903.

West Indian bulletin Agricultural Department, Bridgetown, Barbadoes. Vol. III, No. 4. Scale Insects. Sorghum Poisoning, etc.

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American Farmers' Manual, 1903. Peter Henderson & Co, Cortland street, New York. Catalogue of Seeds, Grasses, Clovers, Cereals, Forage and Root Crops.  
J. B. Watkins & Bro., Hallsboro, Va. Nurserymen. Surplus list of Trees, etc., for spring 1903.

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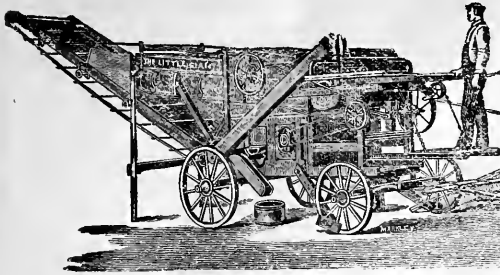
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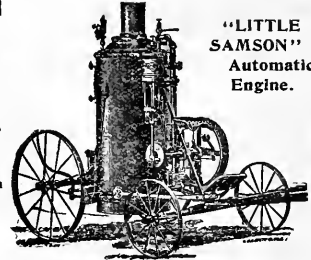
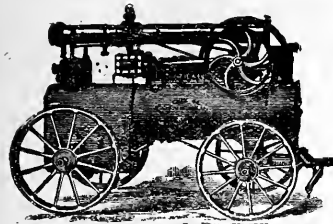
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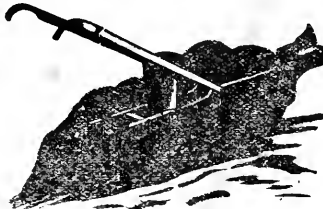
This cut shows our 5 and 7 h.p. "Little Samson" Vertical Automatic Engine, for running threshers, peanut pickers, cutting feed, sawing wood, etc. Larger sizes also furnished.

**STRATTON & BRAGG CO., 20-22 N. Sycamore St., Petersburg, Va.**

**PLANTERS**

**CARDWELL'S, EUREKA and CENTENNIAL FERTILIZER ATTACHMENT** are the best, therefore they are the cheapest.

They Plant..   
**CORN, |  
BEANS,  
ENSILAGE  
CROPS.**



And Distribute  
**FERTILIZER**  
any distance apart,  
and any quantity.

We make **THRESHFRS, HORSE POWERS, PEANUT MACHINERY, STRAW CUTTERS WELL FIXURES,** and all implements formerly made by **H. M. SMITH & CO. and J. W. CARDWELL & CO.**

**THE CARDWELL MACHINE CO., = Richmond, Va.**

# SEED CORN

## Cottage Valley Stock and Seed Farm,

W. M. WATKINS & SON, Props.,  
Randolph P. O., - Charlotte County, Va.

### White Champion

The Earliest corn on record. Ears 10 to 12 inches long, with 18 to 20 rows on a cob. Fine blue grain. The finest Early corn ever planted. Planted June 10th, on ordinary high land, out, and was in shock Sept. 10th. We made from one gal. planted, 12 barrels of good corn.

Price—1 peck 75c; ½ bus. \$1.50; 1 bus. \$2.50.

### Pride of Cottage Valley.

A large ear, deep grained Early White Corn with 16 to 21 rows on a cob and stalks 12 to 15 feet high; usually two ears to the stalk and yielding an abundance of fodder. This Corn is a very productive and makes the best table meal.

Price—1 peck 45c.; ½ bus. 85c.; 1 bus. \$1.25.

### Early Yellow Variety

Popularly known as Hiron Dent. Most perfect-shaped ears and most reliable Early Yellow Corn ever introduced. Planted May 10th, cut, and in shock by the latter part of August.

Price—1 peck 30c.; ½ bus. 60c.; 1 bus. \$1.00.

### Snow White Dent.

It has medium ears, and grows very large, compact close set grains, well filled out, the cob being medium size, very white, and requiring brains to span it, and weighing about 7½ lbs. per 70 lbs. of ears. About white, and requiring brains to span it, and weighing about 7½ lbs. per 70 lbs. of ears. About white, and requiring brains to span it, and weighing about 7½ lbs. per 70 lbs. of ears. About white, and requiring brains to span it, and weighing about 7½ lbs. per 70 lbs. of ears.

If you want the best white corn in America, you cannot make a mistake by planting Snow White Dent. The year 1901 was the first time it was offered for sale by any one, when it bushel was sold at one customer. We are now able to offer it in quantity, but in any event, solicit early orders, as there promises to be a larger demand for all variety of seed corn during the coming season than for many years past. We reserve the right at all times to decline orders for more than one bushel.

Price—1 peck 45c.; ½ bus. 85c.; 1 bus. \$1.50.

### \* SEED CORN \*

The Prize WHITE DENT Corn, the seed were obtained last year from Epitonia, Va. Department Farm, Indianapolis, matures in 90 days, and grows about as like Southern White Corn. A heavy yielder. Price, \$1.40 per bus., 75c. per ½ bus.

W. RUSSELL, Abbyville, Va.

## "Feeds and Feeding"

Prof. Henry's Great Book for  
Farmers and Stockmen.

Delivered anywhere for - - \$2.00  
With the SOUTHERN PLANTER, 22c

### NO HUMBAG.

Three in One. Makes different ear marks. Extraordinary. Price \$1.00 for trial. If you like, send for one. Patent May 2, 1902. He and Co. Holders only. FARMER BRIGHTON, FAIRFIELD, IOWA.



## CONFERENCE FOR EDUCATION IN THE SOUTH.

The Sixth Session of the Conference for Education in the South will be opened in Richmond on the afternoon of Wednesday, April 22d, and will close on the evening of the 24th.

The decision to hold the Conference this year in Richmond was reached only after the Executive Committee had given careful and respectful consideration to the invitations from a number of representative Southern cities. The invitation to Richmond was cordially and earnestly presented by the Richmond Education Association, the Richmond Chamber of Commerce, the Governor of Virginia, the Legislature, the State Department of Education, the University of Virginia, Washington and Lee University, and many other representative institutions of the Commonwealth.

The conference will open for organization in Richmond on the afternoon of April 22d, in the Academy of Music, on Eighth street, between Grace and Franklin streets. The formal opening will occur on the evening of the 22d, at which time the Hon. A. J. Montague, Governor of Virginia, will deliver the address of welcome, and Mr. Robert C. Ogden will present the annual address of the president.

The interest of the programme will continue until its close on the evening of the 24th. Representative educators, statesmen, men of letters and men of affairs will be present from every section of the country. Much importance will be given to such subjects as agricultural and technical education, and there will be opportunity for informal discussion of such topics as the consolidation of schools and the improvement of public school-houses and school surroundings. The conference has always been especially interested in the problems connected with the rural school.

The local arrangements as to the meetings are in the hands of the Executive Committee of the Richmond Education Association, P. O. Box 638, Richmond, Va. The programme, in full, will be published at an early date. The plans for the week will include a public service in memory of Dr. Curry.

Arrangements as to reduced fares over the railroads, and as to hotel and boarding-house accommodations, will be announced within a few days.

M. W. Savage has refused an offer of \$70,000 for Dan Patch. The famous pacer cost Mr. Savage \$60,000 about three months ago. He bought the stallion in New York city, and now eastern men are so anxious to get him back that they telegraphed the offer.

Horsemen doubt whether Mr. Savage would entertain any proposition for the pet of his stock farm. At any rate, the strong increase of \$10,000 in

## A Package of the Famous

# American Stock Food FREE.

Send us the names of ten of the best farmers and stock raisers in your vicinity, and we will mail you, post-paid, a sample package of American Stock Food.

## THIS IS THE COMING STOCK FOOD.

Every package guaranteed. Every five lb.-sized package has on it picture of Uncle Sam. None genuine without.

AMERICAN STOCK FOOD CO., Fremont, Ohio.



## 150 Jacks, Jennets & Mules 150

Best assortment I ever owned. Can sell you exactly. Write for description and prices. Also will sell two Percheron stallions at close figures.

BAKER'S JACK FARM, Lawrence, Indiana.

# FINE JACKS.

Mules are equal to Gold Dollars, from "youth to old age." Several nice ones and 2 very fine Jennets for sale. Buy Jack now and get him ready for spring. Write your wants to

L. L. THOMAS,  
7722 W. Campbell Ave., - Roanoke, Va.



## JACKS and JENNETS FOR SALE.

Enclose 2 cent stamp for new catalogue.

W. E. KNIGHT & CO.,  
R. F. D. 5 Nashville, Tenn.

## FOR SALE

### ANGORA GOATS.

Registered and Graded. "One to carload lots." Pairs, \$10.00; trios, \$11.00. Write for carload prices.



JEREMY IMPROVEMENT CO., - Saxe, Va.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Chilly, Ky.

"HARVEST FOR HUSTLING AGENTS. Send 30c. for sample corn sheller, just out. Illustrated catalogue of quick-selling goods furnished free. See here Novelty Works, Richmond, Va."

## GRANITE POULTRY YARDS.

## EGGS! EGGS! EGGS!

From fine laying strain of

## Barred Plymouth Rocks

And

## Silver Laced Wyandottes.

I will send you nice, fresh layed Eggs, and fill your order promptly. Eggs \$1 per sitting of 15, at express office, Salisbury, N. C. No more birds for sale at present.

Mrs JOHN D. A. FISHER,

R. F. D. No. 3, Salisbury, N. C.

## PURE BRED, PRIZE-WINNING

## FOWLS

## MAMMOTH BRONZE TURKEYS.

We have the winning pen of Madison Square Garden Show. Gobbler weighs 45 lbs.; hens, 28 lbs.

## PEKIN DUCKS. . .

Prize-winning drake at Philadelphia and New York Madison Square Garden. Young ducks weigh 14 lbs. per pair.

## PLYMOUTH ROCKS, Barred and White. WHITE HOLLAND TURKEYS.

Unlimited number fowls and Eggs for Sale.

Also pure bred POLAND CHINAS, SHETLAND PONIES, HORSES, and RED POLLED CATTLE, the milk, butter and beef breed. ALBEMARLE PROLIFIC SEED CORN.

## ARROWHEAD STOCK FARM,

Sam'l B. Woods, Prop. Charlottesville, Va.

## HOLLYBROOK FARM

## Eggs FOR Incubators

We can name a special low price on Barred Plymouth Rock Eggs, first-class stock, in 100 lots and over, for incubator use. Write for price, stating number required.

HENRY W. WOOD,

Hollybrook Farm. P. O. Box 330, RICHMOND, VA

We also have a few first-class Pullets of Silver-Laced Wyandottes for sale: Price, \$1.50 each.

## The Racket Poultry Farms,

A. S. JOHNSON, Man., Parkesley, Va.

Breeder of High-class Land and Water Fowls.

BLACK LANGSHANS, RHODE ISLAND REDS, S. C. BROWN LEGHORNS, TOULOUSE GEES.

PEKIN DUCKS and BELGIAN HARES.

Geese eggs, 25cts. each Langshans, Rhode Island Reds, \$1.25 sitting, others, \$1.00. Our birds are bred from winners at largest shows, and have the range of three farms. Satisfactory guarantee.

## EGGS EGGS EGGS

That will hatch out DOLLARS! Not real dollars, but Turkeys and Chickens of the best strains in this country, which will net the owner more real dollars of profit than any others. I handle "Nothing but the Best" in my line. My prices are higher than some others, but the quality more than makes the difference. National strain. Mammoth Bronze Turkeys, sitting \$2. National strain, Barred Plymouth Chickens, sitting \$1.50.

## PREDMONT POULTRY PLACE,

Miss E. Caille Giles, Prop., Whittle's Depot, Va.

## S. C. W. LEGHORNS. Pure stock. Bred to lay. Eggs, \$1 per 30.

IDEAL POULTRY YARDS, Kopp, Va.

the market price within the short space of 100 days was not too great a temptation.

Tuesday morning Dan Patch will be removed from the Savage private stable on Portland avenue to the International Stock Food Farm on the Minnesota river. An arrival of interest yesterday at the farm from Pleasanton, Kan., was the first Dan Patch colt to be brought to Minnesota. Mr. Savage has bought a half interest in the stud colt and he will live at the farm. The colt was foaled January 6th and \$1,000 was offered for him before he finished his first day. The colt is named "Young Dan." His first dam was Cedar Belle and his grandmother Oleta.

Henceforth "Savage" will be a station on the Omaha road. The officials have notified Mr. Savage that they will call the farm station Savage hereafter instead of Hamilton.—From *Minneapolis Journal*, March 14, 1903.

## GOOD ROADS vs. WIDE TIRES.

The question of good road-making is now being agitated pretty generally throughout the United States. In this connection we are glad to note that wide tires are coming into prominence. This is just as it should be, because if there is one thing that contributes to make a good road it is a broad tire.



We reproduce herewith, by the courtesy of the Electric Wheel Co., Quincy, Ill, a cut, which shows the relative advantage of the broad over the narrow tire. The advantage of the former is apparent to all, as, in addition to making good roads, it reduces the draught, thereby making the load much lighter on the horses.

The above company makes all kind of metal wheels, and has some interesting literature, which it will send free to any one requesting it.

Address them at Box 146, Quincy, Ill.

## A CHANGE.

"Well," said Noah, as he hunted for a dry spot on the top of Ararat, "a lot of people came down to the pier to josh us when we started, but I don't see any of them around to poke fun at our home-coming."—*Life*.

To make cows pay, use Sharples Cream Separators. Book "Business Dairying" & Cxt. 305 Proc. W., Chester, Pa.

## LEGHORN POULTRY YARDS



Have for sale a limited number of Single Comb Brown and White Leghorn Pullets and Roosters. Best layers known. Prize-winning stock. Price, \$1.00 to \$1.50 each. Eggs in season at \$1.00 for 10; \$5.00 per 100. Satisfaction guaranteed. Address

A. T. MATTHEWS, Box 36, Parkesley, Va.

## BROWN LEGHORNS

(Single Comb.)

Eggs from prize winners and good layers \$1.50 per sitting. Reduction on larger lots.

## WHITE PLYMOUTH ROCKS

R. W. HAW, Jr., - Centralia, Va.

## EGGS FOR HATCHING

From White Holland Turkeys, White Plymouth Rock and Rose Comb White Leghorns.

White Plymouth Rocks are the best all purpose fowls. My stock is of the finest strains. R. C. W. Leghorns are the champion layers, Nest Rose Combs do not freeze. Send for circular.

Mrs. LIZZIE DYER, Versailles, Tenn.

## Eggs for Hatching

Toulouse Goose eggs, \$2 per doz.; Barred and White Rocks, S. L. Wyandottes, Brown Leghorns, S. and R. C. S. C. White Leghorns 75c. per sitting of 15. A few more Leghorn Cocks, reis left, \$1 each.

J. B. JOHNSON,

CLOVER HILL FARM. MANASSAS, VA.

## EGGS

BARRED PLYMOUTH ROCK, S. C. B. LEGHORNS.

Biltmore and Thompson strains.

\$1 per 15; prompt attention.

MRS. JNO F. PAYNE,

Clairmont Dairy Farm. University of Va.

## Barred Plymouth Rocks

—EXCLUSIVELY—

Strong, healthy, vigorous, farm-raised stock; bred for laying; 75 cts. per setting.

WM. B. LEWIS, 1rbv, Nottoway Co., Va.

## — EGGS —

— FROM —

**WHITE HOLLAND TURKEYS.**  
\$2.25 for 9; \$4.00 for 18.

**WHITE PLYMOUTH ROCKS**  
\$1.25 for 13; \$2.25 for 30.  
Packed and f. o. b. Express Office.

**JOHN A. CLARK, - SHIRLEY, VA.**

## Home of High-breds.

Even the best is never too good,  
you'd better buy of me.

**FANCIER'S STOCK AT FARMERS PRICES.**  
Duro-Jerseys, the best all purpose hog;  
also Poland-Chinas; B. P. Rocks, M. B. Turkeys and M. P. Ducks. Best in season.  
**THE CEDARS, W. M. G. OWENS,**  
P. and S. FARM, Midlothian, Va.

## BUFF ORPINGTON EGGS FOR SALE.

This wonderful-laying and general utility fowl is taking the day. Eggs, \$1 per 15. Good hatch guaranteed. Will prepay express on \$3 orders. "OCCONEECHEE FARM," Jefferson, Va.

## 32 Varieties Best Poultry

FINE ILLUSTRATED CATALOG for stamp, if you mention this paper. All poultry

keepers should have it. **JNO. E. HEATWOLE,** Harrisonburg, Virginia.

## EGGS FOR HATCHING.

White Wyandottes, Barred Plymouth Rocks, S. C. White Leghorns and Pekin Ducks. Prize winners at New York, Boston, Philadelphia, Cleveland, Hagerstown, Fair American and Charleston. Some extra fine stock for sale. For prices and description, address

**LEWIS E. BENEDICT, Proprietor**  
Meadow Farm, - Lutherville, Md.

## "HAWKINS"

Barred, Buff and White P. Rocks, Light Brahma, White Wyandottes, Buff Cochins, Partridge Cochins, Black Langshan, Black Minorca, S. C. Brown Leghorns and S. C. White Leghorns. Stock for sale cheap. Prize winner eggs, \$1 for 15. A batch of 75, or order duplicated at half price.

**OAKLAND POULTRY FARM, Ruffin, N. C.**  
Box 5. C. J. Warriner, Manager.

## EGGS FOR HATCHING.

Purebred B. P. Rock, Black Minorca, S. C. B. Leghorn. Fine stock, excellent layers. I guarantee eggs to be true to name, fresh, and to arrive in good condition. 75 cts. per 15; \$2 per 45; \$4 per 100.  
Miss S. M. HITER, Ellaville, Louisa Co., Va.

## WHITE WYANDOTTES and BUFF P. ROCKS.

Beautiful birds, and grand layers.

Cockers, \$1.50 each.

Eggs, \$1 per 13; \$5 per 100.

**EDGEMONT POULTRY YARDS, Liberty Mills, Va.**

## EGGS FOR SALE

From purebred S. C. B. LEGHORNS,

\$1 per 15; \$5 per 100.

Mrs. B. D. CHANDLER, R. F. D., Charlottesville, Va

## NATIONAL AID TO ROAD BUILDING.

BY J. B. KILLEBREW.

There is no questioning the fact that the subject of road building is engaging the attention of the people of the United States to a greater extent than ever before in the history of the country. Not only is the subject discussed in every county, township, and civil district, but the Legislatures of the several States are beginning to listen to the coming storm of public applause or public indignation by devising methods to improve the roads. But by far the most important, because the most comprehensive, movement inaugurated is that of the bill presented to Congress by the Hon. W. P. Brownlow, of Tennessee. In its scope this bill provides for national aid in road improvement to every political division or sub-division of the country. Section 12 of the bill provides "that one-half of the expenses of the construction shall be paid by the Treasurer of the United States upon the warrant of the Comptroller, issued upon the requisition of the Director of said Bureau, out of any specific appropriations made to carry out the provisions of this act, and one-half of the expenses thereof shall be paid by the State or political subdivision thereof making application for the co-operation provided for; provided, that nothing herein shall be construed to prevent the State or political sub-division thereof from distributing the said half so that the State may pay a portion, the county a portion, and the owners of the land abutting upon said road another portion. And provided further, that no money be advanced by the United States in payment of its portion of the cost of construction as provided for, except as the work of actual construction progresses, and in no case shall the payment or payments made thus prior to the completion of the work be in excess of 80 per centum of the value of the work performed, but in all cases 20 per centum must be held until the completion of the work according to the plans and specifications and to the satisfaction of the Director of said Bureau."

This is a wise provision, and will put every community upon its mettle. Those that are imbued with the spirit of progress and improvement will not hesitate to avail themselves of this assistance in building good roads. The passage of this bill will be a distinctive and era-making event in the legislation of the country. To one who properly considers all the benefits that will accrue to the nation and to all its citizens by the passage of this bill, it must be conceded that no other legislation has ever been fraught with so much good for the people and with such grand possibilities. Say what we please about the influence of public schools, the press, the pulpit, the plat-

## Cramer's Poultry Yards

Hatching Eggs from m. y. 130 purebred Silver L. Wyandottes at 75c per setting of 15. H. G. per 100 eggs.

**JOHN CRAMER, - South Boston, Va.**

## WANTED AT ONCE OLD LIVE PIGEONS

In any quantity.

**W. C. LYNHAM, 412 W. Marshall St., Richmond, Va.**

## BLACK MINORCA EGGS

60 cts. per setting of 15.

**Mrs. A. G. HILL, Huon P. O., Louisa Co., Va.**



## EGGS FOR HATCHING.

From choice, high scoring, B. and W. Plymouth Rocks, \$2 a setting. From good, purebred B. Leghorns and B. Plymouth Rocks, \$1 a setting, \$3.50 per 50. **H. A. KUHNS, Atlanta, Ga.**

## EGGS FOR SALE.

M. B. Turkey, \$3 per doz.; Pekin Duck, \$1 per doz.; White Wyandotte, \$1 for 13; B. P. Rock, \$1 for 13; S. C. B. Leghorn, \$1 for 15.  
Miss Clara L. Smith, Croxton, Carolina Co., Va.

## Barred P. Rocks S. C. B. and W. Leghorns.

15 eggs, \$1; 30, \$1.75. PEKIN DUCKS—11 eggs, \$1; 22, \$1.75. See instruction guaranteed.

**Rev. J. W. HECKMAN, - Spottsylvania, Va.**

## SILVER WYANDOTTES

EXCLUSIVELY.

Famous "Blue Grass" Strain; none finer. Eggs, \$1 per 13; \$2 per 30. 22 years a breeder and shipper. **S. P. YODER, Denbigh, Va.**

## EGGS FOR SALE

From purebred

**M. B. TURKEYS, WHITE and BARRED PLYMOUTH ROCKS.**

**W. F. FLANAGAN, Christiansburg, Va.**

## BARRED and BUFF PLYMOUTH ROCKS.

**FRED NUSSEY,**

Summit, Spottsylvania Co., Va.

## White Leghorns.

Egg Record, 2,218 eggs in one year

from eighteen hens.

Eggs, \$2 per 15; \$5 per 60.

Write for circulars—day.

**C. G. JIM FINK, 1409 W. Leigh St., Richmond, Va.**

## EGGS From prize-winning matings

**BARRED and WHITE PLYMOUTH ROCK, WHITE WYANDOTTIE and BLACK MINORCA.** Reduced rates to secure widest patronage—\$1.00 per 13.

**KENTON POULTRY FARM, Glendale, Md.**

## BARRED PLYMOUTH ROCK EGGS

From the Sunnydale winter laying strain of ringlets. \$1 per 15; \$1.80 per 30; \$3 per 50. Incubator Eggs, \$5 per 100. No. C. O. D. shipments to any one. **SUNNYSIDE POULTRY FARM**  
Reference: **Christiansburg, Va.**  
Bank of Christiansburg.

## S. C. BROWN LEGHORNS

Long bred for fine plumage, strong vitality and laying qualities. One sitting of 16 eggs, 75 cts.; two sittings of 32 eggs, \$1.25; per 100 eggs, \$3.50. ADDRESS  
**J. N. HANGER, - Lasley, Va.**

## PIT GAMES

Red Horses, Eggs, \$1.50 per sitting (15). Also a few Red Horse and Irish Red Cocks for sale at reasonable prices.  
**A. S. CRAVEN, - Greenwood, Va.**

## PIT GAMES.

**BLACK DEVILS and RED HORSES.**  
 These Cocks won 90 per cent. of battles fought in 1801 and 1802, and have never lost a battle when gameness and cutting qualities could win. Eggs, \$2 per sitting and stock for sale.  
**THOS. W. JARMAN, Yancey Mills, Va.**

## M. B. TURKEY EGGS

From extra heavy weights and brilliant plumage, \$3 doz. B. P. Rock and Pekin Duck Eggs \$1 per 15. Pedigreed Scotch Collie Pups \$5 each. 8 mos. male Collie partly trained \$10.  
**C. H. BENNETT, - Goodson, Va.**

## WANTED!

ALL KINDS OF  
**LIVE WILD BIRDS AND ANIMALS.**  
 Particularly Wild Turkeys, White Squirrels, Ducks, Swans, Etc.  
**CECIL FRENCH,**  
 718 Twelfth St. N. W., Washington, D. C.

## RIVER VIEW POULTRY FARM. EGGS FOR HATCHING

From purebred B. P. R. My hens weigh from 8 to 10 lbs. and cocks from 10 to 12 lbs., at 1 yr. old. I handle only B. P. Rocks, and they are farm range. Price per sitting, \$1 for 15, \$1.50 for 30, \$2 for 45.  
**M. E. ANDREWS, Hurt, Va.**  
 One-half mile from Depot. On Southern R'y.

## HAWKSLEY STOCK FARM. Large ENGLISH BERKSHIRES B. P. ROCKS FOWLS,

Eggs from same, \$1 per 15.  
**J. T. OLIVER, Allen's Level, Va.**

## FOR SALE.

Large English Berkshire Hogs,  
 Barred Plymouth Rock Chickens  
 BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. ~~EGGS~~ EGGS IN SEASON.  
**JOHN P. FOSTER, Noecreek, Ohio Co., Ky.**

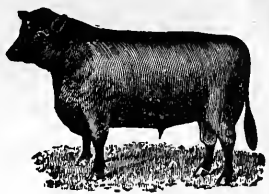
...A BARCAIN...  
**I DE LAVAL CRANK**  
 HUMMING BIRD SEPARATOR,  
 275 lbs. cap. ac., in perfect order. Price, \$50.  
**I SHARPLES SAFETY HAND SEPARATOR,**  
 Cap. ac., 300 lbs., in need of slight repairs.  
 Price, \$25.  
**W. B. GATES, - RICE DEPOT, VA.**

form, and other institutions that mark the civilized progress of mankind, yet all these are more or less dependent upon the facilities of intercourse between the people. In fact, it is an undeniable truth that civilization means labor in some form, and labor is the ability to move things from place to place, and its efficiency depends upon the ease with which they are moved. No nation has ever yet achieved permanent renown without good roads, or ever huilt them and regretted it afterwards. No community in possession of good roads would be willing to surrender them upon the repayment of their cost and maintenance. Of all the expenditures made by aggregated bodies or by government agencies, while it may not be the least felt, it produces the greatest good and the greatest satisfaction to the greatest number. Everybody uses good roads—the millionaire and the beggar, the black and the white, the lame and the blind, women and children—all enjoy and participate in the advantages and blessings of good roads. They are the morning star of progress; they are the fountain heads of trade and commerce; they are the avenues over which pass the main agencies for the dissemination of knowledge and the increase of intelligence, as well as the enjoyments of social intercourse in rural life. They provide the means for the performance of public duty; of reaching local markets or shipping points on the railroads. They serve more country people in the aggregate than the railroads themselves.

This bill of Mr. Brownlow's is most timely. The rapid extension of the rural free delivery system, now covering 300,000 square miles, and destined in the near future to be extended to the 40,000,000 people living in the rural districts, make good roads a necessity. Why should the United States, that has attained supremacy over all other nations in wealth and in a world-wide influence in commerce and diplomacy, hesitate to enter upon a work that will bind its citizens to it with a loyalty exceeding the loyalty of the people of any other nation whatever? Why hesitate to do that which every person desires to be done in this way? Why hesitate, when good roads are the most important factors in carrying out the wise provisions for increasing the intelligence of its citizenship through rural free delivery? No other highly civilized nation on earth has so many bad roads as the United States. England, France, Germany, Spain, Italy—all have good roads.

This government belongs to the people. They instituted it for their own welfare. They are the rulers. Congress is but one of the agencies they have created to provide for their wants and to execute their will. There is no constitutional barrier to the

## MARKET TOPPERS FOR SALE, LOW.



One thoroughbred Angus cow, unregistered, coming 3 yrs., with heifer calf at foot.  
 Four three-fourths Angus heifers, two coming 3 yrs., two coming 1 yrs., bred to reg. Angus bull.  
 Four seven-eighths Angus heifers, coming 2 yrs., bred to reg. Angus bull.  
 Three seven-eighths Angus heifers, coming 1 yr.  
 Four one-half Angus heifers, coming 1 yr., one bull calf, out of a thoroughbred Shorthorn cow, by a reg. Angus bull.  
 One 9-mos.-old reg. Angus bull.  
 One 12-mos.-old reg. Angus heifer.  
 All of the above cattle are black, and as well polled as a thoroughbred Angus.  
 One fine reg. Angus Bull Calif, 5 mos. old.  
 One pair Bay Mares, with black points, coming 5 yrs. old. Weight, 1,200 lbs. each. Well broken to harness and all farm machinery. An ideal farm team. Heavy enough for farm work and active enough for good drivers, and gentle enough for anybody to handle. If sold very soon, will take \$325., which is very cheap.  
**Address W. M. WATKINS & SON,**  
 Cottage Valley Stock Farm,  
 Randolph, Charlotte Co., Va.

## The RICHMOND, FREDERICKSBURG and POTOMAC R. R.

and WASHINGTON SOUTHERN R'Y  
 Form the Link connecting the  
 Atlantic Cost Line R. R.,  
 Baltimore and Ohio R. R.,  
 Chesapeake and Ohio R'y,  
 Pennsylvania R. R.,  
 Seaboard Air Line R'y  
 and Southern R'y.

Between all points, via Richmond, Va.  
 Fast Mail Passenger and Express Routes between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.  
**W. P. TAYLOR, Traffic Manager, Richmond, Va.**

## WHISKEY

4 full quarts Corn Whiskey 10 years old, \$3.50  
 4 " " " " " " " " " " " " " " 2.50  
 4 " " " " " " " " " " " " " " 2.50  
 20 years old, for invalids and other loved ones..... 6.00  
 Or will ship the 12 qts. named above for \$11.00  
 Plain packages. Express paid. Purest and Best Whiskey, and Oldest House in America. Established 1705—135 years ago. Just as Corn-bread is more wholesome and palatable than Rye-bread—So with the Whiskey—so say all Doctors—try it and be convinced. Nothing on earth so beneficial to weak lungs as this mountain beverage.  
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building of roads. The same clause in the Constitution that authorizes the establishment of post-offices authorizes the establishment of post-roads. These two constitutional bestowments are co-ordinate branches created for the accomplishment of the same great end—that is, the convenience and happiness of the people. But aside from the necessity of building good highways for the better distribution of the mails through rural districts, it should be borne in mind that the agricultural classes, while doing more to sustain the credit of the government and the financial strength of its people than all other classes combined, have had the smallest appropriations made for their immediate benefit. The urban population have long been provided, at the expense of the government, with messengers for the delivery of mail. The shipping interests have had the harbors and rivers improved to expedite their business. The cities have been provided with post-office buildings, the architectural beauty and cost of which surpass those of any other nation. Railroads have made use of the credit of the government. Iron masters have depended upon the government to construct great locks and dams for facilitating the assembling of the materials at cheap rates for making iron. The tariff laws have been shaped to benefit the manufacturers. No sane man objects to the majority of such appropriations. They are needed to foster and increase the commerce of the nation. But are they more important to the great mass of citizens than good roads through the country? Such roads cheapen food and clothing, extend trade, make many commodities valuable that are valueless without them, save time, and, indeed, improve the opportunities of every citizen, whether he lives in the town or country or is a sailor on the wide ocean. Good roads through the rural districts would relieve the congestion of population in the great cities. Country life, with its moral influences, would be made attractive and pleasant. The dens of vice in the cities would be deprived of much of their malign influence. Homes would be sought after by thousands who now live in squalor in tenement houses in the cities. In short, through government aid in the establishment of good roads, every phase and every feature of business, social and educational life, would be immeasurably advanced.

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# V. P. I.

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1 year old in April.

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From 6 mos. to 3 yrs. old.

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STAFFORDSHIRE, ENGLAND.

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Yours faithfully,

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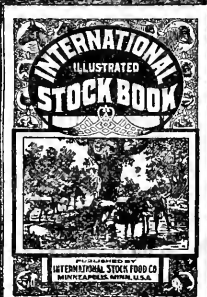
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None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25.00. Heifers, same age, \$35.00. POLAND-CHINA PIGS, \$5.00 each. Send check and get what you want.

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Ayrs ire calves of both sexes, Berkshire pigs and boar, and 2 Oxford-Down Rams For Sale. MELROSE CASTLE FARM, ENOS H. HESS, Manager, Casanova, Va.

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Choice breeding. Registered bulls ready for service. Address A. O. FARR, care A. C. FARR, Jefferson, Va.

promise we make? Do you suppose we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods? We know we can please you and save you money, for Hayner Whiskey goes direct from our distillery to you, carries a United States Registered Distiller's Guarantee of purity and age, and saves you the big profits of the dealers. Read our offer elsewhere in this paper.

THE HAYNER DISTILLING CO.

### A DUST SPRAYER.

Among the numerous Sprayers advertised with us from time to time, we do not recall that a Dust Sprayer has ever been offered our readers. This month, however, we have the card of The Dust Sprayer Mfg. Co., and to which we invite attention. This Sprayer will be found useful in applying all dust and powder insecticides to trees, plants, etc.

### ANGUS BULL GALVES

Registered and unrecorded. Stock first-class, and breeding the best.

### SHROPSHIRE SHEEP

First class yearling rams, and ewes of all ages. Several FINE FARMS for sale.

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### FOR SALE

### ABERDEEN-ANGUS BULL.

"Carlos of the Wells" 27585. Also some nice Cows and Heifers.

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### O. I. C. PIGS

FROM REG. STOCK.

FOR SALE. PRICES RIGHT.

F. S. MICHIE, - Charlottesville, Va.

### FEMALE INVENTORS.

I believe there is a general impression that women are lacking in the inventive faculty, but this impression or theory may be controverted by the fact that the Patent Office has issued one bound volume and two hand-books setting forth separately the inventions of women. True, we do not find in this list a female Arkwright, Whitney, Rumsey, or Morse; nevertheless, these female inventors have contributed to the service of the world many useful and valuable contrivances, saving labor and promoting comfort and convenience; nor are feminine inventions confined solely to household conveniences. Amongst them we find steam boilers, baling presses, fire escapes, car wheels, hospital beds, and improvements in pyrotechnic night signals. Perhaps the most remarkable of the female inventors is Madame Costin, inventor of the famous Costin signals. Her husband had made some experiments on the line of night signals, and after his death she took up the work, and by dint of patient and intelligent labor finally perfected a code containing well defined combinations of three-colored lights—red, white, and green—indicating the numerals, and by this method a number of signals may be conveyed. During the Civil War these signals were employed to advantage, and since then they have been adopted by different European governments. They are also valuable in the life-saving service.

Misa Emma J. Hughes, daughter of the inventor Hughes, seems to have inherited her father's talent, and is not only an inventor, but a practical business woman, visiting the shops almost daily to superintend the making of models and construction and mastering every detail of her work. She has made about ten inventions, not all of which, however, are on the market. The best known of these is the adjustable table attached to the bed for the use of invalids, or to the chair for various other purposes, and this invention is used in the hospitals of the War Department, in the Marine Hospital, and in schools and homes.

The wife of ex-Senator Henderson, writer, artist, and patron of art, is also the inventor of an extremely useful and popular bicycle seat. Mrs. Henderson is a thorough business woman and practical machinist. She was a frequent visitor to the shops while her invention was being constructed, and showed excellent judgment in the selection of forms and materials.

Harriet Hosmer, the sculptor, discovered the process of making marble from limestone, and a Lima girl found the way to extract 1,000 feet of gas from one barrel of Lima oil.

Mrs. Theodore Birney, so well known as the originator of "the Mothers' Congress" movement, has devised and

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It's simple; free from needless complications; has handy operating levers; works easily every way.

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## SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

BARON ROSEBOY (The great son of the world-famous  
 GAY BLACKBIRD) in service.

Nearly all the leading families of the breed represented by females sired by the most famous bulls of the age. We challenge comparison on both as to individual excellence and pedigree. Another car of grand cows just arrived, personally selected from one of the best herds in central Illinois. The tops out of one hundred head. Six animals of the same family and strain as ROSEGAY (for two years the champion of America), others equally good. All young stuff of weaning age sold; am booking orders for future delivery.

Write your wants; we are bound to please you.

A. L. FRENCH, PROPRIETOR, FITZGERALD, N. O.  
 Rockingham Co., 24 miles south-west of Danville, Ya., on D. & W. Ry.

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## Choice Bred A. J. C. C. Bull Calves

Write for descriptive circular.

General Offices, 520 & 524 N. Calvert Street, Baltimore, Md.

patented something for the comfort of the little ones—the "catch-all bib."

It was a woman (naturally and properly) who invented the baby carriage, realizing about \$50,000 from her invention; but, I am sorry to say, I have not been able to ascertain her name. Doubtless, too, it was a woman who invented the safety pin, which has been such a boon to babies and saved their little tender flesh from so many cruel scratches which common pins would have inflicted.

The first native born American woman to take out a patent was Agdalene Goodman, of Florida, who devised an improvement in broom brushes.

The first female name that occurs on the records of the Patent Office is that of Mary Kles, inventor of the art of weaving straw with silk or thread, but she was foreign-born. The straw industry was founded in 1798 by Miss Betsy Metcalf, and tradition says she wore the first bonnet from only seven straws. A Chicago woman invented the paper water pail, and a clever woman made a fortune by the invention of a glove buttoner. Miss Carrie Hurlbut, of Washington city, is the inventor of an accordion pleater, and is now engaged on an invention destined to be of great use to the shoe trade.

Amongst recent female inventors, honorable mention should be given to Mrs. E. C. Bell, of Washington, who has invented a telephone mouthpiece and holder, and to Mrs. Mary Baker, who has invented a practical fire escape.

At the Atlanta Exposition there was a special department for the inventions of women, and this was not the least interesting feature of the occasion. Edison has been quoted as saying that "he prefers women machinists for the details of his electrical inventions, as he thinks they have a more delicate perception of machinery than men."

The female inventors who have gone on record are about 200 in number.

*Errata* to be corrected in my two articles on "Inventions Which Brought Wealth," published respectively in the February and March numbers of *The Southern Planter*:

Dr. Bell offered a half interest in his telephone to John A. Logan for \$2,500.00 (twenty-five hundred dollars), not \$25.00.

W. M. Jenne, of Iilon, N. Y., was the inventor of the typewriter, not W. M. Jenrie, of Iivin, N. Y.

MARY WASHINGTON.

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By prize-winning imported sires and trained dams. Eligible. Fit for bench, ranch or farm. Pups, \$10, either sex. Also a book on the care and training of the Collie for all practical uses. Price, 60c. Copy of book free to purchaser of Collie.

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No. 340—City Top Trap. Price \$30. As good as sells for \$20 more.

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## Berkshire Boar Pigs

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Purchasers are offered selections from our herd, both male and female; our cows are of the leading strains, including De Kols, Pauline Pauls, Mechthildes, Hengervelds, Netherlands, Aggies, etc., etc. They are all well bred and milking from 40 to 65 lbs. per day. Herd headed by Ury ALWINA Count Paul De Kol and DeKol 29 Butter Boy 3rd No. 2.

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### THE JOY OF WORKING.

Think not, Sir Man-of-Leisure, as you peep lazily through your heavily curtained window at the scurrying 7 o'clock crowd on the way to its daily toil, that you have the best of it because you can snuggle back beneath your luxurious covering and sleep until Jeems or Meadows brings your morning coffee and paper and asks if you prefer the Yellow Dragon or the Green Devil for your forenoon spin.

Do not lay the flattering unction to your soul that yours is the happier lot.

Yonder youth with swinging step, with fists dug deep into the pockets of his thread-bare coat and a cold luncheon wrapped in paper tucked beneath his arm, tastes a finer, sweeter joy than all your luxury can bring.

His is the pleasure of incentive—the glory of work.

For there is a zest to it all. The quick spring from bed at the alarm clock's summons, the hastily-swallowed breakfast, then out into the wine-like air of early morning. To work—vigorous work of brain or brawn, whether it be pegging away at a desk or directing the eternal grind of clanking machinery.

It is occupation—accomplishment!

Do not pity these work-a-day folk. Save your sympathy for the hapless and hopeless idle fellows—the unfortunates or unwillings, alike commiserable.

Joy goes with the working masses. There is joy in the noonday luncheon, whether in a gilded cafe or a cold snack hastily devoured "before the whistle blows."

The evening meal is a feast to the weary man, and his well-earned rest is the greatest joy of all.

Hard work is the best of all cures for insomnia.

*Thank God you can work!*

Though your office labor strains your nerves and racks your brain; though the "shop" takes the best of your strength and vitality, be glad to be living, an active part of the working world.

You must earn your amusements before you can enjoy them. *Ennui* has no part in the strenuous life.

Be glad, for conscience sake, that you are not one of those most miserable of all men, a fellow without a job—a human machine standing idle, rusting and losing its value from disuse.

*Thank God you can work!*

When sorrow and grief come, when you seek to forget, to crush out cruel thoughts, thank God that you can absorb yourself in your occupation, plunge deep into the details of your duty.

*Thank God that you can work!*—that you can grasp your pay envelope and say: "This is mine—the rightful pay for the labor of my brain, the just earnings of my strong right arm."

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There is no record of a **FARQUHAR BOILER** having exploded



for a thresherman to buy and for a farmer to use is the Farquhar Celebrated **A. J. A. THREE-SPEED ENGINE** and the **FARQUHAR SEPARATOR**. Engines made in sizes 4 h. p. and up, and combine the advantages of all successful engines. Easy steamers and develop more than rated horse-power. Have driver's seat, foot-brake and two injectors. **SEPARATORS** of all sizes and sizes for merchant threshing or farm use. Farquhar machines have all late improvements, they thresh and clean all kinds of grain perfectly.

Catalogue of engines, Threshing Machinery Saw Mills, Agricultural Implements, free.

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**GASOLINE ENGINES and  
GRAIN THRESHERS.**

ST. JOHNSVILLE, NEW YORK.

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Have become so famous that I found a multiplication of their progeny necessary to the filling of orders; hence I have added a large

number of purest-bred **Imported and American Sows**, not akin to my old herd, and most of them now in farrow to **Imported Berkshire Boars** of a new strain.

**HUNTING DOGS and PUPS FOR SALE.**

**A DURHAM BULL CALF**, a picture, cheap. Write for particulars.

**THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.**

## EGGS for HATCHING

From Fowls of High Merit, Fresh, and a Good Hatch  
Guaranteed of the following varieties:—

**PLYMOUTH ROCKS, BROWN LEGHORNS, WHITE LEGHORNS  
and PEKIN DUCKS at \$1.00 per sitting of 15.  
BRONZE TURKEY Eggs, \$3 per doz.**

Jersey and Guernsey Cattle and Berkshire Pigs. Four handsome  
Great Danes and three Fox Terrier Puppies.

**M. B. ROWE & CO., FREDERICKSBURG, VA.**

**EASTERN SHORE POULTRY FARM.**

**S. C. WHITE, BROWN and BUFF LEGHORNS.**

**THE EGG MACHINES OF POULTRYDOM.**

The record at such shows as Washington, D. C., Philadelphia and New York proves the quality of my stock is second to none. I always breed my winners.

Correspondence cheerfully answered.

**A. O. VAN DEMAN, LEGHORN SPECIALIST, PARKSLEY, VA.**

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***Also get of TREVARTH and GEN. MARIGOLD.*** \* \* \*

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Is now booking orders for Eggs from the best strains and careful matings of

**Barred Buff and White Plymouth Rocks,  
Silver-Laced and White Wyandottes,  
S. C. B. Leghorns and Mammoth Pekin Ducks,**

**AT \$1.00 PER SITTING.**

**EGGS FROM BLACK DEVIL PIT GAMES.**

Never known to run. The grittiest of all games. **\$2 per Sitting.** We give 15 Chicken and 13 Duck Eggs for sitting.

**Offer Fifty Barrels White French or Jerusalem Artichokes at \$2.50 per 3 bus. bbl.**

The cheapest of all hog feeds. I raised 500 bushels on one acre of only fair land. Order at once. Write name and address plainly. Remember, the express is no more on 2 or 3 sittings than on one. Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded.

**P. H. HEYDENREICH, = Staunton, Va.**

Be thankful, employer as well as employee, for the joy of working.

You know the pleasure of it.

Do not deceive yourself by the promise (nine times in ten a pleasant little fiction) that by-and-by you will retire, ease up, end your life in idle luxury.

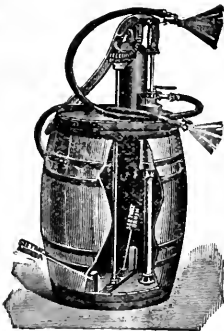
The business game is not alone for the pleasure of the spoils, but for the joy of playing it.

What the world may call greed and avarice you know to be the fascination of success—the intoxication of accomplishment; and it will keep you untiringly at it—on your mettle in the battle—till the end of life.

For life is work.

And work is life.—D. Herbert Moore, in *Judicious Advertising*.

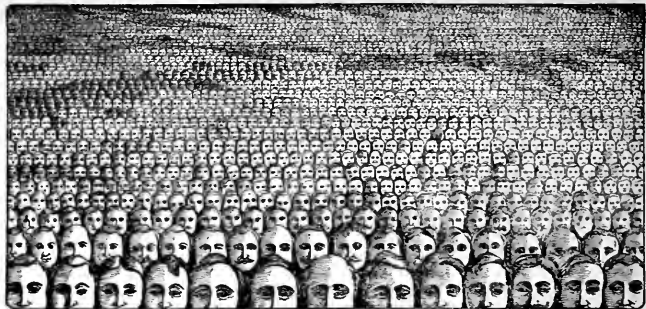
We present herewith a cut of the Empire King Spraying Pump, which is manufactured by our advertising patrons, the Field Force Pump Co., of Elmira, N. Y. These people are manufacturers of a large and complete line of machinery, apparatus, and appliances devoted to the very essential and necessary practice of spraying. They have about everything anybody could wish in this line, from the small bucket sprayer to their Orchard Monarch, which is a large mounted power machine. The outfit, however, which is something of a specialty with them, is shown here. This



is due to several things, among which may be named its ready adaptability to all conditions and to all classes of work. It is small enough and low enough in price to fit the needs of the man having only a small orchard, and yet, if properly handled, it will fit the requirements of the large fruit grower.

We cannot take the space to further describe it, hence recommend that all those who are interested in spraying write the manufacturers for their printed matter on this subject. They will be glad to mail this to you, without cost, if you mention this paper in writing.

Mention the *Southern Planter* in writing



## AN ARMY OF 15,000 DEERING AGENTS AT YOUR SERVICE

There is no town of importance where you can not secure

### DEERING LIGHT DRAFT HARVESTERS

All stanch, reliable machines for the harvest

Binders Headers Header-Binders Mowers Reapers Corn Binders  
Corn Shockers Huskers and Shredders Rakes Binder Twine Oil

Call at the nearest Deering Agency and ask for a copy of "The Golden Era." It's a handsome booklet.

Deering Division  
International Harvester Co. of  
America, Chicago

At WHOLESALE or RETAIL.

## 65 Head of SHORTHORNS (Durham)

1-3 Registered; 1-3 Eligible; 1-3 Grades.

CALVES, YEARLINGS, TWO-YEAR-OLDS, COWS.

The head of the herd is a **FANCY BRED BULL**.

The lot will be sold to a breeder at a bargain. Cattle in perfect health.

THOS. S. WHITE, - LEXINGTON, VA.

## "THE OAKS" SHORTHORNS FOR SALE

2 Reg. Bull Calves; 2 Reg. Cows; 1 three-year-old Reg. Bull (immune) raised south of Petersburg, Va. All right in every particular.

B. B. BUCHANAN, Bedford City, Va.

\* VIRGINIA DIVISION. \*

## Farmers Mutual Benefit Association.

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address,

CHAS. N. FRIEND, General Agent,  
CHESTER, VIRGINIA.

MENTION THIS JOURNAL.



**L A I D L A W ' S**  
**CONCENTRATED TOBACCO POWDER,**  
**Sheep Dip and Cattle Wash.**

A SURE CURE FOR THE EXTERMINATION OF  
**SCAB AND TICK IN SHEEP. LICE ON HORSES AND CATTLE.**  
**LICE ON HOGS. MANGE ON DOGS.**

Kills all vermin. Allays all irritation. Promotes growth of wool. Makes animal feel well and take on flesh.  
 ABSOLUTELY NON-POISONOUS.

PRICES: 5-lb. bag, 75c.; 10-lb. bag, \$1.25; 25-lb. bag, \$2.60; 50-lb. bag, \$5.00.

One 50-lb. bag makes 500 gallons Dip for Scab, and 1,000 gallons for Tick, etc.

**SOLE MANUFACTURERS,**

**L A I D L A W, M A C K I L L & C O., Limited, Richmond, Va., U. S. A.**

To be had at all leading Drug stores.

# Hackney Stallion Cismont,

A. H. S. B. 399.

**IN THE STUD AT CISMONT FARM,**

One and a half miles from Keswick, Va., on the C. & O. Railroad.

Telephone Connection with CHARLOTTESVILLE and RICHMOND, VA.

For approved mares, \$10.00 the season with return privilege, or  
 \$15.00 to insure.

G. S. LINDENKOHL, Owner, Keswick, Albemarle Co., Va.

## UNEXPECTED ANSWERS.

A man who answered advertisements in cheap "story papers" has had some interesting experiences. He learned that by sending \$1 to a Yankee he could get a cure for drunkenness. And he did. It was to "take the pledge, and keep it." Then he sent 50 two-cent stamps to find out how to raise turnips successfully. He found out: "Just take hold of the tops, and pull." Being young, he wished to marry, and sent 34 one-cent stamps to a Chicago firm for information as to how to make an impression. When the answer came, it read: "Sit down on a pan of dough." It was a little rough; but he was a patient man, and thought he would yet succeed. Next advertisement he answered read: "How to double your money in six months." He was told to convert his money into bills, fold them, and he would see his money doubled. Next he sent for twelve useful household articles, and he got a package of needles. He was slow to learn, so he sent \$1 to find out "How to get rich." "Work like the devil, and never spend a cent." And that stopped him; but his brother wrote to find out how to write a letter without pen or ink. He was told to use a lead pencil. He paid \$1 to learn how to live without work, and was told on a postal card to "Fish for suckers, as we do."—From an *Exchange*, in *Our Dumb Animals*.

## THE HEALTH OF YOUR HORSE.

A valuable little book to horsemen is published by the Newton Horse Remedy Co., of Toledo, O., in which symptoms are described whereby ailments can be recognized, and in which remedies and treatment are given for specific diseases. The proprietors have built up a reputation that is famous on Dr. Newton's Heave, Cough, Distemper, and Indigestion Cure, and they will be pleased to send the book free to all who make a request for it.

Farmer Brighton, of Fairfield, Ia., is just entering upon an advertising campaign in this paper. In his combination tool—the Swine V to prevent hogs from rooting, Cattle Dehorner, and Stock Marker—Farmer Brighton has something which other farmers want and buy liberally, else he could not afford to advertise it. His ad., headed, "No Humbug," and accompanied by a cut, shows the tool and a hog's snout operated upon to show how it works. Look up this ad., if you keep hogs or have occasion to mark or dehorn.

## BUGGIES FOR THE MILLION.

The opportunity to get one of the famous Split Hickory Vehicles at the low prices at which they are now offered to the public by manufacturers is one that it is the part of wisdom to take advantage of. Especially is this



## TWO CROP ESSENTIALS

are cultivation and keeping down weeds. More important than deep cultivation is keeping the surface stirred, breaking the crust due to rains, and allowing the light, air, moisture and warmth to penetrate quickly to the roots of the growing plant. For doing just these things the ideal implement is this

## KEYSTONE Adjustable Weeder and Shallow Cultivator.

It kills the weeds at first showing, the top soil is pulverized and kept mellow, the plant roots are not disturbed and the moist soil is not brought up to dry in the sun. Adjustable in width. Narrows to 30 inches, widens to 7½ feet. Strong, runs steady, no cumbersome shafts. Furnished either with round teeth or with flat to suit different soils, as we are licensed by the Hallock Weeder Company to use their famous flat teeth. Weeder booklet mailed free. We also make 10 styles Corn Planters, 12 styles Cultivators, 20 styles Corn Shelters, hand and power, Harrows, Field Rollers, Feed Cutters, etc. Write for catalogue C.

KEYSTONE FARM MACHINE CO., 1554 N. Beaver St., York, Pa.

## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat.

Stock of all ages for sale.

Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.



B. PLYMOUTH ROCK CHICKENS, Fifteen Cockerels for sale.

N. and W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

## POLAND-CHINA BOARS

THE KIND THAT GETS BIG.

Send your check and we will send you as good a pig as money will buy anywhere, sired by a son of "Proud Perfection." We pay the expressage. No guesswork what the cost will be. If you don't like the pig, give it a good feed, send it back, expressage prepaid, and we will return your check.

We are careful in selecting animals and would not sell a poor one at ANY PRICE, for it would spoil our trade. PRICES—2 months old, \$10; 3 months old, \$11; 4 months old, \$12. No more sows or sow pigs for sale.

BULLFIELD FARMS, - Doswell, Virginia.

## SPRAYING IS EASY

and you have an outfit always ready at a moment's notice for a small or large job in the GARFIELD KNAPSACK SPRAYER.

Best sprayer made for nine-tenths of the work, as Cotton, Tobacco, Potatoes, Shrubs, etc. Easily carried and worked, simple and durable. Copper tank concealed to fit back, and all brass pump. Nothing to corrode. We also make the Empire King and Orchard Mopach, mounted sprayers for large operations, and others for all purposes. Fully described in free catalog. Write for it. FIELD FORCE PUMP CO., 223 Eleventh St., Elmira, N.Y.



## SLUG SHOT

Kills insects on Melons, Potatoes, Cabbage and Flowers.

SOLD BY SEEDSMEN EVERYWHERE.

Used 22 Years.  
Send for Free Booklet on Bugs and Blights to

B. HAMMOND, FISHKILL-ON-HUDSON, NEW YORK.



true in view of the fact that thirty days are allowed every purchaser, who desires it, to try the buggy on his own premises and ascertain by actual use and inspection how good the vehicle actually is. The first step is to send your address to the Ohio Carriage Mfg. Co., Station 41, Cincinnati, O., for their illustrated catalogue and price list. The rest of it is easy. Their catalogue illustrates and quotes prices on vehicles, harness, and saddles of every description also, and will be found interesting to all horse owners.

**"OLD HICKORY'S" FAIRNESS.**

Andrew Jackson has two sorts of reputation. He is credited, on the one hand, with being the father of the spoils system; but, on the other hand, he is said to have been staunch and stubborn against wire-pulling. A story told in the *Washington Post* throws light on the best side of Jackson's character.

When Jackson was President, Major Gibbon, a New Jersey man, was postmaster at Richmond, Va. A delegation from Richmond waited on Jackson to demand the postmaster's place for a Democrat.

"Isn't Major Gibbon an old soldier of the Revolution?" asked Jackson.

"Well, yes."

"Any charges against his official character?"

"No; but he stumps up and down the streets of Richmond abusing you and your administration."

"Does he?" said Jackson, grimly.

"Yes; and, besides, he's an old-time Federalist."

"Well," said Jackson, seriously, "you call to-morrow morning and you shall have an answer."

When the delegation had withdrawn, Jackson sent promptly for the Auditor of the Post-Office Department.

"Mr. Auditor, what sort of an official is Major Gibbon, postmaster at Richmond?"

"A model postmaster, Mr. President."

"Any charges against his official integrity?"

"None whatever, sir. His accounts are scrupulously correct and always rendered on time."

"That will do, Mr. Auditor. Good morning!"

The next day the delegation called promptly, expecting to receive Major Gibbon's head.

"Gentlemen," said Jackson, "you admitted yesterday no charge lies against Postmaster Gibbon's official character or conduct. This is verified by the accounting officer of the Treasury. But you dwell on the fact that he villifies me and openly opposes my politics. For that you would have me turn adrift and penniless an elderly

# Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 19083). Lars Jr. 85297.

**FOR SALE**—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos old. Call and make your own selection Prices right.

**MURRAY BOOCOCK, OWNER, KESWICK, VA.**

## HEREFORD CATTLE

Annefield Herd Richly Bred in "Anxiety" Blood and Headed by the Sweepstakes Winner at Kansas City 1901,

**PRINCE RUPERT No. 79539.**

**FEE, \$25.00 FOR THE SEASON OF 1903.**

**CORRESPONDENCE SOLICITED. INSPECTION INVITED.**

**ANNEFIELD FARMS, Briggs, Clarke Co., Va.**

## BACON HALL FARM.

# HEREFORD REGISTERED CATTLE

**"TOP" BREEDING, CALVES NOT AKIN.**

**MOTTO—Satisfaction or No Sale.**

**E. M. GILLET & SON, - Glencoe, Maryland.**

**C. C. Taliaferro,**  
NASONS,  
VA.  
1903

**"MOUNT SHARON**  
**HEREFORD CATTLE**  
**REGISTERED**

**STOCK FARM."**  
**REGISTERED SHROPSHIRE SHEEP**  
**REGISTERED POLAND-CHINA PIGS.**

**NOW OFFERS FOR SALE**



**HEREFORD CATTLE.**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

**SHROPSHIRE SHEEP.**—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10, and \$12. Ewe Lambs, July delivery, \$8, and \$10.

**POLAND-CHINA HOGS.**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7. Pigs, five months and over, \$15 to \$20.

**M. BRONZE TURKEYS.**—Toms, \$4. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

**MUSCOVY DUCKS.**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25; trios, \$3.

**BARRED PLYMOUTH ROCKS.**

**ROUEN GESESE.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.00.

**WILLIAM L. JR., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.**

**RUPTURE CURED** while you work. You pay \$4 when cured. No cure, no pay. ALEX. SPEIRS, Box 844, Westbrook, Maine.

man—the man who led the forlorn hope at Stony Point, and left his right leg there.

"Such a man, gentleman, has bought the right to entertain his opinions and speak them, and to abuse me as much as he pleases. While Andrew Jackson holds the White House, Major Gibbon shall not be disturbed in his little office. You have my answer. Good-morning!"—*Youth's Companion*.

#### INSURING THE HARVEST.

The harvesting of grain has been from the most primitive times until the present an object of solicitude on the part of the farmer.

Upon the successful harvest is dependent the feeding of the world.

The farmer who uses the Deering line of harvesters, however, is free from worry so far as the prompt and effective gathering of the crop is concerned. These ideal machines are always ready when needed, and can be relied upon.

#### GOOD FOR ALL EXTERNAL TROUBLES.

ELKTON, VA., Dec. 6, 1902.

The Lawrence-Williams Co., Cleveland, O.:

I have used Gombault's Caustic Balsam very successfully for a number of years on my horse for swelling, stiff joints, abscesses, etc., I consider Gombault's Caustic Balsam the most valuable external remedy and liniment I have ever seen or used, and keep it on hand all the time.

W. S. SOUTHWELL.

The Pasteur Vaccine Co. have just moved their headquarters to more commodious and convenient premises at 219 Randolph street, Chicago. They occupy the whole building, and it is located in the center of the drug business. The Pasteur Vaccine Co. is very well known to all stock owners who have had any trouble with anthrax or blackleg, as they introduced the vaccines for these diseases into this country in the early part of 1895. The extent and success with which the Pasteur Vaccines have been employed are too well known to need comment. It will be interesting to note that up to the end of 1902 about forty-five millions of animals have been vaccinated with the original vaccines. This is a wonderful showing, and speaks volumes for the success of the Pasteur Company's remedies.

Messrs. W. M. Watkins & Son, proprietors of the Cottage Valley Stock Farm, Randolph, Va., reports that their sales have been good during the year 1903. Among recent sales are as follows: W. G. Rogers, Warrenton, N. C., 2 horses; C. F. & J. Button, Walker's Ford, 1 mare; J. A. Lang,

## MRS. LEA'S MILK AND BUTTER PURIFIER.

Removes all Weed, Garlic, Vegetable and Animal Odor and Taint from the milk and in no way injures the cow to which it is fed.



Dr. Jacob Michaux, Richmond, Va., and Dr. W. L. Robinson, Danville, Va., Ex-Presidents of The Virginia Medical Society, write as follows:

Gentlemen.—Having been consulted by you with regard to your "LEA'S MILK AND BUTTER PURIFIER," we beg leave to state after many careful experiments that we are most favorably impressed with its value.

From the standpoint of physicians, we have no hesitation in saying that the milk from cows to which it is fed is acceptable to the delicate patients and stomachs of the sick in cases where ordinary milk is not borne. We, having a knowledge of the formula, further state that it is not in any way injurious to either the stomachs or systems of the animals to which it is fed, nor to the stomachs or systems of persons using the milk from such animals. We further believe from our knowledge of your preparation that it so favorably influences the digestion of the animal that it will prevent those abnormal fermentations which produce injurious chemical reactions in the secretions and milk of said animals.

We advise that Sanitary Dairies be encouraged to use this product, as it furnishes a milk not only devoid of all vegetable animal odors and flavors so objectionable and so frequently found in milk not thus treated, but that it is a sweet and pure article for the table and for the use of invalids.

(Signed)

JACOB MICHAUX, M. D.,  
W. L. ROBINSON, M. D.

M'd. by VIRGINIA CATTLE FOOD COMPANY, Danville, Virginia.

Write us for prices and further information.

## CISMONT DORSETS..

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices reasonable.

G. S. LINDENKOHL, Keswick, Albemarle Co., Va.

## Where to Sell Your WOOL

WE ARE THE LEADING DEALERS IN THE WOOL TRADE IN VIRGINIA.

HIGHEST MARKET PRICE PAID, and no Commission, Freight, &c., charged SACKS FURNISHED FREE. Checks rendered promptly. Correspond with us when ready to sell.

THE WALLERSTEIN PRODUCE CO.,

19 and 21 So. 13th St., RICHMOND, VA.

REFERENCES:

American National Bank and Richmond merchants generally.

"BRD-IN-THE-PURPLE."

## DUNTREATH BERKSHIRES

Extra choice lot of Young Pigs for sale: ready for shipment after April 20th, 1903, all eligible to registry, and sired by our famous boar,

BARON SYLMAR OF DUNTREATH.

Our advance bookings have been so great that we can only accept a limited number of orders.

DUNTREATH STOCK FARM, Box 666, Richmond, Va.

## IVANHOE POULTRY YARDS-----

Breeders of

# Exhibition Barred Plymouth Rocks

ENGLISH CARRIERS AND HOMING PIGEONS.

For information, address

Ivanhoe Poultry Yards, Box 258, Richmond, Va.

**THE TRAP HAS BEEN SET, BUT THE FARMERS "ARE ON TO IT."**

— IN 1903 —

THEY ARE GOING TO BUY **THE WALTER A. WOOD MACHINE.**

### WHY?

- Because it is the Best Machine Made.
- Because it Belongs to no Combination.
- Because its Repairs Cost Less.

The Wood Binders, Reapers, Steel Hay Rakes, Tedders, Corn Harvesters, Knife Grinders the world knows and the world endorses.

SEND FOR SPECIAL CATALOGUE



**WALTER A. WOOD MOWING and REAPING MACHINE CO., Richmond, Va.**

Haw River, N. C., 1 mare; W. D. Grimes, Washington, N. C., 1 mare; A. C. Canada, Lynchburg, Va., 1 pair mules; the County of Mecklenburg, 1 mule; C. A. Williams, Ringwood, N. C., 1 3-year-old cow, 1 6-months-old calf; D. L. Berry, Abingdon, Va., 1 6-months-old bull calf; B. L. Gill, Rehoboth Church, Va., 1 bull calf; R. Turnbull, Lawrenceville, Va., 1 bull calf; J. F. Jones, Laurel, N. C., 1 bull calf; J. E. Connell, Irwin, Va., 8 sheep; H. A. Black & Bro., Stuarts, N. C., 1 ram lamb; J. W. Smith, Stuarts Draft, Va., 6 ewes, 3 lambs, 3 old ewes; W. R. McKenney, Petersburg, Va., 3 milk cows. Look up this firm's advertisements in this issue.

### THE BUSINESS EYE.

It requires a business eye to see an opportunity when it presents itself. The ability to see things as they are is the one thing which agriculturists should possess, if they mean to make a success out of whatever they undertake to do. It is the power of discernment that enables them to keep up interest in their work, and it is enthusiastic interest in what one is doing that gives life its zest and enables one to do his best. In the purchase of a binder, for example, a good business eye is needed. There are many details in the construction of the machine that should be carefully examined, and where this is done the farmer, in the great majority of instances, buys the McCormick, because it is pre-eminently the machine for the man with an eye for business.

The Southern Farm Magazine of Baltimore has compiled from official reports of the government the statistics of grain crops of the South in 1902. The total values are as follows:

Corn . . . . .	502,487,609	\$276,553,894
Wheat . . . . .	48,872,127	38,069,619
Rye . . . . .	1,352,892	975,514
Oats . . . . .	56,178,672	26,252,365

In addition to grain, the South raised 21,897,555 bushels of Irish potatoes, valued at \$14,116,169; 3,905,423 tons of hay, valued at \$46,734,706, and 630,258,898 pounds of tobacco, valued at \$62,843,025. The total for these three items added to the total for grain makes \$466,545,192, or, approximately, about one-half of the total value of the agricultural products of the South. In this report no mention is made of the cotton crop, of sweet potatoes (the yield of which in the South is much larger than the yield of Irish potatoes), of sugar, rice, and fruit crops. These figures show that the grain crop of the South—corn, wheat, oats, and rye—is about the same in value as an average cotton crop, but the growth of diversified farming in the South promises within a few years to make the value of these crops much larger than that of cotton.

## The DeLOACH SAW MILLS ARE SURE WINNERS.

Eight sizes, from Farmers' 4 h p up to 200-h. p. If interested, write for large illustrated catalogue of DeLoach Patent Saw Mills to omit any power from 4 to 200-h. p.; Spline Mills, Planers, Edgers, Trimmers, Slave and Lath Mills, Bolters, Corn and Buhr Mills, Water Wheels, etc. To introduce our New Farmers' Saw Mill, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



We will deliver on cars at factory our No. 0 Pony Farmers' Saw Mill, with Duplex Dogs, Improved Head Blocks and Ratchet Set Works, complete as shown in cut, except the Carriage made in two 4-foot sections, with Rope Drive instead of Rack and Pinion, without Saw or Belt, for \$115.00 Spot Cash!

With 36" Solid Saw, \$127.50; 40", \$132.50; 44", \$140.00; 48", \$150.00.

With 36" Inserted Saw, \$147.50; 40", \$152.50; 44", \$160.00; 48", \$170.00.

Best Rubber Belting, 4-ply, 6", 20 cents per foot; 8", 30 cents per foot, net. No discount from these prices.

Our Warranty: This mill is warranted to be made in a workman like manner, of first-class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. Any one with ordinary intelligence can set and operate without the assistance of an experienced sawyer; will easily cut 2,000 to 2,500 feet of first class board lumber per day with only 4-h. p.; 3,000 ft. with 6-h. p.; 4,000 ft. with 8-h. p.; is adapted to any kind or size power up to 150-h. p.

DELOACH MILL MANUFACTURING CO., Box 600, ATLANTA, GEORGIA, U. S. A. The DeLoach is the only mill made that is shipped to all parts of the world. Over 10,000 in use.

## FRUITS and VEGETABLES

ARE LARGELY INCREASED IN YIELD AND, GREATLY IMPROVED BY THE USE OF

## SPRAY PUMPS.

Write for new catalogues and price-lists. Our pumps are used by the Virginia and North Carolina Agricultural Departments.

SYDNOR PUMP AND WELL CO., Inc.,  
Box 346, RICHMOND, VIRGINIA.

GASOLINE ENGINES, WIND MILLS,  
RAMS, TANKS  
WATER SUPPLY CONTRACTORS.  
ARTESIAN WELL DRILLERS.

Cut shows a Kerosene Sprayer which can be used for any other mixture.



CHARTERED 1870.

# Merchants National Bank

OF RICHMOND, VA.

Designated Depository of the United States, City of Richmond and Commonwealth of Virginia.

Capital Stock, \$200,000.00

Being the Largest Depository for Banks between Baltimore and New Orleans, this Bank offers superior facilities for direct and quick collections.

Surplus and Profits, \$628,000.00

JNO. P. BRANCH,

JNO. K. BRANCH,

JOHN F. GLENN,

President.

Vice-President.

Cashier.

DIRECTORS.—John P. Branch, B. B. Munford, Chas. S. Stringfellow, Thos. E. Scott, E. W. Branch, Fred. W. Scott, Jas. H. Dooley, Jno. K. Branch, A. S. Buford, Andrew Pisani, Jr., J. P. George, Alex. Hamilton, Sam'l. T. Morgan.

# WAGONS and BUGGIES

MADE  
RIGHT HERE  
AT HO  
-BY



All of Virginia.

The BARBOUR BUGGY CO.,  
The HUGHES BUGGY CO.,  
The VIRGINIA WAGON CO.

These vehicles are guaranteed to be as good as can be bought elsewhere; material and workmanship unsurpassed; all sizes and styles, prices low. We can save you time, money and freight by purchasing our vehicles. Send for our illustrated catalogues. Drop in our warehouse and inspect our stock. Inquiries cheerfully answered.

**RICHMOND BUGGY & WAGON CO., 1433 E. Main Street, RICHMOND, VA.**  
J. T. DUNN, Manager.

## AINSLIE CARRIAGE CO.,

Nos. 8, 10 and 12 Tenth St., RICHMOND, VA.

Building Carriages to order is our special business. Repairing and Repainting done, and best material used. A full line of all the latest styles. Orders for all classes of Vehicles solicited.

1903. IN THE STUD AT LAUREL HILL FARM. 1903.  
THE FINE HACKNEY STALLION

### HEIDRIK

Bay horse, foaled 1898; 16 hands high. This horse has great natural action, and is capable of getting the highest class harness horses.

**FEE, \$10 00 the Season or \$15 00 to Insure.**

Address **C. F. & J. BUTTON, Walker's Ford, Va.**

### WHALEBONE, 7872.

Sired by Abdallah Wilkes, son of George Wilkes, 2:22. Dan Maggie O., by Abdallah, 15, sire of Goldsmith Maid, 2:14; sec ond dam Viley Filley, by Pilot, Jr., sire of dam of Maud S., 2:08½.

NOTE.—Whalebone is a richly colored bay horse of fine size, handsome and well formed. His disposition is perfect. He has sired Visitor, 2:26½, and other winners.

**FEE, \$15, with usual return privilege.**

Address **W. J. CARTER,**  
P. O. Box 229, RICHMOND, VA.

1903. IN THE STUD 1903.

## WEALTH, 29579.

RACE RECORD, 2:17½, Pacing.

Timed separately in 2:08 in a race at Indiana State Fair, 1902.

Bay horse, foaled 1897; 16 hands high. weight, 1,200 lbs. Sired by Gambetta Wilkes, 2:19½, dam Magnolia, by Norfolk, 3:670. Wealth is grand individually and in appearance.

**FEE, \$20 the Season with return privilege, or \$25 to insure.**

Address **S. F. CHAPMAN, Gordonsville, Va.**

## GREAT STAKES, 25521.

RACE RECORD, 2:20, Trotting.

Bay horse, by Billy Thornhill, 2:24, dam Sweetstakes, by Sweep Stakes, 2:08. Great Stakes has sired Captain, 2:16½; Foxhall, 2:19½, and four others in the list.

**FEE, \$25.00 for the Season of 1903.**

**W. H. NELSON, - 1417 E. Franklin St, Richmond, Va.**

Pedigrees traced and tabulated. Catalogues compiled and circulars prepared. Special attention given registration matters pertaining to thoroughbred and trotting horses

..BY..

## W. J. CARTER (Broad Rock),

P. O. Box 929, RICHMOND, VA.

Representing the

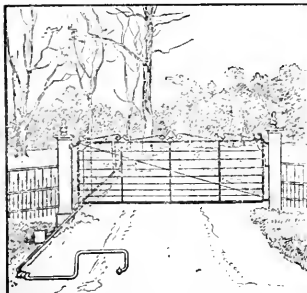
THE TIMES-DISPATCH, Richmond, Va.  
SOUTHERN PLANTER, Richmond, Va.  
SPOTS OF THE TIMES, New York.  
KENTUCKY STOCK FARM, Lexington, Ky.  
BREKIDDER AND SPORTSMAN, San Francisco, Cal.

RIGHT VEHICLES AT RIGHT PRICES.



The illustration shows a standard, well-made, serviceable, stylish buggy, which the Marvin-Smith Company are selling for \$58.20. Local dealers would probably claim to be making a rare bargain on this same vehicle at \$160. This is but one of a long line of vehicles, comprehending every purpose and style which this house is selling at such prices as readers have doubtless noted from their advertisements regularly seen in our columns. Dealers agree that by patronizing them you have the opportunity to examine and make choice before buying. This does not compensate for the high prices charged. The fact is, that the Company named ships anything you may select from their complete vehicle catalogue showing many times over the varieties and styles the local dealer carries, without any payment in advance, and permits full and free examination without obligation to purchase if not satisfactory. They make it possible for every one to own a good conveyance by paying only reasonable prices. We commend the house to readers who have under consideration the purchase of a conveyance of any sort.

THE MANLOVE SELF-OPENING GATE,



Shown in the above cut strikes us as being a very valuable and sensible device. The ease of operation and the time and trouble saved by its use makes it invaluable to every thoroughly up-to-date farmer. See the advertisement elsewhere in this issue.

A NEAT BINDER for your back numbers can be had for 25 cents. Address the Business Office.

Mention the *Southern Planter* when corresponding with advertisers.

## Uncle Sam says it's all right

Uncle Sam, in the person of ten of his government officials, is always in charge of every department of our distillery. During the entire process of distillation, after the whiskey is stored in barrels in our warehouses, during the seven years it remains there, from the very grain we buy to the whiskey you get, Uncle Sam is constantly on the watch. We dare not take a gallon of our own whiskey from our own warehouse unless he says it's all right. And when he does say so, that whiskey goes direct to you, with all its original strength, richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE of PURITY and AGE, and saving the dealers' enormous profits. That's why HAYNER WHISKEY is the best for medicinal purposes. That's why it is preferred for other uses. That's why we have over a quarter of a million satisfied customers. That's why YOU should try it. Your money back if you're not satisfied.

Direct from our distillery to YOU

Saves Dealers' Profits! Prevents Adulteration!

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PURE SEVEN-YEAR-OLD RYE

4 FULL \$3.20 EXPRESS  
QUARTS 3.20 PREPAID

We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. Try it and if you don't find it all right and as good as you ever used or can buy from anybody else at any price, send it back at our expense, and your \$3.20 will be returned to you by next mail. Just think that offer over. How could it be fairer? If you are not perfectly satisfied, you are not out a cent. Better let us send you a trial order. If you don't want four quarts yourself, get a friend to join you. We ship in a plain sealed case, no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo., must be on the basis of 4 quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

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153 DISTILLERY, TROY, O. ESTABLISHED 1866



## The Chesapeake & Ohio Railway

EXTENDING FROM CINCINNATI AND LOUISVILLE, AND THROUGH ITS CONNECTIONS

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

THE OHIO CENTRAL LINES, from Toledo and Columbus.

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FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest ROUTE.

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News-Leader, Richmond, Va.....	\$ 00	\$ 00	
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The World (thrice-a-week), N. Y.....	1 00	1 25	
WEEKLIES.			
Harper's Weekly.....	4 00	4 00	
" Bazaar.....	1 00	1 40	
Montgomery Advertiser.....	1 00	1 00	
Nashville American.....	60	75	
The Baltimore Sun.....	1 00	1 35	
Breeder's Gazette.....	2 00	1 75	
Hoard's Dairyman.....	1 00	1 35	
Country Gentleman.....	1 60	1 75	
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Religious Herald, Richmond, Va.....	2 00	2 25	
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Christian Advocate, " ".....	1 50	1 75	
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Subscribers whose time does not expire until later can take advantage of our club rates, and have their subscription advanced one year from date of expiration of their subscription to either the *Planter* or any of the other publications mentioned.

Don't hesitate to write us for any information desired; we will cheerfully answer any correspondence.

We furnish no sample copies of other periodicals.

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- MAMMOTH CLOVER,
- CEM<sup>o</sup>-ON CLOVER,
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- BOKHARA CLOVER,
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- RUB CLOVER.



- TIMOTHY,
- ORCHARD GRASS,
- RED TOP or HERDS GRASS,
- KENTUCKY BLUE GRASS,
- RANDALL GRASS,
- TALL MEADOW OAT GRASS,
- JOHNSON GRASS,
- GERMAN MILLET,
- BUCKWHEAT,
- OATS and
- CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable **FIELD AND GARDEN SEEDS** of every variety at **Lowest Market rates**, included in which are **RAGLAND'S PEDIGREE TOBACCO SEEDS.**

WE ALSO SELL

## Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

**Wm. A. Miller & Son,** 1016 Main Street LYNCHBURG, VA.

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WHOLESALE AND RETAIL.

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

- Apples, Nectarines, Pecans, Ornamental and
- Pears, Cherry, Chestnuts, Shade Trees,
- Peach, Quinces, Walnuts, Evergreens,
- Plum, Almonds, Small Fruits, Roses, Etc.
- Apricots,

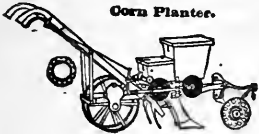
CALIFORNIA PRIVET, for Hedging.

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..AGENTS WANTED..

**FRANKLIN DAVIS NURSERY Co.,** Baltimore, Md.

# LABOR-SAVING IMPLEMENTS AND MACHINERY.



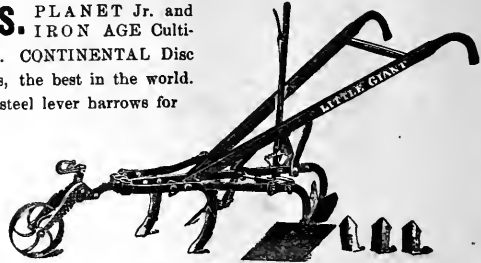
Corn Planter.

Corn Planter.

Spring tooth attachments for Cultivator. RODERICK LEAN steel lever barrows for one, two and three three horses.

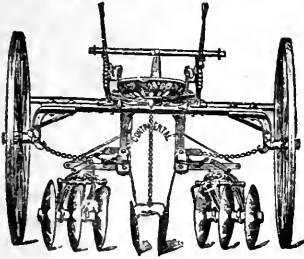
**CORN PLANTERS.** The HOOSIER, both single and double row, with and without fertilizer attachment. The SPANGLER for Corn, Peas and Sorghum.

**CULTIVATORS.** PLANET Jr. and IRON AGE Cultivators and Horse Hoes. CONTINENTAL Disc Cultivators and Harrows, the best in the world.



HORSE HOE.

Wood or Steel beam; all sizes. Guaranteed equal to any made.



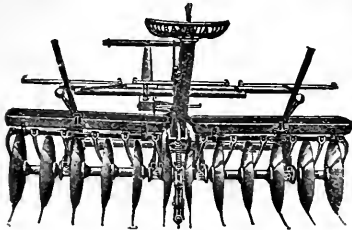
DISC CULTIVATOR.

**THE SOUTH BEND CHILLED PLOWS.**

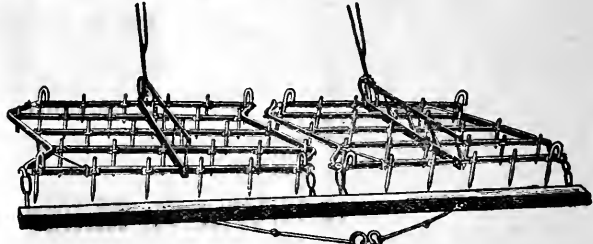
THE CELEBRATED

## HANGCOCK DISC PLOW.

Single or Double Disc.



DISC HARROWS—All Sizes.



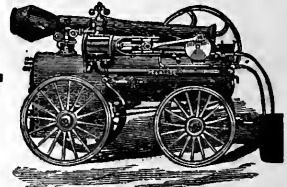
SPIKE TOOTH HARROW.



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## PEERLESS ENGINES.

SAW MILLS and THRESHING MACHINES.



PEERLESS ENGINES.

The FISH, The WEBER and The CHAMPION Wagons IN ALL SIZES.



General agency for the Columbus Buggy Co., Columbus, Ohio, A. Wrenn & Sons, Norfolk, Va., and other celebrated makers of vehicles. All grades in stock.

Harness, Robes and Whips, Pittsburg Perfect Wire Fencing, welded by electricity. Circular for the asking. Correspondence solicited.



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# Seasonable Implements of Latest Patterns.

Established by  
GEO. WATT, 1840.

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MANFRED CALL,  
Manager.



THE CRESCENT PLOW.

The WATT, CROWN, and CRES-  
CENT PLOWS.

Especially adapted to the Corn  
Grower. Equally adapted to the To-  
bacco Planter, the Cotton Planter and  
the Gardener.

**DISC HARROWS**—All sizes.  
Independent Flexible Ganges, op-  
erated by one or two levers. No end thrust.

**DUST PROOF BEARING BOXES.**  
Flexible Scrapers. Steel Shanks.

All Steel Lever Harrows. Made up  
of sections of 25 teeth each. We have the  
Continuous frame with spring trip,  
which relieves all strain on the teeth, or the  
U Bar, by means of the lever instantly  
changed to a straight or slanting tooth  
harrow.

The DEERE SINGLE and  
DOUBLE ROW CORN PLANTER.

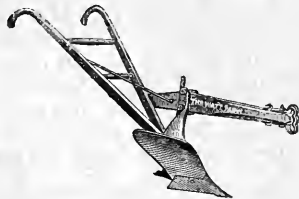
The Corn Drop works on the "edge  
selection principle. Simple in construc-  
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possessed by any other, and are fully de-  
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The EMPIRE SINGLE ROW  
CORN PLANTER with the celebrated  
Marks Force Feed Fertilizer. The lightest  
Combination Planter made.

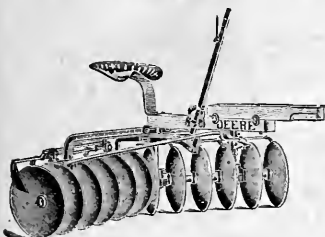
The EUREKA CORN PLANTER.  
Known so long as to require no special  
description.

The DEERE DISC CULTIVATOR  
is made almost entirely of Steel and Mal-  
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Wheels adjustable in width. Pivoted  
Tongue. Dust proof bearing boxes. Con-  
vertible into an Eight Disc Harrow or a  
Spring Tooth Cultivator.

The DEERE RIDING and WALK-  
ING CULTIVATORS. With four or  
six shovels or spring teeth. Possesses  
features not found in any other.



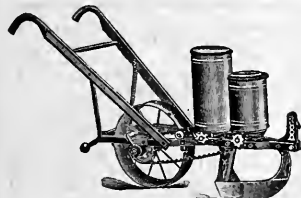
THE WATT PLOW.



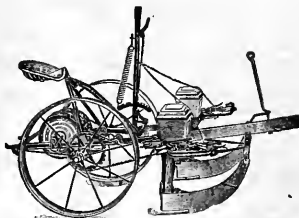
DISC HARROW.



LEVER HARROW.



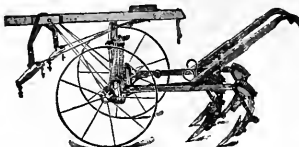
DEERE SINGLE ROW PLANTER.



DEERE DOUBLE ROW PLANTER.



DEERE DISC CULTIVATOR.



WALKING CULTIVATOR.

**Iron Age Cultivators, Iron Age Combined Cultivator and Harrow. Double  
Shovel Plows, Feed and Ensilage Cutters, Pea Hullers, Threshers, Engines,  
Saw Mills, Grain Drills, Hoe or Disc. Farm Wagons, Buggies, Road Carts.  
Implements, Machinery and Vehicles for all purposes.**

WRITE FOR DESCRIPTIVE CIRCULARS.

13 So. Fifteenth Street,  
Between Main and Cary.

RICHMOND, VA. THE CALL-WATT CO.

# "THE EARLY BIRD" You Know the Rest.

I mention this well-known adage, because so many of my customers have proved the old and true saying about the early bird—what he caught. He got the best, and he got there first. Now, you must do the same thing. You know our prices all "change without notice"—so send your orders in on time, and you will get the pick and choice of everything—though we keep nothing but the best. We buy at the market and sell at the market. Write for prices and I will be delighted to send them to you as fast as your mail service can carry them. I have at this writing but I don't know how long they will last:

10,000 bushels Feed Oats.....	40
6,000 bushels Mixed Corn.....	50
Both of these are big drives, and you should order at once.	
500 kits of Large Mackerel, per kit.....	1 25
5,000 bushels Early Rose Potatoes.....	70
4,000 bushels Burbank Seed Potatoes.....	75
10 large bars Laundry Soap.....	25

50,000 lbs. Rock or Lump Salt for stock.  
Take 1,000 lbs, and I will make it for 7 50  
500 bbls. North Carolina Cut Herrings.... 4 75  
500 bbls. Lime, Cement, Plaster, at cost.  
Paints, Oils, Nails, and everything that is needed by a Farmer we keep, and will sell at actual cost to reduce our stock.  
Drop me a line, keep in touch with headquarters, and by doing this you save money.

## READ CAREFULLY THE FOLLOWING PRICES

### Wines, Liquors and Cordials.

Gibson's fine old Rye Whiskey, six years old—Quarts, 75c., or gallon, jugs free.....	\$3 00
Bungardner's fine old Rye Whiskey, six years old, per gal.....	2 75
Fine old Anderson County gal. (this is four years old).....	2 00
Clemmer's fine old Rye, three summers (it is thick and drinks like nectar), quart.....	40
Fulcher's old Mountain Dew, quart, Imported Juniper Gin. For Kidney and kindred troubles it gives instant relief, and you should get a quart—only.....	45
346 bottles, quarts, imported Three Star French Brandy.....	75
McDermott's Pure Old Malt Whiskey, quart.....	85
Pure old Northampton Apple Brandy, 7 years old, strictly choice, gal.	2 00
Old Rye Whiskey, 4 years old.....	2 00
Pure Old Virginia Apple Brandy.....	2 00
Blackberry Brandy, per gallon.....	75
Good Holland Gin.....	1 50
Duffy's Malt Whiskey.....	85

### Flour.

Pillsbury Flour, per bbl.....	4 90
Pillsbury, per bag.....	32
Graham Flour, per bag.....	25
Dunlop Patent Flour, bbl.....	4 50
Dunlop, per bag.....	29
Byrd Island Flour, per bbl.....	4 40
Jersey Lily Flour, per bbl.....	4 00
Fine Fairy Flour, per bbl.....	8 85
Best Family Flour.....	4 25

### Seeds.

Sapling Clover Seed, per bushel.....	\$7 50
Alfalfa Seed, ".....	7 40
Aleyke Seed, ".....	9 50
Timothy Seed, ".....	2 75
Orchard Grass Seed, ".....	2 10
Tall Meadow Oats, ".....	2 00
White Clover Seed, ".....	13 00
Potato Onion Sets, ".....	2 00
Black Spring Oats, ".....	52
Rust Proof Oats, ".....	65
Turf Oats, ".....	70
Fine Winter Turf Oats (seed).....	75
Prime Winter Seed Oats.....	60
1,000 bushels Seed Rye.....	68

10,000 bushels Choice Seed Potatoes, all varieties—Early Rose, Burbanks, Beauty Hebrons. Am prepared to make very low prices.

I have everything that is required by a Farmer, from a 1,000 Acre Farm to a Mouse Trap. Write for my Price-List that will give you more information than a gossiping woman.

### Sugar.

Best American Granulated.....	4 3/4
White A Sugar, per lb.....	4 1/2
Cut Loaf.....	6
Powdered.....	6
Light Brown Sugar, 6 lbs.....	25

### Bacon and Lard.

Best Sugar Cured Hams, lb.....	15
California Hams, per lb.....	10 1/4
Breast Bacon, per lb.....	13

Good Lard.....	9
Genuine Smithfield Hams, lb.....	15
4-lb. Can Cotoleme.....	44
Country Cured Bacon Sides.....	12
10,000 lbs. Nice Family Pork.....	9

### Feed.

Oats, per bushel.....	46
Ship Stuff, per 100 lbs.....	1 10
Brown Stuff, per 100 lbs.....	1 05
Good Corn, per bushel.....	52
Coarse Meal, per bushel.....	65
Best City Meal, per bushel.....	70
Linseed Meal, per 100 lbs.....	1 75
Cotton Seed Meal, per 100 lbs.....	1 40
510 tons Cotton Seed Hulls—an excellent Winter Food, cheap and nutritious—as good as Coarse Meal for Stock, per 100.....	50
70,000 lbs. Rock Salt for Stock, per 100 lbs.....	1 00

### 5,000 Bales of Fine Shucks.

### Coffee, Tea, Soap, &c.

Arbuckle's Green Coffee.....	11
Best Mocha and Java Coffee, roas'd.....	18
Fine Gunpowder Tea.....	40
800 barrels White Oil.....	12
7 boxes Axle Grease.....	25
10 Large Cakes Fancy Soap.....	25
Crystal Washing Soda, light, smooth and durable—makes washing easy 30	
Washing Powder, 8 for.....	25
Large Fat Mackerel in nice buckets or kits, about 15 lbs.....	1 25

**D. O'SULLIVAN, 18th and Main and 502 E. Marshall Sts., Richmond, Va.**

# THE WONDER OF THE 20 CENTURY....

## THE ACME CHURN, MILK AERATOR and CREAM SEPARATOR.

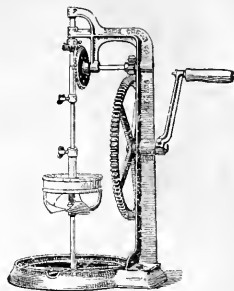
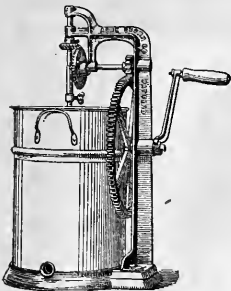
Guaranteed to make butter from sweet or sour cream in from three to ten minutes. The manufacturers offer \$100 to any one who can beat this machine on time, quality and quantity on any given amount of sweet or sour cream. Made of the very best materials and is guaranteed.

It will pay for itself in six months. It will interest and please father, and lessen and lighten the labor of wife and daughter. It is a pleasure to churn with this machine. I have used the churn, as shown in this cut, daily since July, 1902, and it is as good now as it was then. It shows no wear, and the more I use it, the better I like it. In 3, 6, and 10 gallon sizes. Correspondence solicited. Information circulars furnished on application.

Make a note of this and continue to watch SOUTHERN PLANTER.

ADDRESS

THE ACME CHURN, Lock Box, Richmond, Virginia.



### ZESTFUL FRANKNESS.

Unexpected frankness now and then gives a special zest to the humor of a situation in Congress. When "Gabe" Bouck was the Representative from the Oshkosh district of Wisconsin, a pension bill came before the House, to his great vexation of spirit; for, while his personal convictions were directly opposed to it, his political interests were strong enough to whip him into line. On the day the bill came up for final disposal a fellow-member met Bouck in the space behind the last row of seats, walking back and forth and gesticulating excitedly, bringing his clenched right fist down into the hollow of his left hand, to the accompaniment of expletives which would hardly look well in print.

"What's the trouble, Gabe?" inquired his friend. "Why all this excitement?"

"Trouble?" snorted the irate lawmaker. "Trouble enough! That pension bill is up, and all the cowardly nincompoops in the House are going to vote for it. Its sure to pass—sure to pass."

"But why don't you get the floor and speak against it—try to stop it," suggested the other.

"Try to stop it?" echoed Bouck. "Try to stop it? Why, I'm one of the cowardly nincompoops myself!"—Francis E. Leupp's "Some More Humors of Congress," in *April Century*.

Representative Hilborn, of California, after a vote in the House unseating him, retired to the cloak-room, where he held a levee as friends crowded in with expressions of sympathy and good will.

"Well, Hilborn," said one of them, "you are certain to come back, so you ought not to feel so bad."

"Yes," said Hilborn, in his dry way; "we all cherish the Christian belief in the resurrection, but I don't think that it entirely reconciles us to death."

## \* THE \* SEABOARD AIR LINE RAILWAY

OFFERS  
PROFITABLE  
INVESTMENTS

THE MANUFACTURER,  
THE STOCK RAISER,  
THE DAIRYMAN,  
THE FRUIT GROWER,  
THE TRUCKER.

TO

WHERE YOUR LABOR IS NOT IN VAIN.

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE, EDW. F. COST, CHARLES B. RYAN,  
Gen. Industrial Agt., Portsmouth, Va. Traffic Mgr. Gen. Pass. Ag., Portsmouth, Va.

ASSETS, \$900,000.

## Virginia Fire and Marine Insurance Company, of Richmond, Va.

### Insures Against Fire and Lightning.

ALL DESCRIPTIONS OF PROPERTY IN COUNTRY AND TOWN, PRIVATE OR PUBLIC, INSURED AT FAIR RATES, ON ACCOMMODATING TERMS.

AGENCIES IN EVERY TOWN AND COUNTY.

WM. H. PALMER, PRESIDENT.

W. H. M'CARTHY, SECRETARY.



## ANGORA GOATS

550 HEAD of registered and high-grade  
Angora Does and Kids for sale.

Clean your land of brush and filth and double your money invested. I HAVE DONE IT. Come and see for yourself. If not satisfied, I will pay your R. R. fare and expenses.

See Bulletin No. 27, Bureau Animal Industry, Department of Agriculture, for information about the Angora.

M. M. SUTHERLAND, Wytheville, Va.

# Latest Improved FARM IMPLEMENTS.



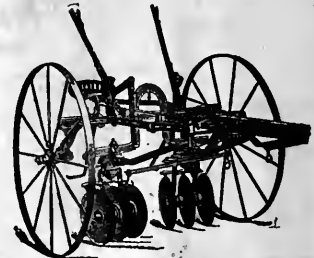
**Aspinwall Potato Planter.**

Automatic, Accurate and Reliable. Used by thousands of practical growers the world over. Over twenty years on the market. Don't be fooled by imitations and make-shifts, but write for attractive illustrated catalogue.



Special prices given on Studebaker and Brown Wagons, Buggles and Carts.

Studebaker Buggles, all styles, Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.



**Bement Disc Cultivator, with 6 or 8 Disc.**

Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.

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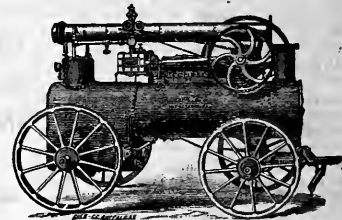
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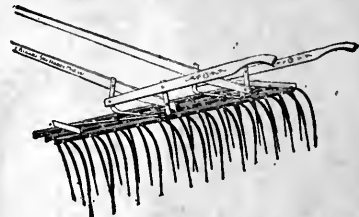
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# The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK AND THE FIRESIDE.

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Agriculture is the nursing mother of the Arts.--XENOPHON.  
Tillage and pasturage are the two breasts of the State.--SULLY.

---

64th Year.

Richmond, May, 1903.

No. 5.

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## Farm Management.

### WORK FOR THE MONTH.

The month of April up to this writing (20th of the month) has been throughout the South the most ungenial April we have ever known. It has been one succession of cold, showery days, with one of the sharpest frosts in the first week we have had since February. Following two months of excessive rainfall, this weather has put the land into such a condition that no work has been or is even yet possible. In the past three months we have had nearly one-half of the average rainfall of the year. As the average rainfall of each year is usually about the same, we may reasonably expect that this wet spring will be followed by a dry summer or fall, and that the water now in the depths of the soil will be needed before crops are matured. It will be well, therefore, to conserve this by keeping the surface mulched with fine soil as much as possible after crops are planted. In the semi-arid regions of the West a new method has been introduced for conserving soil moisture, which is being found to be of great value. It is called the Campbell method of sub-surface packing. The method is to plow very deep, and by means of a specially constructed implement to pack the bottom of the furrow and then to keep the surface well cultivated and covered with a mulch of fine dust. By pursuing this method of conserving the winter and spring rains it has been found possible to make successful crops on land where little or no moisture falls

from June to the fall. An adaptation of this system may be found to be of service here in many seasons.

The condition of the wheat, oat, clover and grass crops are most promising. The genial weather of March set them to growing, and this has continued, notwithstanding the coolness of the month. The average condition of the wheat crop on April 1st throughout the country was 97.3, as against 78.7 on April 1st, last year, and 82.1 the mean of the April averages of the last ten years. Virginia is ahead of all the States in the condition of the crop, which stands at 103 as against 54 last year, and 84 for ten years. North Carolina stands at 100, as against 64 last year. South Carolina at 93, as against 80 last year, and Maryland at 99, as against 70 last year. Tennessee, Kentucky and West Virginia have also a high average condition. Should there be no serious set back during the next three months, the promise is for the largest winter wheat crop ever grown. Grass, crimson and red clover have made splendid growth, and promise early and full crops of hay—crimson clover is being cut already for feed in this section.

The work of planting the corn crop should be pushed on as fast as the land can be got into good order. We would, however, strongly urge that too great haste be not made. Let the land dry and be thoroughly worked before planting, even though the crop

may be put in somewhat late. As we pointed out in our article on "Work for the Month," in our last issue, more depends on a fine condition of the seed bed than on the fertilizer that may be applied. Corn planted in cold, wet and cloddy land is not going to make a good crop, however well it may be cultivated afterwards. The best and most successful cultivation of the corn crop is that which precedes the planting of the crop. In our last issue will be found our views as to best method of planting and fertilizing the crop, and to that issue we refer our readers.

The cultivation of the corn crop will require attention through this month and the next. The object of cultivation is two-fold. One to kill the weeds, the other the conservation of the moisture in the land. The latter is the most important of the two. Without abundant moisture the crop cannot be a success, and this conservation of moisture can only be secured by keeping the top three or four inches in a finely broken condition so as to destroy the capillarity of the soil. When once the soil becomes consolidated, moisture evaporates from it in the hot weather so quickly that the tender rootlets of the corn are absolutely prevented from securing the food needed to make growth. All plant food is taken up by plants in a liquid form, and the amount of this liquid required is enormous. At the Wisconsin station it has been proved that every pound of dry matter in a corn crop requires 310 pounds of water to make it. To secure this it is necessary not only to utilize the rainfall during growth, but also to call upon the reserve moisture in the soil accumulated during the winter and spring months. This can only be done by keeping the surface soil finely broken. To plow the crop deeply will not serve this purpose. Plowing deeply and exposing large surfaces of the subsoil to the action of the air and sun is the way to dry it, and not to conserve moisture. This method of cultivating the crop has also the further disadvantage that it damages and breaks the tender roots of the plant, and thus curtails its feeding power. What is needed is to encourage the making of more roots rather than the cutting off of those roots already made. Few farmers realize how quickly the corn plant will fill the ground with roots if the soil is in a fine condition and well supplied with moisture. Long before the corn is too tall to work the whole width between the rows should be filled with the feeding rootlets of the plants and to use a plow through these is to irreparably injure the crop. The best implements to cultivate a corn crop with for the first two or three work-

ings are a harrow or a weeder. One or the other of these implements should be run over the crop before it breaks through the land, and this be repeated at intervals of five or six days until the crop is too tall to be thus worked. Whilst this may seem a harsh method, and likely to result in pulling up or injuring the plants, it will be found in practice to have no such effect, but will result in keeping a fine mulch on the surface and will destroy all weeds as fast as they germinate, thus accomplishing at one time both the objects of cultivation. The number of times which a crop should be cultivated in order to secure the best results depends largely upon the character of the weather during the growing season. It should be cultivated after every heavy rain as soon as the land is dry enough to work freely, and at other times whenever the soil is showing signs of crusting or whenever weeds are appearing. The advantages of frequent cultivation are forcibly shown in an experiment made at the New Hampshire Station, where certain plats were given no cultivation, other plats were cultivated five times and other plats were cultivated fourteen times. Some of the plats were cultivated shallow and others deep. On the plats not cultivated the weeds grew luxuriantly, and the yield was 17 bushels of shelled corn to the acre. The plats cultivated shallow fourteen times yielded at the rate of 80 bushels of shelled corn to the acre. On the plats cultivated *shallow* five times the yield was 79 bushels of shelled corn to the acre. Where the plats were cultivated *deep* five times the yield was 69 bushels per acre. A plow should never be used to cultivate a corn crop. It has no place in a corn field after the crop is planted, except it may be in the rich river low ground, where climbing vines are so troublesome, growing between the plants in the rows. As these cannot be reached by a cultivator of any kind, and hoeing is too costly, a light furrow may be plowed on to them to smother them out, but the space between the rows should be cultivated level with either an Iron Age or disc cultivator after the crop is too well grown to be worked with the weeder. Keep the soil as nearly level as possible, and throw no hills to the corn. The idea that throwing a hill to the corn will prevent it being blown down is a fallacy. If the corn roots have not been cut during growth by deep cultivation they will have such a hold on so large a surface of the soil that no ordinary wind storm will hurt the crop. Hills thrown to the corn only expose a much larger surface of soil to the drying winds and sun, and lead to drouthing of the crop and a reduced yield. *Cultivate frequently and culti-*

*vate level and shallow.* At the last working sow either cow peas, sapling clover, crimson clover or rape, or a mixture of all these, and then in the fall after the crop is harvested there will be good pasturage, the land will be protected from washing, and a humus making crop be ready to turn under in the spring.

The chopping out and cultivation of the cotton crop should have attention as soon as the plants are large enough for it to be clearly seen which are the strongest and most likely to be left. The longer the chopping out is deferred the less plant food there will be left in the soil for the plant which is to make the crop, and the more the plant is likely to be drawn and spindling. Bring to a stand as soon as can be done with safety, and then cultivate frequently, and cultivate level. Do not use the plow, but an Iron Age or disc cultivator. The same principles apply to the cultivation of the cotton crop as to the cultivation of the corn crop. Sow crimson clover at last working to cover the land in winter and make humus.

Tobacco plants should be set out on well prepared land as soon as they are large enough. Better to plant small, stocky plants than drawn ones. In our last issue we discussed fully the preparation of the land for this crop and the fertilizer best fitted to make a crop which will sell well. To this article we refer our readers. The indications are that for good tobacco there will be a good market next season as stocks in dealers' hand are light and consumption is active.

Peanuts should be planted this month. The demand for these nuts has been good, and prices better than for some years past, and the stocks held by dealers are, we are told, small. This would indicate a good demand for the next crop, as the consumption is a growing one both for domestic use and for oil and feeding purposes. We are strongly of opinion that if better methods of preparation of the land and a better system of rotation was followed and more consideration given to the requirements of the crop in the way of fertilizer, that much heavier crops would be grown than the average now raised. The crop is an important one in Eastern Virginia and North Carolina, and the land well suited for its production, but in many sections they have been too long grown on the same land without a rotation of other crops. According to the census reports, the area devoted to growing peanuts in 1899 in Virginia was 116,914

acres, and the product was 3,713,347 bushels, the average yield per acre being 31 bushels. In North Carolina, in the same year, 95,856 acres were devoted to the crop, and the yield was 3,460,439 bushels, the average yield per acre being 36 bushels. These yields are too small to be profitable, and fall far short of what can easily be made. Fifty bushels to the acre can readily be made by planting in a proper rotation and by fertilizing scientifically. One hundred bushels per acre have been frequently grown. Too often the practice is to follow peanuts with peanuts year after year until the land will not produce a crop worth gathering. At best, the only rotation is peanuts followed by corn, and then by peanuts again. This is too short a rotation. A more profitable way would be to grow cow peas or soy beans, and then follow with peanuts, and after this crop plant sweet potatoes—the three crops to be followed each fall with crimson clover and oats or wheat mixed, to keep the ground covered during the winter, and to provide a humus making crop to be plowed down in the spring. A dressing of 300 pounds to the acre of acid phosphate should be applied to the cow pea crop, and a mixture of 100 pounds of acid phosphate, 300 pounds of cotton seed meal, and 65 pounds of muriate of potash, or 30 pounds of kainit to the acre should be applied before planting the peanuts. A dressing of 25 bushels of lime to the acre should be given every three or four years. We are satisfied that if such a system as we suggest be followed it will result in a much heavier average yield of nuts and the fertility of the land will be maintained and enhanced.

After the planting of the staple crops is completed attention should be given to the planting of forage crops. It is one of the cheering evidences of an improved system of farming being adopted in the South that we almost daily receive enquiries as to the proper forage crops to be planted and the method of growing and harvesting them. This is an indication that live stock is receiving attention and becoming a factor in farm economy. In the past the absence of this factor has been the great weak point in Southern farming. Live stock, instead of being regarded as the sheet anchor of successful farming, was looked upon as merely an incident of the occupation of land and as a means of getting rid of some of the waste products of the farm without regard to their profitable utilization. If the corn stalks and straw sufficed to keep the animals, apart from the team, alive during the winter all was regarded as well. If

not, why they merely pined to death or so near to death as to be practically worth much less in the spring than in the fall. Now on thousands of farms the profit derived from cattle and sheep is a large element in the farm returns, and the resulting manure a great factor in reducing the fertilizer bills. This is as it should be. No country ever became a prosperous, fertile, agricultural country without live stock, and even on the highest priced lands in the world they are the main factor in securing a profitable result from farming. To succeed with live stock provision must be made for their maintenance all the year round by crops specially grown for that purpose. The need for these in a hot climate is often almost as great during part of the summer as in the winter. We have known few summers in which in the South there were not one or two months, when in the absence of forage crops, cattle did not suffer from shortness of feed and make no progress towards maturity or maintain their flow of milk. All this can be obviated by growing a variety of forage crops coming to maturity at different seasons of the year. The climate of the South is especially favorable to the production of the greatest variety of the most nutritious forage crops, and due attention given them will place the stockman in a position to compete successfully with stock raisers in any section of the country. In another article in this issue we deal with this subject more fully, and to that refer our readers.

When planting the corn crop don't forget to use some pumpkin seed with the corn. On the low grounds especially pumpkins can be grown with advantage in the corn, and will make an excellent return in the way of good feed for cattle and hogs during the winter, and at the same time do no injury to the corn crop; indeed, some growers maintain that they help the corn crop by shading the land and conserving the moisture. Mix the seed in the proportion of about 1 of pumpkin to 5 or 6 of corn. The Virginia Mammoth is a good variety to grow. If not mixed with the corn, see that a field is planted with pumpkins alone. Lay off the rows 6 feet apart, and drop the seeds (two or three at a place) 6 feet apart in the rows. The more fertile the land the better will be the yield. It will pay to give the crop some fertilizer, say some cotton seed meal and acid phosphate.

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## FORAGE CROPS.

In our article "Work for the Month," we have drawn attention to the importance of making preparation for the seeding and planting of forage and feed crops for live stock at this time of the year. The number and variety of these crops, which can be successfully grown in the South, is so great and their importance in the farm economy so weighty, that we have thought it wise to devote a special article to the subject. These crops may conveniently be divided into three classes—first, those which planted now will make summer forage crops; second, those which planted a little later, say June, will make fall and winter feed; third, those which planted still later, say August, will make fall, winter and spring grazing and an early hay crop. In addition to these forage crops, there are the root crops, which are of such great service in the successful wintering of cattle, sheep and hogs. Of these mangold wurtzel and sugar beets should be planted this month, ruta baga turnips in July and August, common turnips in August and September, and artichokes in March and April. Among the forage crops in the first class above mentioned are the millets (Pencilaria, German and Hungarian), sorghums, and (south of the James river), Teocinte. Pearl or cat-tail millet (Pencilaria, as it is called in the West) is one of the best of the millets for making a green forage crop to be cut and fed to cattle during the summer. Sown at the rate of one bushel to the acre, on well prepared land, in good fertility during May and June, it will make a crop ready to cut in fifty days, and will yield anywhere from five to ten tons to the acre, according to the fertility of the land. German and Hungarian millet may be sown from this time until the end of July, and will make a fine hay crop in from sixty to seventy days from the time of seeding. To make a heavy yield the land should be in a good state of fertility, and be finely prepared. Sow one bushel of seed per acre broadcast, cut and cure before the seed forms.

Cow peas either sown alone or mixed with sorghum or millet make an excellent crop for green feeding or grazing or for hay. To be used for these purposes, they may be sown broadcast from May up to the end of July. Sow at the rate of one bushel to the acre, if sown alone, or, if mixed with sorghum or millet, sow three pecks of cow peas and a peck of millet or sorghum. If cow peas are wanted for a seed crop, they are better planted in drills two feet six inches apart, and scatter thinly in the drills. They should be cultivated once or twice, and will make a much heavier seed crop than if sown broadcast.



Soy beans are one of the best feeds that can be grown either for cutting green to be fed to hogs or other stock, or to be made into hay or to be allowed to stand until the seed matures for a seed crop. They are the richest of the leguminous crops in protein and fat, and at the same time are, like cow peas, improvers of the land. In our last two issues, and in this issue, will be found articles from farmers who have grown soy beans, speaking in the highest terms of the value of the crop and of its ease of cultivation and curing. They are best grown in drills two feet six inches apart and dropped in the drills five or six inches apart. A peck of seed will sow an acre. They should be planted in May or June.

Teocinte is a most valuable fodder plant either for cutting green or cured, but is not suitable for growing north of the James river. It is a sub-tropical plant, growing very much like corn, but will not mature seed north of the Gulf States. This plant will make a much heavier yield of feed than corn, as it stools enormously after being cut, as many as fifty stalks having been counted coming from one seed. It may be cut two or three times during the summer. It requires rich land to produce these heavy yields. The land should be deeply and finely broken and the seed be planted in rows three to four feet apart. Two to three pounds of seed will sow an acre. The seed should be sown in May, or, at the latest, in June.

In the second class of forage plants—that is, plants intended mainly for fall and winter feeding—sorghum and Kaffir corn are amongst the best. These crops may also be used for feeding green, sorghum of the Early Amber variety being an especially good green feed for cattle and hogs. The saccharine sorghums, like the Early Amber, are not so resistant of drouth as the non-saccharine ones, like Kaffir corn, and it is therefore often well to plant some of both varieties, so that if the season should prove a dry one, there will be a certainty of crop. Kaffir corn will stand drouth better than any other forage crop. Both the forage and seed are good feed. These sorghums may be planted at any time from now to the end of July. They will make a crop on poorer land than corn, but, like corn, will make the greatest yield of good land. They should be planted like corn, in rows three feet apart and the plant be left about four inches apart in the row. Cut and cure like corn. A peck of seed will sow an acre. When intended for a hay crop, from two to three pecks should be sown broadcast, and the crop should be cut before the seed forms, and be cured like hay. We will deal with the crops in the third class in later issues.

## SUCKERING CORN.

There has always been considerable difference of opinion as to the injury which suckers do to the crop of corn. We are glad, therefore, to be able to report the following experiment made by Mr. C. F. Day, of Isle of Wight county, Va., on the subject. He says: "For years I have been pulling off the suckers when I could have it done, being of the opinion of many of the best farmers of this section, who thought it injured the corn not to pull them off. I determined, as it was a question of surmise, to give the matter a practical test.

"Last year I had a ten acre field of corn planted after potatoes, which was full of suckers. Thinking they would reduce the yield, I secured a force of hands and pulled them off, which I found to be the hardest job of any done during the year. I directed the manager on my farm to leave two rows at different places in the field with the suckers on. The rows were 200 yards long.

"In the fall, when it was time to 'get in' the corn, I took two carts with some men, and superintended most carefully the gathering and measuring. From the two rows not suckered I gathered three flour barrels and a bushel and one-half in the ears. From the two rows alongside, which were suckered, I gathered three flour barrels and a scant bushel. So you will see I not only lost the cost of suckering, which is probably three times as great as thinning, but I made less corn by half a bushel in the ears. I examined (but did not shuck) the other rows, and could see no difference.

"Now, whilst 'one swallow does not make a summer,' nor may one experiment prove the truth, it was so convincing that I will never pull off any more suckers."

## BETTER PLOUGHING PAYS.

OTHER NATIONS BEAT US—GOOD PLOWS FOR GOOD PLOUGHING.

*Editor Southern Planter:*

Plows have been going for some time, and will be kept busy for a month yet to come. Generally, pains enough are not taken by ploughmen in the United States. The object of ploughing is twofold—to get the stubble, rubbish, grass and weeds buried, and to make the soil mellow, soft and fine, so that the roots of the plants to be grown upon the field may penetrate it easily in all directions in search of nourishment and moisture. The cohesion of the particles must be overcome and they must be loosened and

separated from each other, because crops do not grow well among clods.

Unlike the food of men and animals, the nourishment of plants must be in the liquid state, and the finer the soil is reduced the easier it is for them to obtain it. This being the case, it is easy to understand that the better the reduction by ploughing and harrowing the better will be the crop. If we only "cut and cover" we should not expect the plants to flourish on the "balks," nor very well in other places.

It has been frequently said, and is, no doubt true, that ploughmen in this country do not take pride enough in ploughing. In Great Britain ploughing matches are of frequent occurrence; the ploughmen by constantly striving after perfection become very expert. The writing master's direction: "Every line and every letter strive to make a little better," is as applicable to ploughing as to writing. In all kinds of work unless there is a constant effort made for improvement, the product will not be kept up to the high standard. We must continue to do our best all the time, or our workmanship will deteriorate. English, Scotch and Irish ploughmen beat us. In Canada also, according to Professor Shaw, the ploughmen excel us. He says that in a journey through Ohio he, 'did not see a really straight furrow. We have young men in this college who can turn a furrow as straight as an arrow course.'

Some may say it is only a matter of looks, and that grain will grow on a crooked furrow as well as on a straight one. So it will, if the crooked furrow is as well crumbled to pieces and refined, but such is not generally the case. Ploughing on a long curve may do tolerably well, but on short crooks the ground cannot be well pulverized, because there it is impossible to maintain an even furrow slice.

Good ploughing cannot be done without a good plow. No amount of skill or watchfulness on the part of the ploughman will avail with a poor tool. According to my experience a short plow with considerable twist in the mold-board will mellow up the furrow slice in a stubble field better than a longer plow with less twist in the mold-board. The short plow will require more power to draw it through the ground, because it is doing more work at crushing, kneading and disintegrating the particles of the soil. The long plow with but little twist in the mold-board is best for ploughing sod-ground, because it raises the furrow slice more gradually, lays it over so gently that it does not become broken or kinked and draws easier.

To do the best work, and for the comfort of the ploughman, plows should have wheels to regulate the depth of the furrow and maintain an even depth on uneven ground. This cannot be done with the clevis.

Wheel plows were common in England more than

140 years ago. They used two wheels and four coulters on each plow. The coulters were not all placed in a straight line on the beam, but were fastened diagonally across the beam, the object being to cut up the ground to the width of the furrow slice before it was turned. The jointer, or diminutive plow, hung in the beam of some of our plows, which is so valuable for getting the grass and stubble under, is a modern invention. We find no account of it in the old English books on husbandry.

Hales's Book of Husbandry, published in London in 1758, says: "Ploughing is the capital operation of husbandry." "To give the crop the full benefit of the land every lump should be broken." "The more we break the particles of earth the more we put the soil in condition to furnish plants with nourishment."

J. W. INGHAM.

Our correspondent is undoubtedly right in asserting that the English ploughman is, as a rule, a much better workman than his colaborer here. There great rivalry exists between the ploughmen on neighboring farms and the work done under such circumstances is of the best. We have seen scores of acres ploughed so skilfully that the furrows were as true and straight as though laid off with a ruler, and the width and depth of each furrow almost mathematically exact. This results in an evenly grown and ripened crop and rows capable of being easily cultivated by machinery.—Ed.

### IMPROVEMENT OF SOUTHERN PASTURES.

WHICH SHALL IT BE, THREE ACRES TO EACH HEAD OF STOCK, OR THREE HEAD OF STOCK TO EACH ACRE?

*Editor Southern Planter:*

It lies in the power of each and every land-owner throughout the entire South to determine the manner in which he individually will answer the above query. If he so elects, he can leave his so-called "pastures" in the condition so many of them are to be found in at this present time—to wit, three acres furnishing but a very scanty subsistence for one single head of live stock; or, if he so elects, he can so improve the general condition and fertility of his pasture as that a single acre of it shall furnish more and better grazing than is now furnished by three acres.

I have seen high, dry and comparatively poor pine, sandy land, that would have been considered a dear bargain at 50 cents per acre, so enhanced in value by Bermuda taking complete and entire possession of it (though much against the owner's will or wishes in the matter) that \$5 per acre would have failed to

purchase it. I have seen many acres on high, dry and comparatively poor sandy pine hills that were so heavily set with Bermuda and the turf so dense that one single acre of it would, and did, furnish more and better grass than was furnished by three or more acres of rich bottom land where the so-called "native" grasses were the sole dependence.

One reason the average southern pasture is no better than it is on account of so many useless, unsightly and pestiferous weeds that, each in its season, are allowed to take possession and crowd out the more useful and valuable grasses, as dog-fennel, sneeze weed, etc., and that pest of every lover of good milk and butter, the "bitter" weed, each and all of which might be eradicated by a little effort in the way of running the mower, or if too rough or too many washes and gullies, even a sythe, and cutting them just as they come into bloom and before any of the seeds have had time to mature. Hand-pulling is a somewhat slower, though surer, method. I have depended exclusively on the latter, hence it is a mere chance if I ever see any of them in my pastures, and if so, they are immediately pulled up and more often than any other way, carried to the fire and burned.

I am satisfied that the leaside of a barb-wire fence is a rather poor protection from either a cold north-west wind or an easterly rain, sleet or snow, and it is an undoubted and indisputable fact that animal heat must somehow or other be maintained and also that said animal heat is far cheaper when maintained from the outside by the aid of a good shelter, than from within by the more costly carbonaceous foods. No pasture, even in the "Sunny South," is complete without some shelter for the stock to run to from sudden northers, etc. "The merciful man is merciful to his beast."

Sufficient timber should be left for necessary shade, but as grass does not, and cannot, thrive where shade is too dense, all timber not actually needed for shade is a detriment to the pasture, and should be cut down without mercy.

Whatever arrangements are made about water, and from whatever source obtained (living springs are best), the supply should be both abundant and pure. The health of the stock is largely dependent on the water supply, and still more on the purity of that supply. The fence should connect with the barn yard by at least a lane, if not other way, and be put up so firm, stont, close and high that any and all live stock enclosed therein shall be actually and positively restrained from depredating on either your own fields or those of your neighbors. This tends to keep

peace in any neighborhood, and may save lots of trouble, both home and abroad, as well as some expensive law suits.

The one great error into which many of our farming friends have been led is that something can be obtained from nothing; that the pasture forms the single exception to nature's inexorable law of restitution or "so, much for so much," and that as the animals are continually depositing excrementitious matter on every square yard, or even foot, of it, that instead of the soil of a pasture becoming depleted or exhausted of its fertility until grass refuses to grow and noxious weeds and useless moss supplant them, that the pasture of all places on the farm should finally become immensely rich and fertile, in fact, the richest land on the place.

It is needless to undertake to prove the above to be a fallacy; it proves itself on every hand the entire country over and in each and every individual pasture.

To keep a permanent pasture in good order and increase its ability for growing grass, hence its capacity for supporting stock, the soil should be fed, and the more liberally it is fed the greater the quantity of grass furnished by it and the better its quality, as far as succulence and nutrition is concerned.

It is seldom necessary to apply nitrogen to a permanent pasture, the droppings of the stock and the leguminous plants, as the vetches and clovers invariably found in every good pasture, tending to keep up the needed supply. Still I have derived both satisfaction and profit from an application of fifty or seventy-five pounds of nitrate of soda per acre broadcasted in early spring before the weather has become sufficiently warm for active nitrification to set in.

The pasturing of stock, particularly of growing animals and of cows whose milk is sold, exhausts the phosphate and potash of the soil very rapidly, and it is important that these be restored if the sod is to be kept in the best condition. To do this 500 pounds of a fertilizer containing 8 per cent. phosphoric acid and 8 per cent. potash may be applied per acre.

It is a great mistake to locate the permanent pasture on the poorest part of the farm, as it requires as good soil, better and more thorough preparation and a greater amount of after-care to make and maintain a really poor permanent pasture than it does for any other crop on the farm. But when all this has been efficiently and rightly done, aside from the vegetable garden, no other crop on the farm affords

as much satisfaction nor so much clear profit, though more often than any other way, it gets the least credit for it.

G. H. TURNER.

*Burgess, Miss.*

### THE NEED OF POTASH IN VIRGINIA LANDS.

*Editor Southern Planter:*

As Mr. J. S. Woods, in the April number quotes me in regard to potash I feel that some additional words on the subject may not be amiss. Dr. Stubbs's experience was in the low-lands of a river heading in the Blue Ridge, and it is generally found that where this is the case that potash is plentiful in such lands. But if he applies the results there to all the sandy soils of Tidewater Virginia I think he will make a serious mistake. The gradual decay of epidotic rocks in the Blue Ridge brings down the rivers that rise there a goodly supply of potash, which is lacking in the Tidewater section, where this is not the case. It depends very largely on the nature of the soil anywhere as to what its requirements are as to plant food. The lands that are devoted to tobacco in North Carolina are very different from the bottom lands of Albemarle and grow a very different tobacco. If Mr. Woods practices on the theory that phosphoric acid is all that tobacco needs he will soon find that he is growing a very poor grade of tobacco. While the lands of the Piedmont section are abundantly supplied with potash it is doubtful whether in most of the lands there is a sufficiency of readily available potash for the tobacco crop. The requirements of tobacco are mainly for nitrogen and potash, as is shown in the experiments of Major Ragland, which you give in the April number of the *PLANTER*. An excess of phosphoric acid will harm the quality of the leaf more than anything else, making it, as the growers say, "boney." The best crops of tobacco grown in North Carolina are grown by men who use potash in the form of a sulphate largely, and while the lands of Piedmont Virginia may have potash enough available for most farm crops, if lime is used on them it will be found that tobacco needs more readily available potash. Still, a great deal does depend on the soil and its treatment. In Nelson county they grow fine black wrappers with no fertilizer but the clover, while in North Carolina the growers say that they cannot grow fine wrappers after clover or peas, even when otherwise well fertilized. The fact is, that every farmer should experiment and study the needs of his particular soil, and not jump to conclusions based on local experience.

W. F. MASSEY,

*Editor of Practical Farmer.*

### HOW TO PREVENT TOBACCO FROM DROWNING.

*Editor Southern Planter:*

I would like for many of your readers to know what to do in case there should be much *wet* weather after weeding their tobacco. The rows should be left nearly level after the crop has been ploughed. If the tobacco begins to wither or droop go quickly and get your horse and plow and turn the soil from the hill again. By so doing you will leave the plant in a draining condition and the plants will soon flourish again. I prevented several thousand plants of my crop of 1902 from being drowned by this means. I am sure this will be helpful to those who are now preparing to raise the *wed* in some of our eastern counties.

D. D. CARTER.

*Halifax county, Va.*

### THE VALUE OF SOJA BEANS AS A FORAGE CROP.

*Editor Southern Planter:*

At this season of the year, when our farmers are planning for their spring and summer crops, it would be well to compare notes as to the value of some of the crops raised the preceding year. Often it is well to exchange views as to value of crops raised, even on adjoining farms.

We well know that it would be a mistake to try and feed stock without a corn crop, but how many of us have raised, in connection with our corn crop, a crop of Soja beans?

About six years ago I planted three pecks of Soja beans in drills three feet apart and sown about like garden peas. The soil was a sandy loam, and considered above the average. This three pecks yielded twenty-three bushels measured, allowed to ripen for seed and cut with sickle. This little crop opened my eyes as to the value of this new crop for feed. The dry, woody stalks were eaten with a relish by all stock. I had some ground with corn—one peck of beans to three pecks of corn. This made one of the best rations for milk cows I ever used, and also for work horses.

The following year I sowed twenty acres broadcast and cut for hay and found them first-class for general feeding of all kinds of stock.

The next year I planted ten acres in drills and began to cut and feed when in full bloom, and they were relished in this stage by cows, horses, mules and hogs.

Each year the yield of grain was about the same.

Last year I sowed four acres on the 3rd of July and ploughed in with a small Dixie plow; dragged flat next day. The season was favorable and I had a nice lot of hay. Cut when the leaves began to turn

yellow—before dropping—and this made as fine a lot of hay as any one could wish for. I would not sow more than one bushel to the acre when wanted for hay, as the natural grasses help to make it easier to cure. Don't house until dry. It may take two or three days, but when cured properly it is one of the best crops I know of.

Now for the benefit to the land. If you will pull up some of the growing plants you will find the roots thickly "set" with nitrogen nodules. From this source comes the great benefit to the soil, gathering and storing for future crops the most expensive element of plant food—viz., nitrogen. Corn planted on land the following year after Soja beans will be benefited by an increased yield of 30 per cent.

Experience with the cultivation of cow peas and blackeye peas teaches that sowing very early gives a larger yield of hay and less grain than sowing later. The 20th of June, in my judgment, is the ideal time for sowing cow peas and blackeye peas and the 20th of May for Soja beans.

Let the farmers who want to try this new (?) crop, and who think it overrated, plant three to five acres and they will never be sorry. D. W. MORRIS.

*York county, Va.*

### RESTORING THE WORN LANDS OF VIRGINIA.

*Editor Southern Planter:*

A great difference is found in what are termed "wornout" lands. The "wornout" lands of the Eastern, Northern and many portions of the Southern States are brought to productiveness only by a long, tedious and expensive process, but the "worn" lands in Eastern Virginia are entirely different.

Comparatively level lands, with a good subsoil of clay, say from eight to twenty-four inches under the surface, where the original timber was pine, oak, hickory, gum, beech, walnut etc., etc., are not "wornout" in the true sense of the term.

Such land is like the blooded horse. The horse may be thin and "worn" and "run down" by hard usage and abuse, but the bones, the hide, hair, muscles, sinews and tendons are all there. The hoof, the eye, the spirit, vim and vigor are all there (partially dormant, it is true), but hay, oats, curry-comb and brush will resurrect, reconstruct and restore the thoroughbred and make a good horse of him, because the foundation is there.

So with our land. If the foundation is there our lands can be easily, cheaply and quickly reconstructed, restored, rebuilt and made reproductive.

If poor, "wornout" land is open at the bottom so

that it will not hold manure and fertilizer, and is washed away on top, it is then poor and "worn" indeed.

Thin, "worn" lands, with porous subsoils and surface quite rolling will require the best of handling to bring them up, and such will not "stay there" after being brought up.

In a recent pamphlet, issued by the Norfolk and Western Railway (said pamphlet edited, and very ably edited, by Dr. Paul Secherer), the subject of "worn out" land is well treated. We recommend the testimony contained therein to the owners of "worn out" lands of Eastern Virginia. We also commend the treatment suggested for such lands.

By the way, the subject matter in said pamphlet is not only comprehensive, covering a great scope, but it is remarkably well and concisely treated, and we can heartily endorse the pamphlet from start to finish. The "worn" lands of Virginia are, in the main, all right for quick improvement.

*Norfolk, Va.*

A. JEFFER.

### BLACK ROT OF SWEET POTATOES.

Can you, or some of your subscribers, tell me what causes sweet-potatoes to turn black, and what to do to prevent it? I have been told that fresh stable manure makes it, but this cannot be so, as I did not use any at all last year, still they turned black badly.

*Hanover county, Va.*

JOHN FLICK.

Black rot of sweet-potatoes is a specific germ disease which affects the crop in all stages of its growth. The spores of the disease infect the soil from the tubers and are carried also from the vines to other vines. In this way when once it has got on to a farm it is a most difficult thing to get rid of. Professor

Priece, who has made most careful study of the disease, says: "There is no doubt but that only healthy slips should be used, which means the careful selection of perfectly sound roots for the seed bed." These healthy sprouts must then be set in soil which is perfectly free from infection—that is to say, on land on which the crop has not been grown for several years. It is impracticable to apply any substance to the soil to kill the germs that have accumulated there. If the seed potatoes are grown from vine cuttings it is easy to get rid of the disease by planting the sprouts from these seed on fresh land. A crop grown even from vine cuttings taken from diseased tubers has turned out to be entirely free from the disease, whilst one grown from sprouts from the same tubers was almost ruined by the disease. The manure or fertilizer used has nothing to do with the disease. It is only propagated by the spores from diseased tubers or vines.—Ed.

### GINSENG CULTURE.

Ginseng (*Panax quinquefolia*) is a native perennial plant closely related to the garden parsnip, carrot and celery. It grows wild in oak and maple woods in all the more Northern States and extends southward along the Alleghany mountains. In North Carolina this plant is found only in high mountain valleys. It is found only in moist, loamy soil under deep shade. The plant cannot endure the sun and when timber is cut out it dies from the locality.

The plant as found growing wild is from eight to sixteen inches tall with from one to three leaves, which are in turn composed of from three to five, or rarely seven, leaflets. The leaflets are arranged like fingers on the hand; they are ovate, sharply toothed on edges and taper pointed at tip. The flowers are greenish-yellow and appear in July. The root resembles a parsnip.

Wild ginseng is extensively collected wherever it abounds. The rapacity of collectors is fast exterminating the plant and many attempts have been made to cultivate it artificially. Most of such attempts have ended in failure. The plant is very difficult to grow and only with great care, patience and considerable expense is it possible to succeed.

The wild root, dried, brings about \$2 per pound. Cultivated roots often bring \$5 per pound. The market is China where this plant is the universal nostrum. American physicians say it has no medicinal virtue and never prescribe it. Owing to the frequent stories told of enormous profits to be made by cultivating this plant there is a constant demand upon the North Carolina Department of Agriculture for advice regarding methods of growing ginseng. To those who want to try the experiment the following advice is offered:

1. Ginseng cannot be profitably grown anywhere in North Carolina east of the mountains. The climate is unsuitable.

2. There may be profit in growing ginseng west of the Blue Ridge.

3. Ginseng cannot be grown in full sunlight. It must have a loose, rich, moist and cool soil. Drought is fatal.

The plant is propagated from roots and from seeds. The plant produces seed in abundance, but the seed requires to be planted immediately after it becomes ripe, and then does not germinate until after eighteen months. The best plan is to sow the seed as soon as ripe in shallow boxes, tack wire cloth over these to keep out mice and worms and place box where it will be continually moist and well shaded.

Let the young plants grow one year in the seed box, then transplant to the permanent bed. This must be rich, moist, loose soil well shaded. Set the plants about six inches apart in rows eighteen inches apart. Cultivate frequently and each fall mulch the bed with straw or pine branches. If everything goes right the roots will be fit to sell the fifth year after transplanting. But a single drought may ruin the entire crop at any time.

Mice, moles and boys are the only pests of the crop.

In starting a new plantation, unless the seed can be had directly from the plant, it is best to begin with small roots, which may be purchased for about \$2 per 100. H. P. Kelsey, Kawana, N. C., and George Stanton, Summit Station, N. Y., supply such roots.

The plantations should be made from October 1st to April 1st.

When ready for harvesting the entire bed should be carefully dug up and the crop assorted. Plants too small to sell, may be replanted. The larger and smoother the roots the higher the price. The roots are simply washed clean and dried in the sun or in a fruit evaporator. The following persons buy for export, viz.: Wallace Brothers, Statesville, N. C.; M. Sabel & Sons, Louisville, Ky.; S. Wells & Co., 211 Vine street, Cincinnati, O.; J. L. Cilley, 101 Gold street, New York.

GERALD McCARTHY,

Raleigh, N. C.

Biologist.

### ARTIFICIAL PROPAGATION OF BERMUDA GRASS.

Bermuda is propagated most successfully by planting pieces of the sod. In the fall while breaking the land with a turning plow, drop pieces of the sod in every third furrow behind the plow and cover with the next plow slice. Sow rye on the land as left by the plow and harrow or drag it smooth, covering the rye seed. In spring turn cattle on to pasture the rye and aid the Bermuda by removing shade and firming the soil upon the Bermuda roots. Neither horses, sheep nor hogs should be allowed upon young Bermuda pastures. These animals will interfere with the spreading of the Bermuda by biting off the over-ground stems.

For spring planting, prepare the land by plowing and harrowing as for corn. Open furrows 2 feet apart, and in these drop pieces of sod every 2 feet. Cover with a light furrow and roll down smooth. This should be done late in March or in April. It may be planted in this way at any time during the summer and early fall by covering the pieces of sod deeply.—J. S. NEWMAN, *Experiment Station, S. C.*

## ENQUIRERS' COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

### Artichokes.

Will you state in your next issue the time for planting artichokes, method of cultivation, and cost of roots required per acre?

*Bedford Co., Va.*

W. A. PENNER.

Artichokes should be planted in March and April, though if got in even in the first half of May they will usually make a fair yield, though this is late to plant them. They should be set in rows three feet apart, and the sets be dropped two feet apart in the rows, and the land be then cultivated during the growth of the crop like corn. It requires about six bushels to plant an acre. The sets usually cost about \$1.00 per bushel.—Ed.

### Applying Ashes.

Please let me know, through the columns of your paper when is the best time to apply unslacked ashes to the land.

*Pittsylvania Co., Va.*

H. M. WATKINS.

Ashes, which are valuable for the potash and lime which they supply to plants, may be applied without fear of loss from leaching at any time of the year, but as they are slow in becoming available, they are best put on during winter or in the early spring.—Ed.

### Nitrate of Soda—Effect of Use of Fertilizers on Land.

Will you kindly tell me in your magazine whether nitrate of soda strains land or not, and if the use of it is once begun will it have to be kept up and used in larger quantities every year? I have heard such a theory from some good farmers around me, and would like to have your valued opinion. I was of the opinion that nitrate of soda was plant food in its most available form, and that the reasons plants showed such a change as soon as the soda was applied was because the food was immediately available, not that it made the land give up its own food. I may add, this is my first year at farming, and I have no practical experience whatever. Your answer to the above will be greatly appreciated, and I am sure there are others who would be benefited by your remarks.

*Darlington Co., S. C.*

RUSSELL ACREE.

Nitrate of soda is the most readily available form of plant food, as it is in the condition in which plants take nitrogen when applied. It has to undergo no change in the soil except to be dissolved. Like all

other forms of plant food, the effect is, or ought to be, to encourage and strengthen the growth of the crop. The stronger and more vigorous the growth of a crop the greater the amount of the available plant food naturally in the soil which it will assimilate, and thus take from the soil, and the more of the tough, immediately unavailable plant food it will act upon by its root acids and bring into available form. In this way all fertilizers and manures, if they are worth anything at all, deplete the fertility naturally in the land, which by their action is converted from an unavailable asset into a money crop. Any land producing heavy crops must sooner or later become depleted of natural fertility, and to continue the process must be helped by good tillage, to get the beneficial action of the sun, air and moisture, and thus make available more of the natural plant food in the soil, and by manure or fertilizers, or both, to continue the healthy growth of the crops.—Ed.

### Crop Rotation.

I would appreciate a suggestion as to what crop or crops may follow on land at present in onions. I want something that is readily marketable. I have alfalfa to plant, and according to *The Planter*, I think the best land I have is in my orchards. Would you advise using it there? Any information on these two subjects will be greatly appreciated. I keep my orchards in peas.

*Haywood Co., N. C.*

JOHN FARRIOR.

1. We would suggest tomatoes (we assume that you want a trucker's crop) or a late crop of Irish potatoes.

2. Yes. The alfalfa would be beneficial to the orchards and a source of profit as feed. We have seen fine crops of alfalfa in an orchard.—Ed.

### Top Dressing Oats--Cow Peas for Hay--Top Dressing for Clover—Fertilizer for Corn.

1. Kindly advise me, through your columns, whether it will pay to top dress an oat crop that was put in with drill on fairly good land, and on which I used 200 pounds of alkali bone, a medium grade corn fertilizer when seeded. If so, please, advise me what to use. My land is somewhat of a red, stiff chocolate.

2. Which is the best way to put in cow peas to be cut for hay. I want to use fertilizer enough to get a rank crop of vines, so please advise what kind and how much to use, and what time to seed.

3. I have a field of clover on red, stiff land, that is nearly in bloom. Some of my neighbors advise me to top dress it with 200 pounds of plaster to the acre. Please advise whether you think I would get enough clover to pay for the plaster above what I would have

got without using the plaster, say the plaster cost 90 cents per acre?

4. Please advise me which is the best way to use fertilizer on the corn crop, and what do you think of putting about half the quantity I expect to use under the crop when I plant it, and the other when I give it the last working?

*Halifax Co., Va.*

N. A. TULLOH.

1. We have used nitrate of soda (100 pounds to the acre) as a top dressing on oats with great advantage.

2. Sow the peas broadcast one bushel to the acre on the plowed land, and cover with a harrow. Apply from 300 to 500 pounds to the acre of acid phosphate and work into the land before seeding. Sow the peas at any time from the middle of May to the end of June.

3. It is very doubtful if you would have obtained any advantage from the use of plaster even had you applied it just when the clover commenced to make growth. Certainly you would get no advantage from its use now. Plaster is very uncertain in its effect. If the land to which it is applied is rich in potash, plaster will generally show marked results, but if potash be wanting, no effect can usually be seen.

4. In our last issue we wrote fully on the use of fertilizers on the corn crop, and to that issue we refer the inquirer. If applying nitrogenous fertilizers heavily it is often advisable to apply part at planting and the residue at the last working, as these fertilizers are apt to be readily washed out of the land by heavy rainfall. The mineral fertilizers are not subject to this loss, and therefore may safely be applied at, or better, some little time before planting.—Ed.

### To Prevent Injury to Tomato Plants by Cut Worms.

Tell F. E. Omohundro (page 247) if he will get some stiff paper, not pasteboard (old postal cards will do), cut it in pieces 2x3 or 3½, and fold it around a lead pencil to form a tube folding the longest way. Put one of these tubes around each tomato plant when he sets them out. This will keep the cut worms from cutting his plants. Put them in the earth about one inch, so that the wind will not blow them away.

### Cow Peas for Improving Land.

What is the best pea to sow as an improver, and is it best to turn them under green or wait until they are dry?

*Hanover county, Va.*

H. J. ROSBACH.

Either the black or clay peas. The black usually make most vines, except south of the James river, where the Unknown variety grows well and makes a

heavy crop of vines. Let the vines die before ploughing down.—Ed.

### Whitewash.

I would like to ask you for a receipt for whitewash.  
*Knoc county, Tenn.* M. B. GAYLON.

An excellent whitewash that wears four or five years is made in this way: Slake a bushel of lime, strain, add a half bushel of salt which has been dissolved in water and six pounds ground rice, after being made into a paste. Stir in while boiling one pound of ground whiting and two pounds glue well dissolved in a double boiler.—Ed.

### Seeds for Pasture and Meadow—Fertilizer for Corn Land and Wheat.

1. I have a field of rye that I wish to turn and sow to millet, with some other crop that would make a good winter pasture as soon as the rye is cut. Would this be practicable, and if so how many pounds of millet and other seed should be sowed per acre?

2. What would make the best winter pasture?

3. How much and what kind of fertilizer should I use per acre with millet?

4. I have a meadow that I wish to turn as soon as the first crop of grass is cut in order to make it very rich for meadow 1904. Is it practicable?

5. If so, what kind of crop would be best to sow that would make a good forage?

6. How many pounds of seed should be sowed per acre?

7. How many pounds and what kind of fertilizer should be used per acre?

8. What time this fall and what kind of grass would you recommend to sow with timothy for meadow?

9. What kind and how many pounds of fertilizer per acre?

10. What is the best crop to sow in working corn the last time to turn down in the fall for wheat?

11. How many pounds per acre?

12. What kind and how many pounds of fertilizer should be used per acre for wheat?

13. What crop would you recommend to be sowed in working corn the last time for winter pasture?

14. How many pounds of seed should be sowed per acre?

15. I want to make a piece of land very rich for a premium crop of corn. In the absence of stable manure what kind and how much fertilizer should be used per acre?

16. Would you please give me the name and addresses of those who deal in seed and fertilizers whom you would recommend?

*Scott county, Va.*

C. M. T.

1 and 2. We don't think it practicable to sow a



crop for winter pasture with a millet crop. Sow the millet in May and in sixty days it will be ready to cut for hay. Then break the land with a disc harrow and in August seed with a mixture of hairy vetch, crimson clover, winter oats and wheat. This will give good winter and spring grazing. Sow twenty pounds of vetch, ten pounds of crimson clover and half a bushel each of oats and wheat.

3. Apply 300 to 500 pounds of acid phosphate per acre.

4. If you will refer to our article on "Work for the Month" in the March issue you will find a full discussion of the subject of growing hay grass.

5. No crop should be grown until the grass seeds are sown. Work the land frequently and get it into fine order.

6 and 7. See reply to No. 5.

8. We always advise that timothy should be seeded alone. The market demand is for clean timothy hay not mixed. For home use we would seed clover with timothy.

9. See reply to No. 5.

10. If wheat is to follow corn we do not think it a good plan to seed any crop at the last working, as with a crop turned down it is not possible to get the land sufficiently compact for the growth of wheat after the corn is harvested.

12. We will write fully on this subject later in the summer nearer the time when the crop is to be seeded.

13 and 14. Sow sapling clover, crimson clover, hairy vetch and rape, say five pounds of sapling clover, ten pounds crimson clover, twenty pounds hairy vetch and two or three pounds of rape.

15. In our last issue we discussed fully the fertilizing of the corn crop. We refer you to this issue. Increase the quantity of each ingredient advised to the extent to which you feel disposed to pay for it. The corn crop, however good, will never pay for it, but the crop may be largely increased and the land improved.

16. Refer to our advertising columns. You can safely deal with any of the parties whose advertisements you will find there.—Ed.

### Protecting Chickens from Hawks.

I know Nux vomica given to chickens will not injure them, but is certain death to a hawk which catches one of the nux vomica-fed chickens. Will some one tell me how much nux must be given in feed for ten chicks? Dr. John Lewis, of this county, protected his chicks that way, as did Mr. R. T. Meech,

but I was not then interested in the subject and both these gentlemen are dead. The dose will be a public benefit.

*Kiny William county, Va.* B. D. MONCURE.

Nux vomica (strychnine) is deadly poison to either man, beast or bird if given in even a comparatively small quantity. We are aware that it is frequently administered in two or three drop doses to human beings, animals and chickens and is a powerful tonic in this form. We cannot, however, conceive it possible to give a dose sufficient to kill a hawk to a chicken without causing the death of the chicken as well. We shall be glad to hear from any one who has experimented with this remedy for hawks.—Ed.

### Soy Beans.

Could you collect data from those who have raised Soy bean hay as to methods of raising and curing. I tried last year your method of putting in small piles, but it moulded before curing. M.

*Thomas county, Ga.*

In our April issue information is given by a contributor on this subject. We have never found any difficulty in curing the Soy bean for hay or for seed. Cut the crop for hay when in full growth. Let lie in the sun until thoroughly wilted and partially cured. Then put into small cocks or heaps and it will lie so open that both wind and sun can penetrate them and complete the cure. It is not easily injured by rain during curing. This is the testimony of numerous growers. Mr. Morris, of Olney, Ill., says he cuts the crop when in bloom with a down corn binder and binds the crop into the smallest sheafs he can make and shocks them up in long, narrow shocks and lets them stand until thoroughly dry before putting in bulk.—Ed.

### Teosinte.

Will you, or some subscriber, give an article in the May Planter on the cultivation of teosinte? I have read great deal of it recently and wish to try it.

Mrs. CHARLES GUTHRIE.

*Charlotte county, Va.*

In our article on Forage Crops will be found information as to the growth of this crop. It is as easily grown as corn and should be planted and cultivated in the same way.—Ed.

### Curb on Horses.

C. I. Mitchell, of Brunswick county, Va., wishes to know what will cure curb on horses. I find that the most simple and effectual remedy is kerosene oil. Apply every morning and rub in gently until the

knot disappears and let the horse have rest until the forward action of the leg is natural again. Kerosene oil is a good remedy for any unnatural growth on horses. It gently blisters and dissolves the knots to which it is applied. It will cause the hair to come out. Rub on a little vaseline and the hair will soon grow again.

H. J. ROSBACH.

*Hanover county, Va.*

### Removing Stumps With Dynamite—Horse Apples—Remedy for Scab on Irish Potatoes—Obstructed Teat of Cow.

1. Will you, or some of your readers who know, please give me minute directions for using dynamite to remove stumps? I want to know where to get it, cost, etc. I have a lot of old oak stumps from 15 to 36 inches in diameter cut from one to twenty years ago, which I want to get out of the way.

2. Will horse apples come true from seed, or do they have to be grafted?

3. I use flowers of sulphur on seed pieces of Irish potatoes after cutting with very satisfactory results for scab. It has the advantage of not being poison. What kind of lime, sulphur or salt are used in the wash for San Jose scale?

4. I have a cow with her first calf whose milk comes in a spray instead of a steady stream. I have to put the bucket very near the teats to catch the milk. What can I do to remedy it? It comes this way unless I milk very slowly.

*Arcola, N. C.*

J. F. HUNTER.

1. Dynamite is sold by the railway supply stores and by hardware merchants in the mining sections. It is sold put up in cartridges, with time fuses ready to be attached. We cannot give the price, but dealers will gladly quote. A hole is driven under the stump with an iron bar large enough to take a cartridge. This is then pushed down the hole, with the fuse attached, until fairly under the stump, and the hole then tamped solid with damp soil and the cartridge then fired. It is the most effective way of removing stumps, but requires handling by careful hands.

2. We cannot say. Some of our horticultural friends will please answer.

3. Rock lime, flowers of sulphur and common salt.

4. The mouth of the teat is obstructed and should be opened by the insertion gently of a steel probe.—Ed.

### Obstructed Teats.

I have a three-fourths Jersey cow (four years old), which calved at two and one-half years of age. In eight or nine months after dropping her calf, there appeared in one of her teats what seemed to be a

gristle or lump at the neck of the teat, where it joined the udder. The flow of milk from this teat was immediately greatly decreased, and what she did give was bloody, and consequently unfit for use. About one month ago she dropped her second calf, and at the time all her teats seemed to be in good milking condition and all right, except the one above named. That one seemed to have the same gristle in it that it had at the time she went dry, but does not discharge any bloody milk. Within the last few days two other teats have got in the same condition as the first named one, and the flow of milk has greatly decreased from all three of them. I kept her well milked when she first dropped a calf, and thought I had her udder well "broke." Please give me all the information you can upon this matter and suggest a remedy.

*Caswell Co., N. C.*

A. H. D. KING.

The cause of the obstruction in the teats may have been either mammitis, which is an inflammation of the mammary glands, or it may be stricture of the teats or internal warts in the teats. If caused by mammitis, we are afraid that it is now too late to remedy the injury. A case of mammitis should be treated vigorously immediately it is found out. It is indicated by swollen, hard glands, which are tender to the touch, and there will be fever present, the muzzle of the cow being dry and hot. A purgative of one pound of epsom salts in warm water should be given. A suspensory bandage should be made large enough to take in the whole udder and to fasten over the back of the cow. In this bandage or bag holes should be made for the teats to pass through. The bandage should be packed with bran and hops mixed in hot water and applied as warm as can be borne by the udder, the teats being passed through the holes and the glands resting on the hot bran and hops. The bran and hops should be kept warm by pouring warm water on them frequently. Keep the animal warm, and give an ounce of alcohol three times a day. The cow should be milked many times a day and the lumps in the teats be worked with the fingers, and thus be broken down, if possible. If this treatment fails, the teat will become useless. Frequently the glands will gather or suppurate, and they should then be opened when a head is formed to allow the matter to escape. If the cause of the trouble is stricture or internal warts, these can only be removed by an operation by a veterinarian.—Ed.

### Injury to Wheat Crop.

Our wheat is turning red, and the top blades look as if they had been burnt. There are blades all through the bunches that look as though fired from the ground. From what I can hear, all the wheat

through the country is affected in the same way. Please inform us in your next issue what is the cause of the trouble, and whether or not it will hurt the crop, and if anything can be done for it. The wheat has a fine growth. We are both subscribers to The Planter, and would like very much for you to answer this in its columns. Yours very truly,

G. H. WALKER,  
Charles City Co., Va. E. H. STUBBS.

We have a similar complaint as to the wheat crop from many different sections. We believe the cause to be the cold weather and the frosts. As the plant has generally made such a good growth, we are hopeful that this may not prove hurtful to the yield.—Ed.

### To Prevent the Growth of Horns—Buckwheat for Bee Feed.

Will you please tell me how I can prevent the horns from developing on young calves so that it will not be necessary to use the saw? Also, when is the best time to plant buckwheat to get the best results from bees?

Faulkner county, Ark. W. G. DENISON.

1. Get a stick of caustic potash from a drugstore and as soon as the little button from which the horn grows can be felt on the head of the calf cut off the hair upon and around it for a small space, wet the end of the caustic potash and rub on the button. This will burn out the embryo horn and no cutting will afterwards be necessary.

2. Buckwheat for bees should be seeded in June or July.—Ed.

### Moles.

Can you tell me the best trap to use for catching moles, and if they can be poisoned, and with what? There are a great many round the house, and they ruin the grass by their passages under it, the hot weather killing it out.

H. G. C.

There is a steel trap sold generally by hardware dealers which is as effective as any. Moles are difficult to poison, as they are not grain or flesh eaters. They are almost wholly insectivorous in their diet, and therefore are usually much more beneficial to farmers than otherwise. We have heard of the animals being poisoned by arsenic mixed in corn meal dough made into little balls and dropped in their runs.—Ed.

Feed brood sows very little for the first week after farrowing; by that time the pigs will be able to use all the milk.

### NOTES FROM SOUTHEASTERN VIRGINIA.

*Editor Southern Planter:*

March, 1903, gave us no frost at all. The coldest was one day at 35. The rain fall for March was 6.01 inches, that being 1.37 inches above the average March rain fall for the past thirty-three years.

Rain fell on thirteen different days—namely, on the 8th, 9th, 10th, 11th, 12th, 17th, 20th, 21st, 22d, 23d, 29th, 30th and 31st. No damage done except in a few cases where the newly planted potatoes did not come up even and regularly—one-fourth to one-third the seed rotting in the ground.

We never suffer from high water, as the only rise and fall in our streams is the regular rise and fall of the tide. If the entire rain fall of the year—about 50 inches—fell during a period of thirty days, the surplus water would all be in the sea within twenty-four hours after falling; and it would not carry houses, bridges or fences with it either.

While the surface here is only from eight to twenty feet above the sea level, still our section is well drained. Our lands do not wash, and our plows are running sooner after heavy rains than in the interior, where the lands are on edge.

While we escaped all frost in March, the full moon period in April did us some damage. When the moon gets full during the first half of April we look for a cool spell, possibly frost. Just what relation there is between the full moon and cool weather we can't say; but still we look for a cool wave at the time stated. The moon was full on the 11th of April and on the 4th and 5th nights there was frost.

Fully three-fourths of the trucking section escaped damage, and the other fourth was not damaged seriously. The thermometer stood between 30 and 31.

The tender radish was not injured at all. The snap beans, just up, and the young potatoes and the strawberry bloom in about one-fourth of our trucking section were slightly injured. The prospect is good for a full crop of fruit.

A. JEFFER.

Norfolk, Va.

Whole or piece roots—Jacob Wise, a West Virginia nurseryman, says he sees no difference between budded and grafted apple tree stocks. He strongly urges the use of whole roots and covers the graft with a wax made by boiling together two pounds English resin, one pound beeswax, and one pint linseed oil. He does not believe in the use of piece roots for grafting.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The continuous season of wet and cold weather which we have had during April has caused serious loss to the truckers of Tidewater Virginia and Eastern North Carolina. A large part of the early Irish potato crop will be a complete failure from the rotting of the sets, and English peas have in many places been badly cut by the frost. The strawberry crop has also been injured by the frost. It is probable that whilst the total yield of this crop may not be materially reduced, yet the return from it will be less, because of the fact that the earliest blooms and berries have been injured by the frost.

The work of sowing and planting out crops of vegetables has been almost completely stopped by the weather, and what promised in March to be one of the earliest seasons known is now likely to be a late one. As soon as the land is dry enough to work the main crops should be seeded or planted. The hardiest, such as English peas, onions, spinach, carrots, beets, lettuce should be first got into the ground. Later sweet corn, snap beans, lima beans and pole beans may be planted. Then should follow cucumbers, squashes, melons and cantaloupes, and later peppers, tomatoes and egg plants may be set out.

Whilst rich soil is absolutely necessary for the best production of vegetables of almost every kind, yet it is possible to make land too rich for all the different kinds of beans. These are very apt to run too much to vine where the soil is overrich. A piece of land that was well manured for a crop last year will usually make more beans than a piece manured just previous to the planting of the crop. When planting lima and pole beans see that the poles are well set in the ground at or before the planting of the crop. They should be set at least a foot in the ground, and it is a good plan to stay them by running rods from the tops of one row of poles to the next row. Many beans are lost every year by the poles being blown down. The dwarf lima beans save trouble with poles and make a good yield, but as large a yield cannot be got from this variety as from the tall growing ones.

Where onion plants have been raised from seed in cold frames they should now be set out in rows wide enough apart to admit of working with a small cultivator like the little Plantet Jr. Set them about four inches apart in the row. When the bulbs begin to

form the soil should be thrown from them, as onions ought to mature on the top of the ground and not in it. Where plants have not been raised the seed should be sown at once in rows a foot or fifteen inches apart. Sow the seed rather thickly so as to ensure plenty of plants. When as thick as a quill thin out so as to stand about three inches apart. The Pearl, the Prize Taker and the Southport White Globe are varieties that make excellent crops from seed in the South. The onion set crop is one from which money can be made, as there is always a large demand for sets. The soil for growing sets ought not to be so rich as for growing onions. The seed should be sown at once in drills a foot or so apart and very thickly. Do not thin out. As soon as ripe they should be taken up and cured with the tops on.

Cucumbers, cantaloupes and squashes should be set in hills four or five feet apart each way. Give each hill a good shovelful of manure and a handful of high-grade fertilizer having 6 or 7 per cent. of ammonia, 1 per cent. of phosphoric acid and 7 or 8 per cent. of potash. Plant three or four seeds in each hill and thin to one plant when well started. Dust the young plants with bone meal as soon as they are well out of the ground and when wet with dew. This will help to keep off the bugs. Where melon bugs are very troublesome the only way to save the plants is by covering them with little frames covered with plant muslin.

Tomato plants should be set out at once. In our last issue we wrote fully on this crop, and to that issue refer our readers. It is well to plant a hill of corn every five or six feet apart. This will save the tomato plants from the worms, which prefer corn to tomatoes. The corn can be pulled out and fed to stock when the tomatoes do not need further protection.

Plant successional crops of sweet corn every week or ten days until the end of July to keep up a supply through the season.

Cultivate all growing crops frequently and keep down all weeds.

Egg plants require rich, light land and a warm situation. Give them plenty of manure and a handful or two of rich fertilizer to each plant. Look out

for potato bugs. They are as destructive to egg plants as to Irish potatoes. Use Paris green in good time.

Don't forget the front garden and yard. Set out a few flowering plants in the beds where they will make a good show from the house and from the highway, and sow a few packets of flowering annuals on all the beds and borders. A dollar or two spent in plants and seeds will make the home much more attractive and home-like and add to its value. Keep the lawn mown frequently and the walks swept and free from weeds.

### ORCHARD AND GARDEN NOTES.

*Editor Southern Planter:*

While examining a peach tree for borers recently, I was greatly surprised to find six large ones and about one thousand very small ones. The life of that tree would have lasted about three months. Examine the peach trees at once for these borers. Use a sharp-pointed knife and a piece of wire or a nail to destroy them. The presence of borers is indicated by gummy exudations and sawdust-like particles of wood. The best preventative I have ever used against peach borers was made of white lead paint and Paris green. Take one-half gallon of the paint and mix with it one teaspoonful of Paris green. After the borers are taken out of the trees paint the trunks of the trees up to eighteen inches. Rake the dirt back around the trunk and the job is completed. After the eggs are deposited on the trunks of the trees and the young borers hatch and begin to cut through the bark they soon get enough of the poison to kill them. I have also known this paint to save trees from injury done by mice and rabbits.

To be most successful the trees must be repainted each year.

At the present writing (April 15th), the prospects for a good fruit crop in Southwest Virginia were never, perhaps, better. Of course, the peach crop has been damaged about 50 per cent and sweet cherries about 25 per cent., while all other fruits seem safe. There is the heaviest bloom on fruit trees this year ever seen by me. If 50 per cent. of the apple and cherry bloom sets these crops will be ample. It is a great pity that some overzealous newspaper correspondents should send alarming reports to our State papers about the damage done to fruit, when frequently there is very little done. It is a very

simple thing to learn how to know when fruit is damaged, and there is no excuse for not knowing, by even a newspaper correspondent.

The Virginia Polytechnic Institute, formerly the State Agricultural and Mechanical College, is in need of more money. The number of students attending this Institution have increased very much during the past five years, as I know from personal observation. Being an alumnus of the Institution, no one can be more proud of its progress than myself. Desiring to see still more progress in the agricultural side of the Institution prompts me to make a few plain statements about the needs along this line. I think it can be truthfully stated that the Agricultural Department has no home. The agricultural teaching is done in spare rooms at different places. There are good agricultural buildings at many other agricultural and mechanical colleges with fine agricultural laboratories, libraries, seed rooms, tool rooms, soil physics rooms, stock judging rooms, etc. The sons of the farmers of the Old Dominion deserve as good agricultural equipment as those of any other State. While it is true that the Agricultural Department has a good barn, still such a building serves a very small part in class instruction.

Students of the Horticultural Department are crowded in small rooms of a building which was not built for teaching purposes at all. The building is not suited for such work. It is a wonder to me how any professor can teach any considerable number of students in such a building with any satisfaction to himself or students. The building is used also for station work. Still good work in both lines has been done. The veterinary department has a small, barn-like building in which afflicted animals are kept.

The equipment for the dairy is not at all adequate. There is needed a large agricultural building to house all these related departments. This would economize space, since several of the rooms and some of the equipment could be used jointly.

The work along all these lines should be broadened very much. I would like to see a short winter course offered in agriculture, horticulture, entomology, veterinary science and dairying. This would give practical men an opportunity to learn something about the latest methods along all these lines. Practical instruction and demonstration along these lines would be a great help to the agricultural interests of the State, but I doubt whether, with the present equipment and the way these related departments are scattered, such a course would be feasible. These

short winter courses of practical instruction have been successful at every agricultural and mechanical college that I am familiar with where the equipment was anything like what it should be. Efforts were made a few years since to secure an appropriation for an agricultural building at this Institution, but no such building exists on the grounds.

There is not only need of improvement along agricultural lines at this Institution, but with the State Department of Agriculture also. How to improve the many worn farms where the fertile soil is being washed to the rivers; how to rehabilitate the old homesteads with all their interesting memories; how to develop stock husbandry, improve the dairy interests, take proper care of the immense orchards now being planted, grow more grass and hay, better forage crops, in short, to make rural and suburban homes more attractive, are great things that affect the weal or woe of the State. There are no other interests of as great importance to the State, and this fact is not doubted by any fair, competent and unprejudiced person.

Let the equipment come. We need it for the agricultural and related interests. R. H. PRICE.

*Montgomery county.*

### WATERMELON GROWING.

The best soil for the watermelon is a high, warm, sandy soil. Land that has been newly cleared or an old field that has been laying out some years are usually good places for melons. It is well not to plant them on land which has grown melons within the last two or three years, as a fungoid disease which affects the plant seriously and causes failure of crop is kept alive in the soil on which a diseased crop has been grown, and will assuredly affect a crop planted on such land within two or three years. Prepare the land well by deep breaking so that moisture will be conserved in the soil. Lay off the rows in checks ten or twelve feet a part each way and plant at the intersection of the rows. Throw out the soil at the intersection of the rows for a space of four or five feet each way. In the hole thus made fill in a few shovelfuls of a good compost of well-rotted manure and woods mould and add a few handfuls of a rich fertilizer analyzing 6 per cent. ammonia, 4 per cent. phosphoric acid and 7 per cent. potash, which may be made up of 300 pounds of nitrate of soda, 750 pounds cotton seed meal, 750 pounds acid phosphate and 250 pounds of muriate of potash to make a ton. Mix the fertilizer and compost well and cover with good soil. Make the hills solid by either run-

ning a roller over them or by patting down with the shovel and plant in each hill five or six seeds. Thin to two plants when they have made good growth. Cultivate until the plants commence to run. After this time the vines should not be disturbed.

### CANTALOUPE GROWING.

Mr. W. F. Allen, of Salisbury, Md., one of the largest cantaloupe growers in the South, gave the following description of his method of growing and handling the crop at a recent meeting of the Maryland Horticultural Society:

"My experience has been that one of the most important items in profitable cantaloupe culture is good seed, true to name, of the variety that you have decided to grow, to commence with, as I know of no crop where more harm can be done with poor or mixed seed than with the cantaloupe crop.

"The most desirable location for cantaloupes is a sandy loam which has not been tilled for a year or two or a clover sod, or, better yet, where cow peas have been grown the year before and the vines left on the ground to be ploughed in during the winter or very early spring, when you want to commence preparing your ground, which should be well broken with a two or three horse plow and put in thorough condition with disc, acme or spading harrow, or something that would produce the same results. After your land is prepared take a two-horse plow and run out furrows about 8 inches deep,  $4\frac{1}{2}$  to 5 feet apart, going twice in the same row, in order to broaden out the trench and clean it out well. Next you must turn to your manure pile. A good compost of stable, pound and hog-pen manure is very good. Stable manure would be very preferable, everything else being equal. I use New York city stable manure, as I cannot possibly get enough at home.

"This trench or furrow should be filled one-half or a little more than one-half full of compost or stable manure, as the case may be. If your furrows are run out you can put on your manure even if the ground should be frozen. If your ground is not frozen or as soon as it thaws, if it is frozen, take from your cultivator the front shank on one side and the rear shank on the other side and provide the other three shanks with  $1\frac{1}{4}$  and  $1\frac{1}{2}$  inch blades and shut up cultivator close enough to go in the furrow, go four times or more, if necessary, to thoroughly work the manure in the soil, then let it remain until about ten days before you are ready to plant your seed; when your fertilizer should be put in five days before planting will do, but ten days is better; put about 800 to 1,000 pounds an acre, running something like 6 per cent. ammonia, 8 per cent. phosphoric acid, 6 per cent. potash.

"The best thing to put your fertilizer on with is a hand drill, which will do the work better and quicker than you can do it by hand. After the fertilizer has been put in take the cultivator which you have already prepared and go twice more in each row. Now take your two-horse plow again and throw up a two-furrowed list over your manure. Any time between this operation and planting take a big roller that will cover two rows at once and roll the rows off. This leaves you a nice, firm, smooth seed bed to plant in with manure firmed in the soil and moisture preserved to germinate the seed should dry weather set in. Now we are ready to plant the seed, and I usually feel safe in making the first planting by April 10th. Small, light weeding hoes are used for this, and six to eight seed are planted at intervals of about eighteen to twenty inches along the row; plant one inch deep. One week from first planting plant again in the same way, putting the hill beside the first one. Two weeks from the first planting plant again the same as at first, putting the third on the other side of the first one. Three plantings are usually sufficient, but if there is any doubt about getting a stand I would not hesitate to plant the fourth time, although I have never found it necessary to do so.

"These repeated plantings are very important, especially in the event of a cold snap late in the spring. If your first planting is up they may all be cut off. The second planting would be already sprouted and ready to come through. If your second should meet a like fate your third planting would be ready to burst through the next warm day, and you would be a week or ten days ahead of your neighbor, who waited for his first planting to come up before he made the next. I made this mistake once and it was a costly one. When the plants have made the third leaf from the size of a dime to a quarter they should have the first thinning and the ground should be lightly stirred around them. If the first planting are good, healthy plants pull out all but two or three of the most vigorous looking. By this time all three plantings will likely be up, and it may be that in some hills the second planting will have the thrickest healthiest-looking plants. If this is the case the hill may be established from this planting. It will not be necessary to thin out any but the bunch, or planting from which the hill is to be established, this time. By the time the plants have the fourth or fifth leaf they should be again stirred and get their last thinning, leaving one plant in a place, the surplus plants in the hill to be carefully pulled out, and the surplus hills can be easily chopped off by one stroke of the weeding hoe.

"Keep the middles thoroughly cultivated and the rows clear of all other growth until the vines are about two feet long, when all cultivation should

cease, and the vines will quickly cover the ground. It has been my custom, and I think it a good one, immediately after giving the cantaloupes the last working to drill in a row of cow peas between every cantaloupe row with a one-row drill. These can be cultivated after the cantaloupe crop is harvested and left for seed, cut for hay or left on the ground, as is most desirable. It sometimes happens that there is a mat of crab grass on the ground by the time the melon crop is off, and in this event I often let the grass and peas grow up together and cut for hay. It makes a very fine hay, only being surpassed by hay that is all pea vine. Now the cultivation is done and the peas drilled in if desired; there is nothing else to do to the crop until we go to harvest it. One hundred and fifty crates an acre is a fair yield. I find there is some difference of opinion about picking, and it is really necessary to pick them greener when they are to be several days in transit, but I will give you my way of doing it. The first half of the season I pick them as soon as the stems can be forced with the thumb to part from the fruit without breaking out a piece of the melon with it—that is, it must come off smooth and not tear or break in the flesh. This condition should prevail before the cantaloupe has begun to turn yellow; but a cantaloupe that is in this condition and just right to ship to-day will be quite yellow and unfit for transportation the next day.

"After the season is one-half or two-thirds gone, and the weather is very hot, as is usually the case, I find it safe to cut them off with stems after they are full grown and become densely netted. It requires careful help to pick a crop of cantaloupes without considerable losses from picking too green or too ripe. In either case those too ripe or too green should not go in the package. An expert should follow just behind every fifteen or twenty pickers to see that they are doing their work properly. Wagons should be ready to take the cantaloupes to the packing shed soon after they are brought out to the end of the rows."

### HEDGE PLANTS.

I cannot understand the interest the people North are taking in the so-called California privet. It grows fast and makes a pretty hedge in summer, but it browns up and losses its leaves in winter, so that we have other things that are far better. The Amoor river privet is far better and more nearly evergreen, though it does brown a little. There is another privet—*Ligustrum Japonicum* or *Ibota*—which is as evergreen as a holly. It is more dwarf in its habit than the California, which is from Japan, too, and does not need half the trimming, while growing more dense at the bottom. All the privets are easily pro-

pagated by long cuttings set in the open ground in the late fall. Make the cuttings about ten inches long and insert them full length in the ground after taking off all the leaves. Work them one season in the nursery row and then transplant where wanted or set the cuttings at once in the hedge row and cultivate there. Head the hedge back to within six inches of the ground the second spring to get it to spread at the base and then shear it broad at the bottom and sloping to a sharp ridge at top. Most people shear a hedge too upright and flat on top and the base gets thin because it is over shadowed. Advise your inquirers to get the Amoor river privet from the Barkmans Company, of Augusta, instead of the California, or get the Ibota, which is more costly and slower to grow, but is far better when grown.

W. F. MASSEY.

### IMPORTANT AND WELCOME NEWS FOR THE FRUIT GROWERS OF VIRGINIA.

*Editor Southern Planter:*

For several years the Virginia State Horticultural Society has endeavored to obtain better rates for shipments of apples than have been in existence. The Committee on Transportation and Marketing was specially instructed to make representations to the railroads operating in Virginia on this subject. As a result of these representations it is with the greatest satisfaction that I, as chairman of this committee have received official information that the rates have been adjusted. Mr. E. D. Hotchkiss, general freight agent of the Chesapeake and Ohio railway, writes to this effect, and in his letter says, in part:

"You will, no doubt, recall quite a lengthy correspondence and several conferences on the subject of a modification of the rates on fruit from Virginia fruit growing sections to eastern territory. The matter has been one of consideration for a good while. I am very glad to be able to advise you that at several recent conferences this matter was considered, and the following announced by the various lines:

"That the rates on apples from the Virginia territory included in Charlottesville, Rockfish, Lynchburg, Staunton, Goshen, Lexington and Roanoke groups to the following eastern groups, viz.: New York, Newark, Allentown, Flemington, Philadelphia, Reading, Chadd's Ford, Baltimore, York, Odenton, Harrisburg, Hagerstown and Washington be made—less car-loads fourth-class (former rate third-class) and car-loads sixth-class, the minimum rate to be observed being to Baltimore 15, to Philadelphia 16 and New York 17 cents per hundred pounds.

"The above is a material reduction on the present basis, and I am sure will be entirely satisfactory to

yourself and your associates, and it will be our purpose some time before the fruit season is on to arrange to publish the rates in accordance with above \* \* and for your further information I desire to say that this basis will be applicable in connection with the Southern railway, Norfolk and Western and Baltimore and Ohio, the same as with our company (the Chesapeake and Ohio)."

The above means that car-load rates to New York will be 25½ cents or thereabouts per barrel. It is with a sense of the greatest satisfaction that I find myself in a position to submit the above information as the result of our efforts on behalf of the fruit growers, thus tending to advance the development of the fruit-growing industry, and I now appeal (with confidence after this showing of what we have been able to effect) to all fruit growers and parties interested in this industry who are not already members to join membership in the Virginia State Horticultural Society. Membership fees are \$1 annually, which can be sent to me, as secretary and treasurer, at Crozet, Albemarle county, Va., and entitles each member to a copy of our annual report and all other privileges of membership. Our organization is steadily increasing each year, and I believe no better proof is now needed that the society is doing all it promised on behalf of fruit growers. These efforts, of course, cost time and money, and we need every member we can obtain.

Our thanks are due to the railroad companies for the recognition mentioned above. I feel satisfied they will find themselves gainers by the increased impetus that will be thus given to our industry.

Yours very truly,  
WALTER WHATELY,  
Secretary and Treasurer Virginia State Horticultural Society, Chairman Committee on Transportation and Marketing.

*Crozet, Va., April 15, 1903.*

We are very much gratified to know that the efforts of the Horticultural Society to secure a reduction in rates has been successful. Great credit is due the Committee on Transportation, and especially the chairman of that committee, for the persistent way in which he has followed up the matter. The fruit growers of the State owe Mr. Whately a debt of gratitude which they may, and should, repay by becoming members of the society. Concerted efforts by a strong organization may always be counted on to secure success sooner or later. Make the society stronger and still greater results will be obtained.—  
Ed.

An old broom is useful in the stable to clean the thickest mud from the horses' legs. Finish up with a coarse cloth or a handful of clean straw.



## Live Stock and Dairy.

### THE MALE THE HALF OF THE HERD OR FLOCK.

For years we have been trying to convince our readers that the only way in which they can succeed in grading up their herds and flocks is by breeding to pure bred bulls, boars and rams. In defiance of all our arguments and illustrations, there are yet, we are sorry to say, many who, whilst most anxious to have better stock, yet begrudge the money to pay for a pure bred male animal of fine breeding and ancestry, and therefore prepotent in power to impress his qualities on his produce. We are constantly in receipt of letters from breeders complaining that Southern farmers decline to pay more than \$50 for a bull calf or \$10 for a ram or boar pig. This is very false economy on the part of would-be buyers. To want a bull calf six months of age and weighing anywhere between 500 and 600 pounds as a pure bred animal of the beef breeds ought to do at that age for \$50 is an unreasonable request. Breeders having bulls at the head of their herds which have cost them into the thousands of dollars cannot afford to sell at such prices. No man who wants to do himself justice should hesitate to give \$100 for a bull calf, or \$25 for a boar pig or a ram lamb when he knows that he is buying pure bred, registered stock from breeders of repute. The get of the animal in one season, even when bred only upon grade stock, will amply repay such an outlay. The increased size of the calves, pigs and lambs and their greater thriftiness will make them worth half as much more when they are six months old as animals the produce of grade sires, whilst animals kept to maturity will show the prepotent power of their male parent in the increased size yield and well doing on the feed consumed. A long experience in keeping stock of all kinds enables us to speak without hesitation on this subject. Whenever you decide to set about the improvement of your herd or flock, and the sooner you do so the sooner you will get into the line of those whose animals are keeping them instead of the owners keeping the animals as is so largely the case now in the South with cattle especially, for it is well within the truth to say that more than one-half the cows in the South to-day are costing their owners money every year, instead of bringing money in; let the first step be the purchase of a pure bred, registered bull, boar or ram of the breed you have decided to adopt, and when you order him let your instructions be liberal. Do not say to the breeder,

however good the animal be, I will only give \$50 or \$10, as the case may be, but ask to have the best animal put to you at the lowest price the breeder can afford to sell at, and give him credit for knowing what will result in the most profit to you and the greatest credit to him as the breeder.

### BLACK LEG--TEXAS FEVER.

*Editor Southern Planter:*

I frequently hear of losses of live stock, or rather cattle, from black leg, and I write to ask that you will call the attention of farmers to the fact that if they will take the precaution to vaccinate their young cattle that there is no danger of losses from that disease. It is to be used as a preventative and not as a cure. And it would be well to describe the disease, as but few of them recognize it when their cattle are suffering from it. Hundreds of cattle are destroyed in this State by it every year when there is a remedy at hand, or, rather preventative.

I am also a firm believer that the fatal Texas fever can be prevented by the use of the salt, sulphur and saltpeter mixture which I think you published once. I give it to you, as I think it will do no harm to put it before your readers again:

One gallon salt, 1 quart sulphur, 1 gill powdered copperas, 1 gill powdered saltpetre. Mix and keep before the cattle at all times, under shelter or in covered troughs, and do not give them any other salt.

*Fluvanna county, Va.*

STOCKMAN.

We have repeatedly drawn the attention of our readers to the importance of their availing themselves of the means afforded by vaccination for preventing loss of cattle from black leg. In almost every issue of the journal there appear advertisements offering the remedy for sale and testimonials as to its effectiveness. In our issue of August, 1902, we published a report on the subject from the Veterinarian of the Experiment Station at Blacksburg, in which he showed that the average loss of cattle in thirty Virginia counties from black leg was, before the introduction of vaccination, 11 per cent., whilst since vaccination had been practiced the loss had been less than 1 per cent. In this report the Veterinarian says: "It must be remembered that vaccination has no curative effect. An animal, therefore, which is infected at the time of vaccination is just as sure to die as one which has not received the vaccine. \* \* \* Although the disease appears to be on the increase there is no doubt that it could be

stamped out in a few years' time by concerted action on the part of farmers by a thorough system of vaccination and thorough destruction by burning of all carcasses of animals which have died of the disease.

Black leg vaccine can be obtained from the Experiment Station, Blacksburg, on complying with certain rules and regulations."

And now, as requested, a word as to the disease itself: It is a bacterial disease in which, under certain conditions, spores (eggs) form which are capable of great resistance to destructive agents, and when once scattered in a field or pasture may remain for an indefinite time, only waiting for an opportunity to enter the system of a susceptible animal and produce the disease, hence a pasture once infected may remain so for years. The carcass of an animal which dies of black leg contains countless numbers of these spores, and unless destroyed by burning may be the means of infecting a whole neighborhood. The disease itself occurs much more frequently in young cattle ranging from 6 months to 2 years old than in old cattle. It is not often seen in calves under 6 months old. The most fatal period is 1 year and under 2. All young cattle, therefore, between the ages of 6 months and 2 years should be vaccinated. The symptoms of the disease are loss of appetite, dullness, cessation of rumination, harshness and staring of the coat, elevation of temperature, rigors, coldness of the extremities, lameness or stiffness when moved. Tumors form under the skin, most frequently on the shoulders or the loins. These tumors are first hot and painful when touched and then become cold and insensitive. If incised a dark colored and fetid fluid is discharged. As the disease progresses the tumors enlarge and the animal shows great pain, the breathing becomes hurried and the temperature rises. After death the animal will be found to be enormously swollen with bloody froth issuing from the mouth, nostrils and anus.

Texas fever preventive: Whilst this will do no harm to try it, we confess that we have no faith in its efficiency wherever the Texas fever tick is to be found. :Ed.

#### A RECORD TEST FOR MILK AND BUTTER OF A HOLSTEIN COW.

The secretary of the Holstein Freisian Advanced Registry sends us the following particulars of the testing of Sadie Vale Concordia. It establishes a new record for the breed:

Sadie Vale Concordia, 32259, age 10 years, 2 months, 24 days. Record for twenty-eight days—

days after calving 5—milk 2,565.6 pounds, butter fat 92.327 pounds, equivalent to 115 pounds, 6.5 ounces butter 80 per cent. fat, or 107 pounds, 11.4 ounces 85.7 per cent. fat; best seven consecutive days—days after calving 14—milk 694.3 pounds, butter fat 24.508 pounds, equivalent butter 80 per cent. fat, 30 pounds, 10.2 ounces, or 28 pounds, 9.5 ounces 85.7 per cent. fat. This cow was retested twice, the first time showing a product of less than a half ounce of the average of the previous seven days; the second a product of eight one-hundredths of an ounce less than the average of the best seven days. This record is undoubtedly the largest strictly official record ever reported. Owner, McAdam & Von Heyne, Deansboro, N. Y.

As showing what such a record adds to the value of the progeny of a cow, we note that Henry Stevens & Son, well-known New York breeders of Holstein cattle, have recently paid \$4,000 for the 9-weeks-old bull calf out of Sadie Vale Concordia, the cow that established new records for seven and thirty days' production of milk and butter fat.

#### A FARMER'S OBSERVATIONS ON FEEDING—FEEDING FOR PROFIT.

*Editor Southern Planter:*

Next in importance to providing the kind of food that will produce the largest amount of flesh, or milk, at the least cost, is to secure a perfect digestion of the food. A food may be rich in all the elements nature requires to support the animal economy, but unless the nourishment is extracted from it the food will be of no value to the animal, or its owner, except for manure. Digestion is the process by which the food, after having been reduced by mastication to considerable fineness, and mixed with the saliva of the mouth and throat to facilitate swallowing, passes into the first stomach, is there acted upon by a powerful solvent called the gastric juice, is subjected to a grinding process to still further reduce its particles, the coarse' parts returned to the mouth for remastication to be again swallowed and acted upon by the organs of the four stomachs and intestines; the most nutritious portions, called *chyle*, extracted and absorbed by the lacteals, or vessels provided for the purpose, is changed into blood and from blood into flesh

This being the case, it will be readily seen that one great aid to digestion when grain is fed is to have it ground, and the finer the better. I am aware that many western feeders have declared that cattle will fatten just as well on whole corn as on corn meal, and that with hogs to follow the steers to eat the

whole grain that is voided, there is no loss whatever. Eastern farmers with smaller corn-fields to draw upon, and forced to observe closely and practice rigid economy, do not find this to be the case. To feed whole grain to cattle without waste would require hogs to follow the cattle and hens to follow the hogs. A neighbor, when showing me his hogs, said he was feeding them whole buckwheat without cooking or soaking, and thereby saved the miller's toll. Apparently they were doing well, as he was also feeding them sour milk and buttermilk in considerable quantities. I pointed him to their dung, which contained many grains that were entirely whole and many more that were merely cracked.

"Oh, that's nothing," he said, "they eat the whole grain all over again." Every observant feeder has noticed that when hogs are fed all they want of whole corn their dung is full of half-chewed kernels, which, unless eaten by the hens, is wasted. Hogs are naturally so greedy they do not properly masticate whole grain, and as they do not have the power to raise and rechew it, as cattle do, it is utterly impossible to feed them whole grain without waste; and, in my opinion, to force them by hunger to eat it the second time, is not only improper, but positively dangerous.

To make hogs eat the voidings of cattle may not be quite so bad, but it is contrary to the instincts of nature and correct judgment. With the dung is ejected the impurities and poisonous germs of the body. No animals will eat their own dung or that from another species, if provided with sufficient food that is clean, fresh and of good quality.

The almost universal practice of feeding whole corn to cattle in the West and compelling hogs to get their living from the cattles' dung, no doubt supplies a fruitful field for the propagation of hog cholera. Something must be allowed for the greater number of hogs raised in the West, but it is a well-attested fact that hog cholera is hardly known in the Middle and Eastern States, where hogs are mostly raised and fattened on ground grain.

Why should animals be allowed to wear out their teeth and tire their jaws in grinding whole grain, which they do not grind good, in order to save the miller's toll, when by so doing they are sure to waste more than a tenth because it is not fine enough to be digested?

Numerous experiments have shown that it is unnecessary to cook food for cattle and hogs, unless it be potatoes for hogs. From the immense number of great kettles manufactured at North Aurora, Ill., it

is evident that many farmers in the West practice boiling potatoes and other roots for their hogs. For the human stomach nearly all foods, except fruits and berries, need to be cooked; but the case is different with animals. As nature has not supplied them the means of cooking food it is reasonable to suppose she has provided them with organs of digestion so powerful and perfect they do not need it, and this reasonable supposition has been supported by many experiments. If grain is to be fed to animals without grinding, then by all means it should be cooked—not for the purpose of making it more palatable or nutritious, but to secure a better digestion by making it softer. Soaking might answer the purpose if it could be soaked long enough to soften without souring it.

My experience is favorable to boiling potatoes and turnips for hogs. The hogs eat them greedily, and with a small quantity of meal mixed with them they furnish a cheap fattening food. On raw potatoes they will nearly starve. Cattle, on the contrary, prefer all kinds of roots in the raw state, and according to my experience roots are better for them raw. I have tried feeding boiled potatoes and pumpkins to cattle, and unless they were fed sparingly they brought on the scours.

To raise and fatten animals the most profitably they must be sheltered from cold storms and housed in warm, well-ventilated stables in the winter. Kept warm and comfortably all kinds of stock will grow and fatten on a smaller quantity of food. Cattle or hogs kept out of doors in the winter require a good deal of corn to maintain the warmth of their bodies, to say nothing about making a gain in weight.

The cruelty of the western ranchmen in starving their unsheltered herds in the winter is punished by the great loss of stock and the pitiful appearance in the spring of those that survive.

Cattle have been grown to good size and fattened on the prairie farms of the West exposed to the fearful blasts of winter that sweep over those fertile plains without the protection of any shelter or wind-break whatever; but it was done at a fearful cost of corn. It is said that western farmers have sometimes burned corn to warm their houses, because it was cheaper than coal, but there is not a particle of doubt they have burned it oftener, and in larger quantities, inside their cattle to keep the unsheltered beasts warm in the winter.

John D. Gillette, of Illinois, took premiums at fat-stock shows, and his steers were famous for their size and beauty in all the eastern markets. He raised

and fattened them in the open fields summer and winter on pasture and unhusked corn. His cattle were excellent, not because they were exposed to the blizzards of winter, but in spite of it. A great deal of the corn he fed his steers was required to supply warmth to their bodies and was as surely wasted as if it had been thrown into the Illinois river. Had he built barns for the comfort of his stock he would have made a great deal more money and slept better in his warm bed.

J. W. INGHAM.

### CHANGING THE BREEDING HABIT IN SHEEP.

We are frequently asked as to the possibility of changing the breeding habit of sheep so as to make them produce their lambs in the winter months and thus meet the requirements of the early-lamb market. The Minnesota Experiment Station has conducted a series of experiments extending over a period of six years with the object of reaching conclusions on this subject. The ewes selected for the experiment were at the outset common western grade sheep carrying the blood of the American Merino and probably of the Cotswold, Shropshire and Oxford Downs. The following are the conclusions reached:

1. That the breeding habit in ewes which usually drop their lambs in the spring may be so changed that they will produce them in the fall and early winter.

2. That this change can be effected sufficiently for practical uses in from two to three generations of judicious crossing when accompanied by a judicious selection.

3. That it may be effected thus quickly by choosing very common ewes of mixed breeding and mating them with pure bred Dorset rams, always reserving the earlier dropped lambs for breeding uses.

4. That in the transforming process, the dams which have suckled winter lambs may usually be bred more readily before being turned out on grass than subsequently, and especially when fed a stimulating grain portion while yet in the sheds.

5. That when the change sought has been thus effected in the dams, a superior quality in the lambs may be obtained by using rams in service of certain of the dark-faced types and more especially of the Southdown and Shropshire breeds.

### POISONING BY SORGHUM AND KAFIR CORN.

In Bulletin No. 77, issued by the Nebraska Experiment Station, stockmen have at last been furnished information of the highest importance relative to cattle poisoning by Kaffir corn and sorghum. Why these two plants so generally useful should under some circumstances be so deadly to cattle has at

last been explained by this bulletin. We quote the following:

"Some three years ago Dr. A. T. Peters arrived at the following conclusions regarding the loss of cattle from eating green sorghum:

"1. Animals do not die from bloat or indigestion.

"2. They do not choke to death.

"3. The deaths result from a violent poison in sorghum of stunted growth.

"4. The symptoms are those of prussic acid poisoning."

The last two conclusions are the ones of deepest interest to stockmen feeding sorghum and Kaffir corn. They have observed that large mature stalks eaten while green or fed as dry forage made a wholesome nutritious food, while stunted plants or those springing up as a second growth brought on the trouble.

The following from the bulletin is to the point:

"As both sorghum and Kaffir corn are important forage plants, and as the investigations of the writer show that they contain as normal constituents compounds yielding prussic acid, the important question naturally arises, in what condition of growth are these plants dangerous? The following have been suggested:

"1. Young plants.

"2. Second growth.

"3. Frosted plants.

"4. Stunted plants.

"Unfortunately sufficient data have not been secured to enable the writer to give a final opinion on all of these points. They will, however, be discussed in the light of the facts at hand.

"Young plants of vigorous growth contain a higher per cent. of prussic acid than the bright green leaves of plants reaching maturity. As the stalks and seeds contain no prussic acid, the young plants contain a much greater per cent. of acid than the mature plants considered as a whole.

"Second growth is not more deadly than first growth, although, as falls in the West are often bright and dry, conditions may be favorable for the elaboration of excessive amounts of poison during the second growth.

"Frost is without influence except as the forerunner of a period of bright dry weather.

"Growth arrested by dry weather before the plant begins to mature presents a condition very favorable for the elaboration of the poison. Growth stunted by too much water, sterile soil, shade of trees or hardness of ground does not result in the formation of dangerous quantities of poison.

"A study of the data at hand, field observations and chemical analyses, indicates that the poisoning is most deadly in Missouri, Nebraska, Kansas and Colorado, and that it is rare east, north and south of these States.—*Breeders' Gazette*.

## The Poultry Yard.

### THOSE DESTRUCTIVE LICE.

Of all ailments of the poultry yard, none equals the scourge of hen lice. They destroy more thousands of young chicks than we have any idea of. Bowel trouble, brain trouble and debilitated conditions are brought about by these blood-sucking pests, some of which work by day and others by night. The first of all these is the head louse, which comes into active service as soon as the chick is out of the shell. We have seen over a dozen of them clinging to the top of the head and under the throat within a few hours after the coming from the shell. To destroy these, oil the top of the head and under the throat with sweet oil. Dip your finger into the oil and rub the top of the head and under the throat with it as soon as they come from the nest.

Much of this insect pest may be avoided by having clean nests for the sitting hens, and by filling the plumage of the hens with insect powder, at least twice during the three weeks of their time of incubating. Dalmatian insect powder—better known perhaps as Persian—which is sold in the drug stores by the pound, is excellent; or any good insect powder will do, providing it will not injure the eyes of the young chicks. If nest boxes are fresh and clean to start with, then clean nests are made of soft straw, the hens' bodies well powdered with the insect powder two or three times during the three weeks they are sitting, you have at least established a barrier against their gaining much foothold; but the eggs of these ever-active pests are hidden away in the feathers of the hen, and continue to hatch and propagate after their creators or sponsors have been killed.

Following the head lice on the chick come the body lice, that hide under their little wings, about their vent and in the neck—in fact, they go where they will be kept warm from the heat of the chick's body, and where the chick cannot get at them with beak or toes. Here they live and thrive, and scatter utter destruction by sucking the life blood from their bodies. Some make use of oil of different kinds to rid the chicks of them. Kerosene oil is often made use of. This is not good, because it will blister the tender skin of the chick; also, this or any kind of oil will grease the down or feathers and gather dirt; for these reasons they are not desirable. If any kind of oil is used, to be rid of lice, use sweet oil; but the best thing is powdered anise seed. When this is powdered very fine, and kept perfectly dry, it is an excellent destroyer of all kinds of lice that infest the

young chick. It must be fine and dry to do good execution. The beauty of it is it is harmless, if they eat it, and it will not injure their eyes.

There are several kinds of body lice that bother the young chick, as well as the mother hen; all of these, however, can be destroyed by the use of finely powdered anise seed or any good insect powder. When you see the young chicks standing in the sun as if asleep, and peeping in distress, you had better look through their plumage, head and neck, for lice. If found, begin war on them as soon as possible by powdering them well, also the mother hen; but ever have in mind that the powder you must use must be very fine, perfectly dry, and of a kind that will not make their eyes sore. Some kinds of powder will cause them to have sore eyes, when it gets into them, as it is apt to do when put into the feathers of the mother hen.—*Country Gentleman.*

### TEN POINTERS IN SUCCESSFUL POULTRY KEEPING.

*Editor Southern Planter:*

1. Give your fowls a dry, comfortable, roomy house; crowded winter quarters are expensive.
2. Breed only from healthy, vigorous stock; never inbreed.
3. Feed a variety of wholesome food, but do not over feed.
4. Let your hens scratch for a part of their living; exercise is essential.
5. Be sure that they have grit of some kind; hens have no teeth.
6. Provide clean water for drinking; foul, stagnant water breeds disease.
7. Clean and disinfect your poultry houses and coops at least once a week; fowls have breathing organs.
8. Look out for lice; give them no quarters. Lice breeding and poultry breeding make an unprofitable combination.
9. Dampness, filth and cold drafts cause roop; avoid them.
10. "Be sure that you are right, then go ahead"; persistent pushing in the right direction insures success.

S. P. YODER.

*Warwick Co., Va.*

When corresponding with advertisers, kindly mention the *Southern Planter*.

### AUSTRALIAN LAYING CONTEST.

Secretary Dunncliffe sends us clippings from the Daily Telegraph, Sydney, New South Wales, from which we learn that great interest is felt in that country over the coming laying contest between American and Australian hens, which is now under way.

The clippings are from the Telegraph for January 7th, and give the results for ten months in the year's test being carried on at the Hawkesburg Agricultural College with Australian hens.

This report makes a better showing than was made at the end of six months, and we are inclined to a belief that some Australian hens are rather good layers.

If we remember that midsummer comes in January in New South Wales, we will better understand the allusions to hot weather in the following extracts from the report:

"Considering the lateness of the season, the hens are laying wonderfully, and no doubt many breeders will be greatly surprised to know that the total number of eggs for the month exceeded that for December by 51.

"The warm weather seems to be suiting the Leghorns from Wagga, as Mr. Horwood's six hens gave the splendid total of 118 eggs. Grantham's rose-comb and Mr. Kennedy's single-comb White Leghorns are having a ding-dong race, and no doubt, from the condition of the birds, they will have a hard battle during the next two months. It is surprising how the Orpingtons and Wyandottes maintain their position, and there is no fear of any of the leading general utility pens being displaced by the Mediterraneanans now below them.

The total number of eggs laid for the month was 2,993, as compared with 2,942 in December, 2,213 in November, and 3,735 in October. The total number of eggs from the 38 pens for the 10 months was 25,935, or an average of 113.75 per hen.

"The six leading pens for the prizes for the second six months are: D. Scott, 447 eggs; Grantham Poultry Farm, 445; G. Kennedy, 439; Dr. Fiaschi, 425; Mrs. A. Hislop, 418; W. Haydon, 412."

The report before us shows that at the end of ten months a pen of rose-comb White Leghorns was first, a pen of White Leghorn second, and these were followed by Silver Wyandottes, Black Orpingtons, Silver Wyandottes, Black Orpingtons, Black Orpingtons, in the order named.

Beginning with the lowest on the list, we find Minorcas, Buff Leghorns, White Wyandottes, And

lusians, Minorcas, Anconas, Black Orpingtons, White Wyandottes. The first and second pens have 152½ and 152¾ eggs, respectively, as the average production for the ten months. The last and next to last have 70¾ and 78 eggs, respectively, to their credit as the average production for the ten months. The best pen of Buff Orpingtons appears as eleventh on the list from the top and the poorest as tenth from the bottom. This places them very close to the general average of all the breeds.

Of the thirty-eight pens, not one is composed of Plymouth Rocks of any variety. A private letter from a breeder in Australia assures us that the Plymouth Rock is in bad savor in that country solely on account of the quality of the specimens that have been sent from this country on orders from breeding stock.

We are not at all alarmed over the prospect of defeat for the American hens, as we believe they will be able to make a good showing compared to the one above given. We are looking for a report from them on the next Australian mail.—*Commercial Poultry.*

### SITTING HENS AND NESTS.

When the sitting hens leave their nests before the hatch is due, it is an infallible indication of lice, and the nests should be taken outside, cleaned of the contents, the material burned, and the next-boxes swabbed with kerosene, to which a lighted match may be applied. If the nests crowd the poultry houses, causing room to be restricted, they may be left outside at this season by being placed against the fences and partially covered with brush.

If a chick stands drawn up or acts droopy, examine it at once. Either lice, bad bowels or indigestion is probably the ailment.

Eggs that have been exposed over night to a temperature of 31 degrees have been hatched and a fair hatch has been had from an incubator where the temperature got as high as 115 degrees. Much depends on the degree of moisture in the air, a dry air being the least dangerous.

Few of us would enjoy a steady diet of cold vitals. The hen is a good deal that way. She appreciates warm food and will respond quickly to it and in a way to make the pocket-book of her owner fuller.

## The Horse.

### NOTES.

Breeding, rearing and developing hunters and jumpers has assumed important proportions in Virginia live stock circles, and the industry is one that richly merits the encouragement and support of breeders and farmers in general. These horses, usually and preferably, too, perhaps, are the product of thoroughbred sires from general purpose mares, and many of them bred and reared on our native heath have gone out and captured the highest honors in the greatest of American show rings and in hunting fields known the world over. Probably the best known centres of this breeding industry are Warrenton, in Fauquier county; Leesburg, Loudoun county, and Charlottesville, in Albemarle county, which are in the midst of rich grazing districts, but there are scores of establishments in other sections that have attained prominence, and whose products have gained fame and the smile of fortune as well.



The season has been a busy one at Hampton farm, and the big stable of hunters and jumpers has been thinned down considerably by a number of quite important sales. The farm is in Fairfax county, and just three miles out from the staid old Virginia town of Alexandria. Hampton, with its broad acres, is the ancestral home of Courtland H. Smith, who directs affairs, and in all Virginia there is probably not a bolder or more intrepid horseman. In addition to the horses at Hampton, Short horn cattle and Southdown sheep are also kept, and these, with poultry of all kinds, help to make the establishment a paying institution. Since the beginning of spring a new and profitable market has been found in Kansas City, and the sales of Firebrand, Roscommon, The Greyling, Montrose, and another light weight hunter were followed by those of Marmion, b. g., 16:2, up to 200 pounds, by Marmion; Well Over, br. g., 16:2, up to 200 pounds, by Jake Shipsey; Valley Boy, b. g., 16:1, up to 180 pounds, by Jake Shipsey; Blue Bottle, blue roan g., 16 hands, up to 180 pounds, by Golden Deer; Troope, br. m., 16 hands, up to 180 pounds, by Philadelphia; ch. g., 15:3, up to 180 pounds, by Guardsman; Minerva, ch. m., 16 hands, up to 180 pounds, by Torchlight; The Witch, br. m., 16 hands, up to 175 pounds, by Romnev; Panther, b. g., 15:3, up to 175 pounds, by Panther; Milk Maid, br. m., 15:2, up to 150 pounds, by Tecumseh; Mr. Dooly, br. g., 16 hands, up to 225 pounds, by Zuave; Scattercash, 16 hands, up to 175 pounds, by Deluric; Cascade, b. g., 15 hands, up to 150 pounds, by Imp; Water Level; Juniata, b. m., 16 hands, up to 175 pounds, by Richelieu; Archduke, b. g., 16:2,

up to 200 pounds, by Jake Shipsey, and The Lamb, gr. g., 15:3, who has a record of 6 feet 5 inches, and is up to 250 pounds, by Botheration. The schooling and handling of these horses represented both care and outlay, but the outcome was satisfactory, and they averaged over \$500.



The Hampton Farm stable has recently been strengthened by new additions, and the string is now the best ever owned on the place, its most important and best known members are, of course, the well-known prize winners, Up-to-date, Tip-Top, Chappie Lee and Ongonquitt, all of whom are in grand shape, and are confidently expected to duplicate their victories of other years when taken down the line of horse shows this season. The new ones, however, include Flambeau, ch. g., 4, 16 hands, by Torchlight, who is a fine looker and able to jump a fence with ease; Skibbereen, ch. g., 4, 16:3, and up to 225 pounds, and can jump close to six feet; Potential, b. g., 15:3, by imp. Potentate, dam Moline, by imp. Blythewood. A grand type with perfect conformation and safe for a lady, while up to 180 pounds and safe over any country; Pride of Hampton, b. g., 15:3, up to 180 pounds, by William, dam Best Girl. This horse is a grand fencer, with nice mouth and manners as well; Senegal Rad, ch. g., 15:1, by Calcium, dam Columbia, a perfect type of the thoroughbred hack, with perfect mouth along with manners, and good enough to win in the best company down the line of horse shows; Fire Light, ch. g., 15:3, 4, by Torchlight, dam nearly thoroughbred; one of the clean bred galloping sort rarely found, and up to 175 pounds; Yorrick, r. g., 16:2, 5, by Merry Lad, is a grand big youngster, up to top weight, and fast with it, while a magnificent fencer; Daylight, b. g., 16:3 1-2, 5, by Torchlight. This gelding is up to 230 pounds, and one of the fastest weight carriers of his day, safe over five feet; Courageous, b. g., 16:2, by Zuave, dam by Underwood, is a big one without flaw or fault, and can both fence and gallop, and some dozen or more other good ones, among them the fine, big roan gelding Brigadier, by Guardsman, and one of the finest horses ever sired by him.



The brown pacing mare Skyland Girl, 2:19½, by Simmons, who was so successfully campaigned during 1902 by George F. Dyer, then of Greensboro, N. C., but now at the Fair Grounds track, Lynchburg, Va., is now in the stable of A. H. Tyson, Newark, Del., who will race her this season. Mamie Woods, 2:20, the dam of this mare, was purchased while in foal and taken to Winston, N. C., by R. J.

Reynolds, the head of the noted Southern manufacturing house of the R. J. Reynolds Tobacco Company, and foaled his property. Mr. Reynolds is still interested in fine harness horses, but of recent years has turned his attention to breeding coaches.



Among the horses in the training stable of George M. Harden, Raleigh, N. C., are the big chestnut mare, Petronel, 2:19 3-4, by Expedition, 2:15 3-4, dam Petrel, by Onward, who made her record in 1902, and is likely to go much faster this season; Sweet Rector, bay horse, 5, by Director, 2:17 $\frac{1}{4}$ , dam Sweet Alea, by Alcazar, and John T. Moore, the bay pacing stallion, foaled 1899, by Hal Woodriddle, dam by Locomotive, second dam by John Dillard, Jr., who is well formed, handsome in harness, and has a nice way of going. This horse was brought to North Carolina by T. M. Arrasmith, of Greensboro, who named him for "Trotwood," the widely known poet, author, charming turf writer and horseman, of Columbia, Tenn., and the son of Hal Woodriddle promises to be a credit to the famous pacing family from which he springs.



Wealth, 2:17 $\frac{1}{4}$ , the son of Gambetta Wilkes and Magnolia, by Norfolk, who heads the stud of Col. W. H. Chapman, Gordonsville, Va., is doing finely, and at the close of a limited season will go into training, and if he keeps right a record of 2:10 or better will be credited up to him before snow flies. Wealth is a horse of grand size, finish and splendid appearance in harness, while he has frequently shown two minute speed in both his work and in races. Col. Chapman is determined not only to accord the son of Gambetta Wilkes the benefit of speed development, but opportunities in the stud as well, as shown by his recent purchase from W. J. Carter of the richly bred brood mare Lanciana, a good looking daughter of Lancelot, 2:23, and Mariana, by Sorrento, second dam, Mary Whitman, by Kentucky Prince, third dam, Nancy Whitman, dam of Robert McGregor, 2:17 1-4, sire of Crescens, 2:02 1-4, the trotting king, Lanecana, is now in foal to Red Buck, Jr., the sire of Ben D., 2:06 3-4, and after foaling will be mated with Wealth.



Friends of the well-known Virginian, Algernon Daingerfield, now assistant secretary of the Washington Jockey Club, will welcome the news that he has been appointed clerk of the scales for the Metropolitan Circuit of the Jockey Club of the United States. This is the largest organization in the country, and the position is an important one. Since Mr. Daingerfield left Harrisonburg, his native home,

he has been prominently identified with the turfmen of the country, and has become widely known in racing circles.



The former well-known Virginia bred pacing mare, Princess Eulalie, 2:17 1-4, by Prince Belmont, dam by Red Jacket, owned by the Hon. W. R. McKenney, of Petersburg, Va., foaled on March 30th, a fine filly by Judge Cox, the sire of Coxe, 2:13.



John G. White, Leesburg, Va., has sold, through W. D. Grand, of the American Horse Exchange, New York, eight half bred hackneys, all of whom were high stepping harness horses, among them being the Virginia Horse Show winners, Lord Fairfax; the prize team, Threads and Patches, and Grey Eagle.



The Boscobel Farm Stable of Mr. and Mrs. Chas. H. Hurkamp, Fredericksburg, Va., includes some choice young horses in addition to a few older ones that will be taken down the line of horse shows this season. Grand old Hornpipe, the big, sturdy roan, son of Young Sanford; Amaret, the crack high jumper, and others will compete for honors in select company. With Mr. Hurkamp up, Amaret has cleared the bars at dizzy heights, while Hornpipe has figured as a winner season after season when pitted against the best in the land, and can usually be depended upon to do his best whenever called upon.



Joseph Lassiter, of the Richmond Horse Bazaar, has made a number of sales of well known trotters and pacers recently, among those passing through his hands being Whitby, 2:18 1-4; Florence Miles, 2:21 1-4; Kitty B., 2:23 1-4; Lenore Russell, Rose Bow, Crissie, and others.

BROADROCK.

### SALE OF IMPORTED JERSEYS.

We invite attention to the advertisement in this issue of the sale of imported Jerseys by Mr. T. S. Cooper, the well-known importer and judge of stock. The sale will include some as fine animals as Mr. Cooper ever offered, and he has imported and sold some of the finest Jerseys now in the country. Buyers who cannot attend the sale are invited to send their bids to Mr. Cooper, who will use his best efforts to execute orders entrusted to him. Send for catalogue.



## Miscellaneous.

### GOOD ROADS.

The long continued wet weather has once more aroused attention to this subject, and for a time at least caused one to believe that at last something is to be done to rid the State of the greatest incubus on its advancement. We, however, regret to say that the question has not yet assumed that phase which leads us to think that we are on the eve of the only sound and satisfactory settlement of it. Not until the State itself as a whole realizes that the subject of roads is one calling for the help of the State in its solution can there be a just settlement of the matter. The dealing with it as one affecting the counties alone can only result in injustice to farmers. It is neither just nor right that the burden of making good roads throughout the State, and thus advancing its prosperity more than any other thing can do, should be wholly borne by the farmers. The cities of the State will be as much—nay, more certainly—benefited than the counties by the making of highways leading into them upon which heavy loads can be carried at all seasons of the year, and the cities therefore should bear their fair share of the taxation, which must be imposed to secure this end. We advanced this idea many years ago, when first the subject of roads became a living question throughout the country. It was then strongly opposed everywhere, but it has proved its soundness by commending itself to the enlightened communities in the North. New Jersey, New York, and Pennsylvania have adopted the principle, and each of these States annually appropriates from the State taxes several million dollars to supplement the efforts of the counties. Pennsylvania only the other day appropriated \$6,500,000 to be expended this year. The result is already seen in New Jersey and New York States, where scores of miles of good highways are already made, and hundreds more are under construction. The counties readily burden themselves to meet the offer of State aid, and the work progresses to the manifest advantage of every one owning property, whether in city or county. We are expecting to see this system of help to the counties still further extended in the near future by the recognition by the Nation of its responsibility in the matter. We urged this in a Convention at Washington many years ago, when the Road Inquiry Bureau, of the Department of Agriculture, was first formed. Then the idea was scouted, now it is being favorably considered, and there is

throughout the country a strong current of feeling being expressed in favor of the Brownlow bill, now before Congress, which makes provision for this National help. There is no more reason why waterways (rivers and harbors) should be aided by national assistance than why highways should not be helped. If the one system is sound and just, then the other is certainly so. Millions have been spent and are being spent each year in rivers and harbors, which are much less the highways of the people than are the public roads of the State. The national revenues are largely drawn from the country people, yet they receive little in return. Millions of this national money are expended in the cities and towns in building government buildings. Let the country people have their share in the building of highways. We are glad to see that some of the counties of the State are asking for power to borrow money to build highways. This, when borrowed, should be met by help from the State and nation, and then good roads will be built without being too great a burden upon the farmers of the State. They are willing to bear their share, but should not consent to carry the whole burden. "Equal burdens break no backs."

### AN IMPORTANT VIRGINIA INDUSTRY.

*Editor Southern Planter:*

In no other portion of the habitable globe does the productive water meet the productive land on such close, intimate and easy terms as is shown everywhere on the lower Chesapeake, James river, Hampton Roads, and their tributaries.

These productive waters penetrate the land in every direction, making thousands of beautiful coves, inlets and snug little harbors, and here and there we find a body of water like Hampton Roads, which contains nearly fifty square miles of surface; the lower James, which is from five to seven miles in width, and the lower Chesapeake, which comprises a thousand square miles of water, all of which waters are underlaid with oysters and clams, and the waters are fairly alive with fish and crabs.

Norfolk is a logical centre for fish and oyster business, and the report of the United States Commission for the year 1901 places Norfolk well up on the list. The States included in the report are New York, New Jersey, Pennsylvania, Delaware, Maryland and Virginia.

A few "facts, figures and features" relating to the fish and oyster industry may be of considerable interest to many of your readers, both in and out of the State.

The value of the Virginia catch for the year 1901 was more than four and one-half million dollars—this for fish alone. Only one State exceeds the Virginia figures, and this is New Jersey. The New Jersey figures were only about one hundred thousand dollars over and above the Virginia figures.

The number of fish caught in Virginia waters during the year 1901 reached the grand total of 378,183,358, against less than half that number for New Jersey.

The value of the New York catch of fish was nearly one million dollars less than that of Virginia. Virginia leads all the States in the clam industry, and is second on the list in the quantity and value of crabs handled.

In oysters Virginia leads every State except one, that being Maryland, and leads Maryland in the quantity, but falls slightly behind her in value of the oysters handled.

The Virginia catch of oysters was 7,885,447, and the value of the catch was \$2,923,456. The Maryland catch was 5,685,561, and the value was \$3,031,518.

In the matter of oyster business, Norfolk is rapidly gaining on Baltimore. For many years Baltimore has had the distinction of being the greatest oyster centre on the face of the globe, and for many years Norfolk has been a pretty good second in the race, and is gaining each year, and will soon lead Baltimore, because the great bulk of oysters and the best oyster grounds lie nearer Norfolk than Baltimore.

Norfolk waters are always free from ice, making it easier for the oystermen to handle their business.

Maryland employs 36,260 hands in the oyster business, Virginia employs 29,325 hands. Virginia uses 1,086 sailing vessels in the prosecution of the oyster business. In addition to these vessels, 12,174 smaller boats are used.

The oyster fleet alone employed in these Virginia waters would make quite a respectable showing. Just imagine 1,086 quite good-sized sailing vessels and 12,174 smaller boats all going and coming like bees all winter in the oyster business. It makes a very lively scene, and results in the handling of large sums of money. The hands are paid every week, and much money is placed in circulation in Norfolk by reason of the oyster business.

Nature has been very good to Eastern Virginia, in

supplying her with such an inexhaustible meat barrel. It is filled each year by the provident hand of nature, and, notwithstanding man's best efforts, the supply continues pretty nearly the same from year to year.

The fish that are caught for the oil are dried out and the oil extracted, and the fish scrap is used for fertilizer purposes, but most of the catch are confined to the food fishes, such as spots, mullets, blue fish, sheep's head, croakers and other varieties, including large numbers of sturgeon, which often reach the weight of three to four hundred pounds each.

The hook and line fishing is also very fine in the waters adjacent to this sea port, and we have to confess that the inducements offered here to extract a living from the salt water are so numerous and so weighty that thousands of good farmers have been spoiled by being attracted by the profits offered to fishermen.

In other words, Eastern Virginia is *long* on good fishermen and good oystermen, but rather *short* on good farmers; but it is a fact that here in Eastern Virginia fishing is not only a pleasure, but it seems to be highly profitable.

A. JEFFERS.

## IMPROVING LAND.

*Editor Southern Planter*

If I were going to preach three sermons on fertility, or land improvement, I would take as my first text Deep Plowing, my second would be Humus, and my third would be Lime. Any one of these three "texts" is a subject for unlimited discussion. But I am going to combine them in one, and if my views have any weight, I will feel honored to have you give them space in your columns. If I am wrong, then consign this to the waste basket, and I will not complain. But my faith is in my subject, and my heart is with my Brother Farmer, and if I can say anything that will aid him, then I am happy.

Deep soil, humus, and lime go hand in hand together. They were joined together in the beginning, and they stand together in the bond of nature, and can be counted on to do their work, if man will let them. They are devoted and true to each other, and dependent one upon the other.

Living as I do, on the border of Loudoun and Fairfax counties, I have abundant opportunity to see the benefits derived from the practice of deep plowing and liming, as well as to note the baneful results of the system of shallow plowing.

We have in this section of the State a beautiful

country, about 300 feet above sea level, with a climate unsurpassed for man, beast and vegetation. (A German editor who spent his summer here says our county is the Italy of America.) The nature of our soil is both loam and clay, adapted to the growing of grain, grass and fruit, as well as trucking. We have the best of railroad facilities, with Washington city as our market, where they pay fancy prices for all good articles. We are in easy distance of the city, and this is the cause of the majority of the farms which are worked by tenants, becoming impoverished. A great many of our land owners hold office in the city and live there. They lease their farms, and the renter hauls about everything that the farm produces to the city. They feed little or no stock, make no manure, and sow a cheap acid fertilizer on land plowed from two to four inches deep.

The owners of these rented lands are now placing these farms on the market, and they are being rapidly bought up by home seekers, and where they have plowed deep and put a little lime the improvement has been like magic. I have frequently, in passing a poor field of corn, asked what was the matter with the crop, and the answer would always be, the land is "worn out."

Now, nearly all of this land in this section was good to begin with, and I do not believe that naturally good land can become permanently exhausted under any system of farming in three or four generations, and yet this land fails to produce, under the tenant system. I think it is God's plan of locking up the fertility of the soil, and rendering it unproductive until some man gets hold of it who knows how to farm it.

These so-called worn out lands are lacking mainly in humus, and the quickest way to fill these lands with humus is the shortest road to permanent improvement. Deep plowing and sub-soiling is the first essential thing to do. I am frequently hearing the question, "What are the benefits derived from deep plowing?" This question was ably answered by Mr. A. Jeffers, in his article: "That Little Farm Well Tilled," in the April *Planter*. He preached sound doctrine there, and it should be preached in every journal. Another article in the April *Journal*, written by Mr. K. N. Crast, headed "Fertility Without Humus," is a strong argument for deep plowing and sub-soiling. Whilst I do not agree with him, that we can maintain fertility without humus, still his article shows that the sub-soil, dug deep in the ground to make the embankments, had plant food in it, and when loosened up and brought into contact with the sunshine and frost, brought forth rank vege-

lation. For the past twenty years I have used chemical fertilizers, and am still using, yet I am constrained to say that I believe a great part of the money spent for fertilizers was lost, and I would have derived better results if the same money had been spent in legumes and barn yard manure, for no so-called complete fertilizer ever took the place of stable manure for me.

As humus is partially decomposed vegetable matter in the soil, its duties are many. First, it is used for the purpose of keeping the particles of soil separate, so that air may find access, and the roots may have a chance to develop. It keeps the soil from puddling in a wet time, and from baking in a drouth; second, it serves as an absorbent or a sponge, to hold moisture, and gives it out in the time of a drouth. It is a conservor of heat, which warms up the soil and causes the seed to germinate properly, and it is the home and storehouse of nitrogen. Humus is the result of fertility; at the same time, it is the mother of fertility. We can best obtain it by thorough cultivation and the plowing under of vegetable matter, such as weeds, stubble, clover, peas and barnyard manure. In doing this we often turn under too much green vegetable matter, and this causes our land to become "sick or sour" from too much acid being left in the soil. In this event we want something to take up and neutralize these liberated acids before they accumulate in such quantity as to injure vegetation. Slaked lime is one of the best materials for this purpose, and has clearly demonstrated the fact in this section.

We are told by the chemist that the conversion of refuse vegetable matter, as well as animal matter, into plant food requires the intervention of chemical and other agencies, which will transform this inert nitrogen into ammonia or nitrates. The natural forces that do this work cheaply and beneficially are the microbes that feed upon the refuse vegetable matter of the soil. These nitrifying microbes cannot do their work in a soil where any considerable amount of free acid (other than carbonic acid) exists, but they work well and multiply in the presence of lime. In this neighborhood hay has been made to increase from 50 per cent. to 100 per cent. per acre from the application of lime, and from my experience and observation, I would advise an application of 25 bushels to the acre every four years, as this quantity is giving as good results as 100 bushels per acre. It is an easy matter to locate the lands in this section that have been limed by the abundance of grass and the absence of sheep sorrel.

As a rule, farmers are not chemists, and do not

know what their lands need in the shape of fertilizers, as different land requires different fertilizers. But we cannot go amiss in putting lime on any kind of land. It will make stiff land more porous, and sandy soil more compact.

Let me repeat, deep plowing, clover, peas and barn yard manure and lime have reclaimed more worn out or abused land than all other agencies combined. Lime works wonders under certain circumstances. But like medicine, it should not be given in over doses, and should be accompanied by some kind of stock raising for the manure. W. E. MILLER.

*Fairfax Co., Va.*

## HOW THE FARMER HAS BEEN EDUCATED.

*Editor Southern Planter:*

A great deal has been said of the educational advantages of city life over that of the country. This fact has had a definite bearing on the agricultural community in all sections of the country. Parents have left the farm in order to give their children the benefit of the advantages which city life affords. The older sons and daughters have left of their own volition, leaving the farm to their parents on which to live out their natural term of years. Any great industrial enterprise cannot long attract labor and capital of a productive nature, which plays this losing game in its process of development. But now as agriculture in its various phases represents the greatest of all industries of the country, there must have been some agency by which this stream of emigration has been checkmated, or a new force set in motion to counteract this condition.

The solution has been found in the farmer himself. The general awakening of the farmer came simultaneously with the organization of such self-helping societies as the farmers' clubs, the Grange, etc. The government also lent a hand, not with a spirit of philanthropy, but as a matter of business policy, and which took the form of departments of agriculture and agricultural colleges. From these two widely different points of view a systematic method of cooperation has been evolved to solve the difficulties of rural progress.

In nearly every State in the Union a central organization has been formed to promote the interests of agriculture. The direction of the work may fall to an agricultural board especially created for the purpose, or under the auspices of the agricultural colleges. The object in any case is the same—namely, the diffusion of knowledge in matters per-

taining to agriculture. By far the most potent influence for agricultural progress has come through the Farmers' Institute. The general supervision is in the hands of the State, and it represents the cooperation of the farmer and the scientist in a common interest. On the average, each State holds 175 meetings in as many places during the year, and the beneficial results accruing cannot be estimated. An Institute lasting from one to two days, and having generally four sessions a day, affords ample opportunity for a great range of subjects, and while the purpose is to draw out local experience, the scientific lecturer may be able to point out from experiences in other communities practical ideas applicable to conditions obtaining in the district where the Institute is held. In the State of Pennsylvania there is a corps of 95 Institute lecturers. Their reports show 200 Institutes during the year, and an attendance of 150,000 people.

The Institute or other voluntary organization for the promotion of agricultural science in any community marks the intelligence of the inhabitants of that locality, and in the most progressive sections they flourish in great number and variety. In Massachusetts great encouragement has been given by the State Board of Agriculture. At the present time there are thirty-four agricultural societies, sixteen horticultural societies, forty-seven farmers' and mechanics' associations, fifteen Pomona granges, one hundred and fifty-nine subordinate granges, and eighteen organizations of a miscellaneous nature, all of which are connected with the State Board. The secretary of the Board believes this communion of interests and unity of purpose is in a very great measure responsible for the general prosperity of its agricultural population. Such a comprehensive method cannot but leave its impress on an agricultural community, developing both a better social condition and a consequent high standard of living. The field of association is constantly widening in its usefulness, and their need is becoming more fully demonstrated throughout the country. GEORGE E. CHADSEY.

*District of Columbia.*

## Bermuda Grass from Seed.

If seed is used, the land should be thoroughly prepared as for other grass seed, having the surface thoroughly pulverized. Draw a smoothing harrow over the surface, leaving the whole surface corrugated with small furrows. Sow the seed, after danger of late spring frost is over, at the rate of five pounds of seed to the acre and brush in very lightly, or better, press in with a heavy roller. J. S. NEWMAN.

THE  
**Southern Planter**

PUBLISHED BY  
THE SOUTHERN PLANTER PUBLISHING COMPANY,  
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ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,  
Editor and General Manager.  
B. MORGAN SHEPHERD,  
BUSINESS MANAGER.

TERMS FOR ADVERTISING.  
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

ALWAYS GIVE THE NAME of the Post-Office to which you prefer to send. Your name cannot be found on our books unless this is done.

SUBSCRIBERS failing to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

THE DATE ON YOUR LABEL shows to what time your subscription is paid.

NO ANONYMOUS communications or enquiries will receive attention.

Address— THE SOUTHERN PLANTER,  
RICHMOND, VA.

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PUBLISHER'S NOTES.

TO ADVERTISERS.

All advertisements and matter pertaining to advertising must reach us by the 25th of each month. Please bear this in mind.

SPECIAL OFFER.

For 25 cents we will send the Southern Planter for the remainder of this year (May to December inclusive) to any one who is not now a subscriber. We make this liberal offer in order to induce a large number of farmers to send us at least a trial subscription. We will greatly appreciate it if our subscribers will bring this notice to the attention of their friends. They will thereby do us a favor and indirectly help themselves. Remember, this offer is for new subscribers only. We have another offer, which we make to those already on our list. Remittances can be sent in the most convenient form, coin, stamps or money order.

This month the Southern Planter appears in entirely new dress from cover to cover. We experimented last month with the type machines, and were so well pleased with the appearance of the journal that in future all composition will be machine set. We will, therefore, give our readers a brand new type in every issue. How do you like it?

WITH THE ADVERTISERS.

The Chicago Stump Machine Manufacturing Company resumes its advertising in this issue.

The Occoneechee Farm, Durham, N. C., desires to exchange a shorthorn bull to prevent in-breeding.

Breeders of live stock should look up the advertisement of "Stock" elsewhere in this issue.

W. B. Fleming, proprietor of the Bridle Creek Stock Farm, is advertising some choice Berkshires in this issue. Mr. Fleming is a new advertiser, and we bespeak the patronage of our readers for him.

The Gans-Rady Company, the well-known Richmond clothiers, have an ad-

WOOD'S SEEDS.

Plant Wood's  
Prize Head  
Late Flat  
Dutch Cabbage

FOR LATE FALL AND WINTER CROP,

Our customers pronounce it,

"The finest Cabbage for winter I have ever grown."

"The best late Cabbage I have ever planted."

"Makes the largest and most solid heads of any late Cabbage grown in this section."

Price of seed, pkt. 5c.; oz. 20c.; 1-4 lb. 50c.; lb. \$1.50, postage paid. See page 17 of Wood's Seed Book for 1903, for further information about Late Cabbage Seed. Wood's Seed Book mailed FREE on request.

T. W. WOOD & SONS,  
SEED GROWERS AND MERCHANTS,  
RICHMOND, VA.

Did you ever buy  
a SUIT direct  
from the MILL?

If you have all right, you will buy again. If you haven't you will be surprised to see how much you have been paying for dealers' profits. We send you FREE samples of Spring and Summer Suits with tape measure and self-measurement blank. Then send us your measurements and we will make you a suit for

**\$7.50 or \$10.00**

that would cost you \$18 to \$25 at your tailor's. All our suits are all wool, made complete in our own mill from the raw wool up. Every suit bears our label and is guaranteed for one year. Every suit has hand shrunk collars, hand made button holes, padded shoulders. We sell either tailor-made or ready-made clothing. Men's all wool and worsted trousers \$2, \$3.50 and \$5. Handsomely made and trimmed. We have the cheapest, strongest and best all-wool boys' clothing. Also cloth by yard or piece and ladies' suitings and skirts. Write to-day for samples, &c.

CLLEN ROCK WOOLEN MILLS.  
Somerville, N. J.

CRONK'S  
Improved  
Staple Puller



IS AT THE FRONT. Ask your dealer to show it. Three wire cutters, two hammers, two splicing clamps—all in one tool. A Staple Puller that will pull staples without your using will. A cutter that will reach wire when the button cutter will not. One day's use will save the cost of it. \$4.00, postage paid. CRONK & CARRIE MFG. CO., Elmira, N. Y.

vertisement on another page, to which we invite the attention of our readers.

The Armour Fertilizer Works are advertising blood meal in another column. This packing-house product is receiving the attention of farmers and feeders everywhere at present.

E. F. Schlichter starts the season's advertising with this number. The Philadelphia Silo is his speciality.

The Defender Spray Pump is offered our readers by J. F. Gaylord, Catskill, N. Y.

The West Disinfecting Company is advertising Chloro-Naphtoleum in this issue. Look up the advertisement and write to the company for pamphlets, prices, etc.

A new advertiser in this number is J. H. Boelte. He offers some choice Shorthorns.

The Leaksville Woolen Mills are with us again this season. Farmers can ship their wool direct to these mills, and have it made into any garment desired.

John P. Mays, a prominent Leghorn breeder, has an advertisement in another column.

Well-drilling outfits can be purchased from the Loomis Machine Company, Tiffin, Ohio. We invite the attention of our readers to a card of this company in another column.

Some finely-bred Aberdeen-Angus bulls are offered by Rear-Admiral B. F. Day.

Miniborya Farm offers some choice Berkshires, both sexes, this month.

We invite attention to the advertisement of the Messinger Manufacturing Company, Tatamy, Pa.

The Majestic Rotary Washer is offered by the Richmond Cedar Works. This is a splendid machine, with hoops electrically welded and sunken in the groove—a patent owned exclusively by them.

Hereford bulls and heifers are offered by the Stonehurst Fruit and Stock Farm.

Farms, orchards, and homes are for sale by J. W. Apperson & Brother.

Note the offering of Duntreath Farm this month.

#### HOW'S THIS?

We offer One Hundred Dollars' Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY, & Co., Props.,  
Toledo, O.

We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUX, Wholesale Druggists, Toledo, O.

WALDING, KINNAN & MARVIN,

Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all druggists. Testimonials free.

Hall's Family Pills are the best.

## The Practical Man

appreciates the saving in wear and tear, in friction, draft and labor gained by the simplicity of

### Plano Mowers

He knows the value of abolishing needless mechanism and applying power direct.

Plano's simple, automatic Clutch Shift, strong internal Drive Gear, easy-acting Vertical Lift Device and self-adjusting Draft Rod are the kind of Mower improvements that appeal to him. They are the outgrowth of experience and scientific ingenuity.

Our catalogue explains them and tells about some other interesting products of the Plano shops—Grain Binders, Headers, Reapers, Mowers, Rakes, Corn Binders, and Huskers and Shredders. The "Plano" is the Husker famed for its safe, swift and satisfactory work. Catalogue free.

#### PLANO DIVISION

International Harvester Co. of America  
CHICAGO, ILL.



We make from your  
Own Wool on Shares  
Or for Cash  
White or Gray  
Large or Small

SEND US YOUR WOOL  
WE PAY THE FREIGHT.  
WRITE FOR CATALOGUE.

Blankets, Coverlets  
Dress Goods, Skirts  
Underskirts, Flannels  
Cassimeres, Cheviots  
Jeans

Art Squares,  
Carpets

Stair Carpets  
Smyrna Rugs

Buggy Robes,  
Lounge Covers  
Yarns, Etc.

Write Us.

LEAKSVILLE WOOLEN MILLS,

Leaksville, N. C.

ORDER AND SEE THAT YOU GET

## Pasteur Black Leg Vaccine

If not obtainable from dealers, refuse substitutes and wire your order to us. Over 20,000,000 calves successfully vaccinated with the original Vaccine during the last eighteen years. Powder form and Cord form both for Single and Double treatment.

PASTEUR VACCINE COMPANY, Ltd.,  
CHICAGO - NEW YORK, - FT. WORTH - SAN FRANCISCO.

A GOOD SUGGESTION.

Editor The Southern Planter, Richmond, Va.:

Dear Sir,—I am a subscriber to your paper, which is a source of much valuable information for the up-to-date and progressive farmer.

Now, a word to my brother farmers: Let each and every reader of the Southern Planter try to persuade at least one neighbor to subscribe to the paper. In this way, we can double its present circulation, and thus enable the editor to make it even more interesting than now. We farmers are scattered over the country in such a way that we can speak almost every day of the Southern Planter to some neighbor or friend who is not familiar with it. This the editor cannot do, as there is only one of him, but there are many of us. Let's get a hustle on us and make it the greatest farm paper in the world.

A. H. D. KIXE.

Caswell County, N. C.

We certainly very greatly appreciate the above letter from our correspondent. He states our position exactly. We want every farmer in the South to become a reader of the Southern Planter. We know we can help them in their farming operations. Look up the special offer we make in this issue to new subscribers. We appreciate the support of every one of our friends, and we endeavor to make our journal a credit to our section, as well as to ourselves as publishers.—S. P. Pub. Co.

PURIFIED MILK.

"Purified Milk" is the title of a little pamphlet from the Virginia Cattle Food Company, Danville, Va. This company manufactures Mrs. Lea's Milk and Butter Purifier, which is advertised in another column.

The pamphlet referred to contains splendid testimonials from prominent physicians and dairymen, who have used this preparation in their herds.

The McCormick Division of the International Harvester Company sends us some unique advertising novelties in the shape of barometers. This barometer consists of a little girl wearing a dress, which changes color according to the weather. They also send us some useful memorandum books.

THE HILL-TOP STOCK FARM.

We invite the attention of our readers to the advertisement of the Hill-Top Stock Farm, Staunton, Va., of which Colonel S. Brown Allen is now the proprietor. This farm is well known to numbers of our readers who have purchased stock there for the past number of years.

Berkshire hogs and Southdown sheep are the offering this month. Look up the advertisement elsewhere.

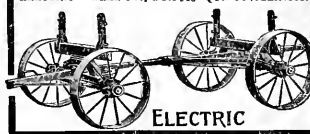
Hollybrook Farm offers eggs from its splendid strains of pure-breeds.

Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our

ELECTRIC STEEL WHEELS

have given a new lease of life to thousands of old wagons. They can be had in any desired height and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel housis, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalogue describing the uses of these wheels and wagon set free. Write for it. ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.



ELECTRIC

WE'LL PAY THE FREIGHT

and send a Buggy Wheel, Steel Tire on, \$7.25; With Rubber Tire, \$15.00. 1 mlg. wheels 2 1/2 to 4 1/2. (Send Top Buggies, \$25.75; Harness, \$3.00.) Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. W. V. BOON, Clatskanie, Or.

The WEBER M. H. P. Gasoline Engines for running grinders, shredders, cutters, threshers, etc. Free catalogue gives all sizes. Weber Gas and Gasoline Engine Co., Box 201, Kansas City, Mo.

FLOWING WATER.

A constant stream in your house, barn or garden without running expense by using the



HYDRAULIC ENGINE. It never stops. Requires no attention. Sold on 30 Days Trial. Send for free book. RIFE ENGINE CO., 126 Liberty St., New York.

Defender Sprayer

All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainer. Catalogue of Pumps and Treatise on Spraying free. AGENTS WANTED. J. F. Gaylord, Box 22, Catskill, N. Y.

STEEL KING CULTIVATOR

with 5 reversible points and hillers. The best tool of its kind in the market. Get our catalogue of Separators and Powers for 2 and 3 horses, level or even



Free catalogue on application. tread. Sweep Powers, Corn Shellers, Feed Mills, Steel and Plank Rollers, Mowers, Rakes, Corn Planters, Saws, Engines, 2 to 25 H. P., mounted and stationary. The Messenger Mfg. Co., Talamy, Pa.

Write for Catalog Today \$40 SPLIT HICKORY WINNER TOP BUGGY

Made of selected second growth split hickory throughout, handsome and durable. This is a thoroughly high-grade vehicle at a low price and has heel braces on shafts, paeel carpets, leather quarter top, solid panel spring back, open bottom spring cushion, boot on back of body, high leather dash, storm apron, side curtains, oil and lead paint (choice of colors), open hearth oil-tempered springs, Norway iron clips, bolts and forgings and a hundred other points of merit. Guaranteed for two years.

SENT ON 30 DAYS' FREE TRIAL. Hitch up to it and use it before you decide. It will pay anyone to borrow the money and pay interest on it to take advantage of the great savings contained in this buggy bargain. It is an investment for years. Secure our large catalogue, sent free if you write, describing this and numerous other vehicles and harnesses at bargain prices. We lead the world in quality, style and price. Address OHIO CARRIAGE MFG. CO., Station 41, Cincinnati, O.

GET A GOOD WIND MILL

Don't buy a poor wind mill. Don't pay a double price. Send direct to our factory for catalogue of the

Freeman Steel Wind Mills

and four post angle steel towers. A complete line of pumping and power mills of the highest grade at extremely low prices. You can save you money on a good article.

S. Freeman & Sons Mfg. Co. 110 Hamilton St., Racine, Wis. A complete line of Feed and Ensilage Cutters, Corn Shellers, Wood Saws, etc., at low prices

Corn Planting

must be well and carefully done, as the future crop depends on it. For all purposes, the best soil, on all kinds of ground nothing equals the



SPANGLER CORN PLANTER. It saves time, labor, money and insures the crop. You know when it is working, you can see the corn on its way to the ground, alike with or without fertilizer attachment. New device for sowing peas, beans, onions, etc. It also makes the famous Spangler Low-Down Grain and Fertilizer Drill. Write for catalogue and price SPANGLER MANUFACTURING CO., 5010 2nd St., York, Pa.

WROUGHT IRON PIPE


Good condition, used short time only; new threads and couplings; for steam, gas or water; sizes from 2 1/2 to 12 inches. Our price per foot on 3/4 inch is \$2; on 1 inch \$2.50. Write for free catalogue No. 166 CHICAGO HOUSE WRECKING CO., W. 25th and Iron Sts., CHICAGO.

NO HUMBUG. Three in One.

Grain & Stock Market and Calf Indicator. Stops sales and makes different markets. Extracts News. Price \$1.50. Send \$1 for trial. If useful, send balance. Write for catalogue and price. FARMER BRIGHTON, FAIRFIELD, IOWA.

Mention the Southern Planter in writing.


**YOUR GREAT GRANDFATHER USED**



**DEERING HARVESTER**

In the old days of the first harvester "DEERING" was a name to conjure with.


**YOUR GRANDFATHER USED**



**DEERING BINDER**

When the wood-frame binder came into use "DEERING" meant the best your grandfather could get


**YOUR FATHER USED**



**DEERING BINDER**

When the first steel-frame binder appeared "DEERING" was the name it bore. It was a general favorite.

**YOU COULDN'T DO BETTER THAN USE A**



**DEERING BINDER**

Now as then, "DEERING" stands for excellence. Deering Division. International Harvester Co. of America, Chicago.

MARK YOUR STOCK.

.....USE THE.....

**KENTUCKY ALUMINUM EAR LABEL**

Made by F. H. JACKSON & Co., Winchester, Ky. Write to them for free samples.

**SPLIT HICKORY BUGGIES.**

The Split Hickory line of vehicles is wholly only direct to the user at the wholesale price, not being on sale at any store, nor is it handled by any jobber or dealer.

The Ohio Carriage Manufacturing Company, Station 41, Cincinnati, Ohio, sole makers of Split Hickory vehicles, is a highly reputable firm, with a record of years of honesty and success as makers and sellers of high-class vehicles at moderate prices. Their offer to sell their jobs on thirty days' free trial is bona fide and liberal. It enables the intending purchaser to see and try just what he intends to buy. A postal card or letter addressed to them at Cincinnati will secure their valuable new catalogue, containing all the latest things on four wheels for people who like stylish, long-wearing, and well-built buggies and vehicles. Send for it before you forget it.

The Fanciers' Supply Company, whose advertisement appears elsewhere in this issue, is unique in that it is the only exclusive poultry supply house in the South. Their line embraces everything in foods, remedies, appliances, incubators, and brooders.

The business is under the management of Mr. Frank Jenkins, well known throughout the South as a judge and a fancier of life-long experience. The company issues a handsome catalogue, which is sent free for the asking, and should be in the hands of every poultryman.

**WILD TURKEYS WANTED.**

Dr. Cecil French is advertising in another column for all sorts of wild game, and especially wild turkeys.

Our readers should be on the lookout for wild turkey eggs, and also any flocks of these birds, which they may run across. Dr. French will pay \$5.00 apiece for them next fall.

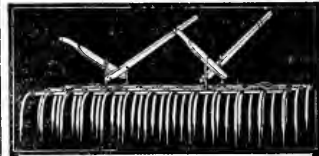
**BEST LINAMENT FOR ENLARGEMENTS OF ANY KIND.**

Carrie, Va., Jan. 22, 1903.

The Lawrence-Williams Co., Cleveland, O.:

I was induced one year ago by my family physician to try Gombault's Caustic Balsam. A fine mule that had an enlarged hock that all other linaments failed to help at all; after using two or three applications of Caustic Balsam, added \$75.00 to its value. Afterwards used it for another one with bone spavin that was so lame he would give out in one day's drive. Gave one month's rest, and the mule is well. So I am proud to say Gombault's Caustic Balsam is far the best linament I have found for enlargements of any kind.—J. C. Dixon.

"The difference between water and air is that air can be made wetter, but water cannot."—New Orleans Picayune.



**Announcement**


We have obtained the Court's decree against two additional manufacturers who have been infringing our patent. The rule of law is: "The maker, seller or user of an infringing device are all liable in damages to the owner of the patent infringed." The Jamesville Machine Co. and the Keystone Farm Machine Co. are the only firms licensed to use a *flat tooth* covered by our patent, and we finally warn sellers and users of all other makes. So admirably have the 60,000 "Hallock" Weeders done the work for which they were designed, that one maker after another sought to copy it. However, by the various Court's decisions, these makers are compelled to abandon the manufacture of a Weeder having flat teeth, and they are now experimenting with other shapes; but it is the flat tooth that made the "Hallock" Weeder famous, and in view of the manner in which our patent has been sustained, it is dangerous to use an infringing tooth. Write for descriptive circulars and prices. **HALLOCK WEEDER & CULTIVATOR CO., Box 839 York, Pa.**



**THE IMPROVED SCREW STUMP PULLER**  
Write for Prices.

Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

**STUMP PULLER**



Most Powerful, Handiest and Strongest Built in the World.

We make 4 kinds in size to suit all needs and of any desired strength. Saves time and does the work right. The operation of pulling stumps and trees by our methods is simple and easy. Send for Free Catalogue.

CHICAGO STEEL MACHINE MFG. CO.  
226 La Salle Street, Chicago, Ill.

**HERCULES STUMP PULLER**



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

**WE PAY \$26 A WEEK** And expenses to men with rigs to introduce Poultry Compound. **INTERNATIONAL M'FG. CO., Parsons, Kan.**



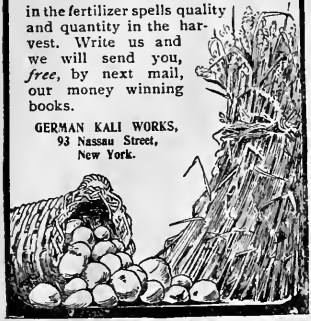
**A Golden Rule of Agriculture:**

Be good to your land and your crop will be good. Plenty of

**Potash**

in the fertilizer spells quality and quantity in the harvest. Write us and we will send you, free, by next mail, our money winning books.

GERMAN KALI WORKS,  
93 Nassau Street,  
New York.



**SAN JOSE SCALE** and other Insects can be controlled by using-

**GOOD'S CAUSTIC POTASH WHALE OIL SOAP, No. 3.**

It also prevents Curl Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide. 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50. Half barrels, 270 lbs., at 3 1/2c. per lb.; barrels, 425 lbs., at 3 1/2c. Large quantities, special rates. Send for circular.

JAMES GOOD,  
PHILADELPHIA, PA.

932-41 N. Front St.,

**Agricultural and Builders' LIME**

Send for Circulars and Price-List.

**FELLSWORTH LIME WORKS**

REEVES CATT, Agent  
Bodley, Augusta County, Va.

**STEEL ROOFING**

Strictly new, perfect, Semi-Hardened Steel sheets, 2 feet wide, 6 feet long. The best Roofing, Shingling or Tinning you can see. No experience necessary to lay it. An ordinary hammer or hatchet the only tools you need. We furnish nails free and paint roofing two sides. Come either flat, corrugated or "C" crimped.

**\$2.00 PER SQUARE.**

A square means 100 square feet. Write for Circulars. Also on Plans supplies of every kind. CHICAGO HOUSE TRUCKING CO., 77, 35th St. Iron Bldg., Chicago

**TEACH THE COMMANDMENTS.**

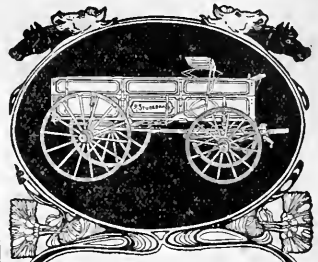
The Ten Commandments, if I may be allowed the expression, are that quantity of eternal righteousness of which human nature is capable, writs Rev. Dr. H. Martyn Hart, dean of St. Johns' Cathedral, Denver, Col. There was one man who kept them intact, one perfect man, and only one. But, inasmuch as Jesus of Nazareth did keep them, it is proof that they can be kept by human nature. That these Ten Commandments were spoken by God and were not the emanation of the mind of Moses is plain enough. We have some intimation of the caibter of the ancient Egyptian mind and of their notions of morality. The outcome of the Ten Commandments from that source is impossible. The Jews were, and had been for two centuries, laborers, ground down in slavery. Moses could not have gained such a notion of righteousness from that source. Then, how did this man, without assistance from his environment, suddenly produce a code of laws which the highest intellectual capability of our race has never approached, much less equalled?

The Ten Commandments are the only invariable moral standard the world has ever possessed, and those men whose characters have most closely reached that standard have been the best men, the men who have been most honored, who have had the best influence on their generation, and whose memories the world has treasured. What ordinary man can even mention ten men who lived in the different centuries after Christ other than 'those the world has called "saints"?' And the saints are the men who ruled their lives by the Ten Commandments. "Wisdom," said the wisest man who ever lived—"wisdom is the principal thing," and everybody knows that the ancient writer wrote truth when he said: "The fear of the Lord is the beginning of wisdom." When that man whom God raised up to try to the fullest every scheme human nature has proposed for the securing of happiness reached the end of his career, having travelled every road to its farthest end, and declared of each one: "It is vanity; all, all is vanity," Solomon bequeathed to his race the result of his vast experience. Let us hear the conclusion of the whole matter. He wrote: "Fear God and keep his commandments, for this is the whole duty of man."

The Ten Commandments are the only rules we possess for the eductiaon of the heart—the man.

And inasmuch as it is the heart which governs the man, and not the head, the Ten Commandments are the most important implements of education we possess.

The Ten Commandments are the rules of morality. There is not a breath of ecclesiasticism or sectarianism in the Ten Commandments. Let the Ten Commandments be incorporated in the regular school curriculum. They carry with them a subtle feeling



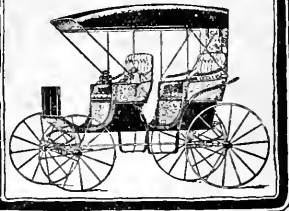
**No Favors.**

Impartial Time bestows none in passing on vehicles. Each is judged by its fitness and the service rendered. It is through more than half a century's duty that

**Studebaker Vehicles and Harness**

have acquired the good opinion of all users. The verdict is that they are staid, staunch, dependable goods, that give full value everywhere and always. There's variety and fitness for all service, good taste, style, and above all, **Honesty in Make and Material.** You are entitled to these things for your money. The place where you are sure of getting them is the Studebaker local dealer. Catalogue and particulars sent direct on request.

**Studebaker Bros. Mfg. Co., SOUTH BEND, IND.**



**WELL DRILLING MACHINES**

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

**Loomis Machine Co., Tiffin, Ohio.**

First check for \$20.00 will get a

**Sharples Safety Hand Separator,**  
350 lb capacity. Does good work.

W. B. GATES,  
Rice Depot, Va.

**"Feeds and Feeding"**

Prof. Henry's Great Book for Farmers and Stockmen.  
Delivered anywhere for \$2.00  
With the SOUTHERN PLANTER, 2.25

**FRAZER**

**Axle Grease** Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.



**MANLOVE SELF OPENING GATE**

Ornamental, economical, practical, high grade saver. Used by good, practical farmers everywhere. Satisfaction guaranteed.

Catalogue free  
MANLOVE GATE CO.  
272 HURON ST. CHICAGO, ILL.

### YOU OUGHT TO KNOW BETTER

About the B. B. Stays. They make a cheap fence with barb or coil wire. Easily handled as nails, self-locking, can't slip, and no machine necessary. They are made of heavy, hard wire, and won't slip down. Try a basketful to stiffen the old fencing (barb or woven wire), and you will use nothing else to build new fence. We sell coil wire, too.

THE B. B. FENCE CO.,  
14th and Clark Sts., Racine, Wis.



### WIRE FENCE.

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

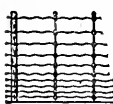
THE HARD STEEL WIRE FENCE CO.,  
Cuyahoga Falls, Ohio.



### Page Gate Frames

are solid round iron, welded by electricity. Gates have to stand more hanging than fence. Ours are powerfully braced. Mesh entirely woven by hand.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



### Genuine Spiral Spring Wire FENCES AND GATES

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO.  
Columbus, Ohio.

### Barbed & Smooth Wire

Write for our prices on 2 and 4 point Barbed Wire, painted and galvanized; also, 65,000 pounds

#### Smooth Galvanized Wire Shorts

Gauges, 10, 11, 12, 13 and 14; Prices from \$1.50 to \$1.75 per hundred. Write for Catalogue No. 109

CHICAGO IRON WRECKING CO.  
West 35th and Iron Sts., CHICAGO.



### LAWN FENCE

Many designs. Cheap on wood. 32 page Catalogue free. Special Prices to Dealers and Churches. Address COILED SPRING FENCE CO., Box Q., Winchester, Ind.



**FENCE! STRONGEST MADE.** Ball strong, Chicken light. Sold to the Farmer at Wholesale Prices. Pat. Wires used. Catalogue Free. COILED SPRING FENCE CO., Box 88, Winchester, Indiana, U. S. A.

of awe—"God spake these words"—and the fear that the Great King will hold us responsible for breaking them is a continual incentive to our careful keeping of them.

Mr. MacDonald, the specialist in the United States Bureau of Education, in his statement just presented to Congress, says, without question, that crime is steadily on the increase. This may be seen from these figures, published ten years ago (the data of the last census have not yet been issued, so that 1890 is as far as we can go):

In 1850 there was one criminal to every 3,442 of the population.

In 1860 there was one criminal to every 1,647 of the population.

In 1870 there was one criminal to every 1,021 of the population.

In 1880 there was one criminal to every 837 of the population.

In 1890 there was one criminal to every 715 of the population.

There were 8,834 murders in the United States last year; the year before the number was 7,852—an increase of 1,000. One death in every 112 is murder! There were 986 more suicides last year than the year before—\$231 is the fearful record of godless unrestraint. One death in 65 is either a murder or a suicide in the United States.

In the face of this alarming condition of the mortality of the nation, it must be confessed that the public education is a failure. It fails to do that very thing for which education is undertaken; it fails to train our youth to the yoke of discipline and obedience; it fails to create in them a principle of energy which enables them to resist temptation; it fails to induce them, of their own free will, to accept the law of labor and duty; it fails to make them patriotic citizens and God-fearing men and women.

I have little respect for the man who is only a destructive critic. Do not pull down even the hovel which shelters you, unless you have prepared a better house for your refuge. I therefore would venture to suggest a remedy to arrest this increasing torrent of anarchy and revolution.

I would stop the public education at about the sixth or seventh grade. I would take the money now expended on high schools and universities and spend it on lower education. The character is formed practically between the ages of seven and fourteen years.

I would supply a teacher to every twelve children. I would make those children, by almost individual attention, master, and thoroughly master, the groundwork of education. They should read aloud history, geography, etc., and plenty of it; they should write composition, commit to memory the best of literature.

I would publish a book of extracts from the Bible, which is the highest literature we possess. I would have the Ten Commandments often repeated and thoroughly taught, and some

## FARMS FOR SALE!

### Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

### No. 3.

Contains 430 acres; 350 acres under cultivation; 80 acres in good original oak and hickory timber. Situated in Loudoun county, four miles from railroad station; one mile from proposed electric railroad. Soil in fine state of cultivation; adapted to grain and grass. Land level and watered by streams, and a beautiful, bold spring in the yard. Good dwelling and outbuildings; two new stock barns. Greater part of farm in grass. Price now, \$20 per acre.

### No. 4.

Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

### No. 5.

Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

The above-described farms are situated in a neighborhood of refined citizens, with good labor plentiful, and will not be on the market long before being sold. For further information and a more detailed description of any one of them, write to

W. E. MILLER,  
Herndon, Va.

## To HOMESEEEKERS.

### "THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,  
G. F. A., Lands and Immigration,  
Roanoke, Va.

## HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.

## WE HAVE A LARGE LIST OF FRUIT, POULTRY and TRUCK FARMS

Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also

### GRAIN AND STOCK FARMS

From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.  
J. R. HOCKADAY, Manager.

## IF YOU WISH TO SELL OR BUY VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.

R. B. CHAFFIN & CO., Inc.

No. 1 N 10th St., Richmond, Va

## VIRGINIA FARMS, ORCHARDS and HOMES

In the best fruit and agricultural sections of the state. Virginia folder, lists of property and information free

J. W. APPERSON & BRO.,  
Yancey Mills, Va.

## JAMES RIVER FARM FOR SALE!

220 acres—120 in high state of cultivation, in Wheat, Grass and Corn; will produce 30 bushels of Wheat per acre. Land adapted to variety of trucking. Dwelling house, Barns and other outbuildings. One mile from regular steamboat wharf. For further information write to "JAMES RIVER."

Care of The Southern Planter.

## 'PIEDMONT' And all that it implies.

Good land, climate, markets, shipping facilities, churches, schools, good health, moderate prices, easy terms.

MACON & CO., Orange, Va.

## VIRGINIA FARMS

All prices and sizes. Free list on application.

WM. B. PIZZINI CO., RICHMOND, VA.

## Go South.

For full particulars write  
A. JEFFERS,  
Norfolk, Va.

## I Can Sell Your Farm

on matter where it is. Send description, state price and learn how. Est. '96. Highest references. Offices in 24 cities.  
W. M. Ostrander, 1835 N. A. Bldg., Philadelphia

text-book provided for the explanation of their principles.

By this plan a boy or girl of fifteen or sixteen would leave the public care thoroughly and accurately instructed in the groundwork of education, and, which is of far more importance, with habits of careful observation, accurate expression, and economy of time well established, and—above all—with the law of labor, not play, stamped upon the character.

Every civilization which has practiced immorality has decayed and finally disappeared. And this great country is not beyond the reach of a universal law. This country is rapidly deteriorating in its moral fiber, and the material decline will inevitably follow; and, unless our citizens arise and grapple this demon of irresponsibility and immorality by reorganizing the public education, even this land of vast opportunity, rapidly becoming the land of license, will fall from her majestic height into an unimaginable chaos of social disaster.

## PRIZES FOR AGRICULTURAL STUDENTS, NORTH CAROLINA A. AND M. COLLEGE.

The Vermont Farm Machine Company, of Bellows Falls, Vt., offers a prize of their No. 7 U. S. Separator for the student preparing the best essay on "The Making of a Dairy Farm." The value of this prize is \$100.

P. M. Sharples, West Chester, offers a prize of one-half the list price of the separator to the student preparing the best essay on the subject, "The Middle South as a Dairy Section." The value of this prize is from \$50 to \$250.

The Caraleigh Fertilizers an i Phosphate Company, Raleigh, offers a prize of a ton of high-grade fertilizer to the student preparing the best essay on "Soil Fertilization." The value of this prize is \$35.

Mr. Grimes Cowper, Raleigh, offers a prize of a pure-bred registered Jersey bull to the student preparing the best essay on "The Conformation of the Dairy Sire and Cow." The value of this prize is \$50.

The McMillan Company, of New York, offers a prize of a set of books, "Rural Science," complete, to the student preparing the best essay on "The Farmer and His Library." The value of this prize is \$25.

Charles Scribner's Sons, New York, offers a prize of a set of books on Agriculture to the student preparing the best essay on the subject, "The Farmer Should be a Student Always." The value of this prize is \$5.

The Zenner Disinfectant Company, Detroit, Mich., offers a silver medal to the student making the best report on live stock exhibit at the State Fair. The value of this medal is \$25.

The North Carolina State Fair Association offers a prize of \$5 to the student preparing the best essay on the "Live-Stock Exhibit at the State Fair."

## ELMWOOD NURSERIES.

## ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 10'0 for 2 mos. for BARR'S, PALMETTO, CONOVER.

## APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

## Splendid Assortment of Ornamental, Shade and Fruit Trees.

EGGS from B. P. Rocks, Light Brahmas, Brown Leghorns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hollisboro, Va.

## Wood's Farm Seeds.

## Cow Peas and Soja Beans

Two of the most important crops for farmers everywhere. Write for leaflets entitled "Soja Beans vs. Corn" and "Cow Peas—The Clover of the South," giving special information about these crops. We carry large stocks of all SEASONABLE FARM SEEDS, Seed Corn, Millet, Sorghums, Teosinte, Late Seed Potatoes, Crimson Clover, Buckwheat, etc.

Wood's Seed Book and Special Circulars giving prices and seasonal information, mailed free.

T. W. Wood & Sons, Seedsmen,  
RICHMOND, - VIRGINIA.

## VIRGINIA FARMS

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## HONOR TO WHOM HONOR IS DUE. (Mary Washington.)

Whilst the whole civilized world is throwing up its cap (as it were) and cheering for Marconi, there is no fact in history better authenticated than that the original inventor of wireless telegraphy was Dr. Mahlon Loomis, whom we may justly call a Virginian, for, though he was born in what is now called West Virginia, it formed at that time (1826) a part of the "Old Dominion." Fairfax county claims Dr. Loomis as one of her citizens, on the strength of his having spent the greater part of his life there, his parents having carried him to that county when he was only ten years old. It is not a matter of mere tradition, but of record, that in July, 1872, Dr. Loomis obtained a patent for his wonderful invention, but, as usual with men of genius, he had to encounter the sneers, incredulity, and ridicule of his contemporaries, with a few honorable exceptions. The following winter, he tried to get the recognition of government for his invention, and accordingly on the 16th of January, 1873, the United States Senate passed a bill incorporating the Loomis Aerial Telegraph Company, and the act was signed by President Grant on the 21st of January.

The whole transaction had been consigned to oblivion until lately, when it was recalled to recollection by Senator Hoar's introducing a resolution that Congress should extend a vote of thanks to Marconi for his invention of wireless telegraphy. On reading of this, Mr. E. W. Whitaker (who had been Loomis's attorney when his bill was passed, and who had assisted him in getting a patent) wrote to Senator Elkins, of West Virginia, calling his attention to the fact that wireless telegraphy had been invented by a man from his State thirty years before, "but that a foreigner had taken and perfected the ideas and invention of Dr. Loomis, who had died poor, because his countrymen had failed to recognize his genius." I am not aware, however, if any proof exists that Marconi appropriated Loomis's idea, or even knew of it as such. It is more probably one of those coincidences (so numerous in the annals of the world) in which the same idea dawns almost simultaneously on persons living widely apart and having no communication with each other.

The records amply verify Mr. Whitaker's assertions about Dr. Loomis's invention. It appears from the debates held on the subject that the bill was warmly championed by Senator Anthony, of Rhode Island, but most of the other senators were disposed to laugh at it, and treat it as a freak. Even Senator Thurman, although he gave the bill his support, showed something of this spirit. "Now," said he, "I want to perfect this measure as well as I can. The promoter of it has discovered some new mode of telegraphy, which he assures me will enable him to

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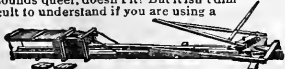
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telegraph all around the world without any wires, cables, or anything of that kind. I have not the least objection to his doing it, provided so great a feat can be accomplished."

One section of his bill provided that "the business and objects of said corporation shall be to develop and utilize the principle of and powers of natural electricity to be used in telegraphing, generating heat, light and motive power, and otherwise make and operate any machinery run by electricity for any purpose."

Finally, the bill passed, more as a compliment to Senator Anthony than anything else, and because it did not commit the government to anything, or involve any appropriation. But I can not see that the passage of this bill effected anything, except to place on record the fact that Loomis was the original inventor of wireless telegraphy. It left him still without adequate means to put his great invention into practice, and though he used his own means unsparingly for the purpose, he was only able to demonstrate on a very small scale the feasibility of his plan. He succeeded in transmitting messages without wires between stations fourteen miles apart, these stations being on the spurs of the Blue Ridge mountains. He memorialized Congress for an appropriation of \$50,000 to enable him to carry out his invention, and the House of Representatives passed the bill, but it was defeated in the Senate, and thus, for want of this trivial sum (trivial in comparison with the matter at stake), one of the greatest inventions of modern times fell to the ground, instead of soaring triumphantly aloft, and the name of Loomis, instead of being proudly inscribed on the roll of fame, along with that of Morse and other great inventors, is known to only a very few of his countrymen.


His fate reminds me very much of that of Columbus, who, after all he had risked and endured in making the discovery of the new world, saw himself virtually pushed aside in favor of a later explorer, and the crown of laurels he so richly merited placed on the head of Amerigo Vespucci, in honor of whom the two continents of the new world were named, instead of their bearing the name of "Columbia," and the fact of Columbus' rival being an Italian renders the parallel yet more striking.

After sacrificing his health and means in the effort to secure recognition for his invention, Dr. Loomis died at the residence of his brother, at Terra Alta, West Virginia, in 1836, aged sixty, fully convinced that posterity would acknowledge the importance and utility of his invention.

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With its mechanical frame quite concealed beneath beautiful flowers and vari-colored foliage plants, the mammoth floral clock that may be seen at St. Louis by visitors to the Louisiana Purchase Exposition in 1904, will be by far the largest timepiece ever constructed.

The floral clock is immediately north of the Agricultural Building, and to the visitor appears to be made entirely from contributions from the floral world. The mechanism of the clock is buried and the huge dial, 100 feet in diameter, shows its face six inches above the ground. The dial, the hands, the minute hand being fifty feet long, and moving five feet at each move, and all the frames are so covered with flowers as to quite conceal any mechanical contrivances.

The numerals making the hour are fifteen feet in length, and are made of bright-colored colesus, a foliage plant that grows dense, and may be pruned with the gardener's shears and kept symmetrical without fear of impairing the growth of the plant.

In the circle surrounding the numerals are collections of twelve distinct plants, each collection being twenty-five feet long and twelve feet wide. Nature has ordained that each of these plants should open its blossom at a certain hour of the day, and the great floral clock shows how the laws of nature are as exact as the mechanical laws discovered by man. As the hands of the giant floral clock reach the numeral naming a certain hour the flowers in the great bed at the back of the hour so designated begin to open their buds and to exhale the perfume peculiar to the plant.

Still another mode of computing time will be shown by this immense recorder of time's flight, and this by the primitive hour-glass. On the south side of the dial, behind the numeral that denotes mid-day or midnight, is built a tower, twelve feet square and eighteen feet high. The tower is of wood, and, like most of the beautiful structures within the City of Knowledge, is covered with staff. The architecture is graceful and ornate. The top of the tower is surmounted with a mammoth hour-glass, made of the heaviest and clearest crystal, with the receptacles for holding the sand, each six feet in length and four feet in diameter, as the base. The hour-glass is so suspended that when the sand is spent the glass automatically reverses itself, and another hour is being told off.

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The entire centre of the face of the mammoth floral clock, a space inside the circle created by the numerals, and seventy feet in diameter, is composed of alternanthera, a foliage plant which is commonly known as "Joseph's Coat," because of its many colors. This plant grows low and exceedingly dense and mottled, and brightly-colored foliage completely covers the ground, but will never grow close enough to be touched by the hands as they pursue their never-ending course.

Encircling this immense bed of alternanthera, and separating it from the fifteen-foot floral numerals that mark the hour, is a narrow band of centaurea, another foliage plant, popularly known as "Dusty Miller." This species of plant, a beautiful silver in appearance, grows a trifle higher than the alternanthera. The band of "Dusty Miller," only eight inches wide, separates the seventy-foot circular bed of alternanthera from the twelve beds of the same plant that surrounds the space on the dial allotted to the large numerals.

The hands of the clock are made of a frame-work of steel, but wooden troughs filled with soil are provided, and in these troughs myrtle, ivy, and other creeping green plants grow luxuriantly and completely conceal from view everything but themselves.

The crowning glory of the floral clock is a group of twelve distinct plants that begin unfolding their petals with the morning-glory at the peep o' day, and as each hour is registered a new plant begins displaying its charms, while the bloom of the plant of an hour before falls and dies to be reincarnated twenty-four hours later. The circle surrounding the numerals is 300 feet in circumference, and the sections of hour flowers each occupy a space twenty-five feet long and eighteen feet deep. The sections are divided by narrow strips of foliage

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LIGHT BRAHMAS, \$1.50 per sitting.  
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M. B. Turkey Eggs, bred from 45-lb. tom, brilliant plumage, \$3.00 doz. B. P. Rock and Pekin Duck Eggs, \$1.00 per 20; \$1.00 per 100. Yearling Male Scotch Collie, trained, \$10.00; Pups, \$5.00.  
C. H. BENNETT, Godman, Va.

## EGGS FOR SALE

From purebred S. C. B. LEGHORNS.

\$1 per 15; \$5 per 100.

Mrs. B. D. CHANDLER, R. F. D., Charlottesville, Va.

## The Southside Manufacturing Co.,

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All Kinds of...

## Fruit and Vegetable Carriers...

Send for Catalogue and Prices.

NOW READY, A VALUABLE  
PAMPHLET,

### CULTIVATION AND STORING OF SWEET POTATOES.

This pamphlet, with necessary cuts, gives plain directions for constructing a Sweet Potato House that, in connection with important details, will easily keep sweet-potatoes in good condition until the new crop comes in, or longer.

Also some new, well-tested and valuable plans for bedding and growing sweet-potatoes. A. F. Funderburk, Dudley, S. C., in speaking of this pamphlet, says: "I would not take ten times its cost for it."

The pamphlets have been introduced into eighteen States and two Territories, and it is believed that the plans given will eventually, to a great extent, supersede the present mode of growing and storing sweet-potatoes.

The pamphlet also contains a number of my best agricultural articles. Price of pamphlet, postpaid, 50 cents.

I have a few copies of formula for constructing "A. Mothproof Bee Hives" that will be sent, as long as they last, without extra charge. Address

BRYAN TYSON, Carthage, N. C.

### 150 JACKS, JENNETS and Mules 150



Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell two Percheron Stallions at close figures.

BAKER'S JACK FARM.

Lawrence, Ind.

### FINE JACKS.

Mules are equal to GOLD DOLLARS, from "youth to old age." Several nice ones and 2 very fine Jennets for sale. Buy Jack now and get him ready for spring.

Write your wants to

L. L. THOMAS.

722 W. Campbell Ave., - Roanoke, Va.

**ANGORA GOATS** are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Chilly, Ky.

Mention the Southern Planter when corresponding with advertisers.

plants, and each section thus retains its individuality.

Surrounding the twelve groups of flowers that open their blossoms on the approach of the hour hand of the beautiful floral time register and completing the picture, is a circle of grass, six feet wide, and as smooth as velvet. The visitor may walk around the clock on a spacious granitoid promenade, but a chain encircles the six-foot award, and the dreaded sign, "Keep off the grass," is not in evidence.

The floral clock will be as attractive an exhibit at night as it is in day. Among the foliage of the hour numerals are 1,000 incandescent electric lamps, not visible during the day, but after nightfall, when the electric current is turned on, the myriads of lamps illuminate the entire exhibit, and make it as light as day, and more beautiful.

The floral clock is the exhibit of the Johnson Service Company, of Milwaukee.

### BLOOD MEAL.

Calves scour and die as the result of incomplete nutrition. Too little protein has been furnished in the food of the pregnant dam; hence the fetus is imperfectly developed. The milk of a dam so fed is similarly lacking in this most requisite ingredient. Armour & Co.'s dried blood meal, advertised elsewhere in this issue, serves to immediately balance the ration of cows and calves—of other females and their offspring—so that these evils do not occur. It is pure dried powdered blood of bullocks, and contains 87 per cent. of digestible protein, besides the other necessary and valuable constituents of fresh blood, so that starchy foods may be easily and cheaply balanced by the addition of small quantities of this important product of the packing-houses. Working animals are strengthened and invigorated; young growing animals fully nurtured, and sick animals restored to normal weight and health when fed dried blood meal as an adjunct to their other foods. It has a hundred other important uses. Many of these are set forth simply and truthfully in the booklet published by the Armour Fertilizer Works. Readers of the Southern Planter should procure a copy of this booklet, which will be sent free of charge. Blood meal will keep poultry healthy and make hens lay.

### LORD & THOMAS' NEWSPAPER DIRECTORY.

The 1903 edition of "The Pocket Directory of the American Press," recently issued by Lord & Thomas, Chicago, is of great value to all who are interested in the subject of newspaper or magazine advertising. In compact and convenient form, this little, neatly-bound, handsomely-printed volume, besides giving the claimed circulation of all papers in the United States and Canada, contains a vast amount of detailed information classified and arranged with admirable skill. It is invaluable to general advertisers.

### MARKET TOPPERS FOR SALE, LOW.



One thoroughbred Angus cow, unregistered coming 3 yrs., with heifer calf at foot.

Four three-fourths Angus heifers, two coming 3 yrs., two coming 4 yrs., bred to reg. Angus bull.

Four seven-eighths Angus heifers, coming 2 yrs., bred to reg. Angus bull.

Three seven-eighths Angus heifers, coming 1 yr.

Four one-half Angus heifers, coming 1 yr.

One bull calf, out of a thoroughbred Shorthorn cow, by reg. Angus bull.

One 9-month-old reg. Angus bull.

One 12-month-old reg. Angus heifer.

All of the above cattle are black and as well polled as a thoroughbred Angus.

One fine reg. Angus bull calf, 5 mos. old.

Address W. M. WATKINS & SON,

Cottage Valley Stock Farm,  
Randolph, Charlotte Co., Va.

## V. P. I. Farm Bulletin

Splendid ANGUS BULL for sale.  
1 year old in April.

We are now booking orders for  
DORSET RAM LAMBS. No more  
BERKSHIRE PIGS now.

D. O. NOURSE, Prof. of Agr.  
Blacksburg, Va.

### ABERDEEN-ANGUS BULLS FOR SALE.

1. My Herd Bull, ROCKBRIDGE ABAC-TOR, No. 40364, 3 yrs. old Dec. 2d last; \$400.

2. A Bull Calf, born Dec. 20th; sired by the above "Abactor"; dam, "Pride of Potomac"; No. 42607; \$100.

3. A Bull Calf, born Dec. 12th; sired by the above "Abactor"; dam, a thoroughbred Angus Cow bred by the late William A. Ruff. Pure breeding can be shown for this calf, but being out of an unrecorded dam he cannot be registered; \$50.

None of these will be sold until October, and should the calves at that time not prove to be good specimens of the bred they will be withdrawn from sale.

B. F. DAY, Glasgow, Va.

### MONTEBELLO HERD OF

## Aberdeen-Angus Cattle.

3 Reg. Bull Calves for sale. Ages, 8, 4 and 3 months:

1 Thoroughbred (not entitled to registration), male, 2 months old.

BERKSHIRE PIGS of Biltmore Strain.

L. H. GRAY, LOCK BOX 56, ORANGE, VA.



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OFFERS FOR SALE SOME CHOICE  
**JERSEY and GUERNSEY CATTLE,**  
**BERKSHIRE SWINE, WHITE**  
**WYANDOTTES, BARRED PLY-**  
**MOUTH ROCKS and WHITE**  
**LEGHORNS.**

The cattle offered consist of Young Cows, Yearling Heifers, Heifer and Bull Calves and Bulls old enough for service, Berkshires of all ages and both sexes. The poultry is all fine breeding stock and healthy.

Meadowvale Farm has won in the past three years over 600 First and Special Prizes at the Leading Fairs and Expositions, including New York, Boston, Philadelphia, Hagerstown, Pan-American and Charleston. For Description, Pedigree and Prices, address

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### Swift Creak Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.

**JERSEY MILK AND HEIFERS.**

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. **POLAND CHINA PIGS,** \$5 each. Send check and get what you want.

**I. P. BRASWELL, Prop., Battleboro, N. C.**

## FOR SALE

Reg. **AYRSHIRE BULL,** 2 years old in July, \$50.  
 15 Fresh **MILK COWS,** sloper or the lot.  
 75 Fine **NATIVE EWES,** with High-Grade Dorset Lambs at side. Choice, not less than \$10, or \$8 for the flock.

Will have for sale five or six Selected-Grade Dorset Buck Lambs and several Registered Dorset Buck Lambs—all from one of the Finest Registered Dorset Bucks in the country. **Geo. R. S. CONWELL, Irvine, Va.**

## ANGUS BULL CALVES

Registered and unrecorded. Stock first-class and breeding the best.

## SHROPSHIRE SHEEP

First-class Yearling Rams, and Ewes of all ages. Several **FINE FARMS** for sale. **WARREN RICE, - Winchester, Va.**

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## Large ENGLISH BERKSHIRES

## B. P. ROCKS FOWLS,

Eggs from same, \$1 per 15.

**J. T. OLIVER, Allen's Level, Va.**

## FOR SALE.

**Large English Berkshire Hogs,**  
**Barred Plymouth Rock Chickens**

**BEN. BOLT, 60747, 430 lbs.** as a yearling at head of herd. **REGGINS IN SEASON.**

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"**WHITE MINORCAS.**" As layers unsurpassed. Catalogue explainer fully. Eggs shipped anywhere with good results. They will please you. **F. S. BULLINGTON, Box P, Richmond, Va.**

## FORESTRY PROFITABLE IN THE SOUTH.

The University of the South, at Sewanee Has Found It So.

What Can Be Done When Forestry Is Practiced With Lumbering—High Profits and a Better Forest the Results.

The direct and immediate advantages of careful lumbering, when combined with the practice of forestry, have seldom been so forcibly shown as in the case of the University of the South, at Sewanee, Tenn., whose timberlands have been managed since 1900 under the direction of the Bureau of Forestry.

Although \$3,000 for all of its timber was considered a fair offer by the University in 1899, the Bureau, by its plan of management, has already secured a net profit for the University of \$3,200. Four more years of lumbering remain to be done, and for three years at least there is an assured annual profit of \$1,500. In a word, timber formerly valued at \$3,000 will have been made to yield a profit of over \$7,000.

Sewanee is on the top of a spur of the Cumberland Plateau, and is a noted summer resort. Every summer when the University opens, hundreds of persons from all over the South take cottages in the town to enjoy for the season the fine climate and the beauties of the woodland scenery. The work of the Bureau of Forestry is thus brought to the attention of a large number of people, many of them owners of Southern timberlands, who see for themselves the great practical advantages of forestry and careful lumbering in the surprisingly large profits and improved appearance of the forest.

A detailed account of how the results in the Sewanee forest have been achieved has just been published by the Bureau of Forestry in Bulletin 39, entitled, "Conservative Lumbering at Sewanee," by John Foley. The bulletin does not furnish such specific instructions for the management of timberlands like those at Sewanee that they can be applied to them without expert assistance. It illustrates, however, what may be done with such timberlands; and especially does it emphasize that lumbering and forestry may be practiced in the South, as elsewhere, with profit.

### THE POINT OF VIEW.

"Life, however short, is made still shorter by waste of time."—Johnson.

Although these words were uttered by the great scholar and philosopher more than two hundred years ago, long before the invention of the reaper, they come down to us freighted with the same meaning they had when first spoken, but from the modern point of view they perhaps have greater significance. They mean more now, because

## SHORTHORN BULL CALVES 3 to 10 mos. old FOR SALE.

Close descendants of the World's Fair greatest winners in 1893, and also up to the present time. **SPECIAL OFFER**—A 1-year old **Roan Bull Calf** at \$75 if taken soon.

**Poland-China** Pigs of the best and most fashionable breeding. Spring Pigs now ready. Pedigree furnished with all stock sold. Come or write.

**WM. T. THRASHER, Springwood, Va.**

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## Thoroughbred Horses

**AND SHORTHORN CATTLE,**  
**Pure Southdown Sheep**  
**and Berkshire Pigs.**

FOR SALE. **R. J. HANCOCK & SON,**  
**CHARLOTTESVILLE, VA.**



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**Scotch-Topped**  
**Shorthorns**

Herd Headed by Governor Tyler, 1858-48. Young Bulls for sale. Inspection and correspondence invited.

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FOR SALE.

The Red and White Bull Calf **Westover 138579;** Roan Cow **Dina,** 4 years old, out of Red Jacket; also 10 months old Bull, to be registered if desired. Inspection of stock invited. **J. H. BOELTE, Redfield Stock Farm, News Ferry, Va.**

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## SHORTHORNS

FOR SALE.

Two Red Heifer Calves to be shipped about May 1st.

ADDRESS

**JAMES F. CLEMMER, - Summerdean, Va.**

## VIRGINIA VALLEY HERD

Of Registered **Shorthorn Cattle.** Choice young bull, cows and heifers bred Also **Poland-China** Hogs and **Barred Plymouth Rock** Chickens.

PRICES REASONABLE.

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WE WILL EXCHANGE A—

### Reg. SHORTHORN

(Durham) Bull, 2 years old, well bred, for bull of same breed to avoid inbreeding. We refer to former owner, Mr. H. L. Owen, of Lexington, Va. Address,

**OCONEECHEE FARM, DUSHAM, N. C.**

WANTED—Pair Pure Bred **PERCHERON** and **CLYDESDALE** Brood Mares; **DURO** Boar and Sows; one **SHROPSHIRE,** **SOUTH-DOWN** and **LINCOLN** Ram and five Ewes. Address **STOCK,** care Southern Planter, with prices and particulars.

**GOV'T REVOLVERS, GUNS, & SWORDS.** Military Goods, NEW and old, auctioned to F. Bannerman, 679 Bowery, N. Y. 15c. Catalogue mailed, 6c.

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Represents the

## Finest Blood Lines

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Stock for sale at all times.

Correspondence Solicited.  
Inspection Invited.

EDW. G. BUTLER, Annelfield Farms,  
Briggs, Clarke Co., Va.

## We Have Some Choice Young BERKSHIRES FOR.. SALE

...BOTH SEXES...

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MINIBORYA FARM. - BOX 901.  
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## ESSEX PIGS—FOR SALE.



Some fine Pigs, from Registered Stock, not mated, at \$10.00 per pair, crated F. O. B. 8 to 10 weeks old. Your orders solicited.

L. G. JONES, Bethania, N. C.

Registered P. Chinas Berkshire, C. Whites. Fine large strains. All ages, mated not akin, 8 week, pigs. Red sows, service hours, and Poultry. Write for prices and free circular. P. F. HAMILTON, Cochranville, Chester Co., Pa.



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BULL CALVES FOR SALE.

Registered. Also DEVONS, all ages.

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WANTED—A thoroughbred

## RED POLL BULL

Calif. 4 to 8 months old. Correspondence solicited. J. D. JOHNSON, Garland, N. C.

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By prize-winning imported sires and trained dams. Eligible. Fit for bench, ranch or farm. In care and training of the Collie for all practical uses. Price, 50c. Copy of book free to purchaser of Collie.

Stock Farm, "MAPLEMONT," Albany, Vermont

time is worth more. On the farm today one man and a good binder will accomplish more in a day than a dozen men could do in a week in the olden time. Thus time has come to be a very important factor in modern farm work, and it behooves the farmer to study his best interests from every point of view and do the right thing at the right time. McCormick machines are great time-savers—they enable the farmer to think and plan and look at things from the correct point of view.

## SUCCESSFUL RIDING CULTIVATORS.

The only way to find out whether a farm implement will work or not is to try it in the field under all the various conditions of soil, climate, crops and seasons that farmers in various parts of the country have to contend with. This is the test that has been applied during many years to the line of Iron Age Riding Cultivators, and they have come out winners in the trial. To meet various conditions, they are made with pivot wheels, with fixed wheels, or with a combination of the two, and they are adaptable to all conditions of soil or crops, hills or plains. Especially desirable for cultivating crops on hillsides or for work among crooked rows is the Iron Age Pivot Wheel Cultivator, a movement of the foot carrying the whole implement, with its gangs of teeth, to right or left as desired.



The cut shows one of the popular Iron Age Riding Cultivators having pivot wheels; spring pressure lock-down, to prevent the gangs rising and slipping over hard places; and lever gang adjuster, which gives the operator immediate control over the width of his gangs.

Among the attachments for these cultivators are the fallow-tooth attachment, for work in orchards and for preparing land in the fall for sowing grain; the plows for turning earth away from the plant, hilling up, and marking rows; spring hoes, adjustable in every way; and discs, for working crops and for exterminating wire-grass, coffee, etc.

Prices and full descriptions can be obtained from the Bateman M'fg Co., Box 167, Grenloch, N. J.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Mention the Southern Planter in writing.

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## SHEEP, GOATS, HEREFORD CATTLE

Am open to buy 25 to 50 Angora Goats, 25 to 100 Shropshire or Dorset Sheep, 1 Hereford Bull (yearling), 5 Hereford Heifers.

Cattle must be registered stock; Sheep and Goats registered or high grades.

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## Hereford Cattle.

A number of young HEREFORD Bulls and Heifers, not akin, at reasonable prices.

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8 Reg. HEREFORD BULLS

From 6 mos. to 3 yrs. old.

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From 6 to 18 mos. old. At reasonable prices.

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I am now offering my fine herd bull, ROY MAY, 5085; am also booking orders for Dorset ram lambs.

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A thoroughbred HOLSTEIN-FRESIAN BULL, one year old, eligible to registration. For prices, etc., address

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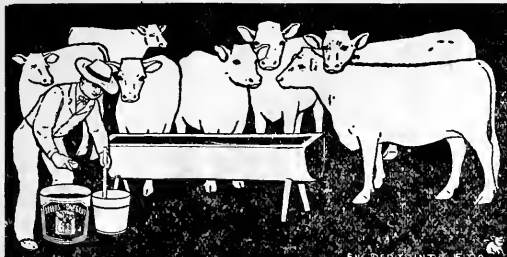
## Aryshires, Berkshires and Oxford-Downs.

Aryshire Calves of both sexes, Berkshire Pigs and Boar and 2 Oxford-Down Rams for sale. "MELROSE CASTLE FARM,"  
Enos H. Hess, Manager, Casanova, Va.

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POSITION by Practical Poultry man to plan and build a duck and poultry plant for market, for a man having location and capital. None other need answer. Salary expected until business is established. No 1 references given and same required. Address C. F. G.,  
Care SOUTHERN PLANTER.

Mention the Southern Planter in writing.



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 Gentlemen:—I have used "International Stock Food" for three years and can recommend it. I mixed it in skim milk for calves and they thrive as well as when fed new milk. It also prevents scours. Butchered one of my calves at six months that dressed 330 pounds. I would not feed a stock without using "International Stock Food."  
 Very truly,  
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 Dear Sirs:—I have used "International Stock Food" quite extensively. It is the best food I have ever used for calves or for fattening cattle or milk cows or calves. I do not hesitate to recommend it very strongly.  
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☞ We have thousands of smaller testimonials and will pay you \$1000 Cash to prove that they are not genuine and unsolicited. ☞

"INTERNATIONAL STOCK FOOD" ☞ 3 FEEDS FOR ONE CENT. ☞ Is Prepared from Roots, Herbs, Seeds and Barks and Won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fattening stock because it increases the appetite and Aids Digestion and Assimilation, so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fattening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Human System. You insist on eating medicinal ingredients with your own food at every meal. Satisfy a stomach lame and worm medicine, Peppermint is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these condiments promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary an addition to the regular feed of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. ☞ Your Money will be Promptly Refunded in Any case of failure. It will make your Calves or Pigs grow Amazingly and has the largest sale in the World for keeping them healthy. ☞ Beware of the many cheap and inferior imitations! No Chemist can separate all the Different powdered Roots, Herbs, Barks and Seeds that we use. Any One claiming to do so must be an ignorant or Falseful.

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 Very truly yours,  
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 Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish.  
 Respectfully,  
 GEO. W. NULL.

**A \$3000.00 STOCK BOOK FREE**

**IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.**

The Cover of this Book is a Beautiful Live Stock Picture ☞ Printed in Six Brilliant Colors. Size of the book is 6 1/2 by 9 1/2 inches. It cost \$1000 to have our Artists and Engravers make these Engravings. This Book contains a Finely Illustrated Veterinary Department that will save you Hundreds of Dollars. It describes common Diseases and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains Life Engravings of many very noted Animals, and also testimonials. The Editor of This Paper Will Tell You That You Ought to Have This Stock Book in Your Library for Reference.

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Largest Stock Food Factory in the World. Capital Paid in, \$1,000,000. We occupy 62,000 Feet of Floor Space.

**TEST 3 FEEDS FOR ONE CENT ENTIRELY AT OUR RISK**

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Are popular the world around. The tremendous amount of business being done by the Champion division of the International Harvester Company is well known. There are sixty branch houses located in the United States, devoted exclusively to the demonstration and sale of the Champion line.

This makes it possible for purchasers of these machines to examine them and see them demonstrated at some point near their home. These branches are in close communication with all selling agents throughout their territory, and it is a simple and easy matter for purchasers to secure repairs or special parts without sending to the home plant for them.

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**Berkshire Hogs and South-Down Sheep**

A SPECIALTY.

S. Brown Allen, who succeeds H. A. S. Hamilton & Co in the ownership and management of this celebrated Stock Farm, offers a few Berkshire Pigs that have been bred without regard to cost, and one and two years old, that cannot be excelled in this country. We have swept premiums on this stock over all competitors at Fairs in this and adjoining States



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S. BROWN ALLEN,  
 Staunton, Virginia,

(Successor to H. A. S. HAMILTON & Co )

"BRED-IN-THE-PURPLE."

**DUNTREATH BERKSHIRES.**

EXTRA CHOICE lot of Young Pigs for sale, all eligible to registry, and now ready for shipment. Many of these Pigs are sired by **BARON SYLMAR OF DUNTREATH.** NONE BETTER IN AMERICA.

**DUNTREATH STOCK FARM, Box 666, Richmond, Va.**

REFERENCE: American National Bank of Richmond.

Minneapolis, Minn., April 6, 1903.  
Editor of Southern Planter,  
Richmond, Va.:

Dear Sir,—Owing to the great rush of business, we have been compelled to put on a night crew and run our factory twenty-four hours per day. This week we have added ten more typewriters, and this gives us a force of 130 people, and our office is the largest in the entire Northwest.

Our sales for 1903 have been much larger than for the corresponding months of 1902, and our March sale was the largest since we have been established. We are pleased to report this condition, because it is absolute proof that "International Stock Food" and our other goods have superior merits, and that farmers and stockmen obtain paying results from their use.

Intelligent farmers will not use any preparation year after year if they are not satisfied that it is not a money-maker for them. Our largest trade comes from States where "International Stock Food" has been largest on sale.

Such facts as we give in this letter prove conclusively to any fair-minded man that "International Stock Food" is exactly as we represent it to be. Our object in writing you this letter is simply to give you more facts as to the tremendous growth of our business.

With best wishes, we are,  
Very truly yours,  
INTERNATIONAL STOCK FOOD CO.

#### BLACKLEG-INE.

The season is approaching when Blackleg is likely to break out among your stock, and therefore, the question arises as to the best way to avoid the usual loss from this troublesome disease. A vast number of stock-raisers in the blackleg districts can easily answer this question for themselves, and will use the Pasteur Vaccine Co.'s remedies, with which they have had such a large and favorable experience during the last eight years. The Pasteur Vaccine Co.'s vaccines, and particularly the form ready for use, called "Blacklegine," are by far the best and most favorably known. One of the most important facts in regard to "Blacklegine" is that it has not only proved to be the most effective preventive remedy for blackleg, but it is ready for use as supplied; each dose is separate, it costs but little, and the instrument for applying it, called a Blacklegine Outfit, only costs 50 cents. The Pasteur Vaccine Co. has offices in New York, Chicago, Fort Worth, and San Francisco, as well as several general agencies, and a vast number of local agencies, but if any difficulty is experienced in obtaining the Pasteur Co.'s remedies, they can always be ordered direct from one of their offices.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

**GET THE VERY BEST**



## Kentucky Cane Mills

**FOR OVER 40 YEARS** have been the recognized **STANDARD** in Cane Mill construction. They are imitated, of course, but they stand alone and supreme in these essential points:

**PERFECTION OF MECHANICAL DETAIL—STRENGTH IN EVERY POINT—SAVING IN REPAIRS—SIMPLICITY—COVERED GEAR CHANNELS IN MOTOR FLATE.—PATENT REVERSIBLE FEED GUIDE.—ENGAGED GEARINGS—DO MOST WORK WITH LEAST POWER.**

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**BARON ROSEBOY 57666** (The great Westertown Rose, son of the world-famous **GAY BLACKBIRD**) in service.

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On dam's side, Baron Roseboy traces direct to the Imp. Blackbird Bull, "BASUTO," said to be the best Blackbird Bull ever imported.

The females in the herd are "chips off the same block". Great bulls, great cows, mean great calves. Come and see them, or write

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Rockingham Co., 24 miles southwest of Danville, Va., on D. & W. Ry.

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Products are Good

FOR SALE

## Choice Bred A. J. C. G. Bull Calves

Write for descriptive circular. General Offices, 520 & 524 N. Calvert Street, Baltimore, Md.

## LARGE YORKSHIRE HOGS.

The Ideal Bacon Breed,  
The Pork-Packers Breed,  
The Most Prolific Breed,  
The Most Profitable Breed.

We have **four litters** of this popular breed, which will be ready for shipment in May. Bred from the best imported stock. We have never seen better pigs.

Send for circular and prices. Address—

**BOWMONT FARMS, Salem, Virginia.**

**POINTS ON CULTIVATION.**

The farmer who keeps abreast of the times—whose farm implements are up-to-date—is the successful one in the competition for greater production at less cost.

In this connection the farmer's attention is called to the new book of the Hallock Weeder and Cultivator Company, of York, Pa., manufacturers of the famous Hallock quadruple cultivator and weeder—the most practical and profitable machine ever invented for both weeding and cultivating all kinds of crops.

In this book is demonstrated the superiority of the flat-tooth cultivators over the round. In words so plain and illustrations so clear it proves beyond a doubt that the Hallock weeder and cultivator is the greatest labor and money-saving agricultural implement invented in recent years.

This very interesting and illustrated booklet, which the manufacturers will send free to any address, is chock full of valuable information.

**A REMINDER OF HOME.**

Mr. John F. Warwick, the American traveller and writer, states in a recent article that he had a severe attack of nostalgia or homesickness during his recent trip over the Trans-Siberian railway. He had travelled for days without seeing a familiar face or hearing a familiar tongue, and his spirits were at a low ebb. The train having stopped at a small water-tank station, with an unpronounceable name, Mr. Warwick stepped out of his car to get a breath of fresh air, and in the field at the side of the track he saw a sight that at once dispelled his homesick feeling. It was Deering Grain Binder, painted in the American national colors, and at the sight of this reminder of home and country, Warwick was himself again, and retained his restored good spirits for the balance of the journey.

**COCKSURE SCHOOLBOYS.**

Here are some samples of what the British schoolboy can do when he tries hard:

"John Wesley was a great sea captain. He beat the Dutch at Waterloo, and by degrees rose to be Duke of Wellington. He was buried near Nelson, in the Poets' corner at Westminster Abbey."

Asked to name six animals peculiar to the Arctic regions, a boy replied, "Three bears and three seals."

"The Sublime Porte is a very fine old wine."

"The possessive case is the case when somebody has got yours and won't give it to you."

"The plural of penny is twopence."  
"In the sentence, 'I saw the goat butt the man,' 'butt' is a conjunction, because it shows the connection between the goat and the man."

"Mushrooms always grow in damp places, and so they look like umbrellas."

**FROM EVERY POINT OF VIEW**

**LOOKED AT**

from every point of view, McCormick mowers will be found faultless in design, modern in construction and thorough in equipment, with the most practical features. These mowers are so perfectly balanced, so easily operated and do such smooth and even cutting that they instantly become the favorite of every man who buys one.

The McCormick book, "A MODEL MACHINE," tells all about Model mowers.

W. K. BACHE, General Agent for  
McCormick Machines, Richmond, VA.

**ANGORA GOATS**

**550 HEAD** of Registered and high-grade Angora Does and Kids for Sale.



Clean your land of brush and filth and double your money invested. I HAVE DONE IT. Come and see for yourself if not satisfied, I will pay your E. R. fare and expenses.

See Bulletin No. 27, Bureau Animal Industry, Department of Agriculture, for information about the Angora.

M. M. SUTHERLAND, Wytheville, Va.

**GOOD, GROWTHY POLAND-CHINAS and BERKSHIRES.**

THE KIND THAT GET BIG PIGS.

6 Weeks Old Pigs, \$5.00. 12 Weeks, \$8.00.

WHITE PLYMOUTH ROCK EGGS; \$1 per sitting of 15; Birds, \$1 each in lots of 3 or more.

WRITE YOUR WANTS. BYRD BROS. R. F. D. 3, Salisbury, N. C.

**GUARANTEED INCUBATORS.**

An incubator is purchased for a specific purpose—for hatching chicks. If it doesn't do that, or if it only hatches a small part of the eggs consigned to it, it is a failure, and its purchase is a waste of money.

There is a way now of buying incubators on trial. The Hawkeye Incubators are sold on thirty days' free trial, long enough to go through with one complete hatch and enable the purchaser to be sure he is getting what he wants. The Hawkeye Incubators and Brooders are all guaranteed, as it is the wish of their makers to have every customer satisfied. They consider that as their best advertisement.

The new Hawkeye Incubator catalogue is full of pictures and facts, and many letters from all over the Union attesting the excellent hatches these machines have made.

If any of our readers have not as yet received this catalogue, they can obtain one by writing the Hawkeye Incubator Co., Box 49, Newton, Iowa.

Littleton Female College is preparing for a great commencement the last week in May. Bishop A. Coke Smith will preach the annual sermon. Dr. C. F. Reid, of Nashville, Tenn., will deliver the missionary address, and Governor Aycock will deliver the literary address.

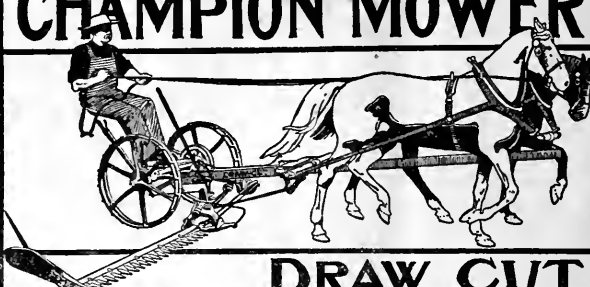
**CORN BREEDERS' ASSOCIATION.**

I would be glad if you would make note of the following item of news in the columns of your paper, so that it may pre-empt the ground for our people and give some publicity to the organization of the association referred to:

As a result of the efforts which have been put forth by the Experiment Station for two or three years, and followed up by the work of the State Department of Farmers' Institutes during the past winter in holding special Corn Institutes in different parts of the State, which were addressed by Professor Shamel, of Illinois University, there was organized recently in Frederick the Maryland State Corn Breeders' Association. The general objects and plan of the organization was modelled in the main after that of the Illinois Corn Breeders' Association, with such modifications as seemed necessary to meet the conditions prevailing in Maryland. The membership includes farmers in Frederick, Montgomery, Carroll, Harford and Prince George's counties. The following officers were elected: Columbus D. Kemp, of Frederick, president; Joseph T. Hoopes, Bynum, Harford county, vice-president; Charles C. Waters, Frederick, secretary-treasurer. These three members, with W. L. Amoss, of Beuson, Harford county, and G. A. T. Snouffer, Adamstown, Frederick county, constitute the Board of Directors of the association.

H. J. PATTERSON, Director.

# CHAMPION MOWER



## DRAW CUT

**DRAWING** the finger bar of a mower from a point ahead instead of pushing it from behind gives the wheels more traction and the machine more power. This is the reason for the great cutting power of the Champion, just as it was the reason for the great cutting power of the old rear cut mowers. The Champion is front cut, but it is also draw cut, and combines the cutting power and durability of the old rear cut mowers with the safety and convenience of the modern front cut. The Champion draws the finger bar entirely—it does not push it in the least, and in this important particular is not equalled by any other. The Champion has other valuable improvements, among them a simple and effective lining device for the finger bar, and a superb plowman having new and improved ball and socket connections both to the knife and to the fly wheel. No cramping or binding is possible with the Champion plowman, while provision is made for taking up wear and lost motion, preventing pounding and breakage. The fly wheel pin is at all times surrounded by oil, which cannot be thrown out and wasted by the revolution of the fly wheel, thus preventing heating and wear at this important and heretofore troublesome point on a mower. Write for catalog describing this wonderful modern mower, also Champion hay rakes and bladders. Handsome calendar free if requested.

**CHAMPION DIVISION, INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO.**

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Imported Sir John Bull, No. 3609—B. H. B.  
 Imported Oansfield Roland, No. 60528—B. H. B.  
 Imported Columbia, No. 60527—B. H. B.  
 Imported Royal Carlisle, No. 4841—B. H. B.

And that Immensely Princely Hog

**Uncle Sam, No. 7233** are the sires of my Spring and Summer offerings of pigs. Does this list of Royalty suit your fancy? They represent the most famous Berkshire breeders of England. Fancy stock, moderate price

**Hunting Dogs** and pups for sale. Setter pups, \$5.00 each.

**Short Horn** (Durham Cattle) for sale. Write for particulars.

**THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.**

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs. **WESS MON** has the only other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

**WALTER B. FLEMING,**

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.

**Chloro-Naphtholeum Dip**

A money-maker for the live stock owner, because it kills Lice, and cures Mange, Itch, Scabs, Contagious Abortion and other diseases that pull down the health and cause live stock losses. It saves money and makes money for the live stock owner.

A page of this paper couldn't tell the whole story. Better send for our free booklet, and tell us if you want it for cattle, Hogs, Sheep, Poultry or Horses.

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## COOPER SALE MAY 30

AT COOPERSBURG, PA.

### A PLEASED BUYER IS THE BEST ADVERTISEMENT.

The imported Jersey Cattle sold at our May, 1902, Auction Sale have given universal satisfaction. My most sanguine expectations have been more than realized. How could it be otherwise? Individually, they were strictly FIRST-CLASS.

BEST OF ALL, they were bred on both dam and sire's side from animals that have made the Island cattle so famous—the blood that wins at the churn and in the show-ring.

Catalogues ready for distribution April 20th. Owing to great cost publishing same, they will only be sent on application. Address

T. S. COOPER, "Linden Grove," Coopersburg, Pa.

P. S.—Would respectfully request parties who are in want of an extra fine bull calf, or a few fine heifer calves, that they send for a catalogue, which will give them full particulars, and if they are not able to attend the sale in person, that they send in their bids, and they will receive the same attention as if the buyer was a bidder himself. It is with pride that we refer to parties that have entrusted such orders to us. This will be a rare chance to get calves out of the very best cows the Island can furnish, and sired by prize-winning bulls, and they will not cost you more than others that have no breeding.—T. S. C.

## *BILTMORE FARMS, = Biltmore, N. C.*

### Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❀ ❀ ❀

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



### BILTMORE POULTRY YARDS.



**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

### Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO *BILTMORE FARMS, BILTMORE, N. C.*

## MAGAZINES.

Leading in interest, as well as order, in the May *Century* is Arthur Schneider's story of his sixteen months's close connection with the Sultan of Morocco. The American artist was the instructor and daily companion of the Sultan from November, 1900, to March, 1902, an intimacy never before permitted between an eastern despot and an American citizen. Mr. Schneider tells in the May number, following an introduction by Talcott Williams, of his arrival and reception in Morocco, his first meeting with, and impressions of, the Sultan, and the often laughable experiences with his odd pupil. There are plenty of illustrations, some of them being reproductions of the royal student's work.

Henry Loomis Nelson, one of the best equipped critics of public affairs in the United States, tells in the May *Century* of "The Hampered Executive." Mr. Nelson's article on "The Over-shadowing Senate" in the February *Century* called forth widespread comment, editors and public men declaring it suggestive, interesting and "a most trenchant arraignment of the growing despotism of the so-called 'upper chamber' of Congress." "It is difficult for the ordinary citizen to understand," writes Mr. Nelson of this important phase of our national life, "why the President cannot accomplish any desire or effect any purpose which he may feel or upon which he may determine." And from this text Mr. Nelson goes on to explain and define the probabilities and limitations of the American presidency.

Ray Stannard Baker's Great Northwest series this month takes up "The Conquest of the Forest" in what one critic calls his "crisp and picturesque way." The story of the Great Northwest forest, a Continent long, 200 miles wide, is as thrilling and fascinating as any tale of adventure, and Mr. Baker has been able to transfuse into a magazine article something of the spirit of the mighty woods. Other features of more than ordinary worth are: William T. Arnold's memories of his father, the younger Thomas Arnold, father also of Mrs. Humphrey Ward; the second installment of Herman Klein's modern musical celebrities, giving this month delightfully intimate glimpses of Adelina Patti; a discussion by Professor Edward L. Thorndike of Teachers' College, Columbia University, New York, of "The Careers of Scholarly Men in America"; Alice Katharine Fallows's "Athletics for College Girls"; Mrs. Field's estimate of Mme. Blanc, Th. Bentzon; a description, generously illustrated from Copley prints, of Sargent's "Redemption" in the Boston Public Library; another chapter of Lillie Hamilton French's "My Old Maid's Corner"; descriptions and pictures by Charles R. and Annis Hardcastle Knight of the Tasmanian wolf, and an account of of five hundred farmers'

## A Positive Certainty.

**WE** ask you to take nothing for granted. We say that we can supply the Spring Suit or Top-Coat with as much satisfaction to you as any custom tailor in this country. But there are none of the risks of trying a new tailor. Here are ours—ready for you to put on. You put them on—see exactly how they fit, how they look on YOU; that the pattern is becoming. The making and the details you investigate on the spot. The good opinion of first impression we guarantee will last as long as the suit or coat does.

It's no longer a matter of compulsion to go to the tailor. There's equal satisfaction right here, with economy of time and cost on our side.

But the Gans-Rady perfection mustn't be accepted as a precedent for all ready-for-wear clothing. There's as much difference in that as there is in custom tailors.

## Gans=Rady Company.

1005 Main St (Opposite P. O.) Richmond, Va.

We Have Some EXTRA CHOICE

## Berkshire Boar Pigs

READY FOR SHIPMENT, AND OTHERS  
SOON TO BE READY.

THEY ARE FINE, AND FROM PROLIFIC SOWS  
7, 9 AND 13 TO LITTER.

FOREST HOME FARM, = Purcellville, Va.

## HOLSTEINS THAT PAY.

Purchasers are offered selections from our herd, both male and female; our cows are of the leading strain, including De Kols, Pauline Pauls, Mechthildes, Hengervelds, Netherlands, Aggies, etc., etc. They are all well bred and milking from 40 to 65 lbs. per day. Herd headed by Ury ALWINA Count Paul De Kol and De Kol 29 Butter Boy 3rd No. 2.

THOS. FASSITT & SONS, Ury Stock Farm, Sylmar, Md.

## "THE OAKS" SHORTHORNS FOR SALE

2 Reg. Bull Calves; 2 Reg. Cows; 1 three-year-old Reg. Bull (immune) raised south of Petersburg, Va. All right in every particular.

B. B. BUCHANAN, Bedford City, Va.

When corresponding with our advertisers always mention the  
*Southern Planter*.



successful economic experiments in Iowa.

Of the fiction of the *May Century* perhaps most readers will turn first to Sara Jeanette Duncan's long short story, "The Pool in the Desert." The chapters of "The Yellow Van" continue in interest, and the Pa Gladden story of the month tells of "The Drought." Eden Phillpott's "Joseph" is quaintly humorous.

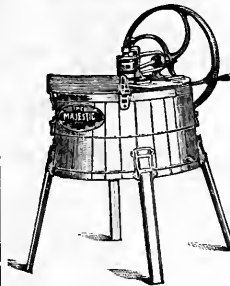
The dedication of the St. Louis world's fair is the occasion of a brilliant series of articles in the *May Review of Reviews* on the Louisiana Purchase and its results, the exposition in forecast and the city of St. Louis. The same number has an outline of the plans formed for the municipal exposition to be held at Dresden this summer, and the noteworthy features of several other European fairs and congresses are summarized in an article on the great gatherings of the summer and autumn at home and abroad. The character sketch of the month is by Mr. W. T. Stead, his subject being the Right Hon. George Wyndham, whose name has been immortalized by its connection with the Irish land bill introduced last month in the British Parliament. An illustrated article by Mr. F. N. Stacy describes the great ships for the Pacific trade being built at New London, Conn., for Mr. James J. Hill. There are several pages of illustrated notes on the spring fiction and other new books, and "The Progress of the World," "Cartoon Comments" and other editorial departments are marked by a distinctive freshness and timeliness.

The *May St. Nicholas* begins the second half of Volume XXX, of that popular magazine for children of all ages, and seems an especially rich number. Every lad will turn first of all to the record of G. W. Orton's articles on "Training for Interscholastic Athletics." Mr. Orton, who is the 2-mile world's steeplechase champion, as well as a doctor of philosophy, treats his subject from the viewpoint of both the school-boy and the trainer. He tells young athletes this month about the broad jump, the high jump, the pole vault, the hammer throw, how to train for these events and how to secure good all-around results. Reproductions of notably animated photographs add life and interest to the sketch.

J. M. Gleeson, who stands at the head of animal painters of the day, contributes to the *May St. Nicholas* for frontispiece "The Game-Keeper's Daughter" and a sketch under the same title. Alice Gertrude Field's "Remorse Two-Step" is pronounced by every reader a "rattling good story." Hannibal, the lion presented to the New York Zoological Park by Mr. Andrew Carnegie, has been interviewed; and the interview, together with a full-page likeness of Hannibal, is a feature of the number. The story of

**A BIG CROP**  
shouts loudest in praise of Iron Age Implements. Quick, sure, thorough cultivation does wonders to increase profits and decrease expense. We have learned how to build our cultivators by farm experience as well as shop practice. Everything about them is for work—

**IRON AGE Riding Cultivators**  
Pivot wheel, fixed wheel or combination are adaptable for all farming, from corn growing to market gardening. Write for Iron Age Book and read the facts. Ask your dealer to show you the tool.  
**RATEMAN MFG. CO.**  
Box 167 Greenloch, N. J.



A WASHING MACHINE is as great a necessity in the house as a wringer

**THE MAJESTIC ROTARY WASHER**

has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of woodenware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

THE RICHMOND CEDAR WORKS, Richmond, Va.

VIRGINIA DIVISION.

**Farmers Mutual Benefit Association**

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

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CHAS. N. FRIEND, General Agent.

CHESTER, VIRGINIA.

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**Virginia Fire and Marine**

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ALL DESCRIPTIONS OF PROPERTY IN COUNTRY AND TOWN, PRIVATE OR PUBLIC INSURED AT FAIR RATES, ON ACCOMMODATING TERMS.

AGENCIES IN EVERY TOWN AND COUNTY.

W. M. H. PALMER, President.

W. H. M'CARTHY, Secretary.

"Dick, the Sea Gull," is a true one, vouched for by Captain Edward Fogarty, of Brenton's Reef Lightship.

As is fitting in a May number, several articles deal interestingly with outdoor topics. Aside from G. W. Orton's valuable sketch, Allan Leigh tells of some "Strange Nest-Builders." John Russell Coryell relates the experiences of "The Artist, the Sparrow and the Boy," and Nature and Science has valuable information on mysterious spring sounds, herring ways, homes under the bark, woodchucks, meadow lark and other interesting topics.

*Lippincott's Magazine* keeps up its reputation for publishing a strong, bright novel each month by presenting in the May number one of even more than usual interest by George Gibbs. This is called "The Love of Monsieur," and, as the title implies, it is Frenchy, with a hero who is "a demon for success with petticoats." His last love is a fetching conception, well worth the quarrels she provokes. With Mr. Gibbs's grace in writing and an extraordinarily fine plot there is left nothing to be desired in this very fascinating tale.

Among the short stories there is one by Seumas MacManus, called "Caitilin Dhu." The fight between Irish rivals is described in a way which stirs sporting blood.

Readers have come to look with eagerness for Ella Middleton Tybout's darkly parable sketches. "Ananias of Poketown" will not disappoint those who seek amusement, and Miss Tybout has a gift for writing dialect which makes it as easy to read as rolling off a log."

"The Sorrow of a Setter," by Cy Warman, is a pathetic tale of a hunting dog's old age, vividly set forth.

Clifford Howard's lively little story called "The Winning of Margaret Merwin," tells cleverly how two men waste time trying to settle which one shall have the first chance with the girl they both love. Meanwhile, the girl settles it for herself, by marrying the "dark horse," so to speak.

The name Montgomery B. Corse is not a familiar one, therefore, his admirable story called "How Putz Lost His Job," will attract attention, both for the way it is done and because of its timeliness to the labor question.

#### THE ANNUAL MEETING OF THE AMERICAN GUERNSEY CATTLE CLUB.

The annual meeting of the American Guernsey Cattle Club will be held at the Fifth Avenue Hotel, New York, on May 13th, at 10:30 A. M. The year just closing is the twenty-fifth since the establishment of the register and organization of the club, and has been a very successful one for Guernsey interests.

WILLIAM H. CALDWELL, *Secretary*,  
Peterboro, N. H.

## Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.  
FOR SALE—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos. old. Call and make your own selection. Prices right.

MURRAY BOOCOCK, Owners, Keswick, Va.

### HEREFORD CATTLE

Annefield Herd Richly bred in "Anxiety" Blood and Headed by the Sweepstakes Winner at Kansas City 1901,

PRINCE RUPERT No. 79539.

FEE, \$25.00 FOR THE SEASON OF 1903.

Correspondence Solicited. Inspection Invited.  
ANNEFIELD FARMS, - Briggs, Clarke Co., Va.

Bacon Hall Farm.

## Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.

**C. C. TALIAFERRO,**  
NASONS,  
VA.  
1903

Reg. and Grade HEREFORD CATTLE  
BRONZE TURKEYS & MUSCOVY DUCKS

"MOUNT SHARON"  
STOCK FARM

Registered SHROPSHIRE SHEEP  
Registered POLAND-CHINA PIGS

**NOW OFFERS      FOR SALE**

HEREFORD CATTLE.—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

SHROPSHIRE SHEEP.—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

POLAND-CHINA HOGS.—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

M. BRONZE TURKEYS.—Toms, \$1. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

MUSCOVY DUCKS.—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

BARRED PLYMOUTH ROCKS.

ROUEN GEESSE.—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

WILLIAM L. J., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.



THISTLE



BRAND.

# LIDLAW'S

## CONCENTRATED TOBACCO POWDER, Sheep Dip and Cattle Wash.

A SURE CURE FOR THE EXTERMINATION OF

SCAB AND TICK IN SHEEP.

LICE ON HORSES AND CATTLE.

LICE ON HOGS.

MANGE ON DOGS.

Kills all vermin. Allays all irritation. Promotes growth of wool. Makes animal feel well and take on flesh. ||

ABSOLUTELY NON-POISONOUS.

PRICES: 5-lb. bag, 75c.; 10-lb. bag, \$1.25; 25-lb. bag, \$2.60; 50-lb. bag, \$5.00.

One 50-lb. bag makes 500 gallons Dip for scab, and 1,000 gallons for Tick, etc.

SOLE MANUFACTURERS,

LIDLAW, MACKILL &amp; CO., Limited, Richmond, Va., U. S. A.

TO BE HAD AT ALL LEADING DRUG STORES.

# IMPERIAL FRUIT AND POULTRY FARM

Is now booking orders for Eggs from the best strains and careful matings of

Barred, Buff and White Plymouth Rocks,

Silver=Laced and White Wyandottes,

S. C. B. Leghorns and Mammoth Pekin Ducks,

AT \$1.00 PER SITTING.

EGGS FROM BLACK DEVIL PIT GAMES.

Never known to run. The grittiest of all games. \$2.00 PER SITTING.

We give 15 Chicken and 13 Duck Eggs for sitting. Order at once.

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

P. H. HEYDENREICH, - Staunton, Va.

## REPORTS.

- U. S. Department of Agriculture, Washington, D. C. Bureau of Chemistry. Bulletin 7. A Study of Cider Making in France, Germany and England.
- Office of Experiment Stations. Experiment Station Record. Vol. XIV., No. VIII.
- Office of Experiment Stations. Bulletin 125. A Digest of Recent Experiments on Horse Feeding.
- Division of Statistics. Bulletin 24. Relations of Population and Food Products in United States.
- Farmers' Bulletin, No. 165. Silk worm Culture.
- Farmers' Bulletin, No. 166. Cheese Making on the Farm.
- Division of Foreign Markets. Circular 25. Our Foreign Trade in Agricultural Products, 1903.
- Bureau of Forestry. President Roosevelt on Forestry and Foresters.
- Alabama Experiment Station, Auburn, Ala. Bulletin 122. Grazing and Feeding Experiments with Pigs.
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- Bulletin 78. The Tomato Industry of the Arkansas Valley.
- Bulletin 79. Treatment of Stinking Smut in Wheat.
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- Bulletin 81. Onion Growing.
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- Bulletin 79. Investigation in Milk Production.
- Bulletin 80. Alfalfa—Its Chemical

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Chief of Dairy Division,  
U. S. Department of Agriculture.

Horseshoe, Rapidan, Va.

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Nebraska Experiment Station, Lincoln, Neb. Bulletin 79. Experiments in Orchard Culture.

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Bulletin 99. A Selected List of Vegetables for the Garden.

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Imperial Department of Agriculture for the West Indies, Barbados, W. I. Agricultural News.

#### CATALOGUES.

Virginia Polytechnic Institute, 1902-1903. The present condition and outlook at the Virginia Polytechnic Institute and the necessity for the appropriations asked for building and equipment, and for increase of annuity.

Bird Lawn Stock Farm for the care of horses. M. S. Bird, Anacostia, D. C.

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The International Stock Food Company, Minneapolis, Minn. Owners of the great pacing stallion, Roy Wilkes, 206½. Race history of Roy Wilkes.

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**PROMINENT AGRICULTURISTS TO ADDRESS THE EAST TENNESSEE FARMERS' CONVENTION.**

Satisfactory progress is being made in the preparation of the programme for the East Tennessee Farmers' Convention, to be held in Knoxville, May 21st to 23d, inclusive. Among those who have agreed to be present and deliver addresses are Governor James B. Frazier on "The Greatest Need of Tennessee"; Professor Thomas Shaw, Professor of Animal Husbandry, University of Minnesota, on "Grazing vs. Stall Feeding" and the "Practical Judging of Beef Cattle"; Professor W. F. Massey, editor for the *Practical Farmer*, on "The Cow Pea for Soil Restoration" and "The Development of Truck Farming"; Hon. W. W. Ogilvie, Commissioner of Agriculture, on "What the State is Doing for the Farmer"; Professor W. J. Spillman, Agrostologist, United States Department of Agriculture, on "Forage Crops for the South"; Professor M. O. Eldridge, United States Department of Agriculture, on "The Construction of Good Roads"; Professor S. A. Mynders, Superintendent of Public Instruction, on "The Rural Schools."

In addition to the above several members of the Tennessee Experiment Station staff will deliver addresses covering specific experiments now in progress at the station and of general interest to all the people of the Middle South. More than fifty of the most progressive farmers of Tennessee will read papers or lead in discussions. Those attending can be reasonably certain of hearing every one of the gentlemen mentioned, because they have all signified their intention of being present. The Farmers' Convention stands for education, for opportunity and for progress in southern agriculture. Do not forget the dates, nor the fact that the railroads give a single fare to the meeting. If your name is not on the mailing list, kindly send it to the secretary at Knoxville, and he will gladly furnish you with a copy of the programme, which will shortly be issued.

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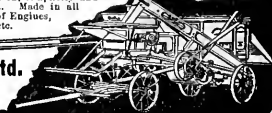
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12 inch.....	\$0.45 per bale
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out a mole every time. I never missed one during the summer.

Moles have good ears, and when you start with your hoe, go on tiptoe, or you may have to wait an hour or two for them to begin work again. I would generally push down with my foot the ground where they worked last for ten or twelve feet, and then watch that, for they always go in the same runway, and will bunch it up again. That will be a guide for you. Be sure that you are square in front of them when you strike. C. G. JOHNSON.

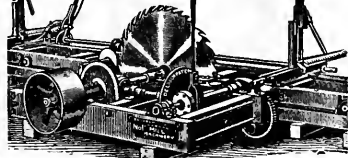
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One of the ever-recurring questions that novices in floriculture ask is about potting soil. In his "Home Floriculture" Mr. Rexford gives the following as the best general purpose soil he has ever used: One part of ordinary garden loam; one part of turfy matter scraped from the lower part of sods, containing all the fine grass roots possible to secure with it; one part of well-rotted manure and sand, half and half. If leaf mold can be obtained it can be used instead of the turf scrapings. We hear a great deal about its superiority over the other light and spongy soils, but there is really but very little difference between it and turfy soil, since both are composed largely of vegetable matter. In one case the leaves decay and furnish food for plant growth, and in the other the grass roots rot and supply nutriment. Leaf mold gives more immediate effects, because it is already decayed, while turf soil must have time in which to decay before it is fully available.

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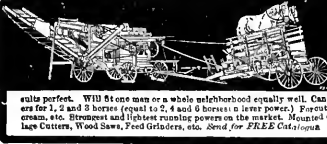
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The second annual exhibition of the Kentucky State Fair will be held at Owensboro, September 21st to 26th, inclusive. Twenty thousand dollars is offered in premiums, apportioned as follows:

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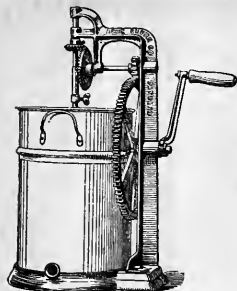
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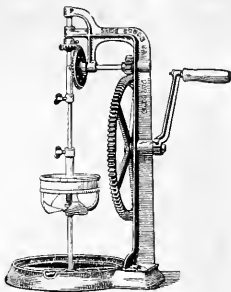


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The cut is the Single Standard, in 3 and 6 gal. sizes. In the Double Standard, the iron frame is on both sides and across the top, is heavier and stronger, with an extra wheel at the handle for either hand or light power. In 6 and 10 gal. sizes. You can rely upon what is said about this machine.

Make a note of this and continue to watch SOUTHERN PLANTER. Address THE ACME CHURN, Lock Box 311, Richmond, Virginia.



Our readers will notice the appearance in this issue of the advertisement of the Studebaker Brothers Manufacturing Company, of South Bend, Ind. This great concern, we believe the largest of its kind in the world, is so well known as to require no introduction. Studebaker general repositories for the proper and convenient distribution of their products are found in most large cities, while there is scarcely a hamlet in the country where the local Studebaker dealer is not found. There is nothing questionable about the character of Studebaker goods. The wagons and vehicles of every character, and harness for all purposes are standard everywhere. Whoever is willing to pay a fair price for assured high quality is not disappointed in Studebaker's. We unreservedly commend the advertisement to the favorable attention of our subscribers.

Readers of this paper may not be familiar with the Red Ripper Hay Press advertised in this issue by the Sikes Manufacturing Company, Helena, Ga. The advertisement deserves attention. The Red Ripper claims strong features where hay balers have found weakness in other makes. To instance, the removal of practically all draft, when the horse is crossing the connecting beam, in a full circle press, is a big item. The statement that through its clever mechanism the draft at all times is so light that it can be operated by one horse, where other presses require two, well deserves consideration. We believe, too, there is some reduction from prices heretofore prevailing. The manufacturers maintain distributing houses at Baltimore, Memphis and Cincinnati. See advertisement for home office address before writing for catalogue.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

THE SEABOARD AIR LINE RAILWAY

OFFERS PROFITABLE INVESTMENTS

THE MANUFACTURER, THE STOCK RAISER, THE DAIRYMAN, THE FRUIT GROWER, THE TRUCKER.

TO

WHERE YOUR LABOR IS NOT IN VAIN.

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE, Gen. Industrial Agt., Portsmouth, Va. EDW. W. COST, Traffic Mgr., CHARLES B. RYAN, Gen. Pass. Agt., Portsmouth, Va.

WHISKEY

4 full quarts Corn Whiskey 10 years old, \$3.50  
 4 " " " Private Stock, 2.50  
 20 years old, for invalids and other loved ones..... 6 00  
 Or will ship the 12 qts. named above for \$11.00  
 Plain packages Express paid. Purest and Best Whiskey and Oldest House in America. Established 1768-135 years ago. Just as Corn bread is more wholesome and palatable than Rye bread—so with the Whiskey—so say all Doctors—try it and be convinced. Nothing on earth so beneficial to weak lungs as this mountain beverage.

THE OLD NICK WILLIAMS CO., Lock Box No. 11. Williams, N. C.

Mention the Southern Planter when corresponding with advertisers.

The RICHMOND, FREDERICKSBURG and POTOMAC R. R. and WASHINGTON SOUTHERN RY

Form the Link connecting the Atlantic Coast Line R. R., Baltimore and Ohio R. R., Chesapeake and Ohio R'y, Pennsylvania R. R., Seaboard Air Line R'y and Southern R'y.

Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.

# Our Clubbing List.

The following list of papers and periodicals are the most popular ones in this section. We can SAVE YOU MONEY on whatever journal you wish.

**DAILIES.**

	Price. With Alone. Planter.	
Times-Dispatch, Richmond, Va.....	\$5 00	\$3 00
The Post, Washington, D. C.....	6 00	6 00
The Sun, Baltimore, Md.....	00	40
News-Leader, Richmond, Va.....	3 00	3 00

**TRI-WEEKLY.**

The World (thrice-a-week), N. Y.....	1 00	1 25
--------------------------------------	------	------

**WEEKLIES.**

Harper's Weekly .....	4 00	4 00
Harper's Bazaar .....	1 00	1 40
Montgomery Advertiser .....	1 00	1 00
Nashville American .....	50	75
The Baltimore Sun .....	1 00	1 35
Breeder's Gazette .....	2 00	1 75
Hoard's Dairyman .....	1 00	1 35
Country Gentleman .....	1 50	1 75
Times-Dispatch, Richmond, Va.....	1 00	1 15
Religious Herald, Richmond, Va.....	2 00	2 25
Central Presbyterian, " ".....	2 00	2 50
Christian Advocate, " ".....	1 50	1 75
Turf, Field and Farm .....	4 00	4 00
Spirit of the Times.....	4 00	4 00
Horseman .....	3 00	3 00

**SEMI-MONTHLIES.**

Wool Markets and Sheep .....	50	75
Dairy and Creamery .....	50	75
Commercial Poultry .....	50	75
All three .....	1 50	1 15

**MONTHLIES.**

North American Review .....	5 00	5 00
The Century Magazine .....	4 00	4 25
St. Nicholas Magazine .....	3 00	3 25
Lippincott's Magazine .....	2 50	2 50
Harper's Magazine .....	4 00	4 00
Forum Magazine .....	3 00	3 25
Scribner's Magazine .....	3 00	3 25
Frank Leslie's Magazine .....	1 00	1 35
Cosmopolitan Magazine .....	1 00	1 35
Everybody's Magazine .....	1 00	1 35
Munsey Magazine .....	1 00	1 35
Straud Magazine .....	1 25	1 65
McClure's Magazine .....	1 00	1 35
Argosy Magazine .....	1 00	1 35
Review of Reviews .....	2 50	2 75
Southern Fruit Grower .....	50	85

Where you desire to subscribe to two or more of the publications named, you can arrive at the net subscription price by deducting 50 cents from "our price with the PLANTER." If you desire to subscribe to any other publications not listed here, write us and we will cheerfully quote clubbing or net subscription rates.

Subscribers whose time does not expire until later can take advantage of our club rates, and have their subscription advanced one year from date of expiration of their subscription to either the PLANTER or any of the other publications mentioned.

Don't hesitate to write us for any information desired; we will cheerfully answer any correspondence.

We furnish NO SAMPLE COPIES of other periodicals.

# Seed House of the South.

- RED CLOVER.
- FLAMMOTH CLOVER.
- CRIMSON CLOVER.
- WHITE CLOVER.
- LUCERNE CLOVER.
- ALSIVKE CLOVER.
- BOKHARA CLOVER.
- JAPAN CLOVER.
- BUR CLOVER.



- TIPOTHY, ORCHARD GRASS.
- RED TOP or HERDS GRASS.
- KENTUCKY BLUE GRASS.
- RANDALL GRASS.
- TALL MEADOW OAT GRASS.
- JOHNSON GRASS.
- GERMAN MILLET.
- BUCKWHEAT.
- OATS and CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are

**RAGLAND'S PEDIGREE TOBACCO SEEDS.**

WE ALSO SELL

## Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods.

Samples sent by mail when desired.

# Wm. A. Miller & Son,

1016 Main Street,  
LYNCHBURG, VA.

## Headquarters for Nursery Stock.

WHOLESALE  
AND  
RETAIL.

We make a specialty of handling dealers' orders.

**ALL STOCK TRUE TO NAME.**

- |           |             |               |                |
|-----------|-------------|---------------|----------------|
| Apples,   | Nectarines, | Pecans,       | Ornamental and |
| Pears,    | Cherry,     | Chestnuts,    | Shade Trees,   |
| Peach,    | Quinces,    | Walnuts,      | Evergreens,    |
| Plum,     | Almonds,    | Small Fruits, | Roses, Etc.    |
| Apricots, |             |               |                |

CALIFORNIA PRIVET, for Hedging.

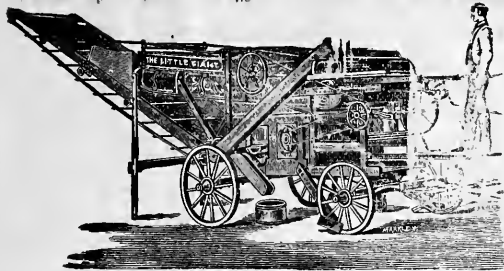
WRITE FOR CATALOGUE.

AGENTS WANTED.

**FRANKLIN DAVIS NURSERY CO., Baltimore, Md.**

The Most popular Machines in use for Peanut Picking and Grain Threshing are the

**HEEBNER'S,  
LITTLE GIANT and  
PENNSYLVANIA**



Machines, and they have splendid improvements for 1903. They are built in first-class manner, and are strong and durable. The price is within the reach of all. We guarantee them to do the work satisfactory. We will mail catalogue and testimonials, and quote prices on application.

**RUBBER, LEATHER**

AND

**GANDY BELTING.**

**FRICK'S "ECLIPSE"  
ENGINES and BOILERS.**

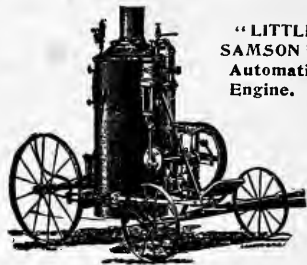
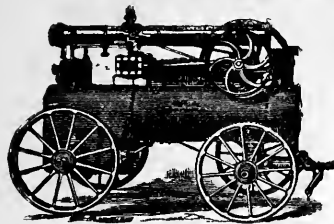
**ERIE ENGINES and BOILERS.**

THE CELEBRATED

**"CHASE" SAW MILLS**

AND

**"DE LOACH" MACHINERY.**



**"LITTLE  
SAMSON"  
Automatic  
Engine.**

This cut shows our 5 and 7 h. p. "Little Samson" Vertical, Automatic Engine, for running threshers, Peanut pickers, cutting feed, sawing wood etc. Larger size also furnished.

**STRATTON & BRAGG CO.. 20-22 N. Sycamore St., Petersburg, Va.**

# How is Your Wheat?

**ONE CENT** Invested in a postal card and addressed to  
**THE CARDWELL MACHINE COM-  
PANY, Richmond, Virginia,** will bring you circulars regarding

## Cardwell's Thresher and Cleaner

They are **SIMPLE, DURABLE** and **EASY TO WORK.**  
Capacity, 200 to 1000 bushels of wheat per day, according to size  
and character of grain.

**THE CARDWELL MACHINE CO.,** Nineteenth and Cary Sts.,  
**RICHMOND, VIRGINIA.**

# “THE EARLY BIRD” You Know the Rest.

I mention this well-known adage, because so many of my customers have proved the old and true saying about the early bird—what he caught. He got the best, and he got there first. Now, you must do the same thing. You know our prices all “change without notice”—so send your orders in on time, and you will get the pick and choice of everything—though we keep nothing but the best. We buy at the market and sell at the market. Write for prices and I will be delighted to send them to you as fast as your mail service can carry them. I have at this writing but I don’t know how long they will last:

10,000 bushels Feed Oats .....	40	50,000 lbs. Rock or Lump Salt for stock. Take	
6,000 bushels Mixed Corn .....	50	1,000 lbs, and I will make it for .....	7 50
Both of these are big drives, and you should		500 bbls. North Carolina Cut Herrings.....	4 75
order at once.		500 bbls. Lime, Cement, Plaster, at cost.	
500 kits of Large Mackerel, per kit.....	1 25	Paints, Oils, Nails, and everything that is	
3,000 bushels Early Rose Potatoes.....	70	needed by a Farmer we keep, and will sell	
4,000 bushels Burbank Seed Potatoes.....	75	at actual cost to reduce our stock.	
10 large bars Laundry Soap .....	25	Drop me a line, keep in touch with headquar-	
		ters, and by doing this you save money.	

## READ CAREFULLY THE FOLLOWING PRICES

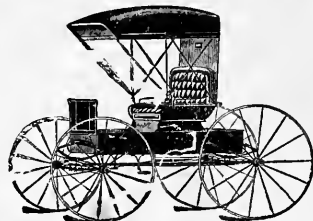
<b>WINES, LIQUORS AND CORDIALS.</b>		Fine Fairy Flour, per bbl..... 3 85		Breast Bacon, per lb..... 13	
Gibson's fine old Rye Whiskey, 6		Best Family Flour..... 4 25		Good Lard .....	
years old—quarts, 75c., or gal-		<b>SEEDS.</b>		Genuine Smithfield Hams, lb..... 15	
lon, jugs free..... \$3 00		Sapling Clover Seed, per bushel.. \$7 50		4-lb Can Cottleene..... 44	
Bumgardner's fine old Rye		Alfalfa Seed, per bushel..... 7 40		Country Cured Bacon Sides..... 12	
Whiskey, 6 years old, per gal. 2 75		Alskey Seed, per bushel..... 9 50		10,000 lbs Nice Family Pork..... 9	
Fine old Anderson County, gal.		Timothy Seed, per bushel..... 2 75		<b>FEED.</b>	
(this is 4 years old)..... 2 00		Orchard Grass Seed, per bushel. 2 10		Oats, per bushel..... 46	
Clemmer's fine old Rye, three		Tall Meadow Oats, per bushel... 2 00		Shipstuff, per 100 lbs..... 1 10	
summers (it is thick and		White Clover Seed, per bushel.. 13 00		Brownstuff, per 100 lbs..... 1 05	
drinks like nectar), quart... 40		Potato Onion Sets, per bushel.. 2 00		Good Corn, per bushel..... 52	
Fulcher's old Mountain Dew,		Black Spring Oats, per bushel.. 52		Coarse Meal, per bushel..... 65	
quart .....		Rust Proof Oats, per bushel... 65		Best City Meal, per bushel... 70	
Imported Juniper Gin. For		Turt Oats, per bushel..... 70		Linseed Meal, per 100 lbs..... 1 75	
kidney and kindred troubles it		Fine Winter Turf Oats (seed)... 75		Cottonseed Meal, per 100 lbs... 1 40	
it gives instant relief, and you		Prime Winter Seed Oats..... 60		510 tons Cottonseed Hulls—an	
should get a quart—only..... 45		1,000 bushels Seed Rye..... 65		excellent winter food, cheap	
346 bottles, quarts, imported		10,000 bushels Choice Seed Potatoes,		and nutritious—as good as	
Three Star French Brandy... 75		all varieties—Early Rose, Burbanks,		coarse meal for stock, per 100... 50	
McDemmott's Pure Old Malt		Beauty Hebrons. Am prepared to		70,000 lbs Rock Salt for stock,	
Whiskey, quart .....		make very low prices.		per 100 lbs..... 1 00	
Pure old Northampton Apple		I have everything that is required		5,000 Bales of Fine Shucks.	
Brandy, 7 years old, strictly		by a farmer, from a 1,000 Acre Farm		<b>COFFEE, TEA, SOAP, ETC.</b>	
choice, gallon .....		to a Mouse Trap. Write for my Price-		Arbuckle's Green Coffee..... 11	
2 00		List that will give you more informa-		Best Mocha and Java Coffee,	
Old Rye Whiskey, 4 years old... 2 00		tion than a gossiping woman.		roasted .....	
Pure Old Virginia Apple Brandy... 2 00		<b>SUGAR.</b>		Fine Gunpowder Tea..... 40	
Blackberry Brandy, per gallon... 75		Best American Granulated..... 43		800 barrels White Oil..... 12	
Good Holland Gin..... 1 50		White A Sugar, per lb..... 43		7 boxes Axle Grease..... 25	
Duffy's Malt Whiskey..... 85		Cut Loaf .....		10 Large Cakes Fancy Soap... 25	
<b>FLOUR.</b>		Powdered .....		Crystal Washing Soda, light,	
Pillsbury Flour, per bbl..... 4 90		Light-Brown Sugar, 6 lbs..... 25		smooth and durable—makes	
Pillsbury, per bag..... 32		<b>BACON AND LARD.</b>		washing easy..... 30	
Graham Flour, per bag..... 25		Best Sugar-Cured Hams, lb..... 15		Washing Powder, 8 for..... 25	
Dunlop Patent Flour, bbl..... 4 50		California Hams, per lb..... 103		Large Fat Mackerel in nice	
Dunlop, per bag..... 29				buckets or kits, about 15 lbs... 1 25	
Byrd Island Flour, per bbl..... 4 40					
Jersey Lily Flour, per bbl..... 4 00					

**D. O'SULLIVAN,** 18th and Main and 502 E. Marshall Sts., Richmond, Va.

# WAGONS and BUGGIES



MADE  
RIGHT HERE  
AT HOME  
BY



The BARBOUR BUGGY CO.,  
The HUGHES BUGGY CO.,  
The VIRGINIA WAGON CO. }

*All of Virginia.*

These vehicles are guaranteed to be as good as can be bought elsewhere; material and workmanship unsurpassed; all sizes and styles, prices low. We can save you time, money and freight by purchasing our vehicles. Send for our illustrated catalogues. Drop in our warehouse and inspect our stock. Inquiries cheerfully answered.

AGENTS FOR DEERING MACHINES.

RICHMOND BUGGY & WAGON CO., 1433 E. Main Street, RICHMOND, VA.

J. T. DUNN, Manager.

Our "TRUST" is in the merits of the machines.

Fine as they are, Durable as they have proven,

## THE WALTER A. WOOD MOWERS.

Reapers, Hay Rakes and Binders

can be bought to-day for  
less than any other ma-  
chine on the market.

Don't you believe it? Try us.  
We'll astonish you. We've got  
'em whipped to a stand-still.  
Everybody after "WOOD" ma-  
chines this season, and no  
wonder.



ASHTON STARKE,

RICHMOND, VA.

# Seasonable Implements of Latest Patterns.

Established by  
GEO. WATT, 1840.

**THE CALL-WATT CO.,**  
RICHMOND, VIRGINIA.

MANFRED CALL,  
Manager.



THE CRESCENT PLOW.

The WATT, CROWN and CRESCENT PLOWS.

Especially adapted to the Corn Grower. Equally adapted to the Tobacco Planter, the Cotton Planter and the Gardener.

**DISC HARROWS**—All sizes

Independent Flexible Gangs, operated by one or two levers. No end thrust.

**DUST PROOF BEARING BOXES, Flexible Scrapers. Steel Shanks.**

All Steel Lever Harrows. Made up of sections of 25 teeth each. We have the Continuous frame with spring trip, which relieves all strain on the teeth, or the U Bar, by means of the lever instantly changed to a straight or slanting tooth harrow.

The DEERE SINGLE and DOUBLE ROW CORN PLANTER.

The Corn Drop works on the "edge selection" principle. Simple in construction and next to impossible to get out of order. These Planters have features not possessed by any other, and are fully described in special circular.

The EMPIRE SINGLE ROW CORN PLANTER with the celebrated Marks Force Feed Fertilizer. The lightest Combination Planter made.

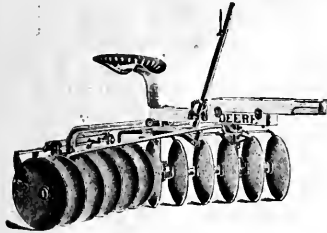
The EUREKA CORN PLANTER, Known so long as to require no special description.

The DEERE DISC CULTIVATOR is made almost entirely of Steel and Malleable Iron. Light weight and great strength. High, solid steel arch. Wheels adjustable in width. Pivoted Tongue. Dust proof bearing boxes. Convertible into an Eight Disc Harrow or a Spring Tooth Cultivator.

The DEERE RIDING and WALKING CULTIVATORS. With four or six shovels or spring teeth. Possesses features not found in any other.



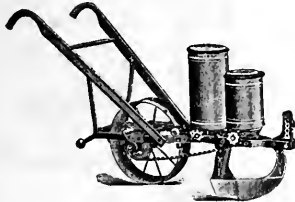
THE WATT PLOW.



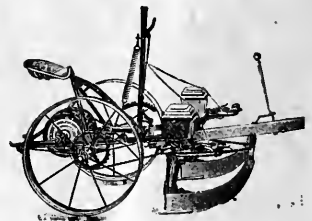
DISC HARROW.



LEVER HARROW.



DEERE SINGLE ROW PLANTER.



DEERE DOUBLE ROW PLANTER.



DEERE DISC CULTIVATOR.



WALKING CULTIVATOR.

Iron Age Cultivators, Iron Age Combined Cultivator and Harrow, Double Shovel Plows, Feed and Ensilage Cutters, Pea Hullers, Threshers, Engines, Saw Mills, Grain Drills, (Hoe or Disc.) Farm Wagons, Buggies, Road Carts. Implements, Machinery and Vehicles for all purposes.

WRITE FOR DESCRIPTIVE CIRCULARS.

13 So. Fifteenth Street,  
Between Main and Cary.

RICHMOND, VA. THE CALL-WATT CO.

# LABOR-SAVING IMPLEMENTS AND MACHINERY.

**CORN PLANTERS.** The HOOSIER, both single and double row, with and without fertilizer attachment. The SPANGLER for Corn, Peas and Sorghum.

**CULTIVATORS.** PLANET, Jr. and IRON AGE Cultivators and Horse Hoes. CONTINENTAL Disc Cultivators and Harrows, the best in the world.

**THE SOUTH BEND CHILLED PLOWS.**

**THE CELEBRATED HANCOCK DISC PLOW.**

Wood or Steel beam; all sizes. Guaranteed equal to any made.

Single or Double Disc.

THE OLD RELIABLE

**PEERLESS ENGINES.**

**SAW MILLS and THRESHING MACHINES.**

PEERLESS ENGINES.

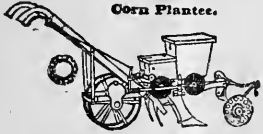
**THE FISH, THE WEBER AND THE CHAMPION WAGONS IN ALL SIZES.**

General agency for the Columbus Buggy Co., Columbus, Ohio. A. Wrenn & Sons, Norkolk, Va., and other celebrated makers of vehicles. All grades in stock.

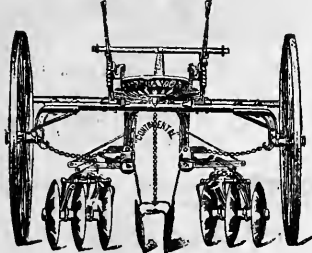
Harness, Robes and Whips, Pittsburg Perfect Wire Fencing, welded by electricity. Circular for the asking. Correspondence solicited.

**THE WATT PLOW CO., 1452 E. FRANKLIN and 1404 E. MAIN STREET. Richmond, Va.**

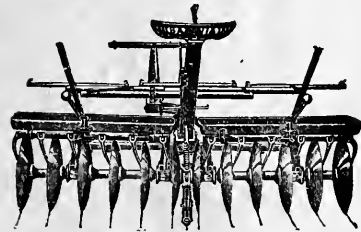
Corn Planter.



Spring tooth attachments for cultivator. RODERICK LEAN steel lever harrows for one, two and three horses.



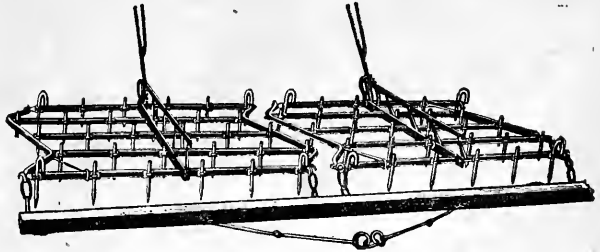
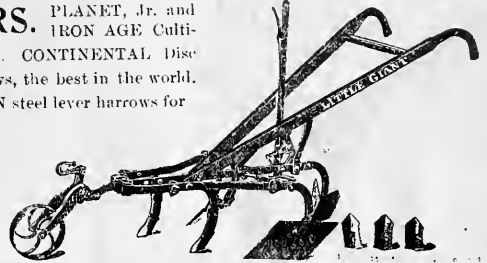
DISC CULTIVATOR.



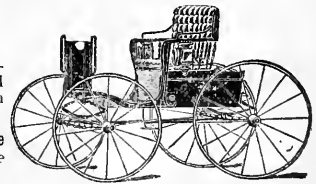
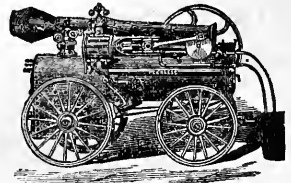
DISC HARROWS—All Sizes.



HORSE HOE.



SPIKE TOOTH HARROW.



# Latest Improved FARM IMPLEMENTS.

## ANTI-DIRT MILK PAIL



Only Pail made that prevents Dirt and Hair from dropping into the MILK and STRAINS IT TWICE while milking. Aerates and Cools it.

Every Farmer and Dairyman Should Use it.

Special prices given on Studebaker and Brown Wagons, Buggies and Carts.

Studebaker Buggies, all styles, Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.



## Aspinwall Potato Planter.

Automatic, Accurate and Reliable. Used by thousands of practical growers the world over.

Over twenty years on the market. Don't be fooled by imitations and make-shifts but write for attractive illustrated catalogue.

Buckeye Force Pumps. Porcelain Wood Pumps. Wood and Steel Wind Mills.

Frick and Aultman and Taylor Engines, Saw Mills and Threshers.

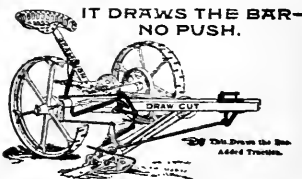


One and Two-Horse Planter, Plain or with Fertilizer Attachment.

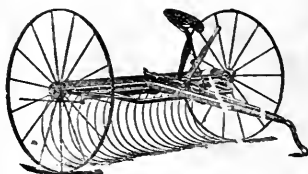


## The Celebrated Plymouth Twine...

Even, Smooth, Strong, - Full Length. Every Ball Warranted.



THE WHEELS WILL NOT LIFT FROM THE GROUND. CHAMPION Mowers, Reapers, Blades, Hay Rakes and Twine.



TIGER Steel and Wood Self-Dump Rakes, GRANGER Steel and Wood Hand-Dump Rakes, all sizes.

## ELI BALING PRESSES.

18 styles and sizes. - For horse or steam power. Write for prices and catalogues.



## Caoon Seed Sower.

Michigan Wheelbarrow Sower.

Three Sizes

Superior Grain and Fertilizer Drills. Hoe and Disc.



## Bement Disc Cultivator, with 6 or 8 Disc.

Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.



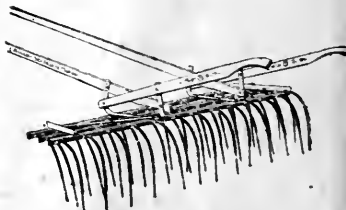
Genuine BROWN Walking and Riding Cultivator. All styles. Write for circulars and prices.

Smith's EUREKA Corn Planters, FARMER'S FRIEND Plain and Fertilizer Planters.

TIGER Double-Row Plain Planters, TIGER Double-Row Planters with Fertilizer and Check Row Attachment.



## Kemp's Improved Manure Spreader, Three Sizes.



## "Bement" Improved Duplex Tooth Weeders.

Write for circulars and prices.

**HENING & NUCKOLS,** Successors to CHAS. E. HUNTER, 1436-38 E. Main St., RICHMOND, VA.



# The Southern Planter.

DEVOTED TO

PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK AND THE FIRESIDE.

---

Agriculture is the nursing mother of the Arts.--XENOPHON.  
Tillage and pasturage are the two breasts of the State.--SULLY.

---

64th Year.

Richmond, June, 1903.

No. 6.

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## Farm Management.

### WORK FOR THE MONTH.

At the date of this writing (20th May) the contrast afforded in the weather, as compared with that at the time we wrote our article on work for the month for the April issue, is the most strongly marked we have ever known in so short a time. Then nearly the whole of the Southern States and many of the Eastern and Northern ones, were suffering from an excess of cold rains, which had been long continued, and there seemed no immediate prospect of relief. Now, nearly the whole of the South and all the Eastern and Northern States, and many of the Middle States, are suffering from drought, which, in many places, has already done serious injury. The rains ceased in the last week in April and since May came in we have had dry, cool weather with decidedly cold nights and a complete absence of genial, growing weather. Not until the present week have even the mid-days been warm. Notwithstanding this ungenial weather, crop conditions in the South are not yet seriously impaired, but a continuance of the like conditions for another week will work serious injury. Already in several of the Northern and New England States damage has been done which cannot be made good, whatever the subsequent weather may be.

In our April issue we sounded a note of warning as to the probability of drought following so long a period of rain, but we did not look for its setting in so soon. If, however, what we then said was heeded, many a farmer may already have saved himself from much loss by a careful conservation of

the moisture in the ground. Where the surface soil has been kept stirred and loose there is yet a reserve of moisture in the land which will serve to carry the crops planted through a further period of dry weather. Wherever the surface soil has been allowed to become compacted and hard, moisture has been rapidly exhausted, and it will require some days of rain to fit such lands for planting, and the probability is that the effect of the present drought will be seen in the yield of such crops at harvest.

The condition of the wheat crop of the country still remains a high one, though it suffered some impairment up to 1st of May and no doubt will have been further injured since that date. On the 1st of May the average condition throughout the country was 92.6, against a condition of 97.3 on 1st of April, 1903, and 76.4 on May 1, 1902, and 82.5 the average of the last ten years. The condition in Virginia on May 1st was 94; in North Carolina, 75, in South Carolina, 78, and in Maryland 97. These figures show but little impairment from the April condition, and are very high ones for this section, being, in most cases, in excess of the ten year average. Winter oats are still looking well in most sections, though beginning to suffer from want of rain. Spring oats are seriously impaired, and in many sections will be a failure. This once more emphasizes what we have so often said, that the spring oat crop is not one for the South. Grass and clover crops were looking very well up to a week ago, but are now showing the effects of the drought, and the yield will, no doubt, be

cut off considerably. Crimson clover has made a better crop than usual, and some excellent hay has been made from it, which will help to make good the deficiency in red clover and meadow hay.

The work of planting the corn crop will, we are afraid, occupy the attention of many farmers for some time yet. The sodden condition of the land up to the beginning of May, and the quick drying of the fields under the influence of the cold, dry winds of that month, caused much land to remain unplanted at the end of the month, and a great deal of that planted was put into a poor seed bed and will make slow progress and require frequent cultivation to stimulate its growth. Where land is unploughed on the 1st of May, as is too often the case, the occurrence of such a spring as this has been is bound to cause poor stands of corn. The only remedy for this is to plough in winter and the first months of the year whenever the land can be worked, and then to fit it for a seed-bed with the disc harrow, roller and cultivator. Under this system moisture can be accumulated in the land and afterwards be conserved there and the work of fitting the land for the seed can be much more quickly completed when the time and season for the work comes round. All haste possible should now be made in completing planting, and the work of cultivation should have constant attention so as to hasten the growth of the crop. In our last issue we wrote at length on the proper method of cultivating the crop, and to this we refer our readers. We will add to what we then said, the following very valuable advice given by Mr. Terry in the *Practical Farmer*:

But now let me give you one absolute rule in regard to the use of the cultivator, weeder or harrow in growing crops. You cannot do this work just when you have the time and get best results. It will not do to simply go over the ground so many times in a season, without regard to when, simply often enough to keep the weeds down. Let me tell you about the when, a matter that has literally brought us thousands of dollars. From start to finish never let the surface dry up after a rain, or rainy spell, and remain unbroken. Stir it always as soon as the land is dry enough to work. If it rains again in twenty-four hours, no matter, stir it again. If it does not rain, is all dry and dusty, never mind, stir again inside of a week any way, although you work in a cloud of dust. This stirring makes a mulch that saves water from evaporation—saves it for the crop. Water evaporates rapidly from an unstirred surface when the sun shines or the wind blows, but very slightly after you have made the surface fine

and mellow two inches deep. This is the way to save water for your crop in a dry time. But keeping weeds down and saving water is not all one does by so much work. No! There is much inert plant-food in the soil. Ordinary tillage makes a little available. This extra tillage makes more ready for plants and you get larger crops. Larger because you have kept weeds from getting any. Larger because you have saved water for the crop. Larger because it has been able to get more to grow on. I hope you all prepared your ground well and have it well supplied with vegetable matter, then this extra care of crop will pay still better.

The planting of corn for filling the silo should have attention during this month. We wish that more of our subscribers had silos to fill. We have repeatedly urged the building of a silo on every farm having more than half a dozen head of cattle on the place. It is the cheapest barn a man can build and preserves the feed placed in it in a succulent condition, which makes it always acceptable to the stock, and results in great economy in feeding, as the stalks are softened so that they are readily consumed with the finer portion of the feed. In our July issue we will give instructions for the building of a silo, and hope that many will be induced to try one. Once used no stock-keeper will ever want to be without one again. The best crop with which to fill a silo is corn or a mixture of corn and cowpeas or corn and soy beans. Corn alone makes a silage rich in carbohydrates, but lacking in protein. The addition of cow peas or soy beans supplies the needed protein, and makes the feed as taken from the silo nearly a completely balanced ration. Where corn alone is grown for filling the silo, or when corn is grown mixed with peas or soy beans, the crop should be planted in rows three feet apart and six or eight inches apart in the row. This admits of cultivating the crop and ensures that the stalks shall carry a fair proportion of ears. The stalks and fodder also become more fully matured and the silage made will be sweeter and not so watery. We are strongly in favor of growing cow peas with the corn. Those of our subscribers who have adopted this plan speak in the highest terms of the mixed crop. They get an increase in the yield at practically no cost except that of the cow-pea seed and get also a much more valuable feed. It is true that the increased yield is not so great as would seem probable generally. Usually it amounts to about 25 per cent. in actual weight, but this gain costs so little and is attended with other advantages in addition to the improvement of the feed that render it most advisable. Amongst these

advantages is the economy in land to be got ready for seeding and of the cultivation of a separate crop, and also the fact that a silo will hold much more feed made from a mixed crop than from one of corn alone. Experiments made at the Delaware Experiment Station show that a circular silo seventeen feet in diameter filled with settled silage to a depth of twenty-three feet would hold ninety-two tons of corn alone or 132 tons of mixed corn and peas grown in the proportion of 75 per cent. of corn and 25 per cent. of peas, which is about the usual proportionate weight when grown together. When grown together the corn should be first planted and at the second cultivation the peas should be drilled in along side the corn rows. The best variety of pea to use for this purpose is the Whippoorwill, as they grow more compactly in the corn row and do not reach across to the adjoining rows so as to tether the crop together and make it difficult to harvest with a machine. Grown together in this way from twelve to fifteen tons of silage to the acre may be readily produced and on good land even twenty tons can be cut. Where soy beans are used for the protein crop they may be grown between the corn rows, which should, in that case, be four feet apart. We prefer, however, to grow this crop separately and mix with the corn when filling the silo. They make a better yield in this way.

The forage crops, about which we wrote fully in our last issue, and on which subject we say another word in this issue, should be planted during this month and July. For information as to the best way in which to plant these crops see our May issue.

The thinning out and cultivation of the cotton crop should receive close attention during this month. The yield of the crop largely depends upon the early vigorous growth of the plants and this is very largely influenced by the quickness with which the crop is brought to a stand and the repeated cultivation of it.

The planting of the tobacco crop has been much delayed by the drought of May and much of it will not yet have made a start in growth, even if planted. Push on the work of planting as quickly as the season will permit and let cultivation be often and shallow. When the crop is large enough to top do not top too high. It is better to have fewer leaves, all fully and evenly ripened, than a greater number of which part have to be cut before ripe. An evenly cured crop of

tobacco all of the same color and texture can never be made out of a crop cut in different stages of ripening. The growing of this crop under shade is making progress in the New England cigar-leaf sections, and to some extent is being tried in the South on the Havana and Sumatra types, but we have not heard of its being attempted with the bright and heavy shipping types. Fine results have been obtained with the types upon which the system has been tried. The cost is great, however, and seems likely only to be profitable upon such types as command high prices. From \$600 to \$800 per acre is a large initial cost to be incurred. Look out for the worms and see that the first brood is closely destroyed, either by hand picking or by spraying. Spraying tobacco with Paris green is certain death to the worms and causes no injury to the tobacco or to the human consumer of it. We would, however, advise that no tobacco be sprayed with the Paris green after it begins to ripen or when getting near that stage, as the poison may stain the leaf and thus prejudice the sale. A mixture of one pound of Paris green to 160 gallons of water will make a solution strong enough to kill the worms.

The harvesting of the wheat and oat crops will call for attention before our next issue reaches its readers. Do not let the grain become over-ripe before putting in the binder. An over-ripe crop never makes so good a sample as one cut just before being dead ripe. The grain is not so bright nor so plump. Besides this, an over-ripe crop shatters badly in handling and the yield is thus much reduced. See that your binder is in good repair and order, and that you have a reserve of the principal working parts on hand, so that in the event of a break you will not have to wait until repairs can be had from the makers or dealers. Many a good crop has been lost from neglect of this precaution. The carelessness with which agricultural machinery is frequently stored—and too often it is not stored at all—makes it very necessary that careful examination and cleaning of the machines before using should be made. It is a sad commentary on the farmers' care of his binder that the Professor of Agricultural Mechanics at the Illinois Agricultural College has stated that as the result of enquiries made in Illinois, he finds the average life of a binder in that State is only four years and the average time used each year is only six days, thus making the real working life only twenty-four days. We are afraid that in this State a not much better record would be found. For so costly a machine this is a very expensive life. With care a

binder should last many years more than four. The scarcity of hands is likely to cause difficulty in handling the crop in many sections. Obviate this as far as possible by looking up and hiring the required hands before the crop is ready for cutting. See that, if possible, you have at least sufficient experienced hands to shock the grain as cut. Every sheaf should be in shock before leaving the field at night—if not prevented by rain. Sheaves left unshocked soon begin to shatter the grain and lessen the yield. See that the shocks are well capped, so that rain is kept out of the center. It is there where the damage is done in case of rain.

The harvesting of clover and hay crops will also require attention. Whilst the drought we are having will, no doubt, somewhat reduce the yield of these crops, yet the good growth made in March and April will ensure a fair yield. See that the crops are cut before the heads are full of seed. The greatest nutriment is found in clover and hay when in bloom, and the greatest weight of produce can also be secured by cutting at that time. After the seed begins to form the nutritive value decreases and the stalks become dry, withered and light. When cut do not let the crop remain broadcast until all the nature is dried out of it and the leaves are crisp and shattering. When well wilted rake up into wind row, and if not sufficiently dry to make into cock leave in that condition for a day and then put up into cock to complete the cure. Hay, whether clover or meadow, should be cured in cock, if the best condition is to be secured, unless the weather be so hot and windy as to cure it sufficiently for the barn in a few hours, which is not often the case. Hay cured in wind row or cock will keep its fresh, green color and fine smell and the fine blades and leaves will all be saved. Nothing but experience can dictate when hay is sufficiently cured to be safely stored away in a barn; but one thing is certain, that nearly all the hay saved in the South is overdried before being stored. We would rather err on the side of storing a little too soon than leave it in the field too long. If the crop is free from rain or dew and only has natural moisture in it, it will, even if carried a little too soon, cure out in the barn into good hay. It will heat more and be a browner color, but will smell well and be eaten greedily. If, however, it be stored in the barn with rain or dew upon it it will heat and spoil and may burn up from spontaneous combustion. We have known this to happen and have seen many stacks and mows almost black when cut into after cooling. If the crop is to be stacked out of

doors put up in a large stack, rather than in a number of small ones. There is much less waste from weathering and the hay will be much better in quality.

### FORAGE CROPS.

In our last issue we wrote at some length on the importance of forage crops as adjuncts to the successful conduct of every farm, and gave instructions for the proper production of these crops. The day has long gone by when the fodder produced by the corn crop was all that was necessary to carry the stock of the farm through the winter and when even much of this was wasted. Now upon nearly every farm there is need for the production of special crops for feeding the live stock, and this ought to be the case everywhere. Formerly the price of corn and wheat was usually at such a level as that the primary object of farming in the South, or rather planting, for there was little real farming, was the production of these crops and tobacco and cotton as sale crops, and for the feeding of the owner and his hands, and the production of live stock and beef, mutton and hog meat was a factor regarded as of but little moment. Now, on the average of years, the only way in which the farm can be run profitably is by the conversion of all except the wheat, tobacco and cotton crops into live stock, meat and butter products. This is as it should be, for no farm can be maintained in a state of fertility on which the products are all sold off in their unconverted condition. The use of commercial fertilizers, even in the enormous quantities which are now the rule in the South, cannot maintain fertility, much less restore to fertility land which in the past has been farmed in the manner formerly the rule in the South. The practice of this system of planting has resulted in the thousands, yea, millions, of acres of galled and wasted land, which is a characteristic of the South. The work of the present and future generations of southern farmers is, and will have to be, the restoration of these lands to more than their pristine fertility, and this can only be accomplished by the breeding, rearing and feeding of live stock on every farm. Without this adjunct the production of the sale crops of tobacco and cotton must diminish instead of increase, and the wasting of our lands must continue. It is a fortunate coincidence that the time when this change has become imperative is one in which the value of live stock has reached a figure seldom touched in the past and when the free lands of the West have ceased to be a constant menace

to the investment of capital in the live stock business of the Eastern, Southern and Middle States. The western man must now pay for the lands on which his stock graze and thus an equality of conditions has been established in the basic factor of the problem. The eastern and southern man can now go into the production of stock with an assurance that if properly conducted he can compete, with success, against the farmer of any other section and with some of the factors in the problem notably in his favor. He is nearer the great centers of population and consumption of the best than the producers of any other section, and these have enjoyed, and are likely to continue to enjoy prosperity, so that they have become capable of taking at a profit all that can be poured into them from nearby points. What the southern farmer now needs to do to ensure a share of this prosperity is to provide an abundance of feed so that he can keep up a constant supply of these products. Climatic conditions are such in the South that he can produce the feeds called for to meet the occasion for less than any other section of the country. Here he can make two crops in the year of these feeds as against the one of less value as a maker of bone, flesh and meat of the western and northern man, and he can at the same time restore and recuperate the wasted fertility of his lands. As illustrative of this, articles in this issue relate how farmers in two different sections of this State have already made and housed one crop of crimson clover hay after having used the land on which it was grown for grazing during the winter. This land can, and will, now go into corn or some other forage crop, which will make further feed for the winter and can then be followed by a winter grazing crop. We desire to see this practice become the rule, instead of the exception, in the South. Land which, in the West and North has, from climatic causes, been prevented being put into a summer crop, must perforce now wait until the fall before it can be seeded. Here it can be yet put into crops which will make heavy yields of the most nutritive feed that can be produced and be improved in the process for planting in fall crops. We would strongly urge that advantage should be taken of this bountiful provision of nature and that not an acre be left unseeded with some crop. The indications now are that unless we have rain quickly crops now seeded are likely to be cut short. This shortage can easily be made good in the South if proper efforts are made. Let cow peas or cow peas and sorghum or millet be seeded as soon as the land can be got ready for them. They can be sown with certainty

of maturing sufficiently to make good long feed even up to the end of July and make a heavy hay crop, whilst rape, rutabagas and turnips can be sown in July, August and September for making fall and winter feed, and crimson clover and vetches can be seeded in August, September and October for winter grazing and spring forage and hay crops. With such a variety of choice yet available crops there can be no excuse for any farmer being short of long feed for a heavy head of live stock during the winter, and we are satisfied that the live stock to be fed on these and the grain crops of the farm can be fed profitably.

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### ALFALFA.

From the numerous inquiries we receive as to this crop it is quite apparent that southern farmers do not intend longer to let the men of the West have a monopoly of the profits to be made from the use of this most excellent feed. We have for years endeavored to interest southern men in this crop, but until last year with very indifferent success. We are satisfied, not only from our own experience with it, but from reports from several of our subscribers, that there is no reason whatever to doubt its success on suitable lands in this and the adjoining Southern States. Within a few miles of this city there are several large fields of alfalfa which have made excellent crops for several years. The great difficulty which has to be encountered in securing a good stand of alfalfa in the South is the weedy character of our lands. Weeds and alfalfa cannot succeed together. The first thing to be done if alfalfa is to be attempted is to get rid of the weeds. It will be a waste of seed and labor to attempt to secure a stand unless this is done. The land best adapted for the crop is a loam soil inclining to sand or gravel and with a goodly intermixture of clay. Even on a clay soil it may succeed, providing the subsoil conditions are favorable. The most important requisite in the subsoil is that it should be easily penetrable by the roots, that it should be deep and that it should be moist, but at the same time free from stagnant water at all seasons of the year. Alfalfa is a deep rooting plant and to succeed must have opportunity to send down its roots. Having selected suitable land the work of killing out the weeds should be undertaken. This may be best accomplished by giving the field a summer fallow. Plough as soon as possible and harrow finely and thus encourage the sprouting of the weed seeds. When a growth has been secured harrow or cultivate on a hot, dry day and kill out the

crop and bring up further seeds to sprout, which must be killed in like manner. Continue this work through the summer until August, when the land should be in good order for seeding, and should then have a dressing of 15 or 20 bushels of lime to the acre. Some, instead of giving a clean summer fallow, prepare well and then seed heavily with cow peas, which act as a smothering crop. The peas are cut for hay and then the surface is just lightly stirred, say, for two or three inches, with a harrow and the alfalfa is seeded. This plan has succeeded where the land is not too full of weed seeds. If the land is not in a good state of fertility it should be helped with 400 or 500 pounds of acid phosphate to the acre and the young alfalfa be given a top dressing of 100 pounds of nitrate of soda to the acre in the spring following seeding when growth is just starting. After a good stand is secured top dressing with farm-yard manure in the fall and winter will be found excellent to maintain the stand, or bone meal may be used for this purpose. The best time to seed the crop is in August or September in all the southern country east of the Blue Ridge and south of the Potomac. West and north of these limits it should be seeded in March or April. The seed—twenty-five pounds to the acre—should be sown broadcast, half being sown one way and the other half across. Cover with a light harrow and roll. The first year no crop should be taken from it, but it should be cut over with the mower two or three times during the summer, just clipping off the tops of the plants and leaving the cuttings as a mulch. In the second year it may be cut two or three times, according to growth, each cutting being made when the plants are coming into bloom. Treated in this way the crop should stand for from seven to ten years, yielding each year two or three heavy crops. It may be grazed with sheep, hogs or young cattle if desired, but is liable to cause bloat in cows and sheep. Its great value is as a hay crop, of which it makes one of the richest known and the heaviest yield.

### "WORNOUT LANDS."

*Editor Southern Planter:*

I should like to give my experience with a piece of so-called "wornout land," and if any subscribers have any such land and will work it as I did they will find that it only wants to be cultivated well and be fed a little by sowing some leguminous crop and ploughing it in the ground to become fertile again.

I purchased a tract of land in the spring of 1902,

and at that time it was all grown up in small pines, sassafras bushes and other shrubs. I cut the pines down and grubbed the hardwood bushes out and burned the broomsedge off. Had it not been so late in the spring I should have ploughed the broomsedge down, but at that time it would not have had sufficient time to rot before I put the crop in.

After I had the land all clean I ploughed it from ten to twelve inches deep with a good two-horse plow. I finished ploughing about the middle of April and then let it lay until the 10th of May, so that it was well settled. I then ran the disc harrow over it both ways, which thoroughly cut the sod; then I dragged it level and was ready to plant my corn, and this I did about the 20th of May. I did not have any stable manure to put on it and I did not use any chemical fertilizer, for I do not think it pays on corn.

Some of my neighbors laughed at me and said I was throwing my work away, but I decided to give it a fair trial anyhow. I worked the corn well and I had a better crop even than I expected, which proves that all the so-called "wornout land" is not as bad as it is made out to be.

But when land is only half ploughed and is cropped year after year and nothing put on it, one cannot expect much. Land to produce good crops must be fed occasionally, and the best and cheapest way is with legumes and plenty of manure. Chemical fertilizers alone will not tend to improve land much, for land to become fertile must have plenty of humus in it, and this chemical fertilizers will not supply. This keeps the land open, prevents it from baking and makes it resist drought much better. When land is devoid of humus a good way to begin—if one wants to improve it—would be to sow it down in peas. Plough the land deep and harrow it well; sow about a bushel of peas per acre broadcast and if a heavy growth of vines is desired apply about 300 pounds of acid phosphate per acre. It is best not to plough the peas under until they are dry. If they are ploughed under in a green state use a dressing of lime. Crimson clover is also a very good crop to turn under as an improver. Now is a good time to lay the foundation for a good corn crop next year. The land that is not being cropped this year and is to be planted in corn next, should be sown in peas. This can be done as late as the middle of June and these can be turned under the latter part of September and the same land sown in crimson clover, which can be cut for hay about the 10th of May and the land be planted in corn by the last of the month. Plough the land deep, harrow it until it is in good order, then harrow it again, to be sure it is all right,

for land cannot be put in too good order. This process will invariably insure a good crop of corn, and if it were kept up many of the farmers who have plenty of land, but think it is too poor to work, would not have to take money out of their pockets—which they have worked hard to get—and buy feed for their stock every spring.

H. J. ROSBACH.

*Hanover county, Va.*

### HINTS ON THE CULTIVATION OF CORN.

(A paper read before the Farmers' Club of Gloucester county, Va.)

The man who expects success as a corn raiser should begin to plan his crop long before the planting season arrives—the longer before the better.

The farmer who selects his field at haphazard about the 1st of March, and only allows himself two or three months to prepare for his crop, is in the class with the man who tries to fatten poor cattle in six weeks.

Stock men and crop farmers practice different methods of rotation, etc., so that the best mode of culture for corn will depend upon which of these two classes the farmer belongs to.

Generally speaking, the stock farmer will find it most profitable to use an old pasture field for corn. If he has fed such concentrates as oil meal, cottonseed meal, etc., in connection with the pasture and top dressed the sod with barn-yard manure during the feeding season, he is pursuing an ideal method for raising heavy crops of corn and maintaining or increasing fertility of soil.

The cropper is a man with intensive methods. His favorite mode of preparing land for corn is to take it through a course of improving legumes, such as cow peas, Soja (soy) beans and the clovers, often depending upon commercial fertilizers to assist these nitrogen-gathering plants in their work of soil improvement.

If you want to raise corn with success and profit take at least two years in which to build up the fertility of the land where the corn is to be raised.

A combination of cow peas or Soja beans and crimson clover or rye with plenty of ploughing, harrowing and fining of the soil will always pay big returns, both in a corn crop and in permanent benefit to the soil.

In our section, where the great Bermuda grass is king, I have always practiced deep cultivation of corn, but only—and this is all important—while the corn is a small plant with little root development. As soon as corn is up so that the row can be followed

I use a double worker cultivator with four shovels, each six inches wide and thirteen inches long. With this implement I give the corn two deep, thorough workings in quick succession, tearing up Bermuda root and branch. After this I use an "Iron Age" cultivator with small teeth, keeping the surface of the ground as thoroughly stirred as possible as long as corn can be worked.

Now, a word about seed corn: Every farmer who gets hold of a heavy-yielding variety of corn that suits his soil and is satisfactory for feeding or sale, should hold on to it, raise his own seed and try to improve it, rather than to be constantly trying new varieties of seed, some of which are sure to be failures.

Seed corn should be raised on a plot of select land far enough away from any other corn to prevent mixing.

It should be planted in checks four feet each way and be carefully thinned to two stalks per hill. After the corn tassels it should be thinned a second time, all stalks that are barren or of inferior growth being cut out.

There can be no doubt to a logical mind that barren and inferior stalks, in fertilizing healthy and prolific stalks, injure the quality of the ear which they bear.

If seed corn be carefully selected and bred in this manner, put on rich, kind soil and carefully cultivated, it is sure to improve from year to year.

*Gloucester county, Va.*

N. S. HOPKINS.

### SORGHUM AS A DRY-WEATHER CROP.

*Editor Southern Planter:*

We are having the dryest time now I have seen for a long time. It has not rained since the night of the 3d of this month (May). During the winter and spring we had so much rain that the ground became thoroughly packed, and all lands anyway stiff are very hard and dry. We cannot plough at all, and many farmers have planted but little corn and the ground is so hard that they cannot now plough at all, consequently the time for making corn and forage is going to be very short. The spring oat crop must be a failure, which will cut us off again in forage. We will have to look around for some means to meet the coming demand for feed. I don't know of a more reliable crop for that purpose than sorghum if it rains enough to allow ploughing in the next thirty days. By planting and sowing a good lot of sorghum we may meet the demand, for it will stand more dry weather than corn and makes a better

class of forage. I have fed on it all winter and am yet feeding it and my horses are looking very well. It makes at least twice as much per acre as corn fodder. If you sow it and peas together—one bushel each per acre—it makes most excellent hay.

*Henrico county, Va.*

COUNTRY.

### "PIGS IN THE PEANUT PATCHES"—CRIMSON CLOVER.

*Editor Southern Planter:*

We have often heard of "pigs in clover," but down here in Eastern Virginia we find "pigs in peanut patches" in the fall of the year. The peanut is planted in May and ploughed out in October and November, before the frost has cut the vines.

In digging it is expected that from 2 to 5 per cent., or even more, of the nuts are broken off the vines and remain in the ground.

The pig, who is as fond of peanuts as the small boy, industriously roots the ground all over for the scattered nuts and rapidly fattens on this oily food.

If killed when he comes off from the peanut patch the meat is soft and oily, and has a "peanutty" flavor to it, which is obviated by feeding corn a few days prior to killing. If allowed to run in the peanut field from the 1st of November to the middle of December and then fed corn for a few days the pigs are in fine shape to kill, and such meat so made or fattened, is much more palatable and much healthier than the thicker, fatter, hotter, corn-fed pork of the West.

The thrifty farmer can sow a few acres in crimson clover in August, September or October and turn his pigs on the same and let them graze until the middle of April following, putting rings in their noses to keep them from rooting out the clover. Taking them off about the middle of April, the clover springs up and grows rapidly, and in twenty-five to thirty days thereafter he can plough the clover under and plant peanuts, or corn, or sweet-potatoes on the same land the same season.

I recently visited a farmer—on the 12th day of May. On the 20th day of April preceding he had taken the pigs off from the crimson clover, which was then twenty inches tall and in full bloom—growing twenty inches in twenty-two days.

This farmer saves a little strip of his crimson clover to ripen fully and then pounds out the seed for the ensuing crop and sows it, chaff and all, thus securing his clover seed at practically no cost at all; and in sowing it with the chaff he secures a better

and a more even stand than when he uses the cleaned seed from the store at \$3 or \$4 per bushel.

Ploughing under the bulk of the crimson clover crop in May he plants the land to peanuts, so that between the four and one-half months winter grazing on the clover and the six weeks fattening on the peanut crop, the pigs make good use of the land, while the owner gets a profitable crop of peanuts.

With such opportunities here, and such advantages in the way of raising and fattening pigs, it hardly seems necessary for this seaport to call upon the great West for at least 10,000,000 pounds of pork per year.

It is not only possible, but entirely practicable and feasible, to make pork here cheaper than at the West. It will not only be cheaper, but it will be healthier.

We would like to see pigs in every peanut patch and in every clover patch in Eastern Virginia.

*Norfolk, Va.*

A. JEFFERS.

### FERTILIZERS IN A DRY SEASON.

*Editor Southern Planter:*

It is sometimes claimed that dry weather is fatal to fertilizers—that is, that fertilizers will show an effect only in good seasons. There is no foundation, in fact, for this idea. As a rule, fertilizers are not used intelligently. The special plant-food needs of the crop are not considered, and in a dry, unfavorable season the foraging power of a plant is greatly lessened, so that it is nearly impossible for it to make good any plant-food deficiencies in the fertilizer by searching the soil for same.

Many experiments have been made, showing the effect of a well-balanced plant-food mixture under conditions of severe drought, one of which we give here somewhat in detail. This experiment—on corn—was made by Mr. Charles H. Rogers, of Colleen, Nelson county, Va. The soil was thin, worn and sandy and with a red clay subsoil. Under best conditions no very heavy crop could be expected from such soil with such improvement as one year's thorough treatment could effect. The drought, setting in early in June, was so severe that the stalks of the crop were practically valueless as fodder, while the yield from the unfertilized soil was practically nothing, being five bushels to the acre only.

The experiment was made with three plots, one of which was unfertilized. Plot 2 was treated with the equivalent of 1,000 pounds per acre of a fertilizer testing 4 per cent. ammonia, 8 per cent. available phosphoric acid and 6 per cent. potash—a formula particularly suitable to corn on light soils.



Mr. Rogers reports that the effect of the fertilizers was noticed from the start, but was materially checked by the drought. A third plot was planted, receiving the same amount of phosphoric acid and ammonia as Plot 2, but no potash, which was left out from the fertilizer in order to show what potash would produce if added to the mixture, as in Plot 2.

The results in grain showed Plot 2 to have produced an increase of twenty bushels to the acre and Plot 3 an increase of ten bushels. This settles the question of the crop-making power of fertilizers in bad seasons. It also throws considerable light upon the quality of effective fertilizers for grain crops on thin, worn soils. By omitting potash from the fertilizer the yield was reduced nearly one-half, and this under most unfavorable conditions.

Moore county, N. C.

BRYAN TYSON.

### BERMUDA GRASS.

*Editor Southern Planter:*

In the May issue of the *Planter* there appeared an article from J. S. Newman, South Carolina. He seems to favor propagating Bermuda grass. For my part I want none of it. It may be all right to plant Bermuda if no other crop is desired on the same farm, or adjoining farms. I had rather buy a farm matted all over with wire than one well set to Bermuda.

I suppose his way of propagation is good, except after it gets a start it would be an advantage to plough in deep with a turn plow every spring, as the more it is ploughed the better it grows. In this part of the country it pays a farmer to stop and uproot a piece of "wire grass," no matter how great his hurry.

TRUCKER.

Hanover county, Va.

We fully realize the objection of a "Trucker" to Bermuda grass. On an arable farm or in a garden we know of no greater pest, but as a pasture for stock in a hot climate it is the best that can be had and more valuable than the finest Kentucky bluegrass. There are thousands of acres in the South that ought to be covered with it and then we could graze cattle and sheep with any country in the world, and instead of galls and gullies should have a beautiful green sod in the hottest weather.—Ed.

### THE VALUE OF LEGUMINOUS CROPS.

*Editor Southern Planter:*

I send you under another cover a bunch of what is called here, a filth, "cotton top" or "woolly head" clover. Where I got the enclosed it has been grow-

ing for about nine or ten years, and nothing seems to exterminate it. I have grown two successive crops of corn on the land and for two other seasons a crop each of pea hay and crimson clover. I send it to show you the tubercles on the roots, though the plant is not yet half matured. The other is what we call "partridge pea," growing on the same land. On this plant the tubercles are very small, but more in number. Before this land took in these plants—about the time (or year after) I sowed it first to crimson clover—it was dead poor and would produce about seven and a half bushels corn. I have had it recently to yield fifty bushels per acre. I have never seen a piece of land improve so rapidly as this has done. At first I thought my "cotton top" a nuisance, but have decidedly changed my mind.

Richmond county, Va.

A. C. FISHER.

This communication strongly illustrates the importance of a knowledge of botany by farmers. These two plants—the so-called "cotton top," which is really a clover, and the so-called partridge pea, which is a vetch—are both members of that great family of legumes which are the truest friends of the farmers. All the clovers, the peas, the beans, alfalfa, sainfoin, lupines, etc., belong to this family of plants and are all capable of taking from the atmosphere nitrogen, which forms one of the greatest constituents of the air and which is in itself one of the most needed sources of plant food. This they do by means of tubercles, which form on the roots, and are the homes of microbes, which assimilate and render available this nitrogen for plant-food. Absence of this knowledge leads farmers frequently to destroy their best friends in the shape of plants, which work for them without fee or reward. No doubt thousands of acres of this so-called "filth," "cotton top" and "partridge pea" have been ruthlessly destroyed as pestiferous weeds in the South, which, if left alone, would have made these acres fertile and valuable. Their persistence in growth, notwithstanding persecution, is a wonderful illustration of the efforts of nature to clothe the earth with verdure and to make it profitable for cultivation by man. Like "dirt," which has been defined as being "simply matter out of place," plants of this character are sometimes troublesome in other crops, but their natural growth ought to be encouraged by utilizing the land for such crops as those in which their persistence will only enhance the yield and quality of the crop, like the grasses, clovers and other forage crops. When, by the continued production of these crops, the land has been filled with humus and fertility, then it may profitably be brought again into cultivation for other crops like corn, wheat, tobacco

and cotton, and these be grown in a proper system of rotation with the clovers, peas and beans, and thus the fertility be maintained.—Ed.

### ENQUIRERS' COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

#### Covering Cow Peas—Cow Peas and Corn.

Please let us know how cow peas should be covered when sown broadcast. Simply to say sow broadcast is very indefinite to us folks up here near the mountains, where such things have never been cultivated. Let us know if oats or corn could not be sown with cow peas to advantage as a forage crop for hay. I see one of your writers on this subject advises planting cow peas in each hill of corn. If you think this is advisable, please give variety best suited for such planting. Would it either help or injure the corn crop?  
W. L. RICHARDS.

*Fauquier Co., Va.*

When sown broadcast cow peas should be covered either by harrowing or by working them in with a cultivator. A cultivator makes the best work, especially a Disc cultivator.

Corn may be sown with cow peas, but we prefer to use sorghum as making a better hay feed. In this issue you will find information as to sowing cow peas with corn for silage or fodder.—Ed.

#### Lettuce Growing.

I want to ask you a few questions about lettuce growing. I want to plant in fall for late winter and early spring shipping. When ought I to sow seed, and what kinds are best? How much fertilizer should I use to the acre, and how much seed must I sow?  
TOM E. PERSON.

*Wayne Co., N. C.*

The lettuce seed for providing the plants for the winter crop should be sown about the middle of September. Sow on a rich, fresh bed and as soon as the plants are big enough to handle they should be set out in frames, if wanted for a very early market, or in the open ground for the spring market. The soil in which they are set out should be well worked, and be made rich with a fertilizer having about 6 per cent. of ammonia, 4 per cent. of phosphoric acid, and 8 per cent. of potash. This may be made of 300 pounds of nitrate of soda, 800 pounds of cotton seed meal, 600 pounds of acid phosphate (13 per cent.), and 300 pounds of muriate of potash to make a ton. Use about 700 to 1,000 pounds to the acre. As let-

tuce seed is very fine and light, an ounce or two of seed will grow a great quantity of plants. The best varieties for the winter crop, when grown in frames, is the Boston Market. For the open ground the best variety is All-the-Year-Round. When grown in frames the plants should have plenty of air given at all times in the day when the weather is mild, but be closed at night.—Ed.

#### Cough in Hogs.

What is good for hogs that cough a good deal?  
*Warren Co., Va.* W. S. WEAVER.

Give the hogs some linseed oil in their food, say, half a pint for each hog. Follow this with half a tea-spoonful of nitrate of potash for each hog in the drinking water once or twice a week.—Ed.

#### Cress Salad.

I should be greatly obliged if you can give me some light on how to kill cress salad. I have a forty-acre field in wheat that is over three-fourths salad, and where the salad is there is very little wheat and in some places not any at all. If I fallow this land deep in the fall so as to cover up the seed several inches, will this prevent it from coming out in the following spring? Please give me some information and suggest a remedy.  
THOS. B. DAVIS.

*Greene Co., Va.*

As soon as the wheat is harvested plough the land, turning a thin furrow, and then harrow and clean off all the weeds and trash which works on to the surface, and either burn or carry it to the barn-yard to make manure. This should get rid of the cress plants before the seed has ripened. Then to rid the land of the seed already in the soil work over with the disc cultivator and induce the seeds to germinate, and as they do so kill the plants out by harrowing on a hot day. Repeat this several times during the summer and you will get rid of the trouble. To wait until fall before attacking the pest is simply to give it the opportunity to make and fill the land with more seed, which sooner or later will come again sufficiently near the surface to germinate and trouble you again.—Ed.

#### Veterinary Colleges.

Will you please, in your next month's *PLANTER*, state which are the best veterinary colleges in this country and Canada, and what the expenses would be, and the length of time it would take a man to graduate; also the best hospitals where a man can work after leaving the college.  
M. WISE.

*Accomac Co., Va.*

We are not able to give you the information asked.

There is a good college in New York and one in Canada, but we do not know the address of either. If you would write the President of the Agricultural College, Ithaca, N. Y., and the President of the Agricultural College, Guelph, Ontario, Canada, these gentlemen would no doubt give you the information you seek.—Ed.

### Cow Peas as Improvers—Compost.

1. I have a piece of land, about two acres, that is very poor; would not bring more than four or five bushels of corn per acre. Would it pay to sow the same to cow peas, using an 8-2-2 fertilizer, say 500 pounds per acre; the vines to be turned under next fall and the place seeded to oats and grass?

2. Where can I get a book on intensive farming and truck gardening?

3. I can get any quantity of pine mould out of which to make compost, which is the best way to handle it? Haul it out during fall and winter and spread broadcast on the land, with lime spread over that and turned under, or pile it up about on the land in a layer of mould and a layer of lime and let lay all winter, turning at times, and then broadcast during spring and turn under?

A SUBSCRIBER.

*Mecklenburg Co., Va.*

1. Yes. It would undoubtedly pay, but we would apply 400 pounds of acid phosphate to the acre, instead of the mixed fertilizer. It would cost less and be more effective. Turn the vines under after they are dead, and not when full of moisture.

2. We can supply you with Robert's book on the Fertility of the Land, which teaches how to make the land rich and thus permits of intensive farming, and Oehmler's book on truck crops. The price of the first is \$1.25 and the second \$1.00.

3. Spread the woods mould on the land broadcast and the lime on this and then plough both under. No advantage is gained by mixing and composting them.—Ed.

### Sheep Sorrel—Sheep.

1. Will sheep eat sheep sorrel?  
2. What are best methods of killing it?  
3. Will Angora goats eat paw-paw, yellow dock or sheep sorrel?

4. What breed of sheep do you think best adapted to this section, one which will produce both wool and mutton? How about the Dorsets?

*Lee Co., Va.*

T. M. KING.

1. No, not unless pinched hard with hunger.  
2. Make the land rich, so that better plants will grow on it and crowd out the sorrel. It is an indication of poverty of soil.

3. Goats will eat almost anything, but we cannot say positively that they will eat these weeds. They do seem, however, to prefer weeds to grass and clover.

4. We think Shropshires would do better in your section than Dorsets, and they would give more mutton and wool. Dorsets are pre-eminently winter lamb raisers.—Ed.

### Plants for Name.

Enclosed find two plants I found growing in front of our home. You will please state what they are; what kind of land they grow best on, and where I can secure seed for the same. I admit I do not take the PLANTER, but I hope this will not cause you not to publish this, for I read my friends'. I assure you it will be greatly appreciated.

*Lenoir Co., N. C.*

W. CLOSS WEST.

We cannot identify the plants from the two sprigs sent. To enable us to do so we must have the whole plant, root and flower. One appears to be some kind of clover, the other we do not know at all. We think enquirers might at least take the journal, when it only costs 50 cents a year, before asking us to give them information. It would only be a small recompense for our labor.—Ed.

### Crimson Clover.

Will you be so kind as to inform me, through your paper, what time to sow crimson clover? I have just read a letter in the PLANTER from C. F. Day, in regard to crimson clover as being a good fertilizer as well as for grazing. I live in Eastern North Carolina, and we don't sow anything of the kind. I have some sandy land that will make from 15 to 20 bushels of corn per acre, and would be glad to improve it by sowing clover, if you think that kind of land will grow it.

R. C. MORTON.

*Onslow Co., N. C.*

The land you describe will grow crimson clover. Sow the seed at any time from August to October at the rate of fifteen pounds to the acre if seeded alone, or if in mixture with oats or wheat, which we advise, at the rate of ten pounds of clover and half a bushel of grain. Sow broadcast and cover with a light harrow.—Ed.

### Gasoline Engine.

Will you kindly advise me, through your columns, as to what you think of a 2½ H. P. gasoline engine being sufficient to run a 24-inch wood saw and a No. 11 Cyclone feed cutter? The engine I have reference to is the Weber Engine. Do you think I could run either machine to fair advantage with 2½ H. P. engine? Would said engine give as much or less power

than five horses on sweep power? The manufacturer fits this engine with 8-inch drive pulley. Now, what effect would it have on the driving power of engine to fit it with a 14-inch pulley? I want just as cheap an engine as I can get to do my work, as it will have to stand idle most of the time. I just want it for my own use, and not to do custom work.

Durham, N. C.

J. THOS. HICKS.

We doubt very much whether a two and a half horse-power engine will do the work you describe. The nominal power of a gasoline engine is practically its actual power and not, as is the case with a steam engine, only about half the actual power. A three horse sweep horse-power would not run the machines you mention. You should have at least a four horse engine. Increasing the size of the driving pulley would not give you more power. A large fly-wheel on it might help, but this would be straining the other parts of the engine. Get a guarantee from the maker when you purchase, that the engine you buy will drive the machines you name.—Ed.

### Asparagus Growing.

Will you kindly give me full and complete instruction as to the best manner and mode of putting out, handling and marketing an acre of asparagus on good land, well drained, and mellow? Would you advise white or green asparagus for the Washington market, and what variety would advise planting? What is an average crop per acre? X.

Westmoreland Co., Va.

The rows should be set out six feet apart across the field. Take a plow and throw out as deep a furrow as possible in the line of the row. Then break the subsoil and throw it out on the opposite side of the row to that on which the surface soil has been thrown. Clean out the furrow well so as to make the bottom of the row at least eighteen inches below the surface. Then take some of the surface soil and fill into the row to the depth of six inches. If this soil is not fairly rich it should have some bone meal and cotton seed meal mixed with it, say, 300 or 400 pounds of each to the acre. The rows are now ready for the plants. These should be 2-year-old plants and should be set out eighteen inches or two feet apart in the row. The plants should be put out as soon as received from the growers, as they are very susceptible to injury when kept long out of the ground. Cover the plants as they are set with two or three inches of the surface soil and make them firm in the rows. The soil taken out of the bottom of the row should then be spread over the land between the rows. This work of planting the bed should be done in the early spring, say,

March or April. Nothing further need be done to the crop until fall, beyond keeping down all weeds. In the fall after the stalks have matured cut them off and burn them and cover each row of plants with a heavy mulching of farm-yard manure. Let this lay all winter and then in spring cover this with two or three inches of soil and work the land between the rows and keep the whole field clear of weeds during the summer. No crop should be cut the first year after planting. In the fall clean off the stalks and again cover with manure and soil. In the early spring work the land over the rows and between them fine and cover the rows with a foot of soil. This will give you white asparagus, which is that mostly called for in the markets. The shoots should be cut with a long-bladed knife as soon as the tips come through the soil. Put up in bunches of fifty. A machine is sold for bunching asparagus, which can be had from implement dealers and hardware merchants. If green asparagus is desired do not cover the bed with the foot of soil and let the stalks grow until long enough for bunching before cutting. There is very little, if any, difference between two or three of the principal varieties as to quality or yield. Either Conover's Colossal or Palmetto are good varieties. The crop depends mainly on the richness of the land. We saw the other day that a grower in the neighborhood of Charleston, S. C., had this year made a clear profit of \$5,000 from 100 acres of asparagus.—Ed.

### Barn Building.

I ask for advice in reference to building a barn. I recall seeing in a recent issue of the *PLANTER* a reference to a barn of modern construction, in which no heavy timbers were used, the heaviest being only two inches in thickness. I have never seen a building of this kind, and would like to know something of it. I would be glad if the editor or any of the readers of the *PLANTER* would advise me after I have made known my wants. I want a barn to accommodate six head of horses and twice that number of cattle, with ample room for forage and small grain crops. I have a fairly good crib for corn, but would like to have at least one small room for corn. If possible, I would like to have a sixteen feet ground space or circle on which to erect a Wright horse power, to run my cutting knife and pea thresher. I also want to use, as far as possible, the timbers of my old barn in constructing the new one. The dimensions of my old barn are as follows: 30 feet long x 24 feet wide, length of studding, 12 feet. A passageway 10x24 feet runs across the barn. The comb of roof runs with the length of barn; rafters cut by a square mitre. Across the ends and one side there is

a shed ten feet wide, length of studding under lower plate, 8 feet. These sheds are weatherboarded and have a loft six feet from the ground. The body of the barn is divided into six stalls, three on each side of the passage. The timbers and weatherboarding of this barn are pretty good, but the roof is rotten. I am not wedded to a barn of any particular kind or pattern, but have thought I would like a square or octagon shape or pattern. I would like a narrow walkway around the stalls for convenience in feeding, where the grain or feed boxes could be constructed and where the forage could be thrown from the loft within reach of the stock. I have not decided whether to cover with shingles or some of the various patented roofing materials on the market. Would like to be advised on this point. I would like for the building to be as inexpensive as possible, with all the conveniences that can be had at a small outlay in cost.

H. Q. ALEXANDER.

*Mecklenburg Co., N. C.*

Mr. Joseph E. Wing, of Mechanicsburg, O., has published a little pamphlet giving full instructions for building the frame barns referred to. Send for copy. We can supply a book on Barn plans, containing a large number of illustrations of barns and other farm buildings, which would probably enable the enquirer to decide upon the one he needs. The price is \$1.00. We shall be glad if any of our subscribers will give the enquirer the benefit of their experience in barn building. If plans are submitted we will publish same.—Ed.

### Broken Cow Peas.

With cow peas threshed in a grain separator is there any way by which the broken peas can be separated from the whole ones? Is there a market value for broken peas? When 25 per cent. of the peas are broken, what is their relative value compared with whole ones?

X. Y. Z.

*Westmoreland Co., Va.*

By running the peas through a fanning mill and carefully regulating the blast the broken peas can be separated from the whole ones. The damage has been done by running the separator too fast. We believe that feed dealers buy the broken peas, as we know they often have them on sale for chicken feed. We could not undertake to place a value on such a sample. Submit same to a dealer.—Ed.

### Teocinte.

"Subscriber" desires further information as to teocinte. Is it a sorghum or a grass?

Teocinte is a tropical or semi-tropical grass. It

makes a heavy yield of forage, growing much like corn, but stools heavily from the root when cut and thus can be cut a second time. It will not mature seed north of the Gulf States nor make a crop of feed north of the James river. It is excellent for cutting for green feed and can be cured like corn fodder.—Ed.

### Japan Clover.

There is considerable pasturage of Japan clover in this locality, and people here are largely of the opinion that it is good to stay and of advantage in fattening cattle on poor land, but that it is not milk producing and will run a cow dry if kept much upon it. My two cows, Jersey and Devonshire, got in fine fix upon it last summer, but failed rapidly in their milk. Was the Japan clover the cause? They had a very light feed of meal and wheat bran at milking, not housed until late fall. Devon was a stripper, Jersey was fresh in July with her third calf. Pray oblige by reply in next issue of paper.

*Transylvania Co., N. C.*

A SUBSCRIBER.

We have never before heard any complaint as to Japan clover being unsuitable for milch cows. On the other hand, we have heard a number of farmers who keep large herds of milch cattle speak highly of it. The composition of the plant as disclosed by analysis is almost exactly the same as red clover, and, therefore, it may be presumed to be an excellent feed for either milk or meat making.—Ed.

### Hen Manure—Prevention of Lice in Hen Roost.

1. I want to know the manurial properties of hen house dung. How much is it safe to apply, especially in a garden?

2. I have a chicken, hatched blind, what can I do for him? My prevention for mites (lice) on fowls in fowl houses is simple. I have tried it with good results for two years. I use saffras poles, unpeeled, for roosts. The lice avoid these. I have never seen a chicken louse, though mites are in abundance and mighty annoying.

JAMES JOYNE.

*Berkley Co., S. C.*

1. Hen manure (fresh) contains 1.10 per cent. of nitrogen, 0.56 per cent. of potash and 0.85 per cent. of phosphoric acid. Horse manure contains 0.44 per cent. of nitrogen, 0.35 per cent. of potash and 0.17 per cent. of phosphoric acid. A ton of hen manure would contain about 22 pounds of nitrogen, 11 pounds of potash and 17 pounds of phosphoric acid. A ton of horse manure contains about 9 pounds of nitrogen, 7 pounds of potash and 3 pounds of phosphoric acid. The hen manure is, therefore, as

you will see, more than twice as valuable as plant-food as horse manure and is better balanced, though still has nitrogen in excess. Knowing these proportions and having this comparison you can judge for yourself as to how much you should apply. The effect of a good supply of nitrogen in a fertilizer is to stimulate leaf and stalk growth, hence nitrogen is valuable in a garden fertilizer, as it forces rapid growth of the leaves and stalks of the vegetables. The phosphoric acid in a fertilizer conduces to the formation of seed and fruitage, whilst the potash is mainly valuable as improving the quality of the seed and fruit.

2. It is very doubtful if you can do anything for the chicken, and unless it is of a valuable pure breed it is not worth the attempt. We have known a case where the eye itself was perfect, but the lid had no division. In this case, when the lid was cut across from side to side, the chicken could see. If, however, when the lid was cut the eye itself was found defective no good would result. What you call mites are lice.—Ed.

### Cow Peas in Corn.

I would like to have your advice as to whether or not it will pay to sow peas in a corn field when worked the last time at \$1.25 per bushel, to gather for peas and to improve the land?

*Pittsylvania Co., Va.*

T. J. HUBBARD.

Yes. We have always advised this course and believe the advice sound. The peas are worth all they cost as improvers of the land.—Ed.

### Cement Walls for an Ice House.

Please state if a cement wall would be better in an ice house than one made out of wood.

SUBSCRIBER.

Yes; cement makes an excellent wall for an ice house. It maintains a more equable temperature and will last forever.—Ed.

Moisture stored in the soil seems to do the crops more good than when it falls as rain during the growing season. This indicates that it is desirable to get the ground thoroughly moist and then cultivate it so as to conserve this moisture.

When corresponding with advertisers, kindly mention the *Southern Planter*.

### THE GROWING BUDS AND GRAFTS.

Buds of apple, peach, cherry, etc., which were put on in budding time last fall, will now be beginning growing if the work was successful. But sprouts from the stock (which, of course, was cut off two or three inches above the bud in March) will also be growing; and these latter, being in perfect connection with the stock will attract the life-giving sap largely to themselves, and rob the bud. Attention will be needed from time to time, in order to prevent this. These sprouts must be broken off every week or two, taking special care not to injure the bud in the operation. Frequently there will be six or eight sprouts above and below the bud, completely hiding it from sight, and without watchfulness the bud may be broken off and all the previous labor lost; and worse than this, there may be the loss of the only living bud of the particular kind—some new variety perhaps, obtained with much trouble and expense; as has occurred more than once.

The only safe plan is to look the bud up the first thing, before breaking off a single sprout; then by keeping an eye on the bud, and handling carefully, it will not be injured.

Sometimes the work is overlooked until the sprouts are three or four inches long, in which case it might be too much of a check to the tree to take all off at once. The best plan would be to take off all that are above the bud, on the stub (as the stub is to be cut off in July), and pinch off an inch or two of the points of those below the bud; then at the next sprouting (in a week or ten days) all the sprouts can be rubbed off, leaving the bud in full possession.

Grafts set in spring will require the same care: only the sprouts will be less numerous, though hardly less injurious.—R. J. B., in *National Stockman*.

### HALF-DONE WORK IS ALWAYS WASTEFUL.

The extravagance and waste of doing work badly are most lamentable. We can never overestimate the value, in a successful life, of an early formed habit of doing everything to a finish, and thus relieving ourselves of the necessity of doing things more than once. Oh, the waste in half-done, careless, patched work!

The extravagance and loss resulting from a slipshod education is almost beyond computation. To be under the necessity, all through one's life, of patching up, of having to do over again, half-done and botched work, is not only a source of terrible waste, but the subsequent loss of self-respect and life is also very great.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

June is one of the busiest months in the year for the trucker and gardener. The shipping and marketing of the fall and early spring planted crops, the cultivation of the later planted crops, and the planting and cultivation of the crops to ripen in the fall must all proceed at once, and if any of these are neglected loss must ensue. In addition to all this work, where strawberries, raspberries and other small fruit are grown, these are now ripe or ripening, and must be gathered and marketed.

When shipping fruit or vegetables to market, see that care is taken to have them cooled off before crating and cull them closely so that the crop may be creditable to the grower. Keep the different grades of fruit and products separate, and mark each shipment "first," "second" or "culls," as the case calls for. In this way much better prices can be realized. See that all baskets, crates and packages are clean and the products packed in them attractively. More than one-half of the profit may be easily lost by neglecting these points.

Successional crops of beans, peas, corn, melons, cantaloupes, cucumbers, squashes, peppers, tomatoes and egg plants should be set out and the earliest planted ones should have frequent cultivation to stimulate their growth and keep down weeds. The hot, dry weather we have had in May has largely hindered growth, and only repeated cultivation can save the crops unless we have rain. Keep the ground covered with a mulch of some kind. A dry dust mulch is as effective as any. As soon as we have rain a dressing of nitrate of soda, say 150 pounds to the acre, will infuse life into the crop again, and set it to growing. Apply when the plants are dry, broadcast. A vigorous, quick growth will tend to prevent damage by insects, and in this way nitrate of soda acts as an insecticide.

Look out for potato bugs, and see that they have a good dressing of Paris green before they have injured the crop. If there are any indications of blight on the Irish potatoes give them a spraying or two with Bordeaux mixture. Even if no blight be seen, the spraying will be of advantage. In an experiment made last year in New York State, spraying seven

times with Bordeaux, at a cost of about \$10 per acre, gave an increased yield of 123½ bushels of potatoes, and three sprays increased the yield 98½ bushels. Where both the early and late blight were absent from the crops on Long Island, spraying seven times gave a gain of 45 bushels per acre, and spraying three times, a gain of 7⅔ bushels.

When setting out tomato plants, plant a hill of corn every few yards. The worms will take the corn before the tomatoes, and when on the corn it can be pulled and fed to stock, and thus the tomatoes be saved from injury. Mustard sowed between the rows of cabbage and other plants of the same family will save them from the attacks of terrapin bugs. These will crowd on the mustard, which can then be destroyed by sprinkling with kerosene. Melons and cantaloupes can be largely saved from the attacks of the melon louse by dusting them when wet with bone meal.

Cucumbers for pickles should now be set out. There is a large demand for this crop, and it is usually a profitable one. Plant them in hills 3 or 4 feet apart, and fertilize liberally with a fertilizer having about 5 per cent. ammonia, 7 per cent. phosphoric acid, and 8 per cent. potash. The cucumbers can be put up in brine as pickled, and then be sold when all the crop is gathered, if not near enough to a market to sell as pickled.

Harvest the fall planted onions as soon as they ripen. Pull and leave on the ground until dry, then cut off tops and sell at once. They do not keep well, but usually sell well before the spring planted crop comes on the market.

Old strawberry beds, if not intended to be plowed up and new ones planted, which is best after the second year, may be renovated by mowing off the foliage and burning it, thus destroying all insects and blight. The rows should then be barred off with the plow, and the plants be thinned out with the hoe, and all weeds be destroyed. Then plow back the soil and cultivate the middles.

Celery seed may be sown during this month for plants to set out in July and August. Make the bed

fine and rich, and let it be in a moist, cool location. Sow the seed thinly, rake in and water, and then cover with brush or mats to keep in the moisture. It is slow to germinate usually and often fails altogether unless kept shaded and moist. When germinated gradually remove the shading.

## ORCHARD AND GARDEN NOTES.

### *Editor Southern Planter:*

Strawberry vines will need much attention this month. All runners should be kept in the row, so that room for cultivation between the rows will be available. After the crop of fruit is gathered the leaf rust is apt to do serious damage. If this disease should be found doing serious damage it is a good idea to mow off the old foliage and when it dries place a few leaves or straw over the bed and burn everything. The fire will injure some plants if the ground is dry, hence it is better to burn when the ground is moist. After this burning the ground should be well cultivated. New, vigorous foliage will soon come up. This foliage should be sprayed with bordeaux mixture to prevent the leaf rust appearing again.

The raspberry canes will need attention also this month. Pinch the ends of the young canes off so that they will branch and be more stocky. We like for the canes to grow about three feet high.

It is quite probable that a large per cent. of the apples will have to be thinned this year to make the fruit large and fine. If the trees overload themselves this year they are not likely to bear a good crop next year. But thinning will be a difficult job on many of the large, tall trees. There will be many water sprouts come out on the younger trees. These should be looked after closely.

Keep the cultivators going in the orchard and garden. The trees will need much moisture to mature their fruit. If grass and weeds come up they should be mowed off closely. None should be allowed to ripen seed.

I notice in many instances where cow peas are sowed in the orchard the vines are allowed to climb up on the young trees and do great damage. If dry weather should continue all such crops should be mowed and let fall upon the ground to make mulch.

Plants should be set out for fall and winter cab-

bage. This is the most important crop of cabbage for the farmer. Many times the plants are set too early in the season for this crop, and the winter cabbage frequently rots or is seriously damaged by the heads bursting in the early fall. Of course, this can be partially prevented by loosening the roots of the cabbage in fall, but the best plan is not to plant the fall crop too early.

Since the last issue of the Planter was published I notice that the Board of the Virginia Polytechnic Institute has asked for \$20,000 to build and equip an Agricultural Building for the Departments of Agriculture, Horticulture and Veterinary Science. Such a small amount put into such a building for the State would be a shame and a disgrace—\$50,000 would be little enough. I have helped to erect and equip a building for the Departments of Agriculture and Horticulture at an Agriculture and Mechanical College which cost \$34,000. Even then we did not have enough. It must be remembered that such a building is to be used for two widely different kinds of work—for teaching and for investigation. The college work will run nine months and the station work twelve months. We do not want to see this work placed in the background any longer at this institution. We do not want the "play of Hamlet with Hamlet left out." The equipment for agriculture and related branches should be the best of all the technical branches, as was originally intended when the colleges were endowed. It is utterly useless to try to attract students to such a course with a poor equipment, and a good equipment is necessary for good station work as well.

There is much room for needed improvement along these lines. We are sorry to see the small sum of \$20,000 asked for to build and equip a building for the most important industrial interests of the State. Broader ideas in the minds of those who think such a small sum sufficient to represent such important interests are sadly needed. We hope such a small sum will never be appropriated. Fifty thousand dollars is small enough.

R. H. PRICE.

Montgomery county.

## PLANTING TREES WITH A CROWBAR.

The Stringfellow Method.

### *Editor Southern Planter:*

New discoveries have been made in modern times in the use of steam and electricity and in the practice of agriculture and the mechanical arts; so it will



not do to say the Stringfellow "new horticulture" is a humbug and a folly. New and valuable things have been discovered, and, according to Wendell Phillips, many of the old arts have been entirely lost.

Some able, experience orchardists have become converts to the Stringfellow method of tree planting, and Mr. S. himself is, no doubt, a very intelligent gentleman. Mr. M. Crawford, of Ohio, says: "If the new horticulture is sound, and it certainly is, the sooner fruit growers find it out the better." Mr. Hitchings, another experienced orchardist, has adopted the system, and I understand that Mr. H. W. Collingwood, the editor of the Rural New Yorker, has planted nearly 1,500 trees by this method and says his success has been so great he would never plant trees any other way.

Some trees, like the willow, will grow from a piece of the limb stuck into the ground, but I know from trial that they will grow quicker when small trees are planted with their roots left on. Everybody knows that a large tree will not grow when transplanted, except it is taken up with a great ball of earth containing most of its roots. There are two modes of doing work practiced in this world. The one is to do it extremely well and the other is to only half do it. Work well done always pays the best in the long run.

The endeavor to save labor is all right, provided the less labor produces just as good results; but this is the question in dispute.

Every intelligent farmer knows that to raise large crops of grain, grass, vegetables, flax, hemp, cotton or tobacco the ground must be prepared by ploughing, harrowing and rolling to make it as mellow as possible before planting, so that the roots of the plants can penetrate it easily and quickly in all directions, embrace the fine particles of soil and extract the nourishment the plants must have to grow luxuriantly and produce good crops. There is no plant or herb we can think of that will not grow and produce better in a well prepared soil than in unploughed ground. Corn has been raised on the prairies by chopping through the sod with an axe and planting the seed, but the planter only raised a meager crop. He did not expect much, and was not disappointed. If the roots of all plants of which we have knowledge thrive best in a mellow soil, why not the roots of fruit-trees? Have they any miraculous power not shared by the roots of other growing things to penetrate a compact soil, made more solid by the jabbing of the crowbar to make the hole for the tree's insertion?

They tell us of a case where a cherrystone was

dropped into the crack of a big rock and grew, it was watered and the roots spread and split the rock itself. Was there not a great waste of energy in making those cherry-tree roots split the big rock? How much quicker and farther those roots would have extended in a mellow soil, and how much quicker the tree would have grown and produced fruit? The Stringfellow converts admit that for the first two or three years the growth above ground of the Stringfellow trees is quite inferior to those planted in the old way. Some orchardists who tried the new method, owing to the slow growth of the trees, became disgusted, pulled them up and threw them away.

A soil made mellow by ploughing or spading will absorb and retain more of the rain water for the support of the young tree in dry weather than when planted in solid ground.

The efforts of wise farmers have always been to get their young stock growing fast at the beginning of life and to keep them growing. They also strive to have their plants and trees start off vigorously at the commencement of existence. Mr. Crawford says: "At the time of planting, the top and roots should be cut back, reducing the tree almost to a cutting." Certainly, if the roots are cut off the top must be also, but that seems like barbarous treatment. The experience of the world in all ages has been against this Stringfellow method. Analogy opposes it, reason condemns it, but nothing will convince these men that the method is wrong so long as the trees *will grow*.

Trees strive very hard to live. The Chinese dwarf small pine-trees by constantly cutting off their roots until they are willing to grow in a flower pot, like house plants. If only allowed to live, they are willing to live without growth. This is not the way pine-trees should be planted to make ship masts and lumber.

J. W. INGHAM.

### FRUIT PROSPECTS IN VIRGINIA.

We have received the following reports from orchardists in this State as to the prospects for fruit:

The out look for fruit in this section (eastern slopes of Blue Ridge in Albemarle county) at present date is that a far larger quantity of peaches escaped the frosts in April than was at first expected, the set now shows early varieties, a very heavy crop, so much that in many cases the trees have more than they can properly bear. All varieties ripening up to end of July are set heavy. August peaches (Elberta, Mountain Rose, etc.) suffered more, but there are no trees

without peaches. October peaches, such as Bilyeu's Comet, are well set, in some of the more sheltered orchards there are large crops throughout. Pippins show for a good crop, have set well and are sticking. Red apples in many cases appear to be dropping considerably, at present Winesap indicates to average half a crop, Limbertwig, Ben Davis, Winter Cheese, etc., are well set in some, and very short in other orchards. York Imperial seems to have failed. There are lots of summer apples. Practically no cherries escaped. No pears, a fair crop of plums, the more delicate Japan varieties, such Abundance, Burbank and Wickson have failed, but there are good crops of Red June, Wild Goose, Ogon, etc. Strawberries, all the blooms out at time of frost were killed, but later blooms are ripening a heavy crop.

*Albemarle Co., Va.* WALTER WHATELY,  
Secretary State Horticultural Society.

Very conflicting reports of the condition of the fruit are given. As far as I have been able to investigate myself, I think in our section there will be half a crop of peaches, very few pears and cherries, the largest winter apple crop we have had for years, too many on the trees. The earlier apples are not so heavy. Japan plums light, hardier varieties and damsons very heavy.

SAMUEL B. WOODS,  
President State Horticultural Society.

*Albemarle Co., Va.,*

Replying to your favor of recent date, inquiring as to prospects for fruit in this section, I will say that there are a few peaches and plums, a good crop of damsons. Of the apples, early varieties are a failure—Winesaps a light crop and Pippins a full crop.

WM. H. BOAZ.

*Albemarle Co., Va.*

There will be a full crop of apples, both summer and winter. About one-fifth of a crop of peaches; some cherries; no pears, and about half a crop of European plums; scarcely any Japan plums.

*Roanoke Co., Va.* A. M. BOWMAN.

Your favor of the 12th May to hand, and will reply by saying the apple bloom in this section of the Valley of Virginia is very heavy, and the prospects for a large crop of apples is very encouraging. This year will bring into bearing many fine young orchards that have never produced a crop before. The acreage of young orchards is large in our valley, and in a few years Augusta will stand first on the list as an apple growing county in Virginia. The York

Imperial grows here to perfection, and many young orchards are set entirely with this variety. All stone fruits have been destroyed with us. We may have some few pears. The strawberry is only a half crop.

*Augusta Co., Va.* DAVID O'RORK.

In reply to your favor of a recent date, I would say I have not written sooner as I was making inquiries as to fruit prospects. I find on investigation there is almost an entire failure of cherries, plums, pears and quinces. Strawberries were killed in the first blooming, and the dry weather has caused the later berries to dry up. The peach crop is a general failure. Albemarle Pippins are holding on here in most cases, though there was not a full bloom, and the crop will be much smaller than usual. We had a fine Winesap bloom, but few appear set, and I have never seen less of this variety. In fact, the crop of winter fruit is small. I have a small orchard of Fall cheese apples that yields from 350 to 400 barrels the regular apple years, which won't yield five barrels this year, and I never saw the trees in finer condition and a fuller crop of bloom. On the morning of April 5th, at 7 o'clock, the mercury was down to 20 degrees, and this is what destroyed our fruit.

*Albemarle Co., Va.* M. L. McCUE.

Complying with your request in regard to the fruit prospects of our section, I will say that strawberries are looking fairly well, but are beginning to need rain, and unless it comes soon they will be cut short. Peaches are almost an entire failure, buds having been killed in February, very few pears, fair crop of plums, cherries mostly killed, but the apple promises to be the heaviest crop in many years. Trees are loaded and no sign of any blight at all.

*Pulaski Co., Va.* W. W. OTEY.

All peaches, pears and plums killed or nearly so. Crop of apples for this county will be an average one. My own orchard of 4,000 trees is very full; have had fine, dry weather for spraying.

*Patriek Co., Va.* J. H. RANGELEY.

Your favor of the 12th instant addressed to me at Roanoke reached me at my farm at this place. For my own orchards, I will say that Pippins, Cannon's Pearmain, Smokehouse, Pryor, have set a good crop of apples. Winesap, Ben Davis, Johnson are less full, but these last are young, and not in full bearing. Keifer has very little fruit. Bartlett has done fairly well. Plums are full, and there some cherries, but peaches very rare. Trees growing well. I did some

spraying and hope that the apples will not fall off as badly as they usually do. The general report is that there will be a good crop of apples.

*Franklin Co., Va.* JOHN R. GUERRANT.

Your favor of the 12th instant to hand and contents noted. In reply would say that the severe freeze that visited this section the night of April 4th about killed the peaches, cherries and other small fruits. I have a twenty acre apple orchard—Ben Davis and York Imperial apples. Many of these trees are full of apples now. But we are having a very severe drought, only one rain having fallen for a month. If this drought continues much longer many apples will fall off the trees before ripening, and the present prospects for a large crop will be greatly diminished.

E WICKHAM BYRD.

*Clarke Co., Va.*

### BUDDING TREES.

*Editor Southern Planter:*

In the next issue of your valuable paper please give a minute description of budding fruit, such as peaches and cherries; also the care of the buds from the original to the new stock; also the time of year for the work.

FARMER.

*Bedford Co., Va.*

Budding consists in introducing the bud of one tree with a portion of bark and a little adhering wood beneath the bud of another, and upon the face of the newly forming wood. It must be performed while the stock is in a state of vigorous growth. An incision is made lengthwise through the bark of the stock, and a small cut at right angles at the top, the whole somewhat resembling the letter T. A bud is then taken from a shoot of the present year's growth by shaving off the bark an inch or an inch and a half in length, with a small part of the wood—directly beneath the bud. The edges of the bark at the incision in the stock are then raised a little, and the bud is pushed downward under the bark. A bandage of bass, corn husk or other substance is wrapped round, covering all parts but the bud. The pressure should be just sufficient to keep the inserted portion closely to the stock, but not such as to bruise or crush the bark. The shoots containing the buds should be cut when so mature as to be rather firm and hard in texture. They are usually in the best condition after the terminal bud has formed. To prevent withering, the leaves must be immediately cut off, as they withdraw and exhale rapidly the moisture from the shoot. About one-quarter of an inch of the footstalks of the

leaves should remain to serve as handles to the buds whilst inserting them. When by growth of the stock the bandage cuts into it, usually in ten days or more, it must be removed. The bud remains dormant till the following spring, when the stock is cut off two inches or more above it before the swelling of the bud. All other buds must then be removed and all the vigor of the stock or branch thrown into the remaining bud, which immediately commences a rapid growth. The essential requisites for success in budding are first, a thrifty, rapidly growing stock, so that the bark will peel very freely; secondly, a proper time, not so early that there will be too little cambium or mucilaginous cement between the bark and the wood for the adhesion of the bud nor so late that the bark will not peel nor the subsequent growth sufficiently cement the bud to the stock; thirdly, buds sufficiently mature; fourthly, a keen, flat knife for shaving off the bud that it may lie close in contact upon the wood of the stock; fifthly, the application of a ligature with moderate pressure, causing the bud to fit the stock closely. When the stocks are in the best condition it is unnecessary to raise the bark any further than to admit the lower point of the bud, which, as it is pushed downwards, performs this operation in the most perfect manner. When the bark does not peel freely enough for this purpose, success becomes uncertain. Budding is performed in summer.

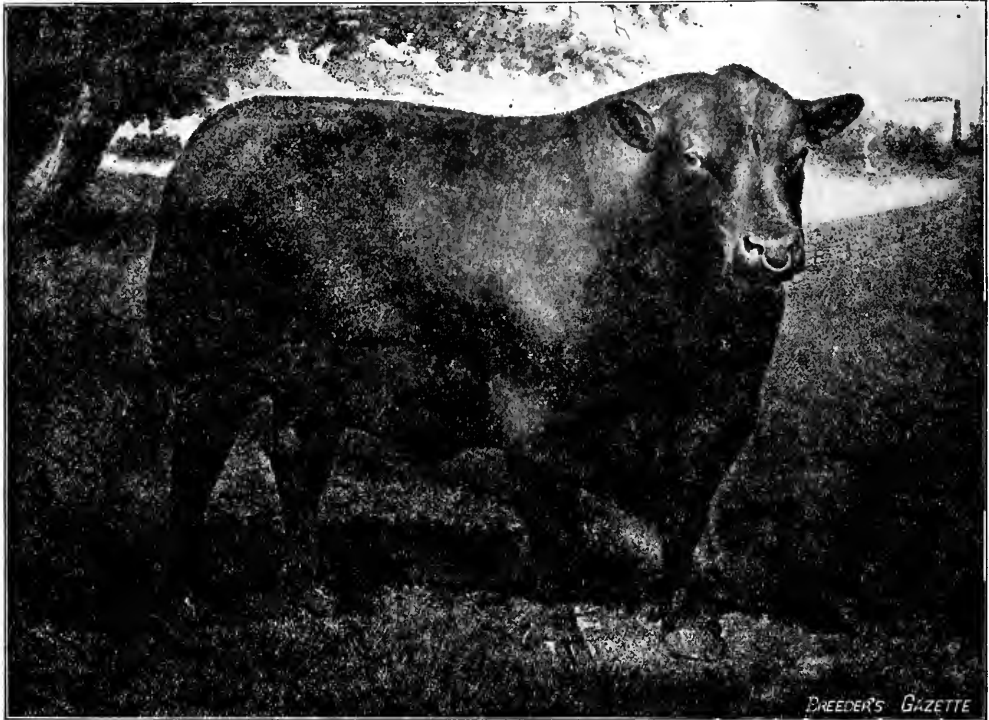
Place a bushel of choice peaches in an old dirty box, barrel or tub. How poorly does the fruit appear? But take the same fruit, place it in neat, clean, tidy packages, firmly packed, and it will appear so much better and sell for so much more that a novice in the work can scarcely realize it is the same fruit. The buyer will gladly pay more for the fruit in the neat, clean package.

The package should be secure, for rough handling may cause a loss of the whole, which would amount to more than the labor involved on a number.

Look, then, in time, and provide a good supply of the very best fruit packages.—*Farm, Field and Fireside.*

Early market tomatoes require short, well-rotted manure in the hill; the crop for canning should have in addition a coating of manure broadcast. This will keep the vines growing late and bearing until frost. The best treatment for the tomato blight is the Bordeaux mixture. The early plants should be sprayed in the bed before being transplanted in the field and then at least twice before the fruit begins to ripen. The blight has become a serious drawback to tomato growing in many sections.—*Farm Journal.*

## Live Stock and Dairy.



**GAY BLACKBIRD, 14443.**

The famous Aberdeen Angus bull, **GAY BLACKBIRD**, 14,443, Columbian winner and sire of several of the most noted herd bulls in America, chief among them being Gay Lad (sold at \$3,050, the highest priced American bred Angus bull).

One of his last sons, the Westertown Rose bull, Baron Roseboy, 57666, is at the head of the Sunny Home herd, at Fitzgerald, N. C.

The old bull was bred by Wallace Estill, Estill, Mo., sired by the great show and breeding bull, Heather Lad 2. He died about one year ago, the property of Mr. J. P. Hine, of Ohio, who paid \$1,025 for him at auction when nine years old.

We were not at all satisfied with the Aberdeen Angus pictures published in our January issue, as they did not do justice to the breed, but at the time we could not do better. This picture of Gay Blackbird will, however, make some amends, as it fairly

represents the breed, which stands very near the top of the beef making breeds.

### DRIED BLOOD AS A TONIC FOR YOUNG CALVES.

For two years the Kansas Experiment Station has used dried blood in connection with its experiments in feeding calves. In March, 1899, one of our cows gave birth to a calf weighing eighty-six pounds. This calf was allowed to suck for several weeks, to assist in reducing the inflammation in the dam's udder. On account of poor quality and quantity of milk, the calf did very poorly, and to save its life it became necessary to remove him from his dam. With the ordinary treatment accorded our calves he grew worse and worse, and when seventy-nine days old weighed only ninety pounds, or four pounds heavier than at birth. Although no one would have given ten cents for the calf at this time, an effort was made to bring

him up. He was given castor oil, laudanum, fresh eggs, calf meal, and, as a last resort, dried blood. With the blood the calf commenced to improve, and in a short time was gaining at the rate of nearly fourteen pounds per week, and not infrequently as high as seventeen to eighteen pounds per week. When a year old he weighed 578 pounds—a pretty good record for a calf that gained only four pounds for the first seventy-nine days of its existence. The dried blood consumed during parts of three months amounted to seven and one-half pounds. At two cents per pound, the cost was fifteen cents.

In October, 1900, a heifer belonging to the Agricultural College dropped her first calf. The calf was small and sickly, and for the first few weeks did very poorly, as is shown by the fact that on December 1st it weighed two pounds less than on November 1st. For a few weeks its life was in a very critical condition, but when induced to eat a little dried blood with its milk it began to improve and has been making fair gains ever since.

Dried blood is not only good for a weak calf, but is an excellent remedy for any calf subject to scours. The Kansas Experiment Station has just purchased twenty young calves. Frequently these calves arrive at the station badly affected with scours; a little dried blood always brings about a cure. Recently a test was made with five calves that happened to be scouring at the same time. With two of these dried blood was fed, after reducing the regular feed of milk. With the other three the dried blood was fed without changing the supply of milk. In the former case the calves recovered from the scours after two feeds; in the latter after three feeds. With the seventy head of young calves under experiment at the Kansas station during the past year, there has not been a single case of scours that dried blood has failed to check.

In feeding dried blood, a teaspoonful at a feed is a great plenty. This should be continued until the scours disappear. In case of a weak calf the allowance may be gradually increased to a tablespoonful at a feed. To prevent the dried blood from settling at the bottom of the pail, where the calf will be unable to get it, it may be stirred in the milk while the calf is drinking, or the milk and blood may be fed immediately after being thoroughly mixed. Since dried blood is such a cheap and effective remedy, it will pay any one who raises young calves by hand to have a little available whenever a calf shows signs of disorders in its digestive tract. It can be obtained from any of the large packers. When ordering, state that the blood is wanted for feeding purposes.—D. H. Otis, Kansas Experimental Station.

### OVER 500 POUNDS OF BUTTER IN THE YEAR.

The Guernsey heifer, Dolly Bloom, No. 12770,

A. G. C. C., Adv. R., No. 40, has just completed a most wonderful year's milk and butter fat record. This record has been made under the rules and conditions for The Advanced Register of Guernsey Cattle, which requires the supervision of an Agricultural Experiment Station. In this instance a representative of the Massachusetts State Station saw and sampled the milk of this cow each month and reported the results thus obtained. The inspector also reported various weightings of milk as check weights. The owner reported the detailed weights of milk for each day and statement of feed and care.

Dolly Bloom calved March 22d, and started her record March 26, 1902, when 23 months old, and completed it March 25, 1903. During this time she gave 8,841.58 pounds of milk. 5.13 average per cent. butter fat, 453.86 pounds butter fat, equivalent to over 500 pounds of butter.

The requirements for the admission of this cow to The Advanced Register was 6,000 pounds milk and 250.5 pounds butter fat. Her production greatly exceeded this requirement. The record made is the *largest record of a year's production of butter fat* by any two-year-old heifer in the world that can be found recorded, and at the same time supervised by any representatives of a public institution or an organization.

The following statement from the owner as to the daily feeding of this cow during her record will be of interest:

March, 1902. After calving her feed for the rest of the month was gradually increased until it reached 5 pounds shorts, 15 pounds ensilage and clover hay *ad libitum*.

April. Six pounds shorts, 1 3-4 pounds old process oil meal, 1 3-4 pounds gluten, 20 pounds ensilage and clover hay *ad libitum*.

May. Same grain as in April, with the addition of 1 pound corn meal, clover hay until the 15th, when she was turned to pasture and fed peas and oats in the barn.

June. Same as in May except green clover in place of the peas and oats.

July, August and September. Same grain, with the omission of the corn meal. Pasture and green clover continued.

October. Same grain. For coarse food in addition to the pasture, millet and a little clover hay was given.

November to March. Same grain, 20 pounds ensilage, 40 pounds roots (mixture of 1 pound carrots to every 2 pounds mangles) and clover hay *ad libitum*.

During the summer she was out in pasture until

heat of day, and at noon was fed green stuff in the stable. If weather was hot she was turned out at night and stabled in day time. She had the same care and feed as the other cows of her age in the herd with regard to general way of handling. She was milked only twice a day and stood in a standing stall.

Dolly Bloom was bred by Mr. Ezra Michener, of Michener, Pa., and dropped April 14, 1900. Her sire was Divan, 5846, and her dam Questa, 11385. Their breeding goes back to such noted animals as Bonny Boy, Fernwood Lily and Imp. Pacific.

Dolly Bloom is owned by Mr. F. Lothrop Ames, of Boston. Mr. Ames takes great pride in his small but choice herd of Guernseys at his beautiful estate, "Laugwater," in North Easton, Mass., and the work of this cow is a great pleasure to him.

This heifer bears unquestionable testimony to the capabilities of a Guernsey cow. She is one of forty Guernsey cows that have made official yearly records of butter fat and been admitted to the Advanced Register. The records varying from 296 pounds to 602 pounds (equivalent to 346 and 702 pounds butter).

WM. H. CALDWELL,

Peterboro, N. H., April, 1903.

Secretary.

### PASTURE FOR HOGS.

The Kansas Experiment Station has realized \$11.90 per acre from rape pasture and \$24.10 from alfalfa pasture in ninety-eight days. These results were obtained from the following experiments, which were begun July 25th and concluded October 31, 1902:

Thirty shoats, averaging 52 pounds in weight, were divided as nearly equally as possible into three lots of ten each. Lot I was fed on a grain mixture of shorts one-half, corn meal one-fourth, and Kafir corn meal one-fourth, in a dry lot. The other two lots were fed the same grain ration, but one received rape pasture and the other alfalfa pasture in addition. Each lot was given what grain the hogs would eat up clean, and each had access to water and ashes. The weights of gains made are as follows:

	Grain consumed in pounds.	Total gain in pounds.	Grain consumed per 100 lbs gain, in pounds.
I. No pasture. . . .	3801	1023	371
II. Rape pasture. . .	3244	1076	301
III. Alfalfa pasture. .	3244	1078	300

The gains of the three lots are very nearly equal. The dry lot consumed 557 pounds, or 70 pounds for every 100 pounds of gain, more grain than the pasture

lots. The lot on rape required one acre of pasture, while the alfalfa lot used a trifle less than one-half acre.

The lot without pasture required 3.71 pounds of grain, to produce one pound of gain. Assigning the same value to the grain fed the hogs on rape pasture, we have 877 pounds of pork credited to the grain and 199 pounds credited to the rape. At six cents per pound, the price at which hogs were selling at the close of the experiment, this would be a credit of \$11.90 per acre for the rape. In a similar manner the alfalfa is credited with 201 pounds of pork, equal to \$12.05, and as there was only a half-acre of alfalfa this makes a rate of \$24.10 per acre.

The cost of preparing the seed bed and seeding the rape was \$1.80 per acre. It was seeded in the feed lots on soil that would otherwise have remained idle, or would have grown up to weeds.

The shoats on pasture enjoyed their diet and seemed satisfied. Those in the dry lots seemed to be banking after something green, and their appetites seemed unsatisfied without some kind of roughness. They would even nibble at straw in a vain attempt to satisfy their craving.

The experiment emphasizes the superior value of alfalfa pasture. Where alfalfa is not available, or where variety is wanted or it is desired to utilize otherwise waste land, Dwarf Essex rape, seeded at the rate of six to eight pounds per acre any time from early spring to late summer, will furnish an excellent diet that is greatly relished by the hog. Succulence and variety will make healthier hogs that will return increased profits.

D. H. ORRIS.

Manhattan, Kan.

### ANGUS CATTLE.

Editor Southern Planter:

I think it is now a well settled fact that the Angus cattle excel all other breeds for beef. At all the recent fat stock shows, both in Chicago and Pittsburg, the Angus took all the premiums except one, and that was given to the Hereford cross on the Angus.

Mr. A. Eichel, the leading butcher of Richmond, told me last week that the finest cattle he has ever killed were six Angus cattle raised by me and five by a gentleman above Richmond.

I sold those cattle to the Brauer Cattle Co. in the field for \$52.50 each. Mr. Brauer and myself estimated them when sold at 1,200 pounds, I think about the 12th of September. They were put on the market the following Christmas, and Mr. Eichel told me

they weighed over 1,500 pounds, which was a gain of over 300 pounds to the steer in a fraction over three months. Mr. Henry Block said they were the finest he had ever seen. I think these facts speak well for the Angus cattle. Our section is not considered anything extra for grazing, so I think that more was due to the breeding of the cattle than to the grass. I have been raising Angus cattle for about ten years, and I am satisfied I can keep one-third more of this breed on the same feed and grass than of any other breed I have ever kept. They do not give a big quantity of milk, but it is very rich, judging from the calves, which are always fat. Hope the day is not far distant when all this Piedmont section will have the black cattle, and thus do away with the necessity for the most barbarous thing that ever was done, de-horning cattle.

J. H. ELLIS.

*Orange Co., Va.*

### INTELLECTUAL BEEF,

*Editor Southern Planter:*

A writer in the *Breeders' Gazette* promises, some may say threatens, a supply from that great food emporium, the West, of "intellectual beef." The consumer and the producer may take different views on the desirability of the attainment. The writer once possessed a very intelligent mule, inquisitive people may be interested to know that his name was Jacob, but I did not eat him. I sold him, seeing that I was running a farm and not a circus. I read somewhere that in ancient Egypt her kings used to eat their prime ministers or secretaries of state to increase their mental abilities. As we do not read of it now-a-days, perhaps the prime ministers or secretaries of state are not so clever as they used to be. Should it be proved beyond contradiction that "correlation between cranial development and the tenderness of the meat exists" in selling an old roguish steer to a dealer or butcher, what stress the seller should lay upon that fact? Some sensitive people may look upon increased cranial development as the beginning of the end, and that pathos and not the graspingness of the beef trust will cause man to cease to be carnivorous. But is not the acquired intelligence of domesticity offset by loss of acuteness in what is called instinct? Must not the tenderness of the animal's meat result from the cranium of man?

Disposition has a very decided influence on the condition a horse keeps in, and probably has more influence in a domesticated state than in free nature, but whether a high strung, thoroughbred racing colt,

or a phlegmatic young drafter would possess tender meat is a question yet to be decided, though if tenderness has a relation to temperament, the fact would speak plainer in the horse than the cow—and in less degree still in the hog. Animals must be accreted with many faculties of mental orders in low degrees, probably the state of the mind we call human before it was impregnated with consciousness, and followed by conscientiousness, the growths of which have caused a continued widening breach between the human and the animal. What will the West do next is a trite saying, with the sun harnessed to the sun-motor and her population surpassing that of the Celestial Empire.

W. M.

*Albemarle Co., Va.*

### BLACKLEG.

*Editor Southern Planter:*

I have before me your issue for May, and have read the article in regard to blackleg and its prevention by vaccination. It would appear from that article that the vaccination of animals to protect them against blackleg was purely an experiment, whereas as a matter of fact, the blackleg vaccine was discovered by Messrs. Arloing, Cornevin and Thomas nineteen years ago, and has been put to practical use for some eighteen years in Europe. I introduced blackleg vaccination into North America as long ago as 1895, and over five millions of calves have been vaccinated in the United States during the last few years with the vaccines that are still prepared by Messrs. Arloing and Thomas, and which are furnished by the Pasteur Vaccine Co.

The blackleg vaccine was first of all made in the powder form, with two lymphs that were administered at an interval of about a week. A few years later the vaccine in powder form was prepared of medium strength, which necessitated only one application. However, as highly graded or pure-bred stock are more susceptible to blackleg than common stock, it is always desirable to treat such animals with the "double" vaccine, consisting of the two lymphs, as the double treatment affords a higher degree of protection than the single treatment. Moreover, it is naturally desirable to give the highest possible degree of protection against blackleg to the more valuable animals.

Some years later an improvement was made in the method of preparing and applying the vaccine, and this was brought about by Dr. Thomas. This is in the form of a cord saturated with the vaccine and then dried, and it is applied in the same way as one would

take a stitch under the skin. This has rendered vaccination more popular, as it has made the operation so much easier, doing away with the expensive and troublesome syringe outfit with pestle, mortar, etc., for preparing the powder vaccine for use. The cord form of vaccine is generally known as "Blacklegine," and for several years past has been furnished both for single treatment and for double treatment.

About *twenty millions* of calves have now been vaccinated against blackleg, of which about 95 per cent. have been vaccinated with the original vaccines prepared by Messrs. Arloing and Thomas, and furnished in this country by the Pasteur Vaccine Co. It will readily be seen, therefore, that vaccination against blackleg is by no means an experiment, and as above mentioned, the vaccine has been a commercial product for about eighteen years. An article is never taken up commercially until the experimental stage is passed. I hasten to correct the erroneous impression conveyed by the article in question, as, if it were thought that vaccination against blackleg was simply an *experiment*, it would deter a number of stock raisers from resorting to vaccination, and by refraining from vaccinating their stock, they would continue to lose their calves from blackleg at the same high rate as existed before vaccination was introduced by myself into this country eight years ago. Perhaps it is not out of place to say that the well-known scientist, Louis Pasteur, discovered the preventive vaccination for anthrax twenty years ago, and over twenty-three millions of animals have been successfully protected against anthrax with Pasteur's anthrax vaccine in Europe, North America, South America and Australia—in fact, in all parts of the civilized world where anthrax is troublesome.

Chicago, Ill.

HAROLD SORBY.

### THE FUTURE OF THE SHORT HORN.

We take the following extract from a letter from an English breeder to the *Breeders' Gazette*. It emphasizes the point we have so often made that Short Horn breeders in this country have lost sight of one of the grandest points in that fine breed—viz., its milk and butter producing capacity. It is this quality, combined with its good feeding qualities, which makes it pre-eminently the farmer's cow. We want breeders here to get back to this type, and then in a Short Horn the farmer will have the finest dual purpose cow in the world:

It seems to me that in the States of America you know the Short Horn in its beef state only. In the

old country we know it in its true cosmopolitan form, a true dual-purpose animal unequalled for the production of beef and milk. If we go to the bed rock of Short Horn history we find special mention of the milking qualities of the earliest recorded cows. Take, for instance, the earliest recorded female Tripes, ancestress of the Princess family, calved some time previous to 1760. This cow, said to have been a great grazer, was the grandam of a heifer by Masterman's Bull (422) and in two successive years produced twin calves and gave eighteen quarts of milk twice a day for more than a month after calving. It is this reputation for milk producing, combined with an aptitude to fatten when dry equal to that of any other breed, that has given the Short Horn first place in the race of breeds.

In this country to-day we have two practically distinct types of Short Horns—the Scotch or beef producing, now the rage in America, and the dual purpose English Short Horn founded on the old Booth and Bates blood. It is to the latter with a judicious blend of the former to give it more substance and earlier maturity that I look to carry on the glorious work of the breed in the future. The old Bates in the Southwest of England that were practically ruined by the mad rush for straight Bates in the seventies and early eighties, have for the last fifteen years or so been recuperating under the shadow of the straight Scotch edifice erected by the sage of Sittyton, an edifice not the growth of a night, but the outcome of a lifetime of patient labor directed by a master mind. A thought sometimes occurs to me—though it may be heresy to express it—when I think of the foundation on which Amos Cruickshank's life-work was laid, on which in the autumn of his days he had the pleasure of placing the corner-stone, and of the story after story that the builders who succeeded him are adding, some with judgment, some without, to that building, that some time in the future—who may say how soon?—the whole structure will fall like a house of cards as flat as the "Bates and no surrender" bubble when pricked with the needle of common sense.

Now one word as to the Short Horn of the future. We must bear in mind that he is the Anglo-Saxon of the bovine species and as the pioneer and civilizer of the cattle world he must retain his activity and constitution, so that in a new country, if necessary, he can forage for himself. With this end in view breeders in this country must aim at the style and grandeur of the early Short Horn combined with the aptitude to fatten of the Cruickshank cattle and at the same time take care that the milking powers are not neglected.—JAMES PETER, in *Breeders' Gazette*.



## The Poultry Yard.

### NUX VOMICA FOR CHICKEN KILLING HAWKS.

Our reply to the inquiry on this subject, published in our last issue, has brought forth the following information from subscribers. We are certainly surprised to learn that hens and chickens are apparently immune to the action of nux vomica (strychnine), which is so violent a poison to human beings and all animals so far as we know. A still more curious feature is brought out in one of the communications—viz., that the drug is poisonous to ducks and guineas. The communications are from persons of the highest repute in their sections, and known to us to be thoroughly trustworthy, and we therefore make no hesitation in publishing the same. We would, however, urge that care should be taken in the handling of the drug, to keep it out of reach of human beings and the live stock of the farm other than the hens and chickens:

*Editor Southern Planter:*

I have for years believed in the testimony of those in whom I have confidence, that strychnine would not kill a chicken. When I read in the last issue of the *PLANTER* the inquiry about the dose of nux vomica to be given to chickens with a view of killing hawks, and your comments thereon, I determined to take nobody's sayso, but experiment for myself. I took as much strychnine as I could get on the point of a pocket knife, enough to kill a dozen crows, made it into a pill with bran and gave it to a hen. She seemed to enjoy it very much, and went off singing as if she were happy. I watched her for some time to see if it would affect her in any way, but she continued in good spirits and is alive and well this morning. Now, why is it that strychnine will kill crows, hawks and other birds, but has no effect on chickens?

*Amelia Co., Va.*

R. E. BRIDGEFORTH.

*Editor Southern Planter:*

I saw a letter in the May issue of the *PLANTER* from Mr. Montague, of King William, asking for information in regard to nux vomica being given to chickens to kill hawks, and as I have used it successfully for two years, am glad of the opportunity to tell him and others of my experience. I had very little faith in it at first, but as the hawks were so very troublesome, thought I would give it a trial, and was so much pleased, have used it ever since. I cannot say it kills the hawks, as I have never heard of one

being found dead, but it surely keeps them away, and I think makes the chicks healthy. I buy the powdered nux vomica, and as I have a good many chicks, get one-quarter pound at a time from a reliable druggist. Begin by mixing one-half teaspoonful in one quart of dry meal, wet up with water and feed every two days. Gradually increase the dose to one teaspoon to a quart of meal. If you give too much at first the chicks have convulsions. I simply put my dough in the feed coop and let them eat it at will. It kills guineas and ducks, so be careful. I think best to discontinue the use of it about a month before the chickens are used for table. As Mr. Montague has a small flock, he can proportion the dose to the amount of meal he uses

MRS. R. T. SOUTHALL.

*New Kent Co., Va.*

*Editor Southern Planter:*

I am glad that I am able to give the information desired in regard to how much nux vomica to give a chicken to kill the hawk and not injure the chicken. I have been using it for the last eight or nine years with the very best results. As soon as I find out that the hawk is catching them, I stop up all of the hens and chickens except one hen and her chickens, and mix four or five drops of nux vomica thoroughly in the dough, and let the little chicks run out. I mean four or five drops for each chicken. Say you have 10 chicks, 50 drops of nux vomica. The first chick the hawk catches is sure death to him. I never give it until the hawk is catching my chickens. It does not act so well on large chickens. Always give it to the youngest ones you have. I generally give it in the morning, and the hawk will soon come and catch one, and that is the last of him.

*Louisa Co., Va.*

J. P. E. JOHNSON.

### TO DESTROY LICE IN THE COOPS AND HOUSES.

Nothing is better to use as a liquid lice-killer than crude petroleum. It is a cheap, heavy, dark oil, just as it comes from the ground. It is sure death to all manner and kinds of hen lice that it touches or that comes in contact with it. It can be used like paint, with a brush to apply it. Kerosene oil, with one pound of naphthaline balls to the gallon, makes another good lice paint; and there are quite a number of liquids sold in cans for this special purpose. No

matter which of these you may select, make good use of them prior to placing a hen and her young brood within an old hen coop. Be sure to paint the coop with this at least twenty-four hours before using it, as the fumes of these mixtures will kill very young chicks.

### ABOUT TURKEYS.

To make a success of turkey raising much care and painstaking must be given the young the first three or four weeks of their life. They are very tender and harder to start than any other fowl. Feed nothing the first twenty-four hours after they are hatched. They gain strength faster if left in the nest with the hen a day and night before cooping. Before putting them in the coop see that it is perfectly clean and free from vermin, and placed on dry ground, a little elevated, that the ground under the coop may not become water soaked in heavy rains.

Remove coop to fresh ground often to avoid filth. Mashed potatoes and sour milk curd mixed with wheat bran is an excellent feed for turkeys and always in order.

Raw meat with onion tops chopped fine may be given once a day with good results.

This forms a diet very much relished by the little fellows at least.

Keep close watch for the large white lice that settle on the heads and necks of the young and kill a large percentage of all that are hatched.

Lard mixed with a sprinkling of sulphur on the head and neck will destroy the lice at once.

Never let the young turkeys get wet and draggled in the morning dew or rain.

Give water in shallow vessels so they can only wet their beaks.

They should only have their liberty on dry, warm days until well feathered, when they may go forth and roam at will.

Green corn, if eaten freely, will produce cholera, which is almost always sure death.

Turkeys, unlike geese, have a very small amount of brains, and are not responsible for the many sad plights they get into.

### COST OF EGG PRODUCTION.

The question is being continually asked as to the cost of egg production, the amount of food consumed, and the amount necessary to be fed daily to fowls for

the best results in producing eggs for market. To answer such questions successfully it would be necessary to go over considerable ground and meet the various conditions under which the fowls are kept, and make a particular point in each particular case. About one of the best things in the world to do on this subject is to study carefully every phase of the question and shape matters accordingly.

In the test made for the Agricultural Division of Cornell University, at seven separate and well-separated stations or farms, it is shown that the average egg yield of 2,133 hens, for seventeen weeks, between December 1st and March 29th, was 32.2 eggs per hundred fowls; or, in round numbers, seven eggs per month from each hen; and the food cost of producing these eggs was a little more than sixteen cents per dozen eggs. The average profit was about \$24.00 per hundred hens for the four winter months.

When we compare flocks, we find that one of the flocks of 150 White Leghorn pullets produced thirty-six per cent. egg average, and shows a profit of \$62.00 per hundred hens for the four months. Another flock of ninety-six Leghorn pullets, twenty White Wyandotte pullets, and one hundred cross-bred White Wyandotte and White Leghorn hens, that averaged 340 during the four months, shows an average of thirty-five per cent egg yield, and a profit of \$53.00 per hundred hens for four months; or, as we might say, about \$1.50 per hen per year, if the same ratio is continued. As between the entire average and the average of the best, there is the same grading off as is found in the average of dairy cows, crops, and general business of all kinds. The best results always come to those who manage the best, and even when we average the general average, we find that each hen of the whole lot would show a profit of over 66 cents per hen per year, or six hundred and sixty dollars (\$660) per year from keeping one thousand hens under poor results, as against the making of over fifteen hundred dollars (\$1,500) per year from the proper handling of the same number.

The greatest value of this test is the cost of feeding the hens. This is shown to be \$32.43 for food consumed by one hundred hens in seventeen weeks, or about 2 cents per week per hen. Those that produced the second largest egg yield consumed the most food of all kinds, including green food. They had about four ounces per day, while those that had the least amount of food, cost value, stood eighth in line of egg production and consumed almost five ounces per day, less costly and more bulky food being used.—*Farm Poultry.*

## The Horse.

### NOTES.

George F. Dyer has quite a good stable of trotters and pacers, which are being worked for speed over the Fair Grounds track at Lynchburg, Va. The best known member of Dyer's string is the bay pacing mare, Little Belle, 2:13 $\frac{1}{4}$ , with whom he won a number of races in 1902. The daughter of Sidney, 2:19 $\frac{3}{4}$ , is now in fine shape, and will be taken to the races later on. Among others in Dyer's hands are Sport, b. g., pacer, by Dr. Hooker, dam, the dam of Josie B., 2:09 $\frac{1}{4}$ ; Pete Warlock, b. g., 4, by Warlock, dam by Strathmore; chestnut gelding, 4, by Robert Mediu, dam by Melville Chief; Jim Rosin, b. g., 4, by Dr. Hooker, dam by Young Jim, and some half dozen or more well bred road horses. Dyer is a careful painstaking man with a horse, and has been quite successful during recent years with such horses as Little Bell, 2:14 1-4; Skyland Girl, 2:19 $\frac{1}{4}$ ; Trib Gentry, 2:20; Princetell, 2:23 1-4, and others with slower records.



Mr. John P. Branch, the head of the banking house of Thomas Branch & Co., this city, has a horse that would most likely learn to go fast with development in the grand looking big brown gelding Quartz, by Quartermaster, who recently drew a heavy road wagon a mile out in 2:37 1-4 over the Deep Run Hunt Club track. He is being driven on the road, but Mr. Branch has three others in George R. Richmond's stable at the Hunt Club track. They are a bay pacing gelding by Willis, dam Louise, sister to Branchwood, 2:22 1-4, by Woodburn Hambletonian; b. g., 4, by Toodles, Jr., dam Louise, and Thiol, brown mare, by Egwood.



Virginia horses were quite strongly in evidence at the recent Baltimore Horse Show, especially in the classes for hunters and jumpers. Courtland H. Smith, of the Hampton Farm, Alexandria, carried off the ribbon in the class for championship hunters with Chappie Lee, and Tip Top, in the same stable, came second. Grand old Hornpipe, owned by Mrs. Charles H. Hurkamp, of the Boscobel Farm, Fredericksburg, one of the most consistent of slow horses and ever ready to do his best when called upon, was also in evidence, as the big roan son of Young Sanford, took first prize in the class for ladies' hunters.



In his private stable where Mr. Langhorne Putney has a couple of well mannered and speedy harness horses in Foxhall, 2:19 3-4, and Foxie Lambert, 2:22. Both are trotters. Foxhall, the chestnut son of Great Stakes, 2:20, and Sue Norfolk, by Norfolk,

is eight years old, and just in the prime of his usefulness. He is a product of the Foxhall Farm, Norfolk, and one of the speediest of Virginia breeds, and when right and fit, and gotten off on his stride, I doubt if any horse in Richmond can head him in a brush from a half mile up. His sire, Great Stakes, is in the stud of W. H. Nelson, this city, while his dam, the great brood mare Sue Norfolk, dam of three in the list, is the most highly prized matron owned by L. G. Roper, of Roper, N. C.



The annual crop of thoroughbred yearlings from the Ellerslie Stud of R. J. Hancock and Son, Charlottesville, Va., are to be sold on Friday, June 12th, by the Fasig-Tipton Company, New York, at their Sheephead Bay paddocks, and the collection is one of the choicest ever sent from the farm. The offerings include full brothers and sisters to horses that have made history on the running turf. Ellerslie is one of the most noted breeding establishments in the land, and the stallions and brood mares in use are among the richest bred to be found in the Stud Book.



J. S. Curtis, of the Mayfield Stud, Leesburg, Va., has been permitted by the Jockey Club of New York to register the name Salvini for the chestnut colt, two years old, by imp. Saville, dam imp. Star Actress, by Kendal. Salvini was bred at Mayfield, where his sire and dam were owned. He was taken to England as a yearling and then brought back to this country, and in order to register him under the name claimed Mr. Curtis was assessed the usual fine of \$50 for a delay of more than six months in the matter. Had it have been taken up as prescribed by rules of the Jockey Club the cost would have only been \$5.



Robert Bradley's horses were in evidence at the Washington spring meeting, and now they are winning at Chicago. Ahola, the bay filly, 3, by Aloha, dam Mrs. Stuart, by Pauque, won recently in a handicap for all ages at  $\frac{3}{4}$  mile. This filly is the Derby candidate of the Bradley stable, and the tall Virginian hopes to land first money in that classic event. Ahola was bred by Mr. Bradley at Greenway Farm, where her sire, Aloha, heads the stud, and is credited with siring Robert Waddell and other good winners.



Albert Fletcher, Jr., Warrenton, Va., has sold to H. V. Colt, Genesee, N. Y., a very promising young gelding by His Grace, son of Eolus. The price was \$400, and the gelding will be schooled to jump by his new owner.

BROAD ROCK.

## Miscellaneous.

### THE VIRGINIA STATE BOARD OF AGRICULTURE.

The first meeting of the newly appointed State Board of Agriculture was held in Richmond on April 14th. The members of the old Board have, with the exception of Mr. Browning, who declined reappointment, been reappointed. In Mr. Browning's place Mr. Gillespie has been appointed. Dr. J. M. McBryde, the President of the Agricultural College and Director of the Experiment Station of Virginia, has become, under the terms of the new Constitution, a member ex-officio of the Board, and took his seat. The Board organized for business by the election of the Hon. J. H. C. Beverly, of Essex county, to the position of President. Mr. Beverly is a large and successful farmer, who has had several years' experience on the Board, and we doubt not will make a most efficient presiding officer. We congratulate him upon his appointment. He is by education and experience well fitted to discharge the duties of the position, and farmers may look with confidence to him to guard and advance their interests. The Board appointed a special committee to confer with the joint legislative committee as to the necessary legislation required to be enacted to bring the work of the Board into harmony with the requirements of the new Constitution. This committee subsequently met the joint legislative committee and submitted a bill, which seemed fitted to meet the needs of the case, and which bill met the approval of the legislators, and has since been enacted into law. We have not yet been able to secure a copy of this law, but will do so as soon as printed and publish same for the information of our readers. We understand that there was some conflict between the Commissioner of Agriculture and the Board as to their respective duties, the Commissioner being desirous of controlling the work of the Department of Agriculture and placing the Board itself in a secondary position. The Board declined to accede to this view of their duties, and submitted that in accordance with the terms of the new Constitution the Department should "be under the management and control of the Board, with power to elect and remove its officers," and in this contention they were sustained by the Legislature. Practically, therefore, the Commissioner is now placed in the position which we have always contended he ought to occupy—viz., that of being merely the executive officer of the Board. We strongly urged this point before the Agricultural Committee of the Constitu-

tional Convention, and that committee agreed with us, and so reported, and further provided that his appointment should be by the Board. Unfortunately, the Convention itself changed this into an appointment by the people, and thus placed the office in the hands of the politicians. We were afraid that this change would result in a conflict of authority between the Board and the Commissioner and perpetuate what had been the bane of the old Board and Commissioner, and the result has justified our fear. We hope, however, that this may now be at an end, as the result of the action of the Legislature, and that undivided and harmonious action may mark the future work of the Board and Commissioner.

### THE GOOD ROADS QUESTION.

In our last issue, writing on this subject, we strongly emphasized the importance of joint action by the Nation, the State and the County if good roads are to be had without an undue burden being cast upon farmers. We are glad to see that this view of the matter commended itself to the recent National Convention, held in St. Louis, which was the largest and most representative gathering ever held on the road question. President Roosevelt and Mr. W. J. Bryan and other representative men addressed the gathering. Colonel Killebrew, of Tennessee, writing on the Convention, says:

"No more successful Convention was ever held in the interest of any industrial movement than the Good Roads' Convention, that was held in St. Louis from April 27th to the 29th, inclusive. In the number and intelligence of its delegates, in its enthusiasm and working capacity, in its unanimity and singleness of purpose, in the number of able speakers and freedom from partisan or political influences, it was seldom if ever equalled.

"Two thousand delegates, from nearly every State and Territory in the Union, attended the Convention. From the first day to the last the most dominating idea was the necessity of government aid in the construction of rural routes—government aid to be conditioned upon an equal amount of local aid, as set forth in the Brownlow bill. All the speakers, with the exception of one or two, dwelt upon this idea, and the thundering applause that followed each speaker left no room for doubt as to the sentiment of the Convention on this point.

"The best evidence, however, was in the adoption of the declaration of principles and resolutions on the last day of the meeting. There was not a dissenting voice in that large assemblage. The declaration of principles as set forth asserted that the building of good roads in the United States is now of paramount importance to national prosperity and commercial supremacy; that the harmonious co-operation of township, county, State and National governments is needed in furtherance of this end; that though the appropriations hitherto made by Congress for the improvement of the rivers and harbors were beneficent and commendable, yet the time has come when the agricultural districts should be assisted in the matter of building highways, so that the benefits of the free mail delivery may be extended, and thus promote a higher order of citizenship, and also meet the ever-growing necessities of the great agricultural interests of the country, upon which its prosperity and growth depend.

"The establishment throughout the United States of a complete and perfect organization for this purpose was recommended, and the delegates assembled were made representatives of the national organization of the Good Roads' Association, to carry forward this local organization. The work of the Office of public road inquiries was endorsed, and the sense of the Convention was that its opportunities should be enlarged and its usefulness extended by a larger appropriation.

"The principle of State and county co-operation was commended, and it was more than once emphasized that it is as much the duty of the general government to assist in the building of highways as it is to improve the rivers and harbors.

"The resolution favoring National aid is to be presented to the Congress of the United States by a committee composed of one member from each State, to be selected by the secretary of the National Good Roads' Association. The building of the memorial road from Monticello to the University of Virginia in honor of Thomas Jefferson, who signed the first bill for the construction of a national highway on March 29, 1806, was unanimously approved and endorsed by the Convention.

Among the most distinguished speakers at the Convention were President Roosevelt, William J. Bryan, Senator Latimer, of South Carolina, and Governor Cummins, of Iowa. Mr. Roosevelt and Mr. Bryan both spoke of the necessity of building better highways for the nation, and though neither committed himself to the proposition of advocating government aid, yet the inference was clear that both would favor

such expenditures. Senator Latimer made a strong and unanswerable argument in favor of government aid. There will be no more earnest worker for good roads in the next Congress than Senator Latimer.

"The President made some good points. Among other things, he said:

"It is the habit of road building that gives to a people permanent greatness.

"The development of the iron road has been all that one could wish, but it is mere presumption to consider good railways as substitutes for good highways.

"We want to see cities built up, but not at the expense of the country districts.

"If the winter means to the average farmer a long line of liquid morasses through which he must painfully force his team if bent on business, and through which he must wade or swim if bent on pleasure; if an ordinary rain storm means that the farmer's boy or girl cannot use their bicycles, you have got to expect that those who live in the rural districts will not find farm life attractive.

"We should all encourage any check to the unhealthy flow from the country to the city."

"This movement in favor of government aid is gathering strength day by day. It will reach such proportions by the meeting of the next Congress that no Congressman who has any regard for his own popularity will be able to resist it. Several conversions occurred during this National Convention. Several who came prepared to resist the movement were astonished at the depth and unanimity of sentiment among the delegates of all political parties. The impulse is gathering strength, and he who would not be swept away must move with it."

We trust that our Legislature when it meets again in November will endorse this movement, and not waste more time in passing useless road laws, which please nobody long, and effect no permanent improvement of our roads.

## PICKING STRAWBERRIES IN SOUTHEASTERN VIRGINIA, NEAR THE SEA.

*Editor Southern Planter:*

In the early morning of May 6th I made a trip to the berry fields around Norfolk, Va., in company with a photographer, for the purpose of securing some views suitable for properly illustrating the Virginia berry business at the St. Louis Exposition.

At 8 o'clock A. M. we reached the farm of one of our largest berry growers, and found more than four hundred dusky pickers waiting the order to go to

work. These hands had gathered there from the city and adjacent country.

They were made up of all sorts, sizes, ages, degrees and conditions. There were old and young, short and tall, fat and lean, male and female—in fact, there was a regular cloud of big darks, little darks and darklets.

They were all good natured and jolly, and while waiting for the signal to begin, the time was spent in laughing, chattering and joking, and the whole mass gathered around the packing house, reminding one of a swarm of bees hanging on to a big honeycomb.

The acreage in berries on this farm was not far from one hundred acres. It was one large square field with a wagon road running through the centre of the field each way, cutting the field into four equal squares. At the crossing of the roads, in the middle of this one hundred acre field, the packing sheds were erected and the crates stored.

At about 8:30 A. M., after the dew was off the vines, the signal was given to begin work. The four hundred pickers were looked after by four sub-overseers, and the whole work was looked after by a superintendent.

The day we were there the west half of the square was to be picked, and the pickers in charge of the overseers were marched to the western boundary of the field, and each one took his position at the end of a row of berries. Each picker had a tray and about ten empty quart baskets.

While they were marching from the centre of the field to take their position for picking, our photographer got a good photograph of the moving mass. At the signal they all began picking, and after they had picked about five minutes our photographer secured another view of the pickers.

It was surely an interesting sight. The berries were large and a beautiful red; the foliage was a beautiful green; the sky overhead was blue, while the pickers were black.

It was a scene once seen never forgotten. We learned afterwards that the result of the picking that morning was something less than one hundred and fifty crates, each holding sixty quarts.

The price paid the pickers is two cents per quart. At this price a good picker often makes as high as one dollar to two dollars per day, although they seldom pick all day.

The market price of berries has been well sustained this year; the ruling price at present being from ten to fifteen cents per quart. For more than two weeks the crop has been going forward to market. The cool weather, so far prevailing in May, ripens the

berries slowly, so slowly that every quart is finding a good market. The berries are also firm and are going forward in a splendid condition.

We are hoping that the crop will reach well up to the maximum—say ten million quarts—and we are also hoping that the average price will reach very near the ten cent mark, which makes a round million dollars for the berry crop of this section. In such case the cost to pick will reach twenty thousand dollars, and this sum is deposited at the very bottom of the heap, so to speak. It circulates onward and upward through the whole mass of business, passing rapidly from the hands of the pickers to the retailers in our city, thence to the wholesale men, thence to the jobbers and manufacturers in the great Northern and Eastern financial centres, from whence it is drawn back to this field again in exchange for the great potato crop which is to go to market in June.

So we see that the "trucking" dollar makes a round trip in about thirty days—that is to say, it makes the rounds from the laborer up through all of the grades to headquarters, and then back again to the laborer in about thirty days.

It is not so with "wheat" dollar, or the "corn" dollar, or the "beef" or "pork" dollar; such dollars make but one round trip per year. The trucking dollar is the "nimble nickel." It is spent, respent, spent again and again and again, passing through dozens of hands in less than thirty days. Because of the fact that the dollar invested here in agricultural pursuits makes so many round trips per year, business here never gets stagnant. Money is always in motion, because the tillers of the soil always have something to sell.

A. JEFFERS.

Norfolk, Va.

## FREAKS OF IRISH POTATOES.

### Different Results Under Similar Conditions.

*Editor Southern Planter.*

There is probably no crop raised in this country that is more talked about among farmers or oftener discussed in the agricultural press than potatoes. This is not because they are a valuable crop, raised on every man's farm, in every part of the country, and constitute a palatable, nourishing, and inexpensive food to be found on every man's table at nearly every meal, but because there are some mysteries about the plant and the terrible diseases to which it is subject. Potatoes sometimes do well under certain conditions of weather and treatment, and again do poorly under apparently the same conditions and treatment. I have known them to do well some

drouthy seasons and do poorly in other dry seasons, to do well in some wet summers, and to rot terribly in other wet summers.

I think it has never yet been satisfactorily settled by the experiments of farmers, or the trials at the experiment stations, whether it is best to plant large or medium sized potatoes whole, or to cut them to one, two or three eyes. That it requires less seed to plant an acre when the potatoes are cut, and that the smaller the pieces the farther they will go in planting, requires but little knowledge of arithmetic to compute, but the question of cutting at all, and the best methods of cutting as a matter of profit is a problem which has not yet been satisfactorily solved.

When seed is scarce and dear there is not much doubt that cutting is advisable, and probably with great painstaking and excellent cultivation, cutting to a single eye may be the best. I once raised a heaping half bushel of Early Rose potatoes from a single medium sized potato cut to single eyes and only one piece planted in a hill. The potato was sent to me by a friend, and was the first one of the kind I ever saw.

I have usually had the best success when medium sized potatoes were planted whole. In one instance part of the field was planted with whole seed of medium size, and the remainder with pieces cut to two and three eyes. The quality of the soil and the cultivation were the same. The part planted with whole seed took the start of the other at first, and kept it all through the season. The tops were taller and more stocky, and the yield was the best.

There are some freaks about potatoes I have never been able to understand. My father had about an acre of sod ground on a side hill broken up for potatoes. The land was clay loam and considerably mixed with small flat stones. It had been seeded down with clover and timothy for several years, but the clover had mostly run out. A moderate coat of manure was spread on the surface and plowed under. The plowing was badly done, the horses having been idle, wanted to go fast, and the plowman did not try to restrain them. The consequence was the plow was out of the ground about half the time, and the plowman did not back up to plow the balks.

It was harrowed, furrowed in rows about three feet apart each way, and planted the forepart of May. The cultivation was with a small plow, the potatoes were hoed well twice and hilled up. The tops were still green at digging time, and the yield prodigious. The season was favorable for potatoes, everybody had good crops, but nobody in our neighborhood had anything that would begin to compare with ours. I have

tried that same ground several times since with potatoes and taken all the pains in the world in manuring, plowing and cultivating, but have never succeeded in equalling that crop, nor have I ever seen it equalled. I do not think it was the poor plowing that made the crop so good. It was good in spite of the unfavorable conditions. But why?

I once manured part of a potato field and left the remainder without manuring. After haying came on the cultivation was neglected, and the part that was manured became very weedy. I inquired of the man who dug the potatoes how they were turning out. He said: "Pretty fair, but they are a great deal the best where the weeds are the highest!" It was true. Both the potatoes and weeds were the biggest where the manure was put. There was plenty for both, so they did not quarrel. The potatoes would no doubt have been better had the weeds been kept down. Weeds injure potatoes more than corn, because the corn soon overtops the weeds and shades them.

Another time I had potatoes on a field that was all manured, but part of the manure was full of weed seed, and the part of the field on which it was placed was quite weedy at digging time, and the other part entirely clean. There was not much observable difference in the yield where the ground was weedy and where it was clean, but the surprising thing about it was that where the weeds grew there was scarcely a rotten potato to be found in the hills, but where the ground was clean, nearly all were rotten. It was the blight, or black rot, which was very prevalent that season. Some may be disposed to doubt this statement, but there is no mistake about the potatoes being much the soundest among the weeds, but why they should be so I cannot tell.

It will seem to corroborate the theory of the Vermont man who claimed to have discovered a remedy for the potato blight by covering the hills with a mulch of straw to shade the potatoes, and shield them from the scalding rays of the sun after a rain. It would seem also to disprove the theory that the rot is a sporadic disease caused by a fungus growth of microscopic, parasitic plants, which have taken root on the potato leaves and makes them wither and die, like the leaves on a blighted pear tree.

According to my experience sod ground that has raised potatoes one year will produce a better crop the next year, provided the season is as favorable. I planted an acre of thick timothy sod ground which was broken up in the spring and well tended. The yield was fair. The next spring I planted the same ground again, and broke up another acre adjoining it, and planted both at the same time with the same

kind of seed. Both patches received the same tillage, but the acre that had grown potatoes the year before produced the larger yield. We would naturally suppose that a crop of potatoes would extract from the soil some of its most available and valuable constituents, and that the second crop on the same ground, not finding so ready a supply of nutriment, would have been poorer than the first, and poorer than the adjoining acre, which had been broken up that spring.

I have seen good potatoes raised by planting them on top of a thick sod without any plowing or cultivating whatever, merely covering the seed thickly with straw and putting on a little more straw as the tops come up through it. There was a fair yield; they were easily dug (by removing the straw), and were as clean and bright as if they had been washed. Where did those potatoes get their food to make their growth? The roots had not penetrated the sod, and the straw had not rotted at digging time. Where did they find the starch, potash and other ingredients of which they were composed? J. W. INGHAM.

## Clover and Grass in Eastern Virginia.

*Editor Southern Planter:*

Knowing what a great friend you are to clover, cow peas, the vetch, etc., etc., I want to report to you a little circumstance which happened recently.

In company with our photographer, we were exploring some of the berry fields of this section, for the purpose of securing some photos for advertising purposes.

After we had secured our views and turned our faces cityward again, we passed a field thickly set in white and red clover, with the white clover predominating.

In the midst of the field was a Jersey cow, grazing contentedly and literally and actually leg deep in clover. The cow was a beautiful Jersey, a typical cow, and such as should be seen by the dozen on every farm in Eastern Virginia.

The sight was such an attractive one, from an agricultural standpoint, that we had the photographer take a photograph of the "cow in clover."

You know, Mr. Editor, that it is generally supposed and stated that grass will not grow in Eastern Virginia, and it seems to be the general supposition of people throughout the country in general that clover and other grasses will not do well in Virginia, especially in Eastern Virginia. Now, the fact is right here. Our berry growers are compelled to fight the clover to keep it from taking their berry

fields, but the third year the "pesky stuff" takes the berry fields, and really drives the trucker out.

Now the clover in which our Jersey cow was contentedly grazing come in as a volunteer crop. In July, 1902 (last summer), the farmer dug his crop of Irish potatoes. After digging he harrowed the ground down smooth and level, and the crab grass at once took the field. Later in the season he cut fully one and one-half tons of crab grass to the acre, worth on the farm \$10 per ton.

This spring on this same land the white and red clover has come in almost as thick as if it had been sowed by hand, and a first class stand secured.

Nature seems to be trying her best to make man understand that grass, especially clover, will grow here in Eastern Virginia. Keep the stock off this volunteer patch of clover and it will make a first class meadow, from which can be cut, during the ensuing three years, a paying crop of grass, especially when we consider that hay is now retailing at twenty dollars per ton.

All that is needed on any farm in Eastern Virginia is simply to consider the matter of growing clover. Let the farmer start in with a little clover seed, and feed the clover to his stock, thus getting the seed well scattered in the manure, and that manure scattered upon the surface of the soil and nature will do the rest, especially if he keeps a few sheep and some cows.

The "pesky stuff," the clover, which our truck farmers fight as they would a noxious weed, secures a foothold here and there and flourishes luxuriantly, because this is emphatically a clover section. The crimson clover does remarkably well, also white and red clover, also the cow pea, also the vetch, also divers and sundry other grasses.

No man living could see the old cow in the volunteer clover field and truthfully say that clover will not grow in Eastern Virginia. A. JEFFERS.

*Norfolk, Va.*

Plaster of Paris will fill floor cracks as well as a more expensive filler, or one that is harder to prepare. Paint as soon as dry and follow with a prepared hardwood finish. Mix only a small amount of plaster of Paris at a time and apply as rapidly as possible with a putty knife. Filling cracks in the floor and about the base boards is a wise precaution against carpet bugs and moths, and is not half so tedious as removing the carpets every few days to destroy the bugs as some house keepers must do all summer in a house badly infested.



THE  
**Southern Planter**

PUBLISHED BY

THE SOUTHERN PLANTER PUBLISHING CO.,  
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ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,

Editor and General Manager.

B. MORGAN SHEPHERD,  
BUSINESS MANAGER.

TERMS FOR ADVERTISING.

Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, Va.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

ALWAYS GIVE THE NAME of the Post-Office to which your paper is sent. Your name cannot be found on our books unless this is done.

SUBSCRIBERS falling to receive their paper promptly and regularly, will confer a favor by reporting the fact at once.

THE DATE ON YOUR LABEL shows to what time your subscription is paid.

NO ANONYMOUS communications or enquiries will receive attention.

Address— THE SOUTHERN PLANTER,  
RICHMOND, VA.

PUBLISHER'S NOTES.

TO ADVERTISERS.

All advertisements and matter pertaining to advertising must reach us by the 25th of each month. Please bear this in mind.

SPECIAL OFFER.

For 25 cents we will send the Southern Planter for the remainder of this year (June to December inclusive) to any one who is not now a subscriber. We make this liberal offer in order to induce a large number of farmers to send us at least a trial subscription. We will greatly appreciate it if our subscribers will bring this notice to the attention of their friends. They will thereby do us a favor and indirectly help themselves. Remember, this offer is, for new subscribers only. We have another offer, which we make to those already on our list. Remittances can be sent in the most convenient form, coin, stamps or money order.

Our Oldest Subscribers.

We have quite a number of subscribers on our list who have been receiving the SOUTHERN PLANTER since it was established in 1840. We are gratified to receive this letter from our friend, Mr. W. T. Harris, of Louisa county:

He writes as follows: "I have been a reader of the SOUTHERN PLANTER since 1840, and I consider it the best agricultural paper published in the United States for a Virginia farmer."

It is needless to say that Mr. Harris will read the SOUTHERN PLANTER the remainder of his days, which we hope will be many.

To Subscribers:

Our readers will confer a very great favor upon us by promptly notifying us of a change in their

WOOD'S SEEDS.

Plant Wood's  
Prize Head  
Late Flat  
Dutch Cabbage

FOR LATE FALL AND WINTER CROP,  
Our customers pronounce it,

"The finest Cabbage for winter I have ever grown."

"The best late Cabbage I have ever planted."

"Makes the largest and most solid heads of any late Cabbage grown in this section."

Price of seed, pkt. 5c.; oz. 20c.; 1-4 lb. 50c; lb. \$1.50, postage paid. See page 17 of Wood's Seed Book for 1903, for further information about Late Cabbage Seed. Wood's Seed Book mailed FREE on request.

T. W. WOOD & SONS,  
SEED GROWERS AND MERCHANTS,  
RICHMOND, VA.



HEEBNER'S ENSILAGE CUTTER.

The best cutter on the market for green or dry corn. Lending ensilage cutter made. It not only cuts, but crushes the stalks, rendering them palatable. Stock greatly relish and thrive on it. A \$5.00 attachment turns the machine into a feed divider. Runs with least power. Used for fruit and other stock food. Power can be applied to pump, plowing, etc. Catalog free. HEEBNER & SONS, 25 Broad St., Lausanne, Pa.

A BARGAIN.

1 AULTMAN-TAYLOR SEPARATOR, 27 inch cylinder. Good as new, \$125.00.

1 six horse power AULTMAN-TAYLOR ENGINE, (Baby Elephant,) \$200.00.

DISCOUNT FOR CASH.

Address D. S. GLENN, Prospect, Va.

SEPARATORS AND POWERS.

For 1, 2 and 3 horses, with governors, level or even tread. Catalogue free.



Sweep powers, Corn Shellers, Feed Mills, Street Cleaners, Mowers, Rakes, Cultivators, Saws, Engines—3 to 25 H.P., mounted or stationary. The Messenger Mfg. Co., Tainton, Pa.

The "Weber Junior" is all complete, ready to set back to pump. Equals 50 man in pump. It is shipped with but little gas. It is shipped completely erected, all connections made. Easy to start, any one can operate it. Every one guaranteed. Other sizes up to 60 H. P. Send for catalogue. Weber Gas & Gasoline Engine Co., Box 123 Kansas City, Mo.

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post-office addresses. We especially desire to know this in the case of free delivery being established. It is absolutely impossible for us to keep up with our large list of names, as changes are made so frequently and rapidly.

We receive a supplement to the Postal Guide every month, but we frequently send copies of the SOUTHERN PLANTER and letters to post-offices after they have been abolished, thereby causing both us and our readers delay and annoyance.

Kindly let us know promptly when your free delivery is established.

**WITH THE ADVERTISERS.**

The St. Omer Herd of Jersey Cattle has an ad. in this issue.

The Southwest Virginia Land Agency offers some choice farms for sale.

Heebner & Sons have a couple of ads. elsewhere in this issue. One offers their tread power and the other eng-listage cutter.

White Yorkshire Pigs are offered by Mr. H. H. Clark.

The Virginia Polytechnic Institute offers its Jersey Herd Bull to prevent inbreeding.

Mr. Warren Rice offers some splendid Shropshires in this number.

The Lyon's Washing Machine resumes its advertising in this issue.

H. A. S. Hamilton & Sons, of Shadwell, Va., are offering some choice stock, which they removed from "Hill Top," near Staunton, Va.

Messrs. W. M. Watkins & Son, pro-

**\$100 REWARD, \$100.**

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

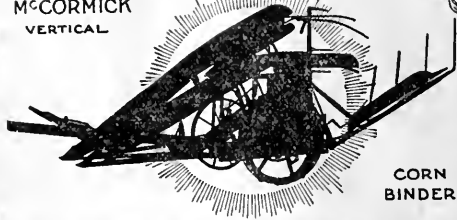
Address, F. J. CIENEY & Co., Toledo, O.

Sold by druggists, 75c. Hall's Family Pills are the best.

# "Gwaiakowe"

Translation—Corn is king

MCCORMICK  
VERTICAL



CORN  
BINDER

## KING CORN BINDER

In the language of the Indian, after which our great American crop was named, corn is king. The grain value of the corn crop is approximately \$1,000,000,000. It is estimated that the stalks and fodder are worth as much more. Think, then, of the amount you can make by saving all of your corn crop.

### The MCCORMICK

corn binder and husker and shredder enables you to save this part of the corn crop that has in past years gone to waste.

W. K. BACHE, General Agent for  
McCormick Machines, Richmond, Va.

ORDER AND SEE THAT YOU GET

## Pasteur Black Leg Vaccine

If not obtainable from dealers, refuse substitutes and wire your order to us. Over 20,000,000 calves successfully vaccinated with the original Vaccine during the last eighteen years. Powder form and Cord form both for Single and Double treatment.

**PASTEUR VACCINE COMPANY, Ltd.,**  
CHICAGO - NEW YORK, - FT. WORTH - SAN FRANCISCO.



### HEEBNER'S Roller Bearing HORSE POWER and Little Giant Thresher and Cleaner

make the handiest and most economical threshing outfit known. The thresher is made in three sizes, 21, 26 and 30 h. cylinder. It is a simple, easy to handle, light running, strong, durable and effective machine. Will thresh and clean wheat, rye, oats, barley, flax, rice, alfalfa, millets, sorghum, timothy, etc. Capacity 200 to 500 bu. Results perfect. Will do one man or a whole neighborhood equally well. Can be run by steam, gasoline, or any other power if preferred. Tread power for 1, 2 and 3 horses (equal to 2, 4 and 6 horses a better power). For cutting dry feed, making and chaffing, sawing wood, pumping, separating green, etc. Shredding and lightest running power on the market. Mounted or unmounted, as ordered. We also make Laver Pumps, Feed and Knal-lage Cutters, Wood Saws, Feed Grinders, etc. Send for FREE Catalogue. HEEBNER & SONS, No. 12 Grand St., Leesdale, Pa.

"THE INVINCIBLE"

POTATO PLANTER.

is the most practical and successful hand potato planter made. Will not clog, but under all conditions does perfect work. Only planter made with open wire sieve. A boy can plant from four to six acres a day with an Invincible Planter. Strongly made. Handles unbreakable and adjustable. Read these unsolicited letters:

Gentlemen,—I am very highly pleased with the Invincible Potato Planter. Would not take \$10 if I could not get another. Not every farmer can afford to buy a \$100 two-horse planter to use only for a day or two and stand idle the rest of the year.

L. H. SNOW, Phoenixville, Conn.

Read this: Gentlemen,—I bought one of your Invincible Potato Planters as a trial sample last year and think it equal to an extra man, besides being a good back saver.

C. W. GRIGGS, Ross Valley, Pa.

Reliable Agents Wanted. Any farmer can sell Invincible Planters on sight. Write for terms.

Circulars Free. H. H. WABERS MFG. Co., Racine, Wis.



prietors of the Cottage Valley Stock Farm, renew their advertising contract for another year, beginning with this issue. Aberdeen-Angus cattle are their specialty.

The Bowmont Farms report an "avalanche of orders and letters for large Yorkshires, as well as Jerseys."

St. Albans School has a quarter page ad. in another column. Parents contemplating sending their sons to college this fall should look into the merits of this splendid school. Professor Randolph will cheerfully answer all correspondence.

The types showed an error in the address of Mr. John P. Mays' ad. in our last issue. It should have been Glencoe, Md. He offers the "Maryland Strain" of Brown Leghorns.

A useful little tool is Cronk's Staple Puller, advertised by the Cronk & Carrier Manufacturing Co., Elmira, N. Y.

"The Wise Man's Wagon" is what the Electric Wheel Co. of Quincy, Ill., calls its low-down farm wagon. And it doesn't miss the mark much, either, as an examination into its merits easily proves.

Frazier Axle Grease is offered to our readers year in and year out. And numbers of them use it for exactly the same period.

Well Drilling Machines are advertised by the Loomis Machine Co., Tiffin, O.

Fleming Brothers' Live-Stock Remedies are offered our readers in their ad. in another column. This well-known firm of chemists have an enviable reputation honestly earned.

John E. Heatwole advertises thirty-two varieties of pure bred poultry. Get his catalogue.

A. T. Matthews, owner of the Leghorn Poultry Yards, has renewed his ad. for another term.

Baker's Jack Farm offers 150 jacks and jennets, and some well bred Percheron stallions.

Mr. T. P. Braswell, Battleboro, N. C., has some nice Jersey bulls and heifers for sale. His prices are very low, considering the breeding of his stock.

Mr. E. G. Butler has some choice Berkshires, as well as Herefords. Look up his advertisements.

Essex pigs can be had of L. G. Jones, Bethania, N. C.

The Castalia Herefords are in fine shape. Mr. Boocock invites inspection. There's good blood and farmers' prices combined in his offerings.

J. E. Moberg & Co. are offering their celebrated Dorsets in this number.

The American Seeding Machine Co. has a seasonable ad. in this issue.

Chloro-Naphtholium Dip is a great lice killer, and every farmer should keep some handy.

The Elkhart Carriage and Harness Manufacturing Co. change their ad. in this issue. Look up the offering for this month.

De Loach saw-mills are advertised in another column. Look up the ad.

Wise Man's Wagon. The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our ELECTRIC STEEL WHEELS have given a new lease of life to thousands of old wagons. They can be had in any desired height and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hubs, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our longest describing the uses of these wheels and wagons sent free. Write for it. ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.

WE'LL PAY THE FREIGHT and send 4 Baggy Wheels, Steel Tire on, - \$7.25 With Rubber Tires, \$15.00. 1 mfg. wheels & 1 in. tread. Top Sockets, \$25.15; Harness, \$3.50. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. W. V. BOBE, Cincinnati, O.

THE IMPROVED SCREW STUMP PULLER Write for Prices. Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

STUMP PULLER Most Powerful, Handiest and Strongest Built in the World. We make 4 kinds in also to suit all needs and of any desired strength. Saves time and does the work right. The operation of pulling stumps and trees by our methods is simple and easy. Send for Free Catalogue. CHICAGO STEEL MACHINE MFG. CO. 226 La Salle Street, Chicago, Ill.

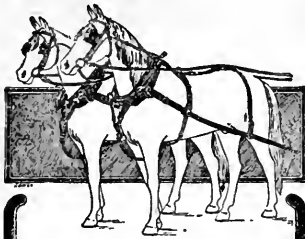
HERCULES STUMP PULLER Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made. Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

Just Ask the Horse. He knows whether it's hard work to run a hay press. If he's worked on a RED RIPPER Hay Press he will tell you that it is the lightest running press in the market. A lever gives the compression, and the power increases with the resistance, but the horse doesn't know that. He knows that it is just as easy at the end of the stroke as it is at the beginning. The Red Ripper has an easy capacity 20 bales per hour. It is a low price, in fact the lowest priced hay press in the market, and so strong and simple it never gets out of repair. It can be loaded on a farm wagon. Our 24 page Catalogue No. 433 tells you more and contains many testimonials we have received from Red Ripper purchasers. Distributing points, Baltimore, Memphis, Cincinnati. Address: SIKES MFG. CO., Haines, Georgia.

THE "ELI" King of Balers. A train of followers, but no equal. Proves its superiority wherever it goes. Makes tight bales, not loose bundles, works fast, avoids accidents and endures. Little draft, tremendous power. Handles 90 lbs. of feed. Write for Free 24 page Catalogue. Collins Plow Co., 1185 Hampshire St., Quincy, Ill.

A Constant Stream of water to the house, barn, garden or lawn is assured by the RIFE HYDRAULIC ENGINE. Pumps water automatically. Better than any ram, engine or wind mill. Sold on 30 Days Trial. Fully guaranteed. Catalogue free. RIFE ENGINE CO., 125 Liberty St., New York.

NO HUMBAG. Three Farmers' Bright and Durable. In One Price \$10.00. Makes 6 different size bales. No rotting. Makes 6 different size bales. No rotting. Price \$10.00. Read 81 for full details, send for FREE CATALOGUE. FARMER BRIGHTON, FAIRFIELD, IOWA.



## Is It Harness

or any sort of vehicle that will claim your attention this spring? Just a word before you buy. There's a standard. A guarantee of absolute worth, highest service, longest life, most perfect adaptability in

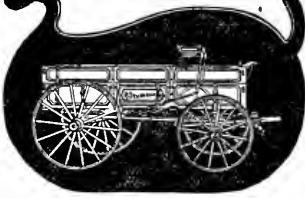
## Studebaker

### Vehicles and Harness.

You can't afford to experiment with untried goods for the sake of a small saving in first cost. Don't make the mistake of looking only at the price, and getting shoddy goods. Quality should be the first thought and that's where Studebaker's count. Studebaker's sell at honest prices and you are sure of value for your good money. Studebaker dealer in most every town. See him. Postal as for a catalog and particulars.

### Studebaker Bros. Mfg. Co., SOUTH BEND, IND.

Chicago, New York, San Francisco,  
Kansas City, Portland, Ore., Denver,  
Salt Lake City, Dallas.



## GET A GOOD WIND MILL

Don't buy a poor wind mill. Don't pay a double price. Send direct to our factory for catalogue of the

### Freeman Steel Wind Mills

and four post angle steel towers. A complete line of pumping and power mills of the highest grade at extreme low prices. We can save you money on a good article.

S. Freeman & Sons Mfg. Co.,  
110 Hamilton St., Racine, Wis.

A complete line of Feed and Endlage Cutters, Corn Shellers, Wood Saws, etc., at low prices.



### MARK YOUR STOCK.

### KENTUCKY ALUMINUM EAR LABEL

Made by F. H. JACKSON & Co., Winchester, Ky.  
Write to them for free samples.

if you wish to know about a really cheap saw-mill.

The Chicago House Wrecking Co. has a very attractive offer in another part of this issue. All sorts of farm supplies are offered at very low prices.

The Acme Churn is being investigated by numbers of our farmers and dairymen. Refer to the ad. and send for fuller description.

Any one wanting a fine Virginia plantation, fertile soil, fully stocked and equipped can hear of an exceptional offer by addressing "X." care of the *Southern Planter*. The owner will exchange for town or city income property.

### CHESAPEAKE & OHIO RAILWAY.

Interchangeable Mileage Tickets.—Commencing June 1, 1903, interchangeable 1,000 mile refund tickets will be placed on sale, limited to one year from date of issue, good only for transportation of owner with 150 pounds of baggage.

These tickets will be good over the following lines subject to certain restrictions and limitations:

Baltimore & Ohio R. east of the Ohio river; Pennsylvania R. R., Lehigh Valley R. R., Erie R. R. east of Suspension Bridge and Jamestown; Delaware, Lackawanna & Western R. R., Chesapeake and Ohio Railway east of and including Huntington, W. Va.

These tickets will be sold at rate of \$30.00 each, subject to refund of \$10.00 on surrender of cover to the Trunk Line Mileage Ticket Bureau, 143 Liberty street, New York city, within 18 months from date of purchase, making net rate \$20.00.

This form of ticket has been arranged for in deference to the wishes of patrons of the various lines who desire one mileage ticket good over several lines.

Agents at principal Chesapeake and Ohio stations will give further information regarding tickets on application.

### HEEBNER THRESHERS AND POWERS.

Two machines which go hand in hand upon the farm, allowing the owner to do for himself what would cost him a considerable sum if he had to hire, are the Heebner Threshers and Cleaners, and the Level Tread Powers. Both represent high types of usefulness, as, well they might, for they have been manufactured by one concern, the Heebners, father and sons, at Lansdale, Pa., for upwards of sixty years. They are the product of a region where people were taught to believe that the surest way to get on in the world was to do for themselves. These machines make that possible. The powers can be put to dozens of different uses upon the farm besides threshing. The threshers have a capacity of from 200 to 500 bushels per day. The owner of one easily does his own threshing, and may quickly re-

## WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

Loomis Machine Co., Tiffin, Ohio.

## SEPARATOR

FOR SALE OR EXCHANGE

A De Laval Humming Bird Separator, in perfect condition, used about 20 times; will sell cheap for cash or will exchange for a pure-bred Bull Calf of any Beef Breed—Polled preferred.

W. H. MacNAIR, Tarboro, N. C.

## ROUND SILO

THE PHILADELPHIA.

The only Perfect Continuous Open Front SILO made. See Open-Top Patent Roof. Ask for Catalogue.

E. F. SCHLICHTER,  
321 Vine St., Philadelphia, Pa.  
Also made in the West by Duplex Mfg. Co., South Superior, Wis.

### CRONK'S

Improved

Staple Puller



IS AT THE FRONT. Ask your dealer to show it. Three wire cutters, two hammers, two splicing clamps—all in one tool. A Staple Puller that will pull staples when no other make will. A cutter that will remove wire when the outside cutter will not. One day's use will save the cost of it. \$1.00, postage paid. CRONK & CARRIER MFG. CO., Elmira, N. Y.

## SAN JOSE SCALE

and other insects can be controlled by using  
GOOD'S CAUSTIC POTASH  
WHALE OIL SOAP, No. 3.

It also prevents Curl Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide. 50 lb. kegs, \$2.35; 100 lb. kegs, \$4.50. Half barrels, 270 lbs., at 3 1/2¢ per lb.; barrels, 425 lbs., at 3 1/2¢. Large quantities, special rates. Send for circular.

909-41 N. Front St.,

JAMES GOOD,  
PHILADELPHIA, PA.

## FRAZER

### Axle Grease Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 boxes any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.

FREE from anxiety over wash day are those who use a DILLEY QUEN WASHER. We manufacture three styles of washers to introduce them we will give you the advantage of our factory prices for a short time. Write for catalogue and prices. Our Up-to-Date at \$2.50.



LYONS WASHING MACHINE CO., Lyons, Mich.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.



**WIRE FENCE.**

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

THE HARD STEEL WIRE FENCE CO.,  
Cuyahoga Falls, Ohio.

cover the entire cost by threshing for his neighbors. All grains and grasses are within their compass, and they come from the machine ready for the bin. An advertisement will be found elsewhere in these columns. It should suggest to readers that it is as good a plan to do for the one's self, to be independent of the coming of the thresherman, and to save where savings can so easily be made.

**GWAIAKOWE.**

Gwaiakowe is an Indian word, and means "Corn is King." In America corn is indeed the king of cereals, the grain alone being valued at considerably more than \$1,000,000,000, which is more than double the value of the wheat and oat crops combined. In addition to the grain value of the crop, the stalks when shredded are worth as much as the ears, and hence the McCormick corn binder and the McCormick husker and shredder have enabled the corn grower to double the value of his crop. A beautifully illustrated book, entitled "King of the Corn Field," will be mailed free to readers of the PLANTER upon request. Write to the nearest McCormick agent.

**HOMES AND THE PLACE TO FIND THEM.**

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.  
C & O Main St, Depot Richmond, Va.

**IF YOU WISH TO SELL  
—OR BUY—  
VIRGINIA LANDS**

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.  
R. B. CHAFFIN & CO., Inc.  
No. 1 N 10th St., Richmond, Va

**NICE FARM FOR SALE**

on the Lynchburg and Durham R. R. at Winfall, Va, laying on both sides of track, over 300 acres, good buildings.

THOS. GOUGH, Lynchburg, Va.

**VIRGINIA FARMS**

\$3 PER ACRE AND UPWARDS.  
EASY PAYMENTS. CATALOGUE FREE.  
GEO. E. CRAWFORD & CO., Richmond, Va.  
Established 1875.

**"PIEDMONT" And all that it implies."**

Good land, climate, markets, shipping facilities, churches, schools, good health, moderate prices, easy terms.

TACON & CO., - Orange, Va.

**FINE FARMS** in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information address

ALBEMARLE IMMIGRATION CO.,  
SAM'L B. WOODS, Pres Charlottesville, Va.

**VIRGINIA FARMS**

All prices and sizes. Free list on application.  
WM. B. PIZZINI CO., RICHMOND, VA.

**Go South.** For full particulars write  
A. JEFFERS,  
Norfolk, Va.

SOUTHWESTERN VIRGINIA  
**BLUE GRASS FARMS and MINERAL LANDS.**  
Send for Free Real Estate Bulletin.  
Southwestern Va. Land Agency, Wytheville, Va.

**I Can Sell Your Farm**

no matter where it is. Send description, state price and learn how. Est. '56. Highest references. Offices in Va cities.  
W. A. Ostrander, 1828 N. A. Edg., Philadelphia

Mention the Southern Planter in writing.

The proper ripening and maturing of whiskey depends on the care and method of storage. The warehouses of the Hayner Distilling Company are of the most modern and improved style, constructed entirely of brick and steel and equipped with the hot air system of heating and ventilating, which keeps the whiskey at a uniform temperature the year round. As a result their 7-year-old is as fully developed as 14-year-old aged in the ordinary, old-fashioned way, and it's better, too, for an uneven temperature of extreme heat and cold destroys the quality and flavor.

During the entire process of manufacture and from the time it is stored in barrels in their warehouses, until seven years later, it is bottled and shipped, Hayner Whiskey is under the watchful care of ten Uncle Sam's Government officials. It goes direct from their distillery to you, with all its original richness and flavor, carries a United States Registered Distillers' guarantee of purity and age, and saves you the enormous profits of the dealers. Read the Hayner Co.'s offer elsewhere in this paper.

**USED FOR YEARS WITH SPLENDID RESULTS.**

Greensboro, N. C. Oct. 5, 1902.  
The Lawrence-Williams Co., Cleveland, Ohio:

Please find enclosed check for \$1.50, for which please send me one bottle of GOMBAULT'S CAUSTIC BALSAM. I have used it for years with splendid results.—T. M. ARRASMITT.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

**MANLOVE SELF OPENING GATE**  
Saves time, temper, teams and trouble. Works all the time, Locks well any time and pays for itself in a short time.  
Catalogue Free  
MANLOVE GATE CO.  
272 HURON ST. CHICAGO, ILL.

**Genuine Spiral Spring Wire FENCES AND GATES**

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO.  
Columbus, Ohio.



**Page Poultry Fence**

Heaviest and strongest made—fences poultry IN and stock OUT. Dealers don't keep it. Write us. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

**LAWN FENCE**  
Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Contractors and Churches. Address COILED SPRING FENCE CO. Box Q. Winchester, Ind

**FENCE! STRONGEST MADE.** Bull Tights. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free COILED SPRING FENCE CO. Box 55 Winchester, Indiana, U. S. A.

**TO HOMESEEKERS.**  
"THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,  
G. P. A., Lands and Immigration,  
Roanoke, Va.

WE HAVE A LARGE LIST OF  
**FRUIT, POULTRY and TRUCK FARMS**  
Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also  
**GRAIN and STOCK FARMS**  
From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.  
J. R. HOCKADAY, Manager.

ELMWOOD NURSERIES.

**ASPARAGUS**

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 10'0 for 2 mos. for BARR'S, PALMETTO, CONOVER.

**APPLES**

A large general assortment, including WINESAPS and YORK IMPERIALS.

**Splendid Assortment of Ornamental, Shade and Fruit Trees.**

**EGGS** from B. P. Rocks, Light Brahmans, Brown Leg-horns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hallsboro, Va.

**Wood's Farm Seeds.**

## Cow Peas and Soja Beans

Two of the most important crops for farmers everywhere. Write for leaflets entitled "Soja Beans vs. Corn" and "Cow Peas—The Clover of the South," giving special information about these crops. We carry large stocks of all SEASONABLE FARM SEEDS, Seed Corn, Millet, Sorghums, Teosinte, Late Seed Potatoes, Crimson Clover, Buckwheat, etc.

Wood's Seed Book and Special Circulars giving prices and seasonal information, mailed free.

**T. W. Wood & Sons, Seedsmen,**  
RICHMOND, - VIRGINIA.

**SOJA BEANS**

55C. PER BUSHEL.

**BLACK PEAS**

\$1.10 PER BUSHEL.

W. H. WILSON, St. Brides, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

**EXTRAORDINARY BUGGY OFFER.**

The Economy Buggy Co., exclusive makers of carriage and harness, Cincinnati, Ohio, are building one thousand of their celebrated Economy Ideal Buggies, which are regularly marketed at \$60, and are, until June 7th only, offering them to our readers at the low price of \$42.50, throwing in for good measure with each vehicle, free of all cost, one Economy Storm Front and one Economy Dust Hood, two essential articles for comfort and stylishness, and costing alone \$5.25 in any store. The terms the Economy Buggy Co. offers are as liberal as the price is low. They propose to reserve one of these buggies and storm front and dust hood for every person who writes them by June 7, 1903, and encloses five dollars. Catalogue and descriptive circulars will at once be sent the customer, fully describing all the options as to build, springs, finish, etc., of which there are many choices to select from. If the description fails to please him, he can at once have his five dollars reservation returned to him on request. If he finds the description to be just what he would expect to pay \$50 or more for, he can send the Economy people the balance of \$37.50 and shipping directions, and the buggy—just as ordered and specified—together with the storm front and dust hood will be forwarded promptly.

And this is not all. When the buggy arrives, examine it, hitch to it and try it thoroughly for ten days. If at the end of that time you are not perfectly satisfied with your purchase, send the buggy back to the factory, and every dollar of your \$42.50 will be returned.

**BIG SALE OF HEREFORDS.**

Messrs. Giltner Bros., of Eminence, Ky., send us the following item:

We beg to report the following sale of Hereford cattle to C. E. Clapp, of Berryville, Va., which is of special interest, inasmuch as it is the largest single transaction ever made in Herefords south of the Mason and Dixon line.

After figuring with the leading Hereford dealers on both sides of the ocean, Mr. Clapp purchased Acrobat of us at \$3,500, which is the highest price known to have been paid for a bull of his age (nine years old) in the world, with the exception of Grove 3d and Lord Wilton. It is generally conceded that Acrobat is one of the most phenomenal sires of the breed. There is hardly a Hereford herd of note in the United States but has the blood of this great sire represented either in their herd bull or in their leading females.

Mr. Clapp secured fifteen females, ranging in price from \$350 to \$600 per head. This consignment embraces the very choicest cows of the breed, among which may be mentioned the champion show cow, Denison, which won innumerable first premiums, and as a producing cow has to her credit Full-

# SEED CORN

FOR SALE.

The corn growers can't afford to miss this chance of getting some of the earliest White Corn ever introduced, known as the "WHITE CHAMPION." It has been known to have been harvested in eighty days after planting. It has a very large, deep-grained ear, grows tall and makes an abundance of fodder and feed.

Price—One Peck, 65c.; Half Bushel, \$1.25; One Bushel, \$2.

W. M. WATKINS & SONS,  
Randolph, Va.

**DIGGS & BEADLES**

RELIABLE

**SEEDS**

Selected SEED CORNS, SOJA and VELVET BEANS, COW PEAS, MILLET and SORGHUMS  
Write for prices.

**DIGGS & BEADLES, Seedsmen,**  
1711 E. Franklin Street,  
RICHMOND, - VIRGINIA.  
Catalogue mailed FREE.

## "Crop Growing and Crop Feeding."

BY PROF. W. F. MASSEY.

383 Pp. Cloth, \$1.00; Paper, 50c.

We offer this splendid work in connection with the SOUTHERN PLANTER at the following prices:

Southern Planter and Cloth Bound Volume, \$1.25.

Southern Planter and Paper Bound Volume, 90c.

Old or new subscriptions.

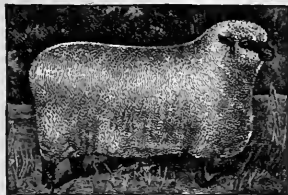
## WALTER'S Piano Exchange

We buy, sell and exchange PIANOS, do a general musical merchandise business and take trade.

PRICES THE LOWEST.  
TERMS THE BEST.

F. W. WALTER & SON,  
Staunton, Va.

## SHROPSHIRE



Back lambs, yearling bucks and ewes for sale; also **Poland Chinas**, eligible to registry. Pedigrees furnished. Farmers' prices. J. F. DURRETT, Albemarle Co. Birdwood, Va.

## Shropshire Rams.

In this my annual offering of Rams, I feel safe in saying that it contains one of the best lot of yearling Rams that has been offered at the price in the United States for a long time. These Rams are 14 months old, and weigh (May 8th) 150 to 163 pounds, actual weight. They have individual merit backed by strong breeding. Careful selection will be made for parties at a distance.

ENGLISH SETTER PUPS.  
(Count Roda, ex-Gladys R., both prize winners.)

WARREN RICE, Winchester, Va.

"WOODLAND," 239-2569.



Bred by us. The finest Dorset ram we ever saw. Is now at the head of our flock with "WOODLAND," 244-2745 Imp.

J. E. WING & CO., Mechanicsburg, O.

## .. 70 Fine Native Ewes ..

—FOR SALE.

Each has big, fat, healthy, **Grade Dorset** lamb; also a fine, big, **Registered DORSET BUCK**; the whole flock at reasonable price; also a **Stewart Hand Clipping Machine**, made by the Flexible Shaft Co., used on 100 sheep, good as new, \$15.

GEO. R. S. CONNELL, Irwin, Va.

## DORSETS and HEREFORDS.

I am now offering my superior herd bull **ROY MAY**, 8088; and some fine male calves. I am also booking orders for Dorset rams and ram lambs.

H. ARMSTRONG, LANTZ MILLS, VA.

filler, that stands at the head of Mr. Sotham's herd. This cow at Sotham's dispersion sale brought \$1,050. She now has a bull calf at foot by the \$6,000 Protector.

We have reserved our choicest Acrotai heifers, which we are mating to Britisher, Champion of both England and America. On this foundation rock we expect to build up our future herd, and surely from this cross we are justified in the expectation of producing a strain of Herefords second to none.

This firm has an advertisement in this issue, to which we invite attention.

### STUDEBAKER ORDERS.

Two sales recently made by the Chicago house of the Studebaker Brothers Manufacturing Co. show which way the wind is setting with big concerns that are satisfied with nothing short of the best to be had in vehicles and harness. The first was to the Yellowstone Park Transportation Company, the concessionaires under the government of the transportation privileges in the Yellowstone National Park, who have some 800 head of horses in service. Some time ago this company ordered from Studebakers a few sets of harness, and having tested and compared them with other makes used by them, quickly followed with an order for fifty sets of four-in-hand harness. The order was placed expressly on the superior quality of the Studebaker goods. The other sale was to the W. C. Walsh Co., of Chicago, and consisted of sixty United States mail wagons and sixty sets of harness to go into the government mail service and to be made after the approved government designs and specifications. These orders, though not of great magnitude as Studebakers do things, yet indicate in a forcible way the high standing of Studebaker goods.

### MISSOURI AGRICULTURAL COLLEGE—GREATLY INCREASED ATTENDANCE.

The year just closing has been one of the most successful in the history of the Missouri Agricultural College. The total attendance shows the unprecedented increase of 30 per cent. This increase is due in considerable measure to the increase in entrance requirements. It is also largely to be attributed to the better facilities for instruction, which have been provided through the liberality of the General Assembly. The new horticultural, dairy and live stock buildings are now occupied by their respective departments, and in some cases are already overcrowded.

Dran H. J. Waters has been appointed Superintendent of Agriculture at the St. Louis Exposition, and has been given a leave of absence.

Professor F. B. Mumford has been appointed Acting Dean of the College of Agriculture and Mechanic Arts, and Acting Director of the Experiment Station.

## Horse Owners! Use

GOMBAULT'S



## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Clusters from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or bluishness. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

## Fistula and Poll Evil

You can treat these diseases yourself

and cure them in 15 to 20 days. Fleming's Fistula and Poll Evil Cure is easy to apply, perfectly safe to use, and your money is promptly refunded if it should ever fail to cure.

### Interesting Booklets Free.

We have two booklets to send you. One tells about Fistula, Poll Evil, Spavin, Ringbone, Curb, Splint, Knee-Sprung, Lump Jaw, etc., with instructions how to cure them. The other proves that you can cure them. Write to-day.

FLEMING & CO'S., Chemists,  
22 Union Stock Yards - Chicago, Ill.

## HORSE COLIC.

Send me \$1.00 and I will tell you how to cure

## HORSE COLIC

in 15 minutes at home.

Address—  
J. C. FITCHER, - South Boston, Va.



### DEATH TO HEAVES

NEWTON'S Heave, Cough, Diarrhoea and Indigestion Cure. A veterinary specific for wind, flat and stomach troubles. Strong recommendation. \$1.00 per can. Dealers. Mail or Ex. paid. Newton's Remedy Co., Toledo, Ohio.

## FOR SALE.

2 very fine Family Driving Horses, 6 yrs. old; 1 large Draft Horse, 1600 lbs.

125 extra grade of Breeding Ewes; their lambs selling at an average of \$1 per head. All to be sold in lots to suit purchasers. Call on or address

JNO. MATHEWS, East Richmond, Va.

2 miles east of Richmond on Seven Pines Street, Cur Line

## SCOTCH COLLIES.

Beautiful pups, fine pedigree \$5 & \$6. Poland-China pigs, good blood, (no pedigree) \$5.

Bull Rocks and Eggs, \$2.

T. M. WADE, Lexington, Va.

### ● — COLLIE PUPS — ●

By Imported Scotch white and white and tri-colors. Prices \$7 to \$15. Older ones correspondingly low. Book on Training, 50 cents; FREE if you buy a Collie. MAPLEMONT STOCK FARM, Albany, Vermont.

## Kentucky HEREFORDS

Headed by the famous  
**ACROBAT**

No. 68460 and the celebrated

### IMPORTED BRITISHER

No. 145996 Champion Bull over all breeds in England and Grand Sweepstakes Champion at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they wish from the FINEST THAT CAN BE BRED to the cheaper class usually desired by the beginner. Write us before buying. Glad to answer inquiries.

Giltner Bros., Eminence, Ky.

## Hereford Cattle.

A number of young Registered  
HEREFORD Bulls and Heifers,  
not akin, at reasonable prices.

STONEHURST FRUIT AND STOCK FARM,  
Union Mills, Fluvanna Co., Va

## FOR SALE 8 Reg. HEREFORD BULLS

From 6 mos. to 3 yrs. old.

## 8 Reg. HEIFERS

From 6 to 18 mos. old. At reasonable prices.  
HAYFIELDS STOCK FARM. Cockeysville, Md.

## ELLERSLIE FARM

Thoroughbred Horses

AND SHORTHORN CATTLE,

Pure Southdown Sheep  
and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,  
CHARLOTTESVILLE, VA.



COOK'S CREEK HERD

Scotch-Topped  
Shorthorns

Herd Headed by Governor Tyler, 1858-48.  
Young Bulls for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

EAST RIVER SIDE

## SHORTHORNS FOR SALE.

Two Red Heifer Calves to be  
shipped about May 1st.

ADDRESS

JAMES F. CLEMMER, - Summerdean, Va.

## SHORTHORNS FOR SALE.

The Red and White Bull Calf **Westover 138579**, Roan Cow **Dina**, 4 years old, out of Red Jacket; also 10 months old Bull, to be registered if desired. I am now booking orders for Poland-China pigs for October delivery. Inspection of stock invited.

J. H. BOELTE, Redfield Stock Farm,  
Newe Ferry, Va.

## DRIED BLOOD MEAL.

As it is true that "the blood is the life" of the animal, it should be apparent that Armour & Co.'s Dried Blood Meal, advertised elsewhere in this issue, must furnish a most valuable adjunct to the ordinary rations of farm animals and poultry. Containing, as it does, some 37 per cent. of digestible protein—eight times as much of it as is found in an average sample of oats—its chief value lies in the fact that but a small quantity of it is required to balance a ration composed largely of such starchy foods as corn, hay and corn fodder. It is protein that young growing animals most require, but that ingredient of food is most difficult to provide in immediately available form. It is lack of protein that causes many common and fatal or detrimental ailments among farm stock. Among these may be mentioned scours in calves and other young animals; abortion from incomplete nutrition of the fetus; rickets or softening of the bones; paralysis of the hind quarters in pigs; goitre in lambs; bloodlessness in growing, working or pregnant animals, and a host of other ailments. Dried blood meal, considering its remarkable richness in protein, is cheap and in concentrated form. It will keep poultry healthy and make hens lay. We advise our readers to write the firm for their booklets giving full information regarding its properties and uses.

## A BEAUTIFUL CALENDAR.

The Plano Division of the International Harvester Co., Chicago, sends us a very beautiful calendar, the design of which is executed by Mr. George Ford Morris, one of the best animal artists in this country. This is certainly a very attractive piece of advertising and is fit to adorn the walls of any library or office. We have also received the annual catalogue descriptive of the Plano machinery. Like the calendar and all other advertising matter emanating from their offices, it is especially attractive. It is illustrated with pen sketches of farm life in different parts of the world and small photographs of actual field scenes on almost every page.

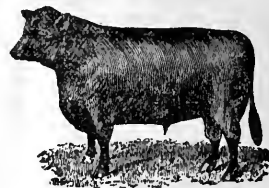
We certainly advise all of our readers to send for both the catalogue and calendar, as each is a work of art, independent of being good advertising of the concern they represent.

## WHALE OIL SOAP.

Mr. James Good, of Philadelphia, who has been a regular advertiser of ours for years, has some circulars describing his Caustic Potash Whale Oil Soap, No. 3. This soap is specially recommended for the control of the San Jose scale, as well as other insects.

Mr. Good will very cheerfully mail this circular or give other information to all nurserymen and orchardists who are interested.

## ANGUS CATTLE FOR SALE AT A BARGAIN.



High-Grade and Registered Angus Cattle; all ages of males and females. Get our prices before you purchase. We can save you money.

One Very Fine Dark-Gray Horse, 16 hands, weighs 1,125. He is very stylish, quick and active. A splendid driver, well broken in single and double harness and a fast mover. He is cheap at our price, \$200.00.

W. M. WATKINS & SONS,  
Randolph, Va.

Charlotte county.

## ABERDEEN-ANGUS BULLS FOR SALE.

1. My Herd Bull, ROCKBRIDGE ABAC-TOR, No. 40364, 3 yrs. old Dec. 2d last; \$400.
2. A Bull Calf, born Dec. 20th; sired by the above "Abactor"; dam, "Fride of Potomac"; No. 42607; \$100.
3. A Bull Calf, born Dec. 12th; sired by the above "Abactor"; dam, a thoroughbred Angus Cow bred by the late William A. Ruff. Pure breeding can be shown for this calf, but being out of an unrecorded dam he cannot be registered; \$50.

None of these will be sold until October, and should the calves at that time not prove to be good specimens of the breed they will be withdrawn from sale.

R. F. DAY, Glasgow, Va.

MONTEBELLO HERD OF

## Aberdeen-Angus Cattle.

3 Reg. Bull Calves for sale. Ages, 8, 4 and 3 months.

1 Thoroughbred (not entitled to registration), male, 2 months old.

BERKSHIRE PIGS of Biltmore Strain.

L. H. GRAY, LOCK BOX 59, ORANGE, VA.

## SHORTHORN BULL CALVES 3 to 10 mos. old FOR SALE.

Close descendants of the World's Fair present winners in 1893, and also up to the present time. SPECIAL OFFER!—A 1-year old Roan Bull Calf at \$75 if taken soon.

Poland-China Pigs of the best and most fashionable breeding. Sprung Pigs now ready. Pedigree furnished with all stock sold. Come or write.

WM. T. THRASHER, Springwood, Va.

WE WILL EXCHANGE A—

## Reg. SHORTHORN

(Durham) Bull, 2 years old, well bred, for bull of same breed to avoid inbreeding. We refer to former owner, Mr. R. L. Owen, of Lexington, Va. Address.

OGCONEECHEE FARM, DURHAM, N. C.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Chilly, Ky.



# V. P. I. Farm Bulletin

Our Jersey Herd Bull for sale—PEDRO'S VIRGINIUS, 45919, grandson of Pedro, 3187, and of Marjoram Second, 12805, both of World's Fair fame. The Bull offered has been used in our herd for several years, and is sold to prevent in-breeding. Price low, quality considered.

**D. O. NOURSE, Prof. of Agr.  
Blacksburg, Va.**

## Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

### JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

## REGISTERED JERSEY BULLS FOR SALE AT A BARGAIN.

Calves 1 and 2 yr. olds; also EGGS FOR HATCHING, W. & B. P. Rocks, W. & B. Leghorns, and S. L. Wyandottes, 75 cents for 15.

J. B. JOHNSON, Manassas, Va.

"CLOVER HILL FARM."

## ST. OMER HERD

Offers young bulls fit for service, out of tested dams with good yearly records. Strong in Exile of St. L., King of St. L. and Stoke Pegs of Prospect. Reasonable prices.

JOS. T. HOOPES, Bynum, Md.

WANTED—Pair Pure Bred PERCHERON and CLYDESDALE Brood Mares; DUROC Bear and Sows; one SHROPSHIRE, SOUTH-DOWN and LINCOLN Ram and five Ewes. Address STOCK, care Southern Planter, with prices and particulars.

## Don't Like Cheap Stuff No How

Even the best is never too good. You'd better buy of Owens. Finest Stock. Prices right. DUROC JERSEY, best all purpose hog; also POLAND CHINA. B. P. R. Chickens, M. B. Turkeys, M. P. Ducks. Eggs in season. Write, or better still, call and see.

THE CEDARS W. T. G. OWENS,  
P. and S. FARM, Midlothian, Va.

## 150 JACKS, JENNETS and Mules 150



Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell two Percheron Stallions at close figures.

BAKER'S JACK FARM.

Lawrence, Ind.

## HAVE YOU PAID UP?

Recently we sent a bill to every subscriber who is in arrears for his subscription. The response was prompt and gratifying in the extreme. There are some few others who have not yet remitted. We would thank these to kindly give this very small matter their attention at once. The amount is small as a separate item, but a few hundred such will amount to quite a sum. We cannot, at 50 cents a year, carry many delinquents. Please let us hear from you.

## ANTI-DIRT MILK PAIL.

Messrs. Hening & Nuckols, whose advertisement appears regularly in our columns, are offering in this issue a very useful device for farmers and dairymen in the shape of an anti-dirt milk pail. It is a very simple arrangement, consisting of a block-tin bucket with two sets of strainers independent of each other. Should any dirt by chance get through the outside strainer, the second one underneath is sure to catch it.

This pail also has a device which aerates and cools the milk as it runs into the bucket.

Any one interested will receive an illustrated circular, together with testimonials from users, free on application.

## SHORTHORNS AND SOUTHDOWNS AT "ELLERSLIE."

Messrs. R. J. Hancock & Son, of the famous "Ellerslie" Stock Farm, have their annual offering of Shorthorn Cattle and Southdown Sheep in another column. The Shorthorns consist of some choice bulls 3 to 6 months old by Fairfax, the splendid grandson of Knight of the Thistle. The Southdowns are rams by the imported Warwick, of King Edward's Sandringham flock. All stock in good working condition, and is being sold at farmers' prices.

## A MATTER OF PEDIGREE.

"Marcus," said Rastus Bivins to his son, who had just returned from college with a great, bushy head of hair. "Marcus, what in the name of common sense did you learn at school, anyway? You can't saw the wood; you won't plough; you won't go to work; you won't do nothing but sit around here and read. I'm getting tired of it. I'm getting tired of it! If you don't do something, young man, and that pretty soon, I'm going to enter you at the State fair in the hog show. That hair of yours might help you some there."

"Don't worry about that," said Marcus affectionately. "Don't worry about that; I wouldn't take any prize, because, you see, I have no pedigree."—*Silas Xavier Floyd, in Lip-pincott's for May.*

## BERKSHIRES

ANNEFIELD HERD

Represents the

### Finest Blood Lines

in England or America.

Stock for sale at all times.

Correspondence Solicited.  
Inspection Invited.

EDW. G. BUTLER,      Annefield Farms,  
Briggs, Clarke Co., Va.

## REGISTERED BERKSHIRES.

One 2 yr. old boar; and young stock  
10 WKS BOTH SEXES.

"Mansfield Farm,"      W. E. HAMMOND,  
Goochland, C. H. Va.

## CHOICE YOUNG

## BERKSHIRES

of Both Sexes, for Sale.

By Highcree Topper of Biltmore II, of Imported Harlene.

Miniborya Farm, Box 901, Richmond, Va.

## HAWKSLEY STOCK FARM.

## Large ENGLISH BERKSHIRES

### B. P. ROCKS FOWLS,

Eggs from same, \$1 per 13.

J. T. OLIVER, Allen's Level, Va.

## FOR SALE.

## Large English Berkshire Hogs, Barred Plymouth Rock Chickens

BEN. HOLT, 60747, 430 lbs. as a yearling at head of herd. \$3 EGGS IN SEASON.

JOHN P. FOSTER, Norecreek, Ohio Co., Ky.

## ESSEX PIGS—FOR SALE.



Some fine Pigs, from Registered Stock, not mated, at \$10.00 per pair, crated P. O. B. 8 to 10 weeks old. Your orders solicited.

L. G. JONES, Bethania, N. C.

Registered P. Chinas Berkshire, C. Whites. Fine large strains. All ages, mated not a in 8 week pigs. Bred sows. Service hours and Poultry. Write for prices and free circular. P. F. HAMILTON, Cochranville, Chester Co., Pa.



Mention the Southern Planter in writing.

## LEGHORN POULTRY YARDS



Have for sale a limited number of Single Comb Brown and White Leghorn Pullets and Roosters. Best layers known. Prize-winning stock. Price, \$1 to \$1.50 each. Eggs in season at \$1 for 16; \$5 per 100. Satisfaction guaranteed. Address  
A. T. MATTHEWS, Box 36, Parkesley, Va.

## EGGS EGGS EGGS

That will hatch out DOLLARS. Not real dollars, but Turkeys and Chickens of the best strains in this country, which will net the owner more real dollars of profit than any other. I handle "Nothing but the Best" in my line. My prices are higher than some others, but the quality more than makes the difference. National strain Mammoth Bronze Turkeys, sitting 15, \$3. National strain, Barred Plymouth Rock Chickens, sitting, 15, \$1.50.

**PIEDMONT POULTRY PLACE,**  
Miss E. Callie Giles, Prop. Whittle's Depot, Va.

## SHADOW - BROOD - POULTRY - YARDS.

**EGGS FOR HATCHING.** B. P. Rock Eggs, \$1 per 30. Pekin Duck Eggs, \$1 per 30.  
Pedigreed Scotch Collie Pups, \$5 each. Trained yearling Collies, \$10

A sure home remedy for chicken cholera and roup, 25c. each. Also a certain extirpator of cabbage and cutworm worms and potato bugs, 25c. Both are inexpensive, safe and sure.

C. H. BENNETT, Goodman, Va.

## BROWN LEGHORNS

[ROSE COMB.]

"The Celebrated Maryland Strain." Prize Winners. Eggs, \$1 00 per 15; \$5.50 per hundred.

JOHN P. MAVS, - Gloucester Maryland.

32 Varieties  
Best Poultry

poultry keepers should have it.

JNO. E. HEATWOLE, Harrisonburg, Va.

## SILVER WYANDOTTES

EXCLUSIVELY.

Famous "Blue Grass" Strain; none finer. Eggs, \$1 per 13; \$2 per 30. 22 years a breeder and shipper.

S. P. YODER, Denbigh, Va.

## GOOD ROADS.

A FARMER'S COMPLAINT.

Good roads are what we need, and need 'em bad;  
In this there is no greed, yet 'tis sad  
To see the towns get all the plums  
While we get only crumbs.

There's riches in good roads did towns  
but know it;  
We farmers then could send great loads  
of produce there to store it;  
An' yet we're denied this one boon—  
good roads—  
They'll repent, ah, soon!

Mud bottoms, they say, are good  
enough for us;  
"No State tax—the town can pay for  
roads.

A trust is what you need.  
Buy up all the good roads and then be  
rich—you greed!"

Thank you, we're not a speculator—  
we'll wait awhile—  
Kind nature sends the mud, and later,  
we'll see you smile—  
A sickly smile, when you behold our  
grain and produce  
Pass by your door, and sold.  
April 1, 1903. E. C. M.

## MR. HICK'S ORGY.

Mr. Caleb Hicks, of Bowman's "Crick," a settlement not many miles from Wilkesbarre, Pa., had a novel experience during Christmas week.

Though Mr. Hicks had toiled on his farm till he had reached the ripe age of 62 years, he had never been so far away from home as Wilkesbarre. Having disposed of his fall crop of turkeys most advantageously, and believing himself to have attained years of discretion, he decided to drive to town and make a day of it. Since his return he has had much to say of the sights he saw in the city, but perhaps none of his adventures proved quite so thrilling as his visit to the theatre.

"I found out about the theatre," says Mr. Hicks, "and I followed a crowd goin' in. They charged me 75 cents for a seat—75 cents, mind you. Well, I paid it, for I didn't want to get into no dispute, and they took me in and set me down in a velvet chair. There in front of me was the biggest picture I ever see, and the best, by jingo! A oil painting it was, bigger than two double barn doors. I set an' admired it awhile, and pretty soon a lot of fiddlers came in and began to play. There must have been a dozen of 'em. They all played at the same time. Made good music, too, darned if they didn't! Never see fellers keep together so well as they did. They played several tunes; none of 'em I ever heard before, but 'twas good, lively music.

"First thing I knew the big picture began to roll up, darned if it didn't! Went clean up to the ceiling on a pole. Then some people came out and began talking to each other. They didn't

## Little Chicks

thrive when fed on our

## BABY CHICK FOOD.

A perfect balanced food. Send for free sample and our large illustrated catalog of POULTRY SUPPLIES,

INCUBATORS and BROODERS.

FANCIERS' SUPPLY CO.,  
517-519 West Broad St.,  
Richmond, Va.

EVERYTHING FOR THE FANCIER.

## White Plymouth Rock

Eggs during June and July, 13 for 75c.; 30 for \$1.50. No White Holland Turkey eggs for sale after June 10th.

JOHN A. CLARK, - Shirley, Va.

## WANTED!

ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Etc.

CECIL FRENCH,  
718 Twelfth St. N. W., Washington, D. C.

BARRED and BUFF  
PLYMOUTH - ROCKS  
AT HALF PRICE.

FRED NUSSEY SUMMIT, Spots. Co., Va.

## White Leghorns.

Egg Record—2,213 eggs in one year  
from eighteen hens.

Eggs, \$2 per 15; \$5 per 50.

Write for circular to-day.

C. G. M. FINK, 1409 W. Leigh St., Richmond, Va.

BARRED P. ROCKS and  
S. C. B. LEGHORNS.

15 eggs, \$1 00; 30, \$1.75.

Pekin Ducks—11 eggs, \$1.22; \$1.75.  
Bargains in INCUBATORS, ORGANS and PIANOS.  
Satisfaction guaranteed. Rev. J. W. HECKMAN,  
SPOTTSYLVANIA, VA.

## WHITE MINORCAS.

The best of layers, big true Minorca shape birds that win everywhere. They will please you. Eggs reduced prices now. Catalog free.

F. S. Bullington, Box P, Richmond, Va.

## Aryshires, Berkshires and Oxford-Downs.

Aryshire Calves of both sexes, Berkshire Pigs and Boar and 2 Oxford-Down Rams for sale.  
MELROSE CASTLE FARM,  
Enos H. Hess, Manager, Casanova, Va.

## WHITE YORKSHIRE

Pigs entitled to registration. FOR SALE.

Henry H. Clarke, "Chantilly,"  
Broad Street Road, Richmond, Va.

talk about anything I was interested in, so I got up and came home. But, by jingo! that the-a-atre was a great place, and I'm going to kick over the traces again some day and go back."—CAROLINE LOCKHART (SCZETTE), in *May Lippincott's Magazine*.

#### THE SCHOOL-BOY OF 1903.

"Tommy, have you been vaccinated?"

"Yes, ma'am."

"Have you had your vermiform appendix removed?"

"Yes, ma'am."

"Do you use sterilized milk?"

"Yes, ma'am."

"Is your home connected with the city sewer?"

"Yes, ma'am."

"Have you shed all your milk-teeth?"

"All but one."

"Have you a certificate of inoculation for the croup, chicken-pox and measles?"

"Yes, ma'am."

"Is your lunch put up in Dr. Koch's patent antiseptic dinner-pail?"

"Yes, ma'am."

"Have you your own sanitary slate-rag and disinfected drinking-cup?"

"Yes, ma'am."

"Do you wear a camphor-bag around your throat, a collapsible life-belt, and have you insulated rubber heels on your shoes for crossing the trolley-line?"

"All of these."

"Have you a pasteurized certificate of baptism?"

"Yes, ma'am."

"And a life-insurance non-forfeitable policy against all the encroachments of old age?"

"Yes, ma'am."

"Then you may hang your cap on the insulated peg set opposite your distinguishing number, climb into your seat and proceed to learn along sanitary lines."—*Judge*.

#### SCOTCH SENSE.

An Englishman and a Scotchman were disputing over the relative merits of Shakespeare and Burns.

"And ye say, do ye, thot Billy Shakespeare was a greater mon than Robbie Burns?"

"Yes, I do; haas hevery Hinglishman knows bit."

"But ye say thot it was Shakespeare who said, 'Uneasy lies the head thot wears a croon.'"

"Certainly hit was Shakespeare. Robbie Burns could never 'ave said that."

"Noo, noo; Robbie Burns would never hae said thot; he had over muckle sense to say a thing like thot."

"Ower muckle sense, 'man! What do you mean?"

"Yis, yis; Robbie Burns would hae kent thot ony king would hae ta'en his croon off and hoong it on the back of the chair before lying doon. You forget thot Robbie was a Scotchman."—*Tit-Bits*.

## ARMOUR'S BLOOD MEAL Cures Scours in Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

**PREVENTS** weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

### A Potent Food for Work Horses, Dairy Cows, Poultry.

Write us for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

#### THE ARMOUR FERTILIZER WORKS,

Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

## "ELLERSLIE."

# SHORTHORNS SOUTH DOWNS

Red Bulls from 3 to 6 mos. old, all by Fairfax (very handsome red bull) by Knight of The Clifton; out of registered cows which have been selected for milking as well as beef purposes

1 and 2 yr old rams by Warwick, imported from the Sandringham flock of KING EDWARD VII, out of ewes from the celebrated DRUID HILL PARK (Baltimore flock) These are unregistered but are first class in every respect.

**REMEMBER.**—We do not ask fancy, but *farmers' prices*.

Our stock is not in show ring but *working condition*.

**R. J. HANCOCK & SON, Charlottesville, Va.**



## BERKSHIRES.

Imported Sir John Bull, No. 3609—B. H. B.  
Imported Dansfield Roland, No. 60528—B. H. B.  
Imported Columbia, No. 60527—B. H. B.  
Imported Royal Carlisle, No. 4841—B. H. B.

And that Immensely Princely Hog

**Uncle Sam, No. 7233** are the sires of my Spring and Summer offerings of pigs. Does this list of Royalty suit your fancy? They represent the most famous Berkshire breeders of England. Fancy stock, moderate price

**Hunting Dogs** and pups for sale. Setter pups, \$5.00 each.

**Short Horn** (Durham Cattle) for sale. Write for particulars.

**THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.**

## HILL TOP STOCK FARM.

# Berkshire Hogs and South-Down Sheep

A SPECIALTY.

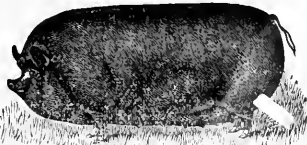
S. Brown Allen, who succeeds H. A. S. Hamilton & Co in the ownership and management of this celebrated Stock Farm, offers a few Berkshire Pigs that have been bred without regard to cost, and one and two year old

## SOUTH DOWN BUCKS,

that cannot be excelled in this country. We have swept premiums on this stock over all competitors at Fairs in this and adjoining States

**S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)**

When corresponding with our advertisers always mention the *Southern Planter*.



**CHESAPEAKE & OHIO RAILWAY.**

2,000-mile tickets discontinued. On and after June 1st, 2,000-mile tickets will be withdrawn from sale and replaced by the 1,000-mile refund interchangeable tickets heretofore announced.

**PAT'S FIRST THOUGHT.**

Back in the good old days when nerves and railroads were little known, an old stage-road ran from Lake Champlain to Ogdensburg, N. Y., passing through the little town of Sodom. This village nestled in a valley between two great hills, over which the white ribbon of the road wound steeply.

Upon one of the trips of the stage the regular driver, who had been at home for some weeks recovering from an illness, was riding inside while the red-haired, mild-featured, big-boned Irishman acting as his substitute occupied the driver's seat upon the box. The day was a beautiful one and the passengers were enjoying their drive keenly, their appetites increasing as the distance lessened between them and the town of Sodom with its promised pause for refreshment.

Suddenly, as the heavy stage lumbered over the brow of the hill, down which the road plunged at a sharp angle, running through the little town at its foot and ascending the hill beyond, the passengers became conscious that their pace had been recklessly increased. Faster and faster they went, dashing down the hill at a rate rapidly becoming a furious one. Trees and bushes at last became but a dizzying blur along the road. All clung to the reeling stage and held their breath in terror, while on the stage raced, down the hill with ever-increasing speed, into the town, past the hostelry with the waiting host left standing in amaze at the door, past the post-office without pause and out upon the road leading up the face of the hill beyond. There the pace slackened and as the incline grew more steep, at last the smoking horses came to a standstill. With one accord the dazed passengers tumbled out and surrounded the driver, who now stood at the head of his reeking leaders.


"What is it, Pat? What is it? Did they get away from you?" came the breathless questions.

"None," replied Pat with a set face, "it wor that," pointing grimly before him. There lay the stage-tongue dragging uselessly on the ground at the heels of the horses and completely severed from the coach. At a glance the regular driver comprehended the meaning of the danger to which the passengers of that stage, deprived of its sole means of guidance, had been exposed, and, realizing the miracle of their escape, he turned sick and fainted where he stood.

Later, back at the inn, when the excitement had somewhat subsided and fresh horses were being put to the

**ENGINES AND SEPARATORS**

There is no record of a **FARQUHAR BOILER** ever exploding.



The **Farquhar** threshing machinery is the perfected product of the pioneer manufacturers of Grain Separators and Threshing Engines. It's the most durable and cheapest threshing outfit a farmer can buy. The Celebrated **Ajax Threshing Engines**, made in sizes from 4 1/2 p. up, have extra foot drives, and two injectors. Provided with every approved safety appliance. **Farquhar Separators** have every advantage of capacity, thoroughness of separation, simplicity and durability. Every part thoroughly tested. Made in all styles and sizes. Send for free catalogue of Engines, Threshing Machinery, Saw Mills, etc.

**A. B. Farquhar Co., Ltd.**  
**York, Pa.**



# CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.      **G. S. LINDENKOHL, Keswick, Albemarle Co., Va.**

**We Are Still in the Business....**

## "HILL TOP" Stock at Shadwell, Va.

Having changed our residence, we brought with us and have for sale a choice lot of HILL TOP stock.

**Jersey Cattle, Southdown and Shropshire Sheep, Berkshire Hogs and B. B. R. Game Chickens.**

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship by September 1st. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

**H. A. S. HAMILTON & SONS, Shadwell, Va.**

# EGGS FOR HATCHING

[From Fowls of High Merit, Fresh, and a Good Hatch  
Guaranteed of the following varieties:—

**PLYMOUTH ROCKS, BROWN LEGHORNS, WHITE LEGHORNS and PEKIN DUCKS at \$1.00 per sitting of 15  
BRONZE TURKEY EGGS, \$3.00 per dozen.**

Jersey and Guernsey Cattle and Berkshire Pigs. Four handsome  
[Great Danes and three Fox Terrier Puppies.

**M. B. ROWE & CO., - Fredericksburg, Va**

**INCUBATORS ON 30 DAYS' TRIAL. THE WORLD'S BEST STANDARD HATCHER.**

Thousands of these incubators are in successful operation in the United States, Canada, South Africa, New Zealand, Sweden, England, Holland, and Germany. These machines operate to perfection and always bring off a large brood of strong, healthy chicks. Catalogue with full particulars




Free for the asking. THE STANDARD F. C. INCUBATOR CO., Dept. 5, Rochester, N. Y., U. S. A.

repaired coach, some one turned to Pat and asked:

"Pat, what was your first thought when the pole dropped?"

"Well, sor," he answered, settling the quid more comfortably in his cheek, "me first thought wor, 'Lord, ha' mercy on our sowis!' Thin thinks I to meself, 'Damn a horse that can't outrun a wagon!' and I licked the poor divils all th' way down the hill!"  
—*Evelyn Currier, in June Lippincott's Magazine.*

#### VIRGINIA AT THE ST. LOUIS EXPOSITION.

*Editor Southern Planter, Richmond, Va.:*

Dear Sir,—As you are aware, the State has made an appropriation for exposition purposes at St. Louis for next year, and this Commission is desirous that Virginia should make as fine a showing as possible in the various departments. We believe that this offers great opportunities for the advertisement of Virginia's agricultural resources, and to illustrate this to the world we would appeal through your columns to the farmers of this Commonwealth, to give us their cordial support by devoting especial attention and culture to some portion of such crop or crops as their sections may be particularly adapted to, and thus try to produce exceptionally fine samples to furnish this Commission for exposition purposes. These articles will be transported and exhibited without further expense to the grower, and full credit will be given to the producer on the label attached at time of exhibition. This will give a wide advertisement for any products which may be for sale, and offers a splendid advertisement of the advantages of Virginia real estate to prospective settlers.

I will deem it a great favor if any parties who will be willing to co-operate with me in this work, will give me notice by letter and I will aid them in every way possible to make their products beneficial both as an advertisement for themselves and for the State.

G. E. MURRELL, Supt.

Office, third floor, Capitol Building.

#### CLASSIFIED.

During an encampment of the National Guard of Pennsylvania at Mount Gretna several years ago a party of officers went out for a stroll, and happening to pass a farm-house near the encampment grounds, one of them suggested stopping in for a glass of milk. On going inside the yard they were met by the farmer's daughter, who brought forth a can of buttermilk and some tumbler, saying: "This is the only kind of milk we have."

After each of the party had taken a drink, one of them remarked: "By George, that's fine; can you let us have some more?"

The lass replied: "Oh, yes, take all you want; we feed it to the pigs, anyway."—*Philadelphia Times.*

We will return your money if after using

## Chloro-Naphtholeum Dip

In accordance with directions, you can say it hasn't killed the Lice on your stock, and cured the Mange, Itch, Scabs and Ticks. Try it and you'll never do without it. Booklet free. Worth its weight in gold. Trial gallon sent prepaid upon receipt of \$1.50—by your dealer or  
AGENTS WANTED. WEST DISINFECTING CO., Inc., 30 East 59th St., New York.

## "The Oaks" Herd.

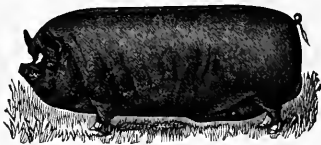
OFFERS FOR SALE 2 Registered SHORTHORN COWS,  
2 Registered MORGAN COLTS, and a few good yearling SHROPSHIRE RAMS.

B. B. BUCHANAN, Bedford City, Va.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.

### DORSET SHEEP

B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

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## LARGE YORKSHIRE HOGS.

The Ideal Bacon Breed,  
The Pork-Packers Breed,  
The Most Prolific Breed,  
The Most Profitable Breed.

We have four litters of this popular breed, which will be ready for shipment in May. Bred from the best imported stock. We have never seen better pigs.

Send for circular and prices. Address—

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### 30 YEARS SELLING DIRECT



No. 331—Surrey. Price \$68.  
As good as sells for \$40 more.

We are the largest manufacturers of Vehicles and Harness in the world selling to consumers exclusively. WE HAVE NO AGENTS but ship anywhere for examination, guaranteeing safe delivery. You are out nothing if not satisfied. We make 195 styles of Vehicles and 65 styles harness. Visitors are always welcome at our factory.

Large Catalogue FREE.  
Send for it.



No. 544—Light Stanhope. Price \$38.50.  
As good as sells for \$35 more.

ELKHART CARRIAGE & HARNESS MFG. CO., Elkhart, Ind.

## THE WELCOME AT THE DOOR.

There is a home I visit sometimes which has a special charm. The mistress, who answers your ring, is blind, but before you can say a word, with beaming face she cries, "How glad I am to see you!" No matter how inopportune the call may be, it is always with radiant delight and cordial words that every one is greeted.

I wondered about it—how it could always be the same welcome, for I knew there were domestic whirlwinds that upset her work and plans just like in other homes. I somehow concluded that it was her special gift, one of her compensations, and so settled the matter. Later, this same subject of the welcome or unwelcome guest, and treatment thereof, coming up in a little circle of friends, I was interested to find my friend quoting her mother, and then I found the solution. Her mother had taught her that no matter how the unexpected guest may find you, unprepared in every way, let your first welcome be generous and instant. Let no thought pantry-ward make your greeting constrained or apologetic.

Give the cordial greeting that cannot be forgotten, and the responsive glow in the heart of the guest will gild deficiencies which may afterward appear; but no after effort can make a guest forget a chill and constrained welcome at the door. This little word has been of service to me, so I give to others.—*Ladies' Home Journal.*

## A RAILROAD SWITCHMAN AT A REVIVAL MEETING.

"Stop! you there making for the door! Don't you know the Lord is calling you and that you are running away from Him? Don't you know that you are going straight to hell?"

Putz was working on a limited schedule now and there was not much time to spare, but he could not resist the temptation of having one pass at him, so he stopped and faced around. As he did so he became conscious that every eye in the church was on him. Putz didn't often get the centre of the stage, and the novelty of the thing pleased him greatly, it was such a contrast to his old accustomed place in the back row of the chorus. Raising his voice so as to reach the least seats in the gallery, he replied:

"Number Six is calling me, too. Didn't you hear her? If I don't get down there and set that switch for Number Six a whole train-load of people will go to hell. Looks like hell's up to me both ways. Guess I'll set the switch. Good-bye, Doc." Having de-

## Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.

FOR SALE—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos. old. Call and make your own selection. Prices right.

MURRAY BOOCOCK, Owners, Keswick, Va.

## HEREFORD CATTLE

Annefield Herd Richly bred in "Anxiety" Blood and Headed by the Sweepstakes Winner at Kansas City 1901,

PRINCE RUPERT No. 79539.

FEE, \$25.00 FOR THE SEASON OF 1903.

Correspondence Solicited.

Inspection Invited.

ANNEFIELD FARMS,

Briggs, Clarke Co., Va.

## Bacon Hall Farm.

## Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

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NASONS,  
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1903

"MOUNT SHARON"  
Reg. and Grade HEREFORD CATTLE  
BRONZE TURKEYS & MUSCOVY DUCKS

STOCK FARM  
Registered SHROPSHIRE SHEEP  
Registered POLAND-CHINA PIGS

**NOW OFFERS FOR SALE**



HEREFORD CATTLE.—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

SHROPSHIRE SHEEP.—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

POLAND-CHINA HOGS.—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

M. BRONZE TURKEYS.—Toms, \$1. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

MUSCOVY DUCKS.—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

BARRED PLYMOUTH ROCKS.

ROUEN GESE.—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

WILLIAM L., Jr., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.

THE  
**KEELEY  
INSTITUTE**  
GREENSBORO, N.C.

For the treatment of THE LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

livered himself of which, he departed without waiting for further developments. The boys told him when they came down, after it was all over, that the "old boy" did not get things going in good shape any more that night.—MONTGOMERY B. CORSE, in *May Lippincott's Magazine*.

#### TACOMA'S BIG SAW-MILL.

With One Exception It is the Largest in the World.

At Tacoma I visited a saw-mill said to have a greater capacity than any other in the United States, and, with one exception (in Norway), the greatest in the world. It is, in fact, two separate mills, covering a wide, low flat with docks on the sound where ships can be loaded at the door of the yards. Here the logs from the camp which we visited are sawed. They are dumped from the railroad cars into ponds of water and held until the mill is ready to cut them into lumber. Mr. Royce showed me through this great establishment, with its devices for handling the enormous logs of fir and cedar, hemlock and spruce, which come to it daily.

Nearly every step in the long process is performed by some human-like machine. Logs weighing many tons are handled like jack-straws—pulled out of the water, whirled over, lifted about, gripped, slabbed off, turned again easily, and, directed by the swift and sure judgment of the expert sawyer, driven through band-saws or great gang-saws, cutting twenty boards or more at once and finally trimmed to certain lengths—everything moving at once, smoothly, with an absolute exactitude. In fifteen minutes from the time the log enters the mill it has been reduced to lumber of several grades; the poor parts have been whittled up into lath and shingles, the slabs have been shot out on a great pile for fire-wood and the remaining bark, sawdust and refuse have been carried away to the fire heap. This mill cuts 100,000,000 feet of lumber and 90,000,000,000 shingles a year, and its product goes the world over—to Australia, Hawaii, China, South Africa, South America and Europe.—From *Ray Stannard Baker's "The Conquest of the Forest,"* in the *May Century*.

#### SHE WAS A BIRD.

"Amos," sighed Mehitabel Scruggs, "doesn't the spring bring inspiration to your soul?"

"May be it does, Mehitabel," answered Amos Medooney.

"Doesn't it bring to you tender, soulful, thrilling thoughts when you see the little birds making their nests and choosing their mates? Doesn't it make you think of a nest for yourself and—and—"

"Mehitabel!" gasped Amos, reaching for her hand, "you've got me up a tree."—*Judge*.

## St. Albans School



SITUATED ON A  
SUNNY HEADLAND  
ABOVE THE  
BANKS OF NEW RIVER,  
IN THE  
BLUE GRASS REGION  
OF VIRGINIA

### Prepares Boys FOR UNIVERSITY OR FOR BUSINESS

SEND FOR ANNUAL CATALOGUE, IN WHICH IS  
PUBLISHED "PLAN OF ST. ALBANS SCHOOL."

Address, W. H. RANDOLPH,  
Head Master,  
RANDFORD, - - - VIRGINIA

## SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

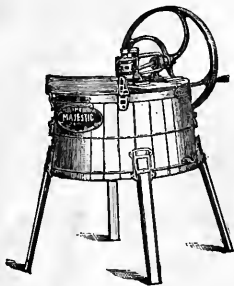
BARON ROSEBOY 57666 (The great Westertown Rose, son of the world-famous GAY BLACKBIRD) in service.

The Sire is half the herd. In Baron Roseboy, is combined the typical "doddy" form with a pedigree that cannot be excelled. He is a brother of the great "Gay Lad" (sold at \$3000), who heads the largest Angus herd east of the Mississippi, is also brother of "Hector of Lakeside" at the head of the great Pope River herd of Illinois; is uncle of the "10th Laird of Estill" at the head of the greatest Angus herd in America.

On dam's side, Baron Roseboy traces direct to the Imp. Blackbird Bull, "EASUTO," said to be the best Blackbird Bull ever imported.

The females in the herd are "chips off the same block." Great bulls, great cows, mean great calves. Come and see them, or write

A. L. FRENCH, Proprietor, Fitzgerald, N. C.  
Rockingham Co., 24 miles southwest of Danville, Va., on D. & W. Ry.



A WASHING MACHINE is as great a necessity in the house as a wringer

### THE MAJESTIC ROTARY WASHER

has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of wood-ware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

THE RICHMOND CEDAR WORKS, Richmond, Va.

## SLUG SHOT

Kills Insects on Melons, Potatoes, Cabbage and Flowers.

SOLD BY SEEDSMEN EVERYWHERE.

Used 22 Years.

Send for Free Booklet on Bugs and Blights to

B. HAMMOND, FISHKILL-ON-HUSSON, NEW YORK.

**USES FOR DRY BREAD.**

(Birdie B. Bates.)

**BREAD CRUMBS.**—The scraps of bread that cannot be used on the table can be placed in the oven and dried or toasted a delicate brown, then rolled very fine and placed in a close or air-tight jar. When frying pork chops, veal cutlets, fish, chicken, etc., dip the meat into a well-beaten egg, then into the crumbs, letting them remain five or ten minutes, then add more egg and more crumbs and fry in hot fat. Serve on a hot platter, garnished with parsley.

**EGG ON TOAST.**—We have the fried, poached and scrambled egg on toast, but did you ever try the bird's nest? The children always enjoy anything in this line, so tempt their appetites some morning with the following: Toast the desired amount and butter lightly, placing the pieces of toast on a baking pan and drawing aside where it will keep hot. Select as many fresh eggs as you have pieces of toast and separate the whites from the yolks. Beat the whites to a stiff foam and salt lightly. When I say stiff, I mean that the foam should stand alone. Now place a spoonful of the beaten white on each piece of toast, arrange a round space in the center and place the unbroken yolk in it. Add small bits of butter, salt and pepper and place in a hot oven until the egg is cooked as desired. Serve hot.

**CREAM TOAST.**—Toast small pieces of bread to a nice brown and arrange in individual sauce-dishes. Take one quart of milk and heat to the boiling-point in a double boiler; when just at the boiling point add a well-beaten egg that has had a little cold milk added to it. Salt and pepper to taste and add two tablespoonfuls of sugar. In a small saucepan place one tablespoonful of butter and when melted stir in one tablespoonful of flour. When all the starch grains of the flour are broken add the hot milk, let boil once, then pour over toast and serve.

**CROUTONS.**—Many people prefer croutons rather than crackers with soup. They are very appetizing and easily prepared. Take bread that is stale enough to toast nicely, cut into medium slices, butter lightly, cut into strips or squares and place in a quick oven and toast. Some prefer them of stale bread cut into cubes or squares, then dropped into hot fat and browned. Lift them from the fat with a skimmer, drain, add to soup and serve.

**INVINCIBLE POTATO PLANTER.**

The H. H. Wahlers Co., of Racine, Wis., are advertising elsewhere in this issue their Invincible Potato Planter. This planter is certainly a great labor saver and is guaranteed to plant from 50 per cent. to 100 per cent. more hills in a day than any other. It has a number of special features, which are fully described in a little circular sent free by the company. Look up the advertisement.

**We make from your  
Own Wool on Shares  
Or for Cash**

**White or Gray****Large or Small****Blankets, Coverlets****Dress Goods, Skirts****Underskirts, Flannels****Cassimeres, Cheviots****Jeans****Art Squares,****Carpets****Stair Carpets****Smyrna Rugs****Buggy Robes,****Lounge Covers****Yarns, Etc.****Write Us.****LEAKSVILLE WOOLEN MILLS,**

Leaksville, N. C.

**FOR SALE.****A De Laval Baby Separator No. 3**

In good running order. Are putting in larger machine, the only reason for selling.

**FOREST HOME FARM,  
PURCELLVILLE, VA.**

VIRGINIA DIVISION.

**Farmers Mutual Benefit Association**

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address, **CHAS. N. FRIEND, General Agent,**  
MENTION THIS JOURNAL. **CHESTER, VIRGINIA.**

**ASSETS, \$900,000.****Virginia Fire and Marine  
Insurance Company, of Richmond, Va.****Insures Against Fire and Lightning.**

ALL DESCRIPTIONS OF PROPERTY IN COUNTRY AND TOWN, PRIVATE OR PUBLIC  
INSURED AT FAIR RATES, ON ACCOMMODATING TERMS.

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First Class Material, Merchandise and Machinery at Sacrifice Prices.

### Plumbing Supplies

For Bath Room

Porcelain Bowl, Hardwood Seat and Tank, Nickel Plated Bush and supply pipes, complete each \$10.00. Cast Iron Bath Tubs.

Length 5 ft. Complete with full set nickel plated fittings, each \$11.00. They are new goods, ask for free catalogue of our full line of plumbing supplies.



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Write for our prices on 2 and 3 point Barbed Wire, painted and galvanized, also, 50,000 pounds SMOOTH GALVANIZED WIRE SHORTS. Gauge is 11, 12, 13 and 14. Price \$1.40 per hundred lbs. We also handle other kinds of wire on request.

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Special lot of new galvanized No. 10 poultry netting while the supply lasts. 4 feet these, 10 running feet this.

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18 inch.....	0.65 per bale.
30 inch.....	1.10 per bale.
36 inch.....	1.30 per bale.
42 inch.....	1.50 per bale.

Other grades at correspondingly low price.

### Gasoline Engine \$70

2 HORSE POWER

Absolutely the most modern type. Guaranteed. Standard features & fittings for \$75. Without pumping jack, oil, or hardware.

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Outline of machinery supplies is almost unlimited. Complete stock of Saw Mills, Pumps, Sugar Machinery, etc.

And in fact everything in that line.



### Steel Roofing

Slightly new, perfect, 5 cent Hardwood Steel Sheets, 2 feet wide feet long; the best Roofing. Siding or Ceiling you can save. We furnish nails free and paint roofing red two sides. Comes either flat, corrugated or V-curved. Delivery charges to all points in S. east of Mississippi. For the north and west of Ohio R. at \$2.25 PER SQUARE. Prices in other points on application. A square means two square feet.



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Each one is guaranteed to be in perfect order before leaving our plant. We are able to offer you an instrument for \$5.00 that would cost you twice as much elsewhere. We carry a full stock of supplies. Send for Free Catalogue.



### Wrought Iron Pipe

Sixes, Gas or Water; sizes 1/2 to 12 in. diam. We have in stock 2,000,000 feet of Standard black wrought iron pipe, second hand. It is in good condition, complete with threads and couplings at following prices:

1/2 inch at 1 1/2 cents per foot.
1 inch at 2 1/2 cents per foot.
1 1/2 inch at 3 1/2 cents per foot.

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LUMBER, SASH, DOORS, ETC.

We carry a complete stock of first class Building Material of all kinds. Send us your bill for estimate.

TO LOADS OF NEW DOORS AT \$1.00 each

HARDWARE SUPPLIES

Write for our catalogue of building hardware. The per cent of profit our reliable dealers profit we can save you.



SEND FOR CATALOGUE NO. 166

We issue a complete illustrated catalogue containing prices at which the above are only a few samples. You ought to have a copy of this book in your home, or office, and we will send it upon request.

**CHICAGO HOUSE WRECKING CO.** WEST 35TH AND IRON STREETS, CHICAGO.

### PICK UPS.

If an old fowl is skinned before cooking it will become tender in a shorter length of time and will be of much finer flavor.

In families where canned pears are not particularly well liked, a sliced orange to a pint of pears will often make them more palatable. A pineapple shredded with a silver fork into canned pears makes them delicious.

Mothers may be glad to know that a young girl taught me last summer. To tie shoe strings so they will remain tied, pass either loop—usually the right-hand loop—around under the second time before drawing the bow up tight. When you desire to untie the knot it will pull out by the strings the same as usual.

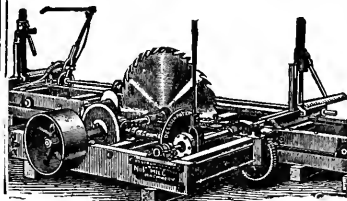
After removing iron rust with lemon juice and salt rub the places with clear water. If soap is used a bright yellow spot will appear that will be more difficult to remove than the iron rust. Rubbing clothes lightly through the rinse water will prevent the bluing from setting in them and will whiten them amazingly, particularly if rain water is used.

A bashful gentleman who visited a school kept by a young lady, was asked by the teacher to say a few words to the pupils. This was his speech: "Scholars, I hope you will always love your school and your teacher as much as I do." A tableau of giggling pupils and a blushing teacher attested the effectiveness of his words.

Mention the Southern Planter in writing.

## The DeLOACH Saw Mills are Sure Winners'

Eight sizes, from Farmers' 4 h. p. up to 200 h. p. If interested, write for large illustrated catalogue of DeLoach Patent Saw Mills to suit any power from 4 to 200 h. p.; Shingle Mills, Planers, Edgers, Trimmers, Stave and Lath Mills, Boilers, Corn and Barb Mills, Water Wheels, etc. To introduce our New Farmers' Saw Mill, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



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With 36" Solid Saw, \$127.50; 40", \$132.50; 44", \$140.00; 48", \$150.00.

With 36" Inserted Saw \$147.50; 40", \$152.50; 44", \$160.00; 48", \$170.00.

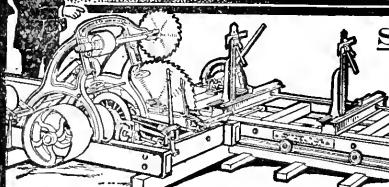
Best Rubber Belting, 4-ply, 8", 20 cents per foot; 8", 30 cents per foot, NET.

No discount from these prices.

Our Warranty: This mill is warranted to be made in a workman-like manner, of first class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. Any one with ordinary intelligence can set and operate without the assistance of an experienced sawyer; will easily cut 2,000 to 2,500 feet of first class board lumber per day with only 4 h. p.; 3,000 feet with 6 h. p.; 4,000 feet with 8 h. p.; is adapted to any kind or size power up to 15 h. p.

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Prices from \$160 to \$700

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## FARMS FOR SALE!

### Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

### No. 3.

Contains 430 acres; 350 acres under cultivation; 80 acres in good original oak and hickory timber. Situated in Loudoun county, four miles from railroad station; one mile from proposed electric railroad. Soil in fine state of cultivation; adapted to grain and grass. Land level and watered by streams, and a beautiful, bold spring in the yard. Good dwelling and outbuildings; two new stock barns. Greater part of farm in grass. Price now, \$20 per acre.

### No. 4.

Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

### No. 5.

Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

### No. 11.

Contains 315 acres in high state of improvement. Large frame dwelling, 10 rooms, 2 large cattle barns, and all necessary farm buildings in good repair. Land watered by spring branches. Situated in aristocratic neighborhood. Convenient to depot and to Washington market. Price, \$50 per acre.

The above-described farms are situated in a neighborhood of refined citizens, with good labor plentiful, and will not be on the market long before being sold. For further information and a more detailed description of any one of them, write to

W. E. MILLER,  
Herndon, Va.

## A PROMISED SPECTACLE AT THE ST. LOUIS FAIR.

Mere cost and bigness do not constitute excellence, but magnitude is impressive, and money does things. The St. Louis World's Fair, however, has other things to recommend it than size and expenditure. In the first place, the topography of the site favors effects that could not be achieved on the flat of Jackson Park. The view from "The Apotheosis of St. Louis" across the Grand Court along the broad avenue between the Education and Electricity buildings, thence across the Basin and up the Cascades to Festival Hall and the Terrace of the States, will doubtless surpass any spectacle heretofore seen at a world's fair. This is the central physical feature of the exposition. A crescent-shaped hill crowned by the Colonnade of the States, with the imposing Festival Hall in the center of the crescent; on each extreme of the crescent, 1,900 feet apart, an ornamental restaurant pavilion; a central cascade 290 feet long with a total fall of 80 feet in twelve leaps ranging from 4 to 14 feet and side cascades 300 feet long, with a total fall of 65 feet. The water will be discharged into a basin 600 feet wide. The two miles of lagoons have their beginning and end in this basin. The abundant supply of water will be drawn from the city mains, but will be filtered to a crystal clearness. Between the cascades will be gardens. Each of the cascades will be framed in sculpture, consisting of sportive groups of nymphs and naiads and other mythological fancies. The center cascade will be crowned by a group composition showing Liberty lifting the veil of Ignorance and protecting Truth and Justice. The east cascade will represent the Atlantic Ocean and the west cascade the Pacific, the symbolism being that the Purchase has extended liberty from ocean to ocean. Assurance is given that the three cascades will completely eclipse the cascade of the Trocadero at the Paris Exposition, the cascade at St. Cloud and the Chateau d'Eau at Marseilles.—From "The Louisiana Purchase Exposition," by Frederick M. Crunden, in the *American Monthly Review of Reviews for May*.

A child may often be expected to put his or her heedless little foot in it, as the phrase goes. For instance, a youngster one day begged an invitation to dinner at the house of a little friend with whom he had been playing. At the table, his hostess anxiously inquired: "Charley, can you cut your own meat?" "Humph!" said the youngster, who was sawing away; "can't I? I've cut up quite as tough meat as this at home." People who are destitute of tact might take warning from such juvenile malapropos, but such does not often appear to be the case, judging by numerous examples to the contrary.



"Leading bus. col. south Potomac river."—Phila. Stenographer.

Nearly 2000 years have been training men and women for business. Only Business College in Va., and second in South to own its building. No vacation. Catalogue free. Bookkeeping, shorthand, penmanship by mail.

*W. P. Taylor*  
Phila. Stenographer.

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W. P. TAYLOR, Traffic Manager, Richmond, Va.

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# WHISKEY

4 full quarts Corn Whiskey 10 years old, \$3.50  
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4 " " " " " " " " " " " " " " Private Stock  
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Or will ship the 12 qts. named above for \$11.00  
Plain packages. Express paid. Forest and Best Whiskey, and Oldest Home in America. Established 1768—135 years ago. Just as Corn bread is more wholesome and palatable than Rye bread—So with the Whiskey—so say all Doctors—try it and be convinced. Nothing on earth so beneficial to weak lungs as this mountain beverage.

THE OLD NICK WILLIAMS CO.,  
Lock Box No. 11. Williams, N. C.

### JUSTLY INDIGNANT.

The house had been full of aunts come to spend the holidays, and the baby's 6-year-old brother was heard one morning confiding his woe to his father.

"Say, papa, do you know I've had to sleep a whole week in a room just full of women?"—*Lippincott's Magazine for May*.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## ***BILTMORE FARMS, = Biltmore, N. C.***

**Headquarters for GOLDEN LAD JERSEYS,**

**Also Get of TREVARTH and GEN. MARIGOLD.** ❀ ❀ ❀

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

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Never known to run. The grittiest of all games. **\$2.00 PER SITTING.**

We give 15 Chicken and 13 Duck Eggs for sitting. **Order at once.**

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

**P. H. HEYDENREICH, - Staunton, Va.**

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What Five Hundred Iowa Farmers Have Accomplished by Co-Operation.

The company is unique among organizations of the people. It is not co-operative, as the long lines of industry which stretch out from the home of modern co-operation in the English town of Rochdale are co-operative. It is not communal in any sense like the Amana, the Oneida and similar societies. It is not held together by any political, religious or sociological tie. Its only bond is that which maintains every successful business organization in the world. These farmers have turned business men and they have been so extraordinarily successful that they stand ready to become manufacturers whenever they find they cannot buy in a fair market. It appears to be the first commanding proof that the common people in country place or town or city have in themselves the power to apply a remedy to the diseases of social and sociological tie. Its only bond is that which maintains every successful business organization in the world. These farmers have turned business men and they have been so extraordinarily successful that they stand ready to become manufacturers whenever they find they cannot buy in a fair market. It appears to be the first commanding proof that the common people in country place or town or city have in themselves the power to apply a remedy to the diseases of social and sociological tie. Its only bond is that which maintains every successful business organization in the world.

It is worthy the attention of the student of present-day problems, as well as of the investor, that, in this day of enormous inflation of capital stock, the business of these Iowa farmers, running now well on to \$1,000,000 a year, has been conducted on a capital never larger than \$25,000. Still more significant, it requires the assent of two-thirds of the 500 members of the firm before any money may be borrowed, and no more than \$5,000 may be borrowed at any one time. At no time may the total indebtedness of the firm rise above \$5,000. The by-laws of the company's articles of incorporation provide that no shareholder shall sign any bond, or sign, endorse or guarantee any note, bill, draft or contract or in any way assume any liability, verbal or written, for the benefit of security of any person, without the written consent of a majority of the directors. The by-laws also provide that none of the funds of the company shall be loaned to any person.—From W. K. Harwood's "Five Hundred Farmers" in the *May Century*.

## A CONTRADICTION.

That "still waters run deep"

You may quote if you will;

This opinion I'll keep—

They can't run if they're still.

G. B., in *May Lippincott's*.

Mention the *Southern Planter* in writing.

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Saves Dealers' Profits! Prevents Adulteration!

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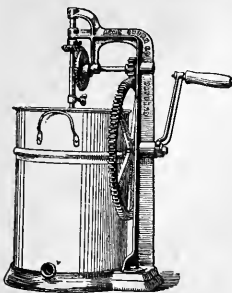
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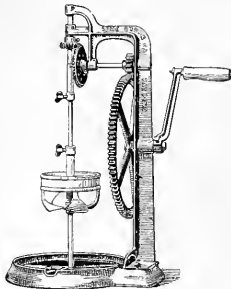


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At a wedding party, some time ago, Rev. E. O. Bartlett, of Rhode Island, at one time settled over the church in Pittsfield, Mass., made famous by the long pastorate of Dr. John Todd, told of a capital *bon mot* on the occasion of his own wedding. His wife, it seems, was also a native of Rhode Island, and in the midst of the merry-making some one wittily remarked that they had with them "two Rhode Island greenings." As every one knows, the Rhode Island greening apple has always been a great favorite throughout New England. The words had hardly been uttered before there came the ready response: "Yes; you see, it takes two Rhode Island greenings to make one Bartlett pair."—*May Success.*

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On one of these occasions the younger one, who was built on the lines of the proverbial man who could not stop a pig in an alley, was being twitted by his companion on his bow-legs.

He stood it manfully for a while, but finally losing patience, he blurted out: "Well, I may be bow-legged, but when the Lord made you. He made you as ugly as He could and then hit you in the face."—*Lippincott's for May.*

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Piedmont Nurseries, Piedmont, N. C. North Carolina Woody and Herbaceous Plants and Other Ornamentals. Spring Catalogue, 1903.

Danforth Chemical Co., Leominster, Mass. Bug Death.

Plano Division International Harvester Co. of America, Chicago, Ill. Lightening Plano Harvesting Machines.

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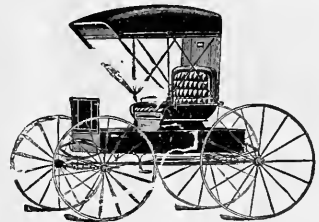
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RACE RECORD, 2:20 Trotting.

By horse, by Billy Thornhill, 2.24, dam Sweetstakes, by Sweep Stakes, 2.05. Great Stakes has sired Captain, 2.16 1/2; Foxhall, 2.19 1/2, and four others in the list

FEE, 25.00 for the Season of 1903.

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Pedigrees traced and tabulated. Catalogues compiled and circulars prepared. Special attention given registration matters pertaining to thoroughbreds and trotting horses

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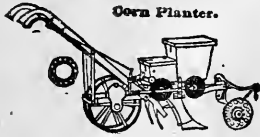
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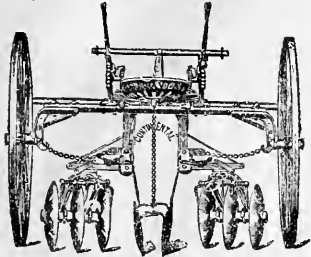
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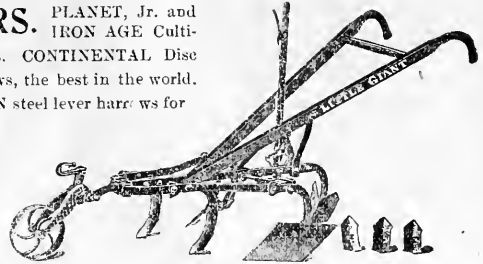
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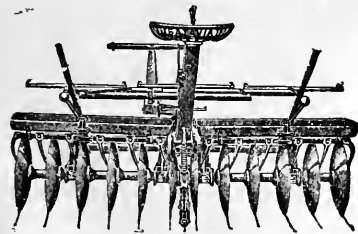
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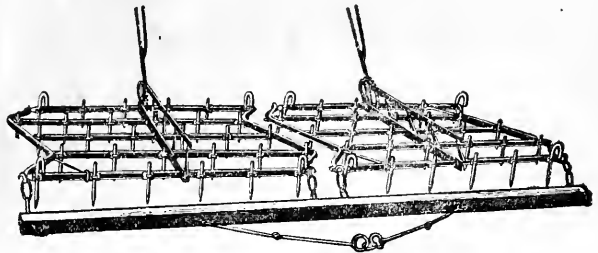
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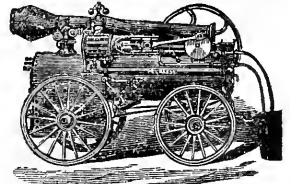
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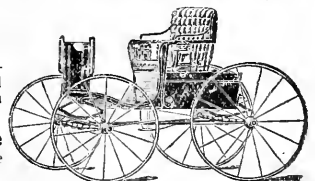
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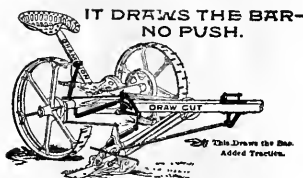


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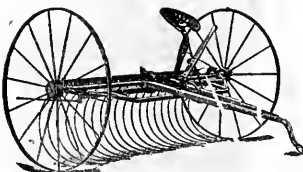
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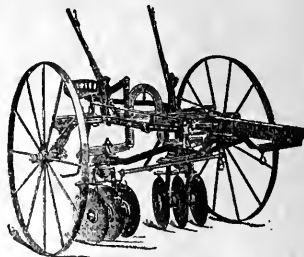


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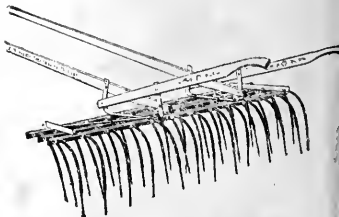
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Tillage and pasturage are the two breasts of the State.--SULLY.

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64th Year.

Richmond, July, 1903.

No. 7.

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## Farm Management.

### WORK FOR THE MONTH.

At this season of the year it has usually been our practice to review the progress and condition of the crops throughout the country, and endeavor to present some idea of what the probable returns are likely to be and to point out deficiencies and make such suggestions for meeting these as are still capable of being carried out. The unusual weather conditions which have prevailed more or less over the whole country since the commencement of the crop-planting season renders this work this year a difficult one. The great disturbing factor in the crop situation in the South was, first, the unseasonable weather in the month of March, when we had practically May weather; and, secondly, the unseasonable weather of April and May, when we had a March temperature with a drought. The March weather forced the wheat, oat and grass crops into rapid growth and then the cold and drought of April and May checked this so suddenly as greatly to impair the vitality of the crops. On the first of May we had the prospect of one of the finest wheat crops ever raised in the South. Since that time its condition has been one of constant impairment, and now at harvest time the yield promises to be below the average. Oats have suffered in like manner, whilst the hay and clover crops are seriously curtailed. Throughout the rest of the country the winter wheat crop has been greatly injured in some sections by drought and in others by flood, so that the average condition as reported on the first of June is 82.2, as compared with 92.6 on May 1st; 76.1 on June 1, 1902, and a ten-year average of

79.1. The spring wheat crop is considerably less in area than a year ago, but its condition compares favorably with the ten-year average. The oat crop is nearly 1,000,000 acres less in area than a year ago, with an average condition below that of the ten-year average.

The indications from these figures would seem to be for smaller grain crops than those of last year, and it is probable that they will be even less than these figures indicate, as the full extent of the loss of crops in Kansas, Iowa and Illinois by recent floods was not known at the time when these returns were made up. It would seem to be wise policy for farmers to be in no hurry to sell their wheat. Future prices, in our opinion, will be higher, rather than lower.

The corn crop of the South starts its growth very unfavorably for a heavy yield. The stand is everywhere reported to be uneven and late in starting, and much of the crop has been planted on land poorly prepared. The drought of May made the land break up cloddy and since this broke the rains have been so frequent as to prevent that cultivation necessary to correct this condition. The month of June, up to this writing, has been, throughout nearly the whole South, much too cool for corn to grow, and complaint is frequent of the bad color of the crop. Corn which does not grow off quickly and make continuous rapid growth rarely makes a satisfactory yield. We are, however, hoping to see now some

summer weather and this will, if it comes, help the crop materially. There is plenty of moisture in the soil, and this is a great factor in the growth of the crop.

The tobacco crop was late planted, and much of it set out in land too dry for the young plants to have a chance to start growth at once. Since it was planted the weather has been too cool for the best progress, and so prospects are not of the brightest. The reports we receive lead us to believe that there is a less area planted than last year.

The cotton crop prospects are distinctly unfavorable, as the average condition on the 26th of May was only 74, as compared with 95 on May 26, 1902, and a ten-year average of 86. This condition is for the cotton States as a whole, and for Georgia, Alabama and Texas in particular—the lowest condition ever reported at this season of the year. The crop is almost everywhere from ten to twenty-one days late. There is an increase in the area planted of over 1,000,000 acres.

The drought of May has materially reduced the hay crop of the country generally, and indications are that this will have the effect of causing firm prices to prevail during the year. Here, whilst the earliest crops have been much shortened, there is yet time for much of this deficiency to be made good by second crops.

Reviewing these conditions it would not seem that prospects are of the brightest, but with a fine late summer and fall there is yet the chance that southern farmers may not be amongst those who will suffer most. There is yet ample time to plant forage crops to make good any deficiency in the hay crops and for fodder, and we would urge that no efforts should be spared to attain this end. The probable shortage of the corn crop should be supplemented by cow peas planted for a seed crop.

Prices for all farm and truck crops and for stock keep good, and with such prospects as we have indicated for future crops and with the enormous consumption which a fully employed population calls for, we see no reason to anticipate any drop in these. Whatever the farm produces can be readily sold, and at a paying price. We would, therefore, urge the production of everything possible.

The cultivation of the corn crop should receive very particular attention this month, as upon the effectiveness of this work will largely depend how far the present backward and unpromising condition of the crop is to be improved upon. With such cultivation as can, and ought to, be given, and with the moisture now in the land, if we have only hot weather this condition can be so improved as to bring the yield nearly up to the average. Few farmers appreciate what an important factor the presence of abundant moisture in the land is to the well doing of the corn crop and how necessary it is to conserve it. In experiments made at the Wisconsin Experiment Station it has been found that it requires about 310 pounds of water to produce a single pound of dry matter. By figuring up the amount of dry matter in an 80-acre field of corn and multiplying by 310 the pounds of water that are required to produce the crop will be secured. The result is astonishing.

It does not seem possible that such an enormous quantity of moisture can be secured by the corn plants during the growing season, and, more important than all, this moisture, in most part, is used during July and August, the months of least rainfall in the year; so it can easily be seen that the conservation of the moisture in the soil is an exceedingly important problem, and one which every corn grower in the country will find it profitable to investigate.

The Illinois Station conducted exhaustive tests of the comparative amount of moisture conserved by the different methods of cultivation. Two things were found to be true: First, that deep cultivation conserves soil moisture; and, second, that frequent cultivation conserves the moisture most effectively of all plans of cultivation. It was found that in the deep cultivations, despite the excess of moisture, the yield was very low, compared with shallow culture. To find the cause of this an extensive series of experiments with the pruning or cutting off of the roots of the corn plant was conducted.

In this root-pruning experiment a field of corn was selected and one row was root pruned two inches deep. This root pruning was done with a broad, sharp spade. The spade was set down about six inches from the stalk of corn in the hill on every side of the hill. The spade was pushed down into the soil and a guard allowed it to penetrate just to the depth planned for in the experiment. The whole field was cultivated with a weeder and all weeds not removed in this way were cut out by hand. This was done so that the rows of corn would receive equal cultivation and be under like conditions. The pruning was

done three times in the season at about the ordinary times of cultivation. The second row was not pruned and the third row was pruned four inches deep. The fourth row was not pruned and the fifth row was pruned six inches deep. This was repeated until a large field was treated in this manner.

The resulting yields were as follows for three seasons: Not pruned, 62 bushels an acre; pruned two inches deep, 60 bushels an acre; pruned four inches deep, 45 bushels an acre; pruned six inches deep, 30 bushels an acre.

In fact, these, and all other similar experiments, simply prove that any injury to the roots of the plants reduces the yield. The amount of this reduction was about in proportion to the number of roots cut off. These experiments explain very clearly the reduction of the yield by deep cultivation.

The results of experiments, and from practical experience, are to the effect that continued cultivation, keeping a loose mulch on the surface of the soil, gives the best results. The general practice coming into vogue among the most progressive and successful corn growers is that after corn reaches a height to interfere in cultivating with the ordinary two-horse cultivator, to use a single horse with a five-tooth harrow or drag and cultivate between the rows of corn during the setting of the ears on the stalks. The yields to the acre of 100 bushels have been secured by this plan, and experience has proved it to be practical and successful on a large scale.

With the results of these experiments before you cultivate shallow, cultivate frequently, and the result with the land so full of moisture, as it now is, will probably be a yield of corn which may suffice to make good the deficiency which an ungenial May, and consequent late planting, threatens.

Let the same careful and frequent cultivation be given the cotton and tobacco crops. The same principles apply to these as to the corn crop, though these being crops having a less widely ramified root system there is less danger of root pruning in the middles of the rows with somewhat deeper cultivation than would be safe with the corn crop.

When it is impossible longer to continue cultivation without breaking down the stalks or leaves, then lay the crop by *level*, and in doing so seed the land with cow peas or crimson clover, sapping clover and a small quantity of rape, say two pounds to the acre, so that when the principal crop is harvested there will be something left growing on the land to conserve

fertility and moisture and prevent washing, and at the same time furnish fall, winter and spring grazing for stock.

After the small grain crops have been harvested, and when not sowed in grass or clover, run over the stubble with a disc harrow and sow either cow peas or crimson clover or sapping clover or rape, with some wheat or oats mixed with these, and thus find the land something better to do than grow a crop of weeds which only impoverish the land and make no contribution towards carrying the live stock of the farm or even furnish more than the very smallest quantity of vegetable matter for making humus. It is of vital importance to the maintenance and enhancement of the fertility of land in the South that some cover crop should be kept on the land at all times. Naked land becomes reduced in fertility faster than when growing a crop.

Where clover or grass has been seeded with the small grain crops see that the weeds, which spring up as soon as the crops are cut, are not allowed to flower and seed. There doing so robs the grass and clover of moisture and plant food and often makes a good stand at the cutting of the crop a failure before winter sets in, and in any event sends it into winter weakened and tender, and hence more subject to winter killing. Set the mower high enough to clip the weeds without taking too much off the clover and grass and leave the weed cuttings as a mulch. These will sink down into the bottom and form a protection to the roots in winter.

This month and August are the best times for seeding dwarf Essex rape for fall, winter and spring grazing for sheep, hogs and young cattle. This crop is most valuable for this purpose, but cannot be cured for dry forage. An acre of rape has been found to be the equivalent of 2,767 pounds of grain when fed to hogs at the Wisconsin Experiment Station. Sheep and lambs fatten on it quickly, but it is not fit to feed to milch cows, as it is apt to taint the milk. Three or four pounds of seed will sow an acre broadcast or two pounds will sow the same area in drills two feet apart. It makes a heavier crop when sown in drill and cultivated two or three times.

Prepare land for rutabagas and turnips. These crops, in order to be grown successfully, require the land to be finely broken and be in a good state of fertility. A dressing of 500 or 600 pounds of acid

phosphate per acre will be found profitable, even on good land. Rutagabas should be sown this month or in the first half of August. They make a crop that keeps better than common turnips and are better feed for stock. With heavy fertilization with farm-yard manure and acid phosphate—twenty-five or thirty tons to the acre—can be easily grown, and they will be found of inestimable value in the winter for feeding cows, sheep and hogs. They are best sown in drills 2 feet 6 inches apart. After the plants have made two or three leaves they should be thinned out in the rows so as to stand six or eight inches apart, and should be kept cultivated and free from weeds. Two pounds of seed will sow an acre in this way. In sown broadcast four pounds of seed will be needed. Turnips may be sown in August and September.

Soy beans and cow peas intended for hay should be cut when in bloom or when the first pods are formed, and should be raked into windrow after they have wilted and partially dried and be allowed to cure in these rows for a day and then be put into cock to complete the curing. In this way the leaves, which are the richest part of the plant in food value, will be saved and bright, green hay will be made. After standing in cock a few days open out after the dew is off and sun for an hour or two and haul to the barn and pack down tight. If free from rain, water or dew the hay will keep perfectly, even though still having considerable natural moisture in it. It will heat considerably, but this will not injure it if not disturbed until cool again. Sorghum for hay should be cured in the same way. Cut before the plant blooms and seed forms.

Millet of the different varieties—German, Hungarian and Cat-tail—may yet be sown for hay and will be ready for cutting in from sixty to seventy-five days. Earlier-sown crops should be cut and made into hay as they come into bloom and before the seed forms. We consider German millet the best variety to grow for a hay crop. Sow a bushel of seed to the acre on finely prepared land and roll after sowing.

When threshing the wheat and oat crops see that the straw and chaff are carefully saved, and have the straw put up into stacks of a convenient size for being put into the barn—a stack at a time—when needed. With good, sweet straw, roots and cow peas or soy-bean hay, young cattle can be kept growing and improving all winter, and will make a large heap of manure for the improvement of the land.

## ALFALFA.

In our last issue we wrote an article in which we strongly encouraged the growing of alfalfa in the South, and dealt with some of the problems involved in the production of the crop. We will now take up one or two other factors which lack of space then compelled us to pass by. Before doing so, however, we want to bring to the notice of southern farmers what is being done in one Southern State (Louisiana) in the production of alfalfa and what a source of profit it is found to be. In that State a considerable number of cotton planters have for several years grown the crop experimentally, and within the past two or three years have become so satisfied of its profitability that they are now growing it largely for market. One of these gentlemen, Mr. W. L. Foster, who has four hundred acres planted, says: "It seems to me that this queen of all hay and forage plants is too little understood, otherwise there would not be a ton of hay shipped into Louisiana. On the contrary there would be thousands of tons shipped out of the State at a better profit than is made on cotton, even at present high prices. I am not chemist or botanist enough to say on what lands in the State it will grow profitably, but believe that with proper expenditure of time in preparation, manuring and nursing it can be made to grow any where in the State. I have seen it growing luxuriously on the poor and worn hill land of the Experiment Station in North Louisiana, but much time and expense was required. On the river lands between Baton Rouge and New Orleans it seems to thrive well, and on the Red river it seems to be perfectly at home. I may say that I use it as a profit crop on our low, stiff, red lands that will not produce profitably any other crop. Its value as a feed for horses, mules, cows and hogs is unequalled by any other food. Hogs will make splendid growth on it and fatten readily without any other feed, and that, too, with twenty or twenty-five to the acre, where it grows well. Again, it is a fine fertilizer crop. Your land is improving each year it grows on it, and when you wish to get rid of it (which will be never unless you want to plant it somewhere else) it is as easily killed as oats or corn. \* \* \* I am free to say that if alfalfa hay is worth as many dollars per ton as cotton is worth cents per pound, I would prefer to raise the alfalfa. On our soils, with ordinary seasons for growing and harvesting, we get three to five cuttings, averaging from one half to a ton of cured hay per cutting, and bringing in our market at Shreveport from \$8 to \$15 per ton. The cost of handling varies,



of course, with the seasons. It costs just as much to cut and rake one half ton per acre as it does to cut and rake a tone per acre. From my experience, and my alfalfa account, it costs an average of \$1.25 to \$2.00 per ton to put in shape for the market. An intelligent negro near our plantation, who works twenty mules raising cotton, told me he had sold \$500 worth of surplus hay per year off twenty acres. For the last two years off sixty acres he has sold enough to very nearly *make his cotton crop clear*. I think a very conservative estimate would be \$15 to \$30 per acre net per year, not counting the pasturage in fall, winter and spring. My advice to every one who works land would be to plant a small patch of alfalfa for trial. If he succeeded with it he would have the most valuable crop that grows; if he failed it would be the most laudable failure he ever made. In 1900 my overseer made with wage hands 253 bales of cotton costing in money outlay \$4,500 and bringing on the market \$10,575. In 1901 the same man with the same labor, on poorer land, harvested 1,100 tons of alfalfa, selling in car-load lots for \$15 per ton, or a total valuation of \$16,500, with a money outlay for labor and machinery repairs of \$1,500. In one case it required about 45 per cent. of the gross value of the cotton to get it ready for the market; in the other it required only 10 per cent. of the gross value of the alfalfa to put it on the market."

With such testimony as this from a southern grower in favor of the crop there should be no hesitancy on the part of all southern farmers in making an effort to secure a stand of alfalfa. In our article last month we pointed out the importance of getting rid of weeds before attempting to grow the crop and also the necessity for lime to render the land slightly alkaline before seeding. Like all the clovers, alfalfa cannot grow in acid soil, nor can the microbes, which are so essential to the luxuriant growth of the crop, flourish and multiply in acid soil. Without these present the crop cannot obtain the nitrogen which it needs from the atmosphere, nor can the land be improved by its growth. Wherever these microbes are absent in the soil the success of the crop cannot be assured. It is, therefore, of great importance that the best means of securing them should be considered. In Illinois, where the growth of alfalfa is being encouraged, it was found that even in the rich prairie soils there was not a sufficient supply of nitrogen for the crop to make a luxuriant growth, and as the soil was not infected with the bacteria necessary to enable the crop to get its nitrogen from the atmosphere, the yield was not satisfactory. Dr. Hopkins,

of the Illinois Experiment Station, set about to conserve the soil nitrogen and obtain the required quantity of that element from the air. He accomplished this by obtaining from Kansas bags of soil taken from fields of alfalfa in which the bacteria were known to be present, and this soil he sowed on plots of alfalfa at the Experiment Station. Adjoining plots were uninoculated. In the fall of the same year a marked difference, which is still very pronounced, was noted in the growth of the alfalfa on the infected plots and untreated plots, the plants on the former being vastly more vigorous and luxuriant than those on the latter. Results quite as conclusive as showing the effectiveness of inoculation have been secured by Illinois farmers from the Wisconsin line to Cairo. Wherever infected soil is used rapid and abundant growth is induced. Examination showed that tubercles were plentiful on the roots of the plants in the inoculated soil, and this proved Dr. Hopkins's theory of soil inoculation. Plants in the uninoculated plots drew their nitrogen from the soil which, although very fertile, contained an inadequate supply to enable the plants to grow apace with their neighbors that derived nitrogen from the atmosphere. He asserts that "No crop grown in Illinois requires such large quantities of nitrogen as alfalfa." Large quantities of manure or commercial fertilizer containing nitrogen might have been applied to the uninoculated plots, but even this course, it is now known, could not have produced the enormous growth of alfalfa which was obtained on the infected plots.

Dr. Hopkins recommends the use of about 100 pounds of the infected soil per acre. It may be sown when the alfalfa is sown or after any cutting of the crop the first season. The Illinois Experiment Station now supplies the farmers of that State with bags of infected soil at the cost of 50 cents per 100-pound bag, and wherever this infected soil has been applied, and the conditions of soil and preparation for the crop have been good, there alfalfa has grown most successfully.

Mr. Ralph Allen, of Tazewell county, Ill., writing on this subject in the Breeders' Gazette, says:

I seeded a field of four acres last year and met with both marked success and complete failure—success in that portion of the field where the soil was inoculated and failure where there was no inoculation. My field was thoroughly prepared and a very even stand obtained. At the time of seeding I sowed about one acre across the field with soil infected with alfalfa bacteria, or, in other words, with soil in which alfalfa had grown successfully with its root tubercles in abundance. I applied about 100 pounds of this

soil to the acre. The whole field grew well during the summer, and root tubercles were found in abundance six weeks after seeding on a small part of the infected acre where the infection had been very heavily applied. As the season advanced the infected acre began to show more thrift, and at the end of the season was noticeably larger than the uninfected parts. This spring the field presented on May 10th a most convincing proof of the absolute necessity of soil inoculation. The growth of the alfalfa on the infected acre had exceeded our most sanguine expectations. It is of a dark-green color and making an enormous growth. The drainage has carried the infection in streaks and spots to the lower parts of the field, all of which show the same luxuriance. The division line separating a narrow strip of uninfected land on the upper side of the field toward which there has been no drainage is as distinctly marked as the boundary of a field. On those portions of the field where there has been no inoculation the alfalfa is of a pale-yellow color and very much of it is so feeble and stunted that it will soon die out unless assisted. I have procured more soil with which to inoculate these remaining parts of the field.

I would urge those who attempt to grow alfalfa to go at it in the right sure way—do not take chances. Where one man will succeed without systematic inoculation a score of men will fail. To depend on the infection which is in the seed is too hazardous and too expensive, and usually entails the loss of the first seeding with the consequent loss of the use of the land and labor for the year.

Infected soil can be procured for 50 cents per 100 pounds and the freight added. This is enough for an acre. I procured both lots of soil that I used from the Illinois Experiment Station. It may be procured from well-established alfalfa fields where there is an abundance of root tubercles. There is no great mountain in the path; just get the infected soil and sow it broadcast, by hand, if you like, one handful at a throw. Sow at the time of seeding and harrow it in; the little fellows in the dirt will do the rest."

There are already several places in this and adjoining States where alfalfa is growing successfully, and no doubt the owners of these farms will gladly supply small quantities of infected soil to their neighbors. It would be of great service to the Southern States if the Experiment stations and the Test farms, in connection with the State Boards of Agriculture, would follow the example of the Illinois Experiment Station and supply bacteria-infected soil to farmers at a nominal cost. We commend this subject to the attention of the directors of the stations and the Presidents of the State Boards of Agricul-

ture. It is of such vital importance to the prosperity of the South that successful stands of alfalfa be secured that no efforts should belacking to attain this end. Whilst it is true that a successful stand may sometimes be obtained without the use of bacteria-infected soil, yet the chances are against it being more than a weak stand for a few years, at least, as the bacteria carried with the seed is so small in quantity that it takes a long time to infect a whole field. We would suggest that farmers who have secured a good stand of alfalfa should make the fact known throughout columns and offer to supply small quantities of soil for a nominal cost. We will gladly make the announcement free of charge. With alfalfa secured as a staple crop of the South there is scarcely a limit to be placed on the quantity of live stock which we can raise and feed profitably, whilst as a sale crop it will, no doubt, quickly find a good market.

### SILO BUILDING.

In our last issue, when writing on the planting of crops for ensilage, we promised to say something in this issue on the building of a silo. Whilst there are not yet one-tenth of the silos in the South which we hope to see built, yet there is a healthy tone of inquiry about these adjuncts to the storage capacity of the farm which is very cheering to those of us who remember the time when no silo could be found in this State. Every year we receive more inquiries as to the feasibility of building a silo and feeding ensilage, and we have never yet met with the man who has once used a silo and fed ensilage who has discarded the practice and gone back to dry forage stored in a barn or stack. The silo, in a word, is the cheapest barn which a man can build, and ensilage is the nearest approach to food in its natural fresh, succulent state which can be fed to stock. It is also the only barn in which a crop can be stored, either wet or dry, and come out good feed. These being facts, the wonder is that more of our farmers do not avail themselves of such desirable aids to profitable farming. Too often the explanation of the neglect to do so arises from ignorance, and yet thousands of pages of instruction on the matter have been penned and published. The idea that a silo is a complicated and costly structure and the making of ensilage a scientific work has hitherto largely prevailed, and this has sufficed to prevent consideration of the subject. The truth is, that a silo is nothing more than an airtight tub which any common carpenter who knows

how to build a frame building can erect almost as well as a scientific builder, and that ensilage can be made in this tub by any common laborer who knows how to cut up the corn or any other forage crop into short lengths and pack it tightly in the tub. Whilst saying this we do not mean to say that the *best* silo can be built by such a man as we have described, because this would be to disparage the value of scientific knowledge unduly; nor would the common laborer who knows nothing of the laws governing the fermentation of green or succulent feed make as good and perfect silage as the scientist who had given study to the subject. The difference between having the silo built by a good builder having a knowledge of the principles governing the requirements of a practically air-tight chamber to be subjected to a considerable strain, is that in the one case you would get a building which would be likely to last much longer and save much feed in the process of curing, whilst in the other case you would probably find it necessary to rebuild in a few years, and in the meantime lose each year the food which would feed several cows for a week or two. The inexperienced laborer would probably waste a still larger portion of the crop from inattention to careful packing, but even under the conditions of an inexperienced builder and a common laborer, much less of the feed grown would, in all probability, be wasted than is wasted now every year by carelessly leaving the feed out of doors or storing it in a leaky shed or barn. The great advantage which a silo gives to a farmer is that it enables him to store in a small space the produce of a large area and that it keeps the food so stored in that succulent condition which is most conducive to a profitable consumption by stock. It does not add to the feeding value of the crop converted into ensilage, except in so far as the partial cooking which it undergoes makes it probably more palatable and easier of digestion and makes less waste, in that the hard parts of the stalks are softened and so more readily eaten. Another great advantage which a silo possesses is that it enables, nay, requires, that the crop which is siloed shall be cut when in full growth and at a time when its feeding properties are at the best and that it preserves these in that condition and places the food in a shape ready for immediate consumption by the stock, so that whatever may be the weather conditions during the winter, a ration of good, succulent feed is ready at all times for the stock and capable of being fed to them with little trouble and expense. The first point to be considered and decided upon is the size of silo required to meet the needs

of the stock kept. To arrive at this it will be safe to estimate the consumption of silage per day per head of cattle at forty pounds. Multiply this by the number of cattle to be fed and then by the number of days for which feed is to be provided, and you have the number of pounds for which storage is required. Forty pounds may be taken as the weight of an average cubic foot of silage, so that practically each head of cattle will consume a cubic foot of silage per day. In estimating the size of silo required there must be provided not only space for this quantity of silage when settled, but also space for the packing of sufficient feed to make this quantity of settled silage. To provide for this, add one-fourth to the number of cubic feet of settled silage called for. Whilst it is true that silage does not usually settle one-fourth of its original bulk, yet much depends as to this on the size, and particularly the depth of the silo, and this is a safe allowance to be made. The silo to hold this quantity of silage so ascertained, may be either round, square, oblong or octagonal, but we advise the building of a round silo, as the best silage is usually made in a round building, as the settling is usually more perfect and regular, there being no corners to hold the food, and there is usually less waste in a round one, as there are no corners where the food can lie loosely and thus spoil. The most essential point in building the silo is to get the greatest depth with the capacity required. The less the surface exposed to the air when the silo is opened for feeding the less the waste. The greater the depth the better will the silage be compressed and the better the quality of the feed. For guidance in selecting the size of building to be put up, we append a table giving the capacity of round silos of different sizes.

If it is decided to put up a silo of the best construction the plans and specifications adopted in building the two silos at the Virginia Experiment Station may be safely followed. These are two of the best silos we ever saw, and if kept painted inside with pitch and outside with paint, should last a lifetime. They are each twenty-four feet in diameter and twenty-four feet deep from sill to plate, and will hold about 200 tons each. The following were the builder's specifications for building these silos:

*Sills*.—Sills to be made of two thicknesses, 2 inches by 6 inches stuff cut to required circle in about 3-foot lengths. Lap and spike all joinings and bed in cement.

*Plates*.—Plates to be made of single 2-inch by 6-inch stuff, cut to required circle, halved, lapped and joined only on top of a stud and nailed down tight.

*Studs*.—Studs to be 2 inches by 4 inches by 24 feet long, well toe-nailed to plate and spaced 11½ inches on centers. Take care to have all studs true and straight. Rafters to be 2 inches by 6 inches, and arranged as shown on drawing. Notch down 2 inches on plate and spike well at all points.

*Roof Sheating*.—Roof to be sheated with 1-inch by 2-inch boards, bent to circle, and the boards laid 5 inches from center to center.

*Siding*.—Outside walls to be covered with a course of ½ by 5½-inch ship lap siding, bent to circle and nailed with two ten-penny wire nails at each stud. Inside studs to be lined, first, with dry ½x4 inch jointed boards of even thickness. Nail at each stud with two eight penny nails. Over this lay a course of one-ply tar paper. Then lay a course of dry tongued and grooved ceiling ¾ inches thick and 4 inches face drawn down tight by blind nailing with eight penny nails at each stud, and face nail with two penny nails at each stud.

*Dormer*.—Construct a dormer window in each roof. Frame stoutly to rafters, and provide a stout glazed sash and frame, frame to be made of 1-inch boards with half inch stop; 3-inch oak sill, 1x½ inch outside casing and 1x4 inch inside casing, window to be 3x4 feet glazed, with 12 lights, single thick glass. Hang on 4 inch butt hinges and provide hasp, staple and padlock on outside.

*Doors*.—There shall be placed three 2x4 feet doors in each silo, each to be on the same vertical line and each opening into chute. These doors are to be made by cutting out the inside lining. Before cutting out put on two battens to each door, two 6 inch strap hinges to each door. After this is done the door may be cut out and will fit snugly. Place a door stop all round, thereby forming a rebate for the door to fit in. Open doors into silo or chute, as directed by superintendent and provide hasp and staple for each door.

*Ventilator*.—Place a ventilator in roof, as shown in drawing, lower slats to be half inch by 6 inches, turned on angle of 45°, and spaced 3-inch centers and wire gauzed on back to prevent entrance of birds.

*Ventilation*.—Walls to be ventilated as follows: Siding on outside is to run up and fit close to roof sheating; siding at top and bottom to be bored with 1-inch holes in a double row, the holes being spaced about 3 inches apart horizontally; cover with bands of wire gauze to keep out mice.

*Gutter and Cornice*.—Cornice will consist simply of rafter ends and sheathing.

A silo built on the lines of the foregoing speci-

fication will make, as fine and durable a building as any one need wish to have. For those who are not in a position to spend the money which such a silo will cost, and yet desire to have silage for their stock, we now give particulars of a stave silo, which is the cheapest form of such a building, and whilst not adapted for a cold northern climate, meets all the requirements of this southern country as a perfect preserver of the feed. We take the particulars from a description given by Professor Nourse, of the Experiment Station, Blacksburg, Va., of such a silo built at Blacksburg before the completion of the silos of which we have given the specifications. He says: "We obtained some green oak lumber (the only kind we could get at short notice), 16 feet long 6 inches wide and 2 inches thick. The edges were dressed by hand. Round iron bands, five in number, large enough to encircle the silo, and with threads on end, were bought and held in readiness for the plank. The silo, erected by contract, was placed in position as follows: The circle, 16 feet in diameter, was marked on the ground and short pieces of plank laid in such position as to cover the mark. Four of the long planks were then set on end on the circle and as far apart as possible. These were held in an upright position by braces in various directions. Two of the bands (made of ¾-inch iron) before mentioned were bent as nearly in a circle as possible and one placed about one foot from the bottom of the planks in the upright position and held there by driving under the band in each plank a twelve-penny nail, bending it up and over the band. The ends of the iron band with the threads on them were run through blocks of cast-iron with two holes through them about two inches apart, and a nut was then placed on each end of the band, thus giving a method for tightening the planks when all were in position. A second band of iron was put about one foot from the top, and when several horses had been made high enough for a man standing on them to reach the top of the silo, then we were ready to set up the rest of the plank. These were put in until the space was all full, each time one was put in a nail being driven part way into the plank and bent over the band. The bands were then tightened somewhat and three more bands were so placed as to make the bands not quite four feet apart. By turning up the nuts on all the bands the silo was soon tight enough for the crop to be placed in. It will be noticed nothing is said about a roof. None was made. The silage was left open to the weather. The only result of this was a slight drying of the surface—not enough to injure it." Pro-

fessor Nourse recommends the following changes in erecting a similar silo as a result of the experience gained in the use of the first one: The lumber used was green oak. On account of its customary warping we would not use it again if other lumber were obtainable. We have taken out some of the planks and put in poplar. There was little loss in this, as the ones taken out were perfectly sound and fit for other purposes. Concerning the iron bands, we followed suggestions of parties who had erected similar silos. I would now do as follows: Procure (as can be usually done) partially worn tire iron from heavy wagons. Get a smith to rivet, not weld, these together so that two bands will go around the silo. Rivet to the ends of these bands short pieces of iron one-half inch thick by 2 inches wide. Bend up 3 inches of this thick iron and punch two three-quarter-inch holes in the turned up portion. For each band procure two bolts a foot long and three-quarters of an inch in diameter. Have threads cut on bolts nearly the entire length and place these bolts through the holes in upturned ends; put on nuts and tighten the silo. These are stronger, cheaper and easier to work than the round bands. In the spring of 1897 we erected a silo twelve feet high by ten feet in diameter, using poplar plank and tire bands. It was filled with oats cut just before they were beginning to turn. The result was perfect; crop kept good to the very side and in as fine condition as could be possible in any silo. To take the silage from a structure of this kind it is necessary to cut apertures at intervals. In our 16-foot one we have two places and in the 12-foot one only one from which we take the product. In refilling we take out the cut planks and insert whole ones again.

The cost of the 16-foot silo was as follows:

104 planks, 16 feet long, 2x6 inches.....	\$16 64
Five iron bands at \$2 each.....	10 00
Contract price for erecting.....	10 00
Nails, about.....	30
	-----
	\$36 94

The cost of the smaller silo was as follows:

Plank, valued at \$10 per thousand.....	\$ 6 30
Contract for erecting.....	5 00
Four iron bands at \$1.20 each.....	4 80
Nails, about.....	20
	-----
	\$16 30

The edges of the plank in the smaller silo were not dressed, as we found it entirely unnecessary. Any person can erect a silo of this sort, and if a

farmer has the lumber on his farm the actual cash outlay would be reduced to the cost of the iron bands and nails.

#### ESTIMATES FOR SILOS.

Estimated size of silo needed, and number of acres required for a given number of cows, for a feeding season of 180 days:

No. Cows.	Estimated Consumption of Silage. Tons.	Size of Silo Needed. Diam. Ht.	Average Acres Corn Needed.
6	20	9x20	1 to 2
9	30	10x22	2 to 3
13	45	11x25	3 to 4
21	74	13x29	5 to 6
25	90	14x30	6 to 7

We have now put before our readers the information needed to enable them to provide either a costly or a cheap silo. Given either the one or the other, there is needed the machinery to fill it. This means a cutting or shredding machine, with an elevator and power to drive these. Wherever more than two or three cows and the like number of horses or mules are kept, a cutting or shredding machine—and we prefer a shredder, as making a more palatable and better consumed food—ought to be a part of the permanent outfit of the farm, with either horse or engine power to drive it. The best power, in our opinion, for a farm is a gasoline engine. It is less liable to cause fire than a steam engine and does not require the special attention of an engineer to run it. It is also economical in working cost, and is ready to run at any moment if supplied with oil. Where such an engine or other power and cutter and shredder is part of the outfit of the farm it can be used to fill the silo, which should be so placed as that this can be utilized. An elevator is needed to carry the cut corn or other crop to the top of the silo. The old style of elevator—an endless band—is now almost superseded by the “blower,” which is much more effective and works without hitch, which could not be said of the endless band elevator. In many sections these outfits for filling silos are now carried round the country from farm to farm like separators. Where this is the case they can usually be used with economy in doing the work. It would, in many sections, be wise economy on the part of a number of neighboring farmers to combine together and buy an engine, corn husker, shredder and blower. We would urge that the question of building a silo be at once given consideration. If it is to be added to the farm—and if once added it will never again be dispensed with—now is the time to build it so that it may be ready to be filled in August and September and the silage be

ready for feeding November or December. A silo means the saving and economical feeding of all the roughage of the farm and the carrying of twice as great a head of stock as is possible without it.

### JOHNSON GRASS IN NORTHERN VIRGINIA.

*Editor Southern Planter:*

I see several readers of the Southern Planter want to know how Johnson grass does north of Richmond. I will tell them my experience with it in Hanover county, on the Pamunkey river. Some ten years back I cultivated some corn in a field that had three or four patches of Johnson grass in it of from a quarter to one acre in each. It is very hard to work any kind of crop where this grass is growing. As to its spreading. The patches are now two or three times as large as they were then, although the land has been cultivated every year by a good farmer. Cultivation won't kill it, but just makes it grow. But one year's pasturing will kill it dead. I ran a fence through a piece of it and put my stock on it, and they not only killed that in the pasture, but on the adjoining land as far as the cattle could reach it through the wire fence. This has been my experience with two pieces in two different years. From one of the pieces I cut four crops of hay, which would average over three feet high at each cutting. I fed it to my horses green and they eat it about like they would crimson clover. It will grow on almost any kind of land, and the richer the better. The piece I cut was on a black sandy loam which would make about four barrels of corn per acre. J. B. LEE.

*Hanover county, Va.*

### GRASSES AND LEGUMES IN EASTERN VIRGINIA AND NORTH CAROLINA.

*Editor Southern Planter:*

Anent the question of wild grasses in Eastern North Carolina and Virginia. I am moved to wonder not at their paucity, but at their abundance. Why, in my neighborhood, wire or Bermuda grass, Carolina vetch, sweet vernal, bluegrass, orchard grass, red and white clover, timothy and various types of lespidiza (Japan clover) grow on every roadside, lawn and corner of one's garden. I send you by to-day's mail a plant that for the last few years I have noticed in increasing amount on sandy spots that will

scarcely grow anything else, and which I think is a legume. (The plant is a legume; the botanical name is *Trifolium arvense*.—En.) I notice stock seem fond of it, and it somewhat reminds me of alfalfa. It would seem to me that any of these grasses would, and could, grow if properly planted and cared for, but it is hard to remove the prejudice our farmers have for anything in the line of grass.

I am a comparative novice in farming, but began right, six years ago, by subscribing for the Planter, and have learned a good deal from it. I tried first crimson clover, but prepared my ground for it and got no stand. The next year I tried sowing the seed in my corn-field behind the corn pullers and had a perfect stand. Learning that a seed-bed must be made that would hold the water up to the top and in reach of the clover roots, which are extremely delicate, I next year ploughed in wheat and then harrowed my bed until so firm that a horse's hoof would not sink in it. Then I rolled in my clover and the result was marvellous. My wheat headed at fifty-four inches so thick it would hold up a hat, and my clover blossomed out at the same time at forty-eight inches, making the prettiest crop I ever saw, and one which the Director of our State Experiment Station said was the finest he ever saw. But I found, and still find, crimson clover hard to cure. And now comes my favorite of all grasses—sand vetch. Six years ago I sent a piece of grass I noticed my horse always headed for in the corner of my garden to Professor Massey for him to name, and he wrote me it was Carolina vetch. I read in the seed catalogue that sand vetch was better than the Carolina, so concluded to try it. Well, I still stick to it. The seeds in an said it was hard to cure, but I find it easier than any other to make good hay of. Also, they said it grew four or five feet high. Mine often grows eighteen feet. I send you a specimen of my crop, and I want to know whether I grow it extra heavy or it is only another mistake of the seedsman. (The specimen plant was 9 feet 6 inches in length. This is more than the average.—En.) Lastly, they said it was earlier than crimson clover, and that cattle had to be educated to eat it, both of which statements have proved erroneous with me. I find it is only an occasional animal that refuses it at first and that all grow to like it. Lastly, I want to tell the way to cut it: My crop is always so heavy that nothing will hold it up, and even in the middle of our late drought I found wet spots on the ground when I cut it, and this moisture so macerates the stems that a man can readily rake off the vines with a long tined

rake, and this is the way I always cut mine, finding it both effective and rapid.

I will close by relating an anecdote on one of our progressive young farmers—a patient of mine—who came to me the other day and said that he had sent \$10 to a seedsman for Bermuda grass cuttings and that the man had actually sent him wire grass roots, and that he had more than enough of that already.

MORAL: He does not read the Planter.

*Edgecombe county, N. C.* C. E. NORFLEET.

(Our correspondent is right as to the facility with which grasses and the legumes grow in Virginia and North Carolina when proper encouragement is given. If southern farmers would labor half as hard to secure stands of grass and clover as they do to kill them out, the South would soon be covered with a carpet of green not equalled by any other section of the country, and the result would be permanent prosperity for the growers.—ED.)

### ALFALFA EXPERIENCE IN VIRGINIA.

*Editor Southern Planter:*

A few days ago I enclosed you a plant which you pronounced alfalfa. Twenty-five years ago I sowed ten acres in alfalfa. It came up very scattering; there was only now and then a plant, so I ploughed it up. The next year I noticed a plant that I thought was alfalfa growing on a poor hillside about one hundred yards from the land I had seeded. This plant was growing near an old stump. I suppose a bird must have dropped the seed. Now and then since that time I have noticed this same plant. Your articles in the Planter have caused me to look after it, especially this spring, and although it has been very dry the plant is vigorous, healthy and looks as if it might stay twenty-five years more. The hillside upon which it grows has been considered too poor to cultivate. That is why it was never ploughed up. The land I sowed the alfalfa on was creek bottom; this plant grows on stiff red land with clay subsoil. Your articles, with this experience, will induce me to try it again this fall.

If you think this experience is of interest enough to publish you are at liberty to do so.

*Bedford Co., Va.*

A. W. SCOTT.

An onion minced fine in cold slaw improves it for every one who does not object to the flavor of onions.

### ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

#### Tomato Worms.

Can you tell me what to do for the tomato worm—the big green one like the tobacco worm. They are not on them yet, but I suppose will be, as they have in years past.

*Accomac Co., Va.*

THOMAS D. MARTIN.

Hand picking is the only practicable way of dealing with this worm. Paris green will kill them, but it is not practicable to apply this remedy after the fruits are set, as there would be danger of poisoning the consumers of the fruit.—ED.

#### Sassafras.

In the April number of the *Southern Planter* a contributor advises the cutting of persimmon growth in the months of January and February as the time to exterminate it. Will not some one of your contributors advise as to the best way and time to destroy sassafras growth?

*Anne Aundel Co., Md.*

T. SELLMAN HALL.

In the February and April (1902) issues of the Planter will be found articles upon this subject, giving experience with different methods.—ED.

#### Potash for Clover.

Will you kindly inform me if it is any advantage to top-dress clover with potash for the second crop. If so, what amount should be used to the acre?

*Isle of Wight Co., Va.*

N. PEYTON YOUNG.

No. We do not think you would find any benefit to the clover from the potash. Potash is slow in its action and should be worked into the land some time before the crop is planted for its action to be appreciated. A dressing of nitrate of soda, say 75 pounds to the acre, would no doubt help it to make a heavier crop. This is quick in action. We have seen its effect in ten days.—ED.

#### Hog Yards.

I can arrange my hog yards so they will be on high ground or extend them to lower ground, where hogs will have a wallow; but this leaves an unsightly mud hole hard to clean up. Do you think hogs will do as well on high ground as if they were allowed to have a mud hole to wallow in?

*Elizabeth City Co., Va.*

E. M. FULTON.

Make the hog yards on the high land. Hog wal-

lows ought not to be found on any farm. They are a constant source of disease and trouble, and are not called for by the natural habits or the health of the hogs. The hog is naturally a clean animal, but man, by his neglect of proper surroundings, has made him a synonym of filthiness. Keep them dry and clean and out of dusty beds and the hogs will be healthier and the meat more wholesome. See that there is in the yards an abundant supply of pure spring water always at hand for drinking.—Ed.

### Rye and Crimson Clover.

Can I plant rye and crimson clover after sweet potatoes and grow it successfully? Could I graze pigs on same during winter months?

*Sampson Co., N. C.*

SUBSCRIBER.

Yes. Sow as early as you can after digging the crop, so that the crimson clover may have a chance to make as much growth as possible before winter. We would mix some wheat and oats with the crop, as they make better grazing than rye. The crop should make some grazing in winter and good grazing in the early spring.—Ed.

### Pickle-Making—Storing Irish and Sweet Potatoes.

Please state through your valuable paper formula for putting up cucumber pickles to use through winter—same as those we purchase in kegs from grocers. Also name best method for putting away sweet and Irish potatoes to keep over winter without cold storage.

ISAAC H. DUNLAP.

We regret to say that we are unable to give a receipt for pickling cucumbers. The cucumbers are usually put up in strong brine by the growers and shipped to the pickle factories and are there converted into pickles. Perhaps some of our lady readers can give receipts for making the pickles. We have several times given instructions for storing Irish and sweet potatoes, and will endeavor to do so again in a later issue. It is too early yet to store these crops.—Ed.

### Ticks on Cows.

My cattle are much troubled with ticks, which seem to get on them when in a certain pasture in which there is some woodland.

The ticks cling between their legs and on the bags of the cows, and are very persistent in sticking on.

Can you suggest a remedy? If you can aid me I will be under many obligations.

*Montgomery, Ala.*

P. C. MASSIE.

Have all the ticks picked off carefully and then

grease the legs of the cows and the parts where the ticks are most commonly found with fish oil or lard in which a little carbolic acid or kerosene oil has been mixed.—Ed.

### Pruning Orchard.

I have an orchard that has been planted for over eighteen years. The trees are thrifty enough (one of them, a heavy bearer, is the finest specimen of a tree that I have ever seen), but most of them haven't borne a peek of apples in the whole time. Some of the trees have been struck with the cedar blight—were struck before I knew of the danger; but they were good bearers.

I have always pruned in the spring, but I believe that it has been decided that summer pruning is best for fruit. What I want to know is, in what month will I be safe in pruning? I do not want to prune at a time that will injure the trees.

*Davidson Co., N. C.*

P. NORTON

Mr. THOMAS, the author of the American Fruit Culturist, and one of the best authorities on fruit growing, writing on "Pruning as Affecting Fruitfulness," says: "As a general rule the rapid formation of leaves and wood is adverse to the production of fruit. On the other hand the slow growth of the wood favors the formation of fruit buds and the production of heavy crops. These two adverse tendencies may be more or less controlled by pruning. When the too numerous branches of a tree produce more leaves than can be properly supplied with nourishment, resulting in a feeble or diminished growth, new vigor may often be imparted by judicious pruning, directing the sap into a smaller number of channels and thus increasing its force. For example: Peach trees, after bearing some years, and yielding smaller fruit than on fresh, young trees, will assume all their former thriftiness by partly cutting back the heads. In such operations it is indispensable to observe the rule of cutting back in winter or early spring before the buds have swollen. If trees are too thrifty and do not bear, a check may be given and many of the leaf buds be thus changed to fruit buds by a continued pinching back during the summer. The production of fruit buds may be accomplished artificially by checking the growth of vigorous trees, but such treatment, out of the ordinary course of nature, though sometimes useful, should be cautiously applied, as the first crop gives still another check and often materially injures the tree and the quality of its subsequent crops. Another and unobjectionable mode of attaining the same end is *summer pruning*, which is effected by pinching off



the soft ends of the side shoots after they have made a few inches' growth. In these the sap immediately accumulates and the young buds on the remainder of these shoots, which otherwise would produce leaves, are gradually changed into fruit buds. \* \* \* It often happens when the pinching is done too early that the new buds send out shoots a second time the same season. These second shoots are to be pinched in the same manner as the first."—Ed.

### Patenting Fruit Trees.

Is there a law that gives a man the right to patent an apple or any other fruit tree, and if so, does this patent prohibit others, who have the same apple or fruit, from budding or grafting or giving limbs to his neighbor to bud or graft for his own use?

*Davidson Co., Tenn.*

T. I. FUQUA.

No patent can be granted for the production of an apple or any other tree, but a man may register the name which he gives to any particular fruit, and thereby acquire title to that name, which will prevent the same being appropriated by another grower. This would not hinder his disposing of the scions or buds from the tree in any way he thought proper, but rather would aid him in doing so.—Ed.

### Feed Value of Rutabagas.

Please let me know the feed value of rutabaga turnips for hogs and cows.

*Duplin Co., N. C.*

THOMAS M. DOBSON.

The analysis of rutabagas shows their content to be as follows: Water, 88.01; ash, 1.15; protein, 1.18; fiber, 1.25; nitrogen, free extract (Carbohydrate), 7.66; fat, 0.15. This does not show them to have a high feed value, but experience in the feeding of them has demonstrated that the analysis of their content does not fully disclose their value as a food. They have a cooling action on the stomach and blood, which encourages appetite and stimulates the assimilative powers of the stomach and other organs, enabling better results to be obtained from all the feed given to the animals eating them. In England they form one of the principal winter foods of all feeding stock.—Ed.

### Horses Rubbing Mane and Tail.

I have some horses that rub their tails and manes. They have no lice, nor do they show any sign of worms. They are in good condition; they have exercise every day by running to pasture or work. This itching seems to annoy them. I would like to know

some way to prevent the itching and stop them, as it makes them look bad. It seems to be contagious.

*Ash Co., N. C.*

EDDIE YOUNG.

Where it is certain that the horses have no lice on them, this rubbing is usually caused by overheating of the blood from too rich food and too little work or exercise. Give a purgative ball and cut off some of the grain feed and substitute a bran mash once or twice a week and feed grass. Give plenty of work or exercise. A little sulphur fed in the mash twice a week will also have a cooling effect. Apply some grease to the roots of the mane and tail, there may possibly be some very small lice. Worms often cause rubbing of the tail. An injection into the anus of a solution of quassia chips in water will give relief from this trouble.—Ed.

### Irrigating Land.

I have a farm, lately purchased—creek bottom—with a bold spring on it—a very large spring, in fact—running diagonally through it, with another large, unfauling spring branch on the north side of the farm. These springs afford an abundance of water for irrigation if it could be utilized. Would irrigation by engine and hose be expedient and commendable? Say, use a traction engine of sufficient power, which could also be used for various other purposes, such as for grinding feed or running a grist or flouring mill, etc., etc. This would reduce the cost of irrigation to a minimum and make irrigation feasible, so far as irrigation itself is concerned. But the question troubling me is, Would this manner of irrigation be expedient? For example, would it be expedient to throw a stream of water on your fields and crops during the hours of sunshine? The process of irrigation could commence, say, at 4 P. M. and continue into the night awhile, if it would be inexpedient to attend to it in the heat and sunshine of the day.

You may be disposed to inquire why resort to this method? One reason, the source of the water is, I fear, too low to raise it to the necessary height of carrying it through ditches, and another is the character of the soil is not such as to restrict the water to the ditch. I am a novice in the matter of irrigation and will greatly appreciate suggestions in this line through the Planter.

*Hamilton Co., Tenn.*

J. W. CLIFT.

This question of irrigating lands outside the arid belt is one which is engaging the attention of the authorities in the Department of Agriculture at Washington, who have already issued several bulletins on the subject. If you will write the Secretary of Agriculture he will, no doubt, have these forwarded

to you. There is no question but that in many cases irrigation can be usefully and profitably used on lands in the East and South, but perhaps in most cases this will be found only to be so when the land is devoted to the production of truck and garden crops, which have a high value and can, therefore, bear a relatively high cost for production. In the case of the staple crops it is doubtful how far the system can be made to pay, especially where cost of pumping has to be incurred. Simple gravity ditch irrigation might be found profitable possibly in many seasons.—ED.

### Raising Colts.

What "points" can some of your subscribers give me as to feeding and general treatment of colts?  
*Henderson Co., N. C.* R.  
 Will breeders please notice and reply?—ED.

### Lice in the Hen House—Number of Roosters Required—Fertility of Eggs.

Is it possible to keep a new hen house, built entirely of new wood, free of lice when stocked with chickens raised in an incubator and brooder?

2. How many roosters ought to be kept with 100 hens to be sure of the eggs being all fertile?

3. Are pullet eggs (the pullet about 7 months old) as good for hatching in an incubator as those laid by an older hen?

4. Is a young rooster, same age as pullets, as good as an older one?

*Albemarle Co., Va.*

AN ENQUIRER.

1. It is practically impossible to keep lice out of any house, but in a new house built as described, and with chickens hatched and raised as described, they may easily be kept in subjection by whitewashing with lime wash in which some kerosene has been mixed, two or three times in the year, so as to cause no trouble.

2. Not more than twenty hens should run with one rooster to ensure fertility of the eggs.

3. Yes. The only drawback to using eggs from so young a hen is that the chickens may lack vitality and strength. Those from a 1 or 2-year-old hen are much more likely to have the required stamina to ensure good growth and resistance to disease.

4. A young rooster is always better than an old one. A year-old bird is in his prime for securing fertility in the eggs.—ED.

### Fig Tree Dropping Fruit.

I have a fig bush on my place that dropped its fruit

when nearly full grown. My neighbors tell me it has done so before, and that as far as they remember the bush has never carried fruit to maturity. This is the first season it is under my observation. The bush looks exceedingly thrifty—very full of leaves of glossy, dark hue. It was spaded around in the spring and thinned, as the stems or trees were very thick. It also received some fertilizer and barn-yard manure this spring, but had been neglected previously, although it certainly looked thrifty all the time. Can you suggest a remedy?

*Middlesex Co., Va.*

C. DEBRUYNKOPF.

Fig trees are very apt to drop their fruit if at all lacking in moisture at the time of the swelling of the fruit just previous to ripening. Probably this is the cause of your tree failing to mature the crop. The North Carolina Experiment Station, Raleigh, has experimented largely with fig growing and published one or two bulletins on the subject. Probably if you were to write the station they would send you the bulletins, which you might find serviceable.—ED.

### Rotten Oak as a Fertilizer.

Kindly advise me if rotten oak has any fertilizing value.

J. C. JACOBS.

No. It is not worth the trouble of hauling it. The only thing about it worth anything is the small amount of vegetable matter it contains, which adds that much to the humus content of the soil.—ED.

### Improving Gravelly Land for Grass.

The grove in front of my dwelling is a hillside, poor, gravelly soil, well shaded with white and post oak and hickory. I wish to sow same in grass for grazing purposes. Please state in your next issue best method to prepare ground, time to do it, kind of fertilizer and seeds to use, also amount per acre.

*Chatham Co., N. C.*

ISAAC H. DUNLAP.

This land will require, first, to be improved before it will carry a grass sod. We would plough it and then apply twenty-five bushels of lime to the acre and seed it with a mixture of crimson clover, sand vetch, oats and wheat, say twelve pounds of clover and a bushel of the grain mixed in equal parts. In the spring, say in April or May, plough this crop down and apply 500 pounds to the acre of acid phosphate and fifty pounds of muriate of potash and sow with one bushel to the acre of cow peas. Graze this crop off and then in the early fall plough again and seed down with a mixture of Wood meadow grass, hard fescue, Virginia bluegrass, Kentucky bluegrass, perennial rye grass and white clover, two bushels to the acre. Give with this a dressing of 500 pounds

of bone meal and afterwards top-dress the land with farm-yard manure.—Ed.

### Nut Grass.

I have a large lawn in front of my house, and upon close examination I find that what we call "nut grass" (a grass that has roots from one to five inches long with little nuts on or about the end) is scattered all over the space in patches. I want to destroy this grass, as it is getting all over my place. I will appreciate it very much if you will give me the surest and most direct method by which to destroy the grass.

JOHN D. WELLS.

*Wilson Co., N. C.*

The only way to get rid of this grass is to put the land into arable culture and then smother it out with crops. Work the land in a short rotation in which use cow peas for a summer smother and crimson clover and hairy vetch as a winter and spring smother as frequently as possible for two or three years. Plough up the land now and sow crimson clover and winter oats and wheat on it, say twelve pounds of crimson clover and three-quarters of a bushel of oats and wheat mixed per acre. Give a dressing of 300 or 400 pounds of acid phosphate with the crop to ensure a heavy growth. In the spring, say May, plough this crop down and sow cow peas, a bushel to the acre, with 300 pounds of acid phosphate. Follow this crop, which should be cut for hay, with an oat crop and then with crimson clover or vetches again and then seed down to grass again with a dressing of 500 pounds of bone meal.—Ed.

### Ploughing Land.

Do you think it a good plan when ploughing to lay the land off in what they call "lands" of about six to eight yards in width, then plough around them until ploughed out; then lay off again until field is finished? I notice that all land ploughed in this way washes in great gullies after rains or during the winter where the turning row is left. Will you kindly tell me how a field should be ploughed?

*Mecklenburg, Va.*

A. B. C.

Land should always be ploughed in "lands," or "beds," as they are called in some sections. The practice of ploughing round and round a field until it is all ploughed is a bad one and can only result in uneven ploughing and uneven land. There is no reason why ploughing in "lands" should result in washing. This is caused by not laying the lands off in the right direction. They should be so laid off as not to follow the direct fall of the land, but slightly across this, so that each furrow will act like the fur-

rows on terraced land, each carrying only a part of the water and that at such a slight fall as to permit most of it to sink into the subsoil as it flows. Then, if the land is ploughed deep enough, all, or nearly all, the water will be absorbed and conserved in the subsoil for the ensuing crop. Deep ploughing is the cure for washing. On flat land the beds should be narrow and on rolling land wide, so as to ensure drainage in wet seasons.—Ed.

### Cramp in Horses.

I have a fine mare, 6 years old, that has the cramp badly—one time I made sure she would die. Every muscle in her body seemed contracted. Can you tell me anything that I could give her that would relieve her permanently, or even temporarily.

*Wythe Co., Va.*

M. H. JACKSON.

What is commonly known as cramp, or colic, in horses is of two kinds, each requiring different treatment. Spasmodic, or true cramp, colic is produced by indigestible food, large drinks of cold water when the horse is heated or driving horses when heated through deep streams or standing in cold rain or from cold drafts. Spasmodic colic always begins suddenly, the horse stops feeding, stamps violently, lies down, rolls, paws. Then there is relief, apparently, for a time and then the pains return again. The horse makes frequent attempts to urinate, sweats and paws violently. For this form of colic the proper remedies are anti-spasmodics. Probably the best is chloral hydrate, 10 ounces in a half pint of water, given as a drench. A very common remedy is 2 ounces of sulphuric ether and 2 ounces of alcohol in 8 ounces of water. If nothing else is at hand give half a pint of whiskey in hot water. If relief is not given by any of these repeat the dose in an hour. After the pain has subsided give a pint of linseed oil to evacuate the bowels.

The other form of colic is properly known as flatulent colic, or wind colic. This is generally caused by sudden changes of food, too long fasting, new hay or grain, or large quantities of green food. The symptoms of wind colic are not so sudden as those of cramp colic. The horse is dull and paws slightly. The pains are continuous and not spasmodic. The belly enlarges, and by striking it in front of the haunches a drum-like sound is produced. The treatment for this form is the use of alkaline remedies to neutralize the gases found. Give baking soda in doses of from 2 to 4 ounces or the same quantity of carbonate of ammonia every half hour until relieved. Chloral hydrate is also a good remedy given in 1 ounce doses in half a pint of water. These remedies

should be followed by a purgative after the pain is relieved. Barbadoes aloes is the best; give 1 ounce or linseed oil 1 pint. An injection of 1 to 2 ounces of turpentine and 8 ounces of linseed oil into the rectum is of great assistance in getting rid of the wind.—Ed.

#### Plants for Name.

We have received from several readers two plants for name which are common all through the South. The one is a woolly headed plant and the other a little creeping plant with yellow flowers. The first is *trifolium arvense*, called in some sections rabbit-foot clover, in others mouse ear clover, in others cotton-top clover. Stock will frequently eat this freely and it is worth something for improving land. This, however, is usually regarded as a weed. The other plant is *trifolium procumbens*, known as hop clover. It is practically of no value.—Ed.

#### Plant for Name.

Please find enclose a bud and a bloom of a plant which is unknown to us. If you know the name of it would like for you to publish in the next issue. It grows from three to five feet high; grows very much like buckwheat; blooms in June and continues until frost, and is relished very much by the bees.

Pittsylvania Co., Va.

J. W. RAMEY.

The plant is *melilotus alba* (white melilot or Bok-hara clover.) It is not generally liked by stock, but is a good improver of land, as it secures nitrogen from the atmosphere. Its roots also go down deep into the land and bring up plant food and make the land friable.—Ed.

#### Sick Chickens and Hens.

I have one hundred chickens, eighteen hens and one rooster. My oldest chickens are 3 months old. I have about thirty-five of that age, the rest are smaller and of different ages. I have a large lot and they have access to a corn-field. I keep my hen house thoroughly clean—use ashes and lime on floor and sometimes burn sulphur in it. I use carbolic acid in their drinking water. I feed them mostly on corn bread, sometimes give them corn meal dough with Pratt's poultry food mixed with it. I also use black pepper in the food. My oldest chickens have something like cholera—they get droopy, sit with their eyes closed and feathers ruffled, and in a few days die. One of my Plymouth Rock hens has it now, and two of my largest young chickens. I have lost six hens, one rooster and five young chickens. Will you kindly advise me what to do?

Russel Co., Va.

MRS. B. T. WILSON.

We have complaint from very many different sec-

tions of the South of sickness amongst chickens this year. We attribute this largely to the abnormal weather we have had. We believe it to be mainly caused by the cold, rainy weather. Dryness and warmth are essential to success in chicken raising. Treated as you are treating yours you should be successful, and no doubt would be, if the weather was more genial. Be sure you have no lice on the chickens. Dust them with insect powder and put a little grease on the heads of the young chickens—just a drop of lard in which a few drops of kerosene have been mixed. Keep your houses and coops clean and burn or bury deeply any chickens that may die. We do not believe there is an effectual remedy for chicken cholera if it is once established in a flock. The only way is to remove the healthy birds to another location and let the germs die out at the old place.—Ed.

#### Curing Pea Vines—Crimson Clover Hay.

1. Will some reader of your valuable paper tell me the best way of curing pea vines? I never have been able to keep them fit for anything.

2. Does crimson clover make good feed when cut and dried?

J. P. McDOWELL.

Halifax Co., Va.

1. We have published a great many different ways of curing pea vines. Mr. Blacknall, of Kittering, N. C., wrote fully on this subject in our September, October and December issues last year. He cures by putting up green on poles set in the ground having cross pieces nailed on to keep the vines from the ground. We have had reports of good success with this method. We know others who cure successfully just as they cure clover. We know that they can be cured successfully by cutting and allowing them to remain as cut until partially cured. Then rake into windrow and allow to remain a day or two, according to the weather, and then put up into cock and allow to remain until nearly fully cured and then carry to the barn and pack away closely into the barn and allow to remain untouched, even though they heat considerably.

2. Crimson clover, if cut just when coming into bloom, makes good hay safe to feed to all stock. If cut after the seed forms the hay is not safe to feed to horses.—Ed.

#### Seeding Grass—Preventing Washing.

When is the best time to seed Evergreen—fall or winter? Does it do better to seed by itself or with grain?

We have land that washes very badly. What kind of grass will hold it from washing? This land is

creek bottom and is sandy. Some say make a permanent pasture of it. Will you please give me your ideas about it?

W. C. JONES.

*Campbell Co., Va.*

All grass and clover seed is better sown in the fall than the spring all through the South. Sow in August and September and sow alone without any grain crop. When seeded at this time and in this way, if the land is in a good state of fertility and well prepared, a good stand can be confidently counted on.

The way to prevent washing is to plough deep and to lay off the land in ploughing it so that the furrows run across the fall of the land diagonally, so that each furrow cuts the line of wash and catches and carries into the subsoil the water falling on it. Such a creek bottom as you describe should, if treated in this way, make a good meadow or permanent pasture, if sown with a mixture of red top, meadow fescue, Italian rye grass perennial rye grass and alsike clover. Mix the grasses in equal parts and sow two pounds of the clover seed. Sow two bushels of the grass seed per acre.—Ed.

### Oats Turning to Cheat.

Will gray winter oats, sown on medium good loam soil, turn into cheat, or must the seed of the cheat have been in the oats or the soil?

SUBSCRIBER.

*Stafford Co., Va.*

Neither oats nor wheat nor any other grain will turn to cheat or chess. Cheat or chess is a distinct botanical species, and is produced only from its own seed, which is either sown with the grain seed or germinates from seed already in the ground, on its being brought near enough to the surface to become influenced by the sun and air.—Ed.

### Water Meadow.

I have a meadow of what we term "native swamp grass." It is on a creek and subject to overflow at high water times. It has been mown continuously (most of it) twice a year for the past fifty years or more. When overflowed it is mostly by back water, and consequently *very little* sand has been deposited on it. The grass does not appear to thrive so well on it of late as of yore, averaging now annually about two tons per acre. The surface is too near the water line to plough and cultivate in corn; besides, wish to use for meadow. Can drive all over to mow and haul hay.

Do you suppose that it may be what is sometimes called sod-bound? If so, how would you advise treating it, say, next fall, after the second crop has been taken off and when the land is dry enough to operate

on? Would it pay to apply lime or lime and acid phosphate?

Any light on this subject will be gratefully appreciated.

A SUBSCRIBER.

We think it very probable that the meadow is what is known as "sod-bound." After the second crop is cut we would harrow it with a heavy, sharp-toothed drag harrow, and then rake off the grass and trash harrowed up and apply 50 bushels of lime per acre broadcast and sow 1 bushel per acre of Red Top and Italian Rye grass in equal parts and roll with a heavy roller.—Ed.

### Threshing Cow Peas and Soy Beans.

1. Can cow peas and soy beans be threshed in a grain separator without breaking the peas? If so, what is to be removed from the separator and at what speed should it be run?

2. Please advise best method and time to harvest same if a seed crop when same is cut with a mower having a pea or clover buncher attached?

An answer through your columns will be greatly appreciated.

X. Y. Z.

*Westmoreland Co., Va.*

1. Yes. They can both be threshed with a separator. Take out part of the concaves and give all the space possible to allow the vines to pass through easily, and run the machine just fast enough to carry the vines through without winding on the drum. We know farmers who thresh large crops of peas and soy beans every year with the separator.

2. Cut when the greater part of the peas or beans are just turning ripe, and cut when the dew is on. Let the crop lie as bunched by the machine until the vines are partially dry and then put several bunches together into cocks and let stand until cured, when haul to the barn. If the cocks feel damp inside after standing a day or two open out and let the wind and sun into them and then put up again until fit to haul to the barn. Handle as little as possible, and never in the hot sun, so as to prevent wasting the seed.—Ed.

### Forage Crops.

I should be glad to hear in the Southern Planter your opinion of what beans to sow with oats as fodder.

AN EXPERIMENT.

*Fairfax Co., Va.*

Canada Peas are the best grain to sow with oats for a forage crop. They should be sown in December or January, and will make an early green forage crop or a hay crop of high feeding value, which may be cut in May. Sand vetch or the English winter vetch may be sown with oats in September and October, and make an excellent forage crop.—Ed.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

Successional crops of sweet corn, pole beans, lima beans and navy beans may yet be planted. Cucumbers for pickles should, if not already sown, be at once got in. In our last issue we gave instructions as to this crop. Blackeye peas may also be yet sown. Sweet potato slips may be set out if not already planted, and cuttings from the earlier planted ones should be put in. These cuttings will make potatoes that will make better seed for next year's crop than that from the earlier planted slips. Cut off the ends of the vines with three or four leaves on them and bury the whole length in the soil except the tip end with two or three leaves. These will soon take root if the ground be moist.

The late crop of Irish potatoes should be planted this month. This crop will make potatoes that will keep all winter. The seed used is northern sets that have been kept in cold storage to prevent sprouting. It is well to spread the sets out for a few days in a shady warm place to encourage the sprouts to start before planting them. Prepare the land well and make rich with a good potato fertilizer rich in potash.

The second crop of Irish potatoes should also be planted this month. This crop is raised from seed grown by the crop planted in January and February. It is a safe crop to raise in all Eastern Virginia and North Carolina and makes seed for the early crop next year, which is much preferred to northern-grown sets, and is, therefore, always in large demand by the truckers of Eastern Virginia. The first crop should be allowed to become nearly fully ripe before digging and then the sets for the second crop be selected from the tubers as they are dug. The sets should be about the size of an egg, as they are to be planted whole or with only just a slip cut off. These sets should, as selected, be spread out in a shady place to green for a few days and then be covered with some light soil and short straw and be made moist to encourage the sprouts. Plough the furrows in which these are to be set deeply by running the plow twice in each furrow. Plant the sets when sprouted in the bottom of the furrows and cover lightly with soil. When the sprouts come through this plough more soil on to them until the furrows are level. Keep level and cultivate frequently. They will continue to grow until late fall and should be dug just before frost

catches them. The essential for success with this crop is to have the sets sprouted before setting.

Celery seed not already sowed should be sowed this month. In our last issue we gave directions as to this. Where the seed has germinated and plants are growing these should be drawn from the seed-bed and set out in a bed to grow on for subsequent planting in the rows so that they may become stout, stocky plants and not be drawn by overcrowding. If the leaves are long and spindling shorten them back with the shears. This may be repeated if necessary to keep the plants stocky.

Seed may be sown towards the end of the month for raising broccoli and fall cabbage. These crops can both be successfully raised in Middle and Eastern Virginia and North Carolina if the plants be not raised too early. They should be ready to set out in September. The seed-bed should be in a moist, shady place and the young plants should be dusted with tobacco dust to keep off the bugs.

Keep the cultivator running in the growing crops to keep down weeds and encourage growth.

The budding of trees should have attention now. In our last issue will be found instructions for this work.

Sow cow peas, crimson clover or sand vetch on all land cleared of crops not wanted for any other purpose. Don't grow weeds, they are unprofitable.

### ORCHARD AND GARDEN NOTES.

During the very dry season that has prevailed over a large extent of the State, frequent shallow, level cultivation has been necessary for good crops in the orchard and garden. If our advice has been followed the beneficial effects are, no doubt, plainly visible at other places, as they are in our garden.

Keep up the cultivation till the middle or last of this month. Then sow some Whip-poor-will cow peas to keep the ground from washing during fall and winter, and also to add some fertilizer to the soil, which is being constantly depleted by clean cultivation and by washing rains.

If the peas are sown in rows about two feet apart so that one or two cultivations can be given the crop better results will be obtained than by broad casting and giving no cultivation.

I consider the cow pea the cheapest and best fertilizer the farmer can use to improve much of the worn soil of the Southern States. By the time this appears in print I expect to have sown some in my corn during the last cultivation to supply fertilizer to the wheat crop, the seed of which will be sown in October.

Insects have been very serious with us this year. The plum curculio has stung a large per cent. of our plums. One of the best ways I have found to fight the plum curculio is to destroy all "wormy fruit." Perhaps hogs are the best things to gather up such fruit.

The rose chaffer appeared on our grapes in large numbers. We succeeded in poisoning the insect by using four ounces of London purple and one pound of lime mixed with twenty-five gallons of water and spraying this on the vines thoroughly. The same preparation kills the "potato-bugs."

The time to can fruits and vegetables on the farm has come. Put up a large quantity for family use. Prepare to open one can a day for ten months in the year. This would be no difficult thing to do, if some preparations are made before hand. Nearly everything except corn and beans can be put up on the cooking stove. I have used successfully a small canning outfit specially made for the cooking stove. With it I could put up from one to two hundred cans per day. Not near enough canned goods are put up in the State. We must broaden out along this line. Small canneries can be put up in the towns and small villages at a cost of \$200 to \$400, with a capacity of two to four thousand cans per day. In another State where I have tested and recommended such canning outfits, the canning industry has made immense progress. Now let Virginia move up along this line. More will be said about this subject later.

The time for sowing seeds for fall crops, such as turnips, radishes, peas, lettuce, will soon be here. They will soon come up and grow off well, if sown in well prepared ground. But there is one thing I want to caution against, and that is never sow turnip seed on land upon which a garden crop is to be grown next year. I have tried it in Texas for two years and in this State this year. The results have been

that the cut-worms destroyed my crops each time. The moths that deposit the eggs of the cut-worms seem especially fond of doing so in the field upon a green, tender turnip bed. The following spring the worms feed on the next crop.

The early purple-top strap-leaf turnip, nonpariel pea, rose-colored China radish and black-seeded Simpson lettuce have done best with me for fall crops.

On a recent visit to the Virginia Polytechnic Institute I was glad to learn that the Department of Horticulture, Mycology and Entomology had been divided. Professor W. B. Alwood was left in charge of mycology and entomology, Professor H. L. Price was put in charge of horticulture and Professor J. L. Phillips in charge of the field work in entomology and crop tests. The division of this work has been needed for some time, and now, that it has come, we look for better things along these lines, though the work has been good in the past.

I was glad to learn also from the chairman of the Board of Visitors that the several changes or additions to the course in agriculture that I had suggested in a recent issue of the Planter were the things the Board wanted to do. Now, if the Board will ask the Legislature for \$50,000 for an agricultural building, instead of \$20,000, we can stand on the same platform.

The Legislature gave \$200,000 to the Jamestown Exposition to advertise what? To advertise how long?

It gave nothing to increase the agricultural facilities at this institution for teaching the young men of the State in its most important industrial line for a century. Our young men are leaving the farms, many old historic farms are going to waste, the facilities for teaching young men of the State in agriculture are behind the times, and the Legislature let a great opportunity go by.

Pennsylvania recently gave its Agricultural and Mechanical College \$250,000 for an agricultural building and equipment. It has been suggested that \$20,000 would do for the Old Dominion. What think you, farmers, of the State? Do you want your sons to have the benefit of all the latest developments in stock husbandry, plant breeding, forage crops, soil improvement, truck and farm crops, fertilizers, diseases of plants, etc.? Would you like to see an equipment in agricultural lines at this institution that is up to date? If so, sound your Representative this fall before he is elected as to how he stands on

this equipment. If the farmers want such a thing and will ask for it persistently they will get it. If they do not ask for it the politicians are not apt to give it. Fall in line, farmers and horticulturists of the State, and let us ask the Legislature for what we need to strengthen the agricultural work of the State.

Montgomery county.

R. H. PRICE.

## FALL POTATOES.

*Editor Southern Planter:*

Other things being equal, potatoes planted from the 20th to the 30th of July will, in this climate (North Carolina), yield more and better potatoes than those planted in early spring. Therefore, they should not be planted in early spring except for early use and the early market. Potatoes planted about the 20th of July will mature in early fall and may be harvested about the first appearance of frost. Potatoes thus grown will keep in good condition, without sprouting to hurt, until the time for the next July planting arrives. Potatoes grown from the July planting of the previous year may be used for seed for the early spring planting.

A clover or cow pea sod is considered best for potatoes. If said crops, when seeded, were properly supplied with potash and phosphoric acid they have drawn from the air a sufficiency of nitrogen to serve the potatoes.

The drills may be laid off three feet apart. A suitable narrow plow may be run several times in the bottoms of the drills, thus preparing loose beds.

One half the usual application of potash and phosphoric acid may be applied in the drills and mixed with the soil, preferably a few weeks before planting. The application of fertilizer, per acre, may consist of 70 to 140 pounds of muriate or sulphate of potash, or 280 to 560 pounds of kainit in lieu of the muriate of potash, and 180 to 360 pounds of acid phosphate. Sulphate of potash is considered preferable to either muriate of potash or kainit.

Large potatoes are considered best for seed. They have larger eyes and produce larger stalks than small potatoes, and consequently the yield is larger. They may be cut into pieces of two or three eyes each. One party recommends cutting potatoes endwise into quarters and planting the seed ends (the ends that contain the most eyes) down.

*Thinning to One Stalk.*—Proper tests have shown that the quantity and quality of the potatoes can be

materially improved by thinning to one stalk. Some years ago two adjoining parcels of land of about equal fertility were planted to potatoes. On one parcel the potatoes were planted immediately after being cut. The potatoes for the other parcel were aired for several days, thus becoming much shrivelled before they were planted. The result was that the parcel planted with freshly-cut potatoes produced about double the quantity of tops of the other parcel, but at digging time it was found that the latter had produced about double the quantity of potatoes. The first parcel produced tops, the latter potatoes.

It was evident that said difference in yield was attributable to one of two causes: 1. To the effect produced by curing the potatoes. 2. To the diminished number of tops, a result of curing. If the latter was the cause, similar results could be procured by thinning the plants. After proper tests I satisfied myself that it was the diminished number of plants that increased the yield, and that similar results can be procured by thinning to one plant. After thinning single plants will stand in the drills eighteen inches apart, which I consider plenty close enough, provided that the soil has been properly fertilized.

From that time to the present I have been an advocate of thinning to one stalk. I have had others to test the plan and they all report a material advantage in favor of thinning. But a matter of so much importance needs further tests to determine the merits of said two points, especially the effect of partially curing the potatoes before they are planted.

The New York Experiment Station has recently reported adversely on the subject of thinning potatoes. I suggest further tests.

The plants drawn for thinning purposes can be advantageously transplanted. I have found them to answer well.

*Advantages of Mulching.*—Potatoes in this climate, whether planted early or late, should be mulched to a proper depth with straw, leaves or other litter, thus keeping the ground cool and moist. By planting in midsummer and mulching we approximate in the early fall the proper temperature to the greatest extent possible. Hence, the superiority of fall potatoes over those planted in early spring maturing in midsummer during the time of our greatest heat.

BRYAN TYSON.

Moore county, N. C.

When corresponding with advertisers, kindly mention the *Southern Planter*.





### THE SMALL "PATCH" WELL TILLED.

*Editor Southern Planter:*

The papers are full of the big men, who, working on a big scale, secure big results. There is not enough said of, or attention paid to, the small, humble workers in our midst.

I want to give you a few "facts, figures and features" respecting a humble colored man and his "patch" of berries. Herewith see a cut or picture of his humble cabin and a portion of his "berry patch."

His cabin is almost hid in shrubbery, the "ivy and the vine." This is an old "befo' de wah" darcy—honest, industrious, hairless and toothless. If he goes by "wat his mudder sed" he is three-score years and ten; but if he counts time or measures the years by the "fun" and "experience" he has had he's more than a "hundred and fifty years old."

He rents a little "jib" or "slipe" or "triangle" or "patch" of one and three quarters of an acre with the cabin thereon, for the nominal sum of \$30 per year.

Among other crops he has three-quarters of an acre in berries. From this three-quarters of an acre he this year sold sixty crates of berries (sixty quarts each) at the average price of 10 cents per quart.

After deducting all expenses, such as picking, freight, commission for selling, cost of crates, etc., etc., and even deducting his entire rent for the year, the old man has made fully \$200 from the three-fourths of an acre.

This is a rather better result, comparatively speaking, than have been secured by any of the larger growers of berries. While we have had cases, this year, where the berry growers have made all the way from \$2,500 clear, clean profit, up to \$15,000, from their berries, none have made as much from a small patch as the old darcy has made.

How this emphasizes the idea of the "little farm well tilled."

If the old colored man, who can neither read nor write, can secure such results with his simple tools, appliances and methods, what may not be done with skill, experience, capital and special fitness?

The intensive, thorough culture of small areas of land means not only the prosperity of the individual, but also of the community, the State and the nation.

A JEFFERS.

Norfolk, Va.

Wooden tubs and pails will keep moist better if turned down upon the cellar bottom and water poured over them, filling the space between the rim.

**AMERICAN POMOLOGICAL SOCIETY MEETING.***Editor Southern Planter:*

Will you kindly give publicity to the following in your next issue:

I have received a letter from Mr. W. A. Taylor, Secretary of the American Pomological Society, stating that their biennial meeting will be held in Horticultural Hall, Boston, Mass., on September 10th-12th next. He asks the Virginia State Horticultural Society to send a strong delegation to represent Virginia fruit interests on that occasion.

He further says: "Have you among your membership any fruit originators whose new varieties are worthy of entry for the Wilder Medal under our new plan of award? If so, kindly send their addresses and I will mail them the necessary blanks, etc., for entries. The new plan is being heartily welcomed throughout the country and it is desired that fruit originators everywhere shall share in its advantages."

If any of your readers have new varieties of fruits I shall be glad to hear from them, and would add that one of these medals has already been won by one of our prominent Virginia Horticulturists (the Hon. G. E. Murrell) some four years ago. Let us try to capture another.

WALTER WHATELY,

Secretary Virginia State Horticultural Society.

The following are the members of the delegation appointed to represent the Virginia State Horticultural Society at the biennial meeting of the American Pomological Society in Boston on September 10th-12th next:

Hon. Samuel B. Woods, Charlottesville, Albemarle county.

Hon. George E. Murrell, Fontella, Bedford county.

Hon. S. L. Lupton, Winchester, Frederick county.

Hon. A. M. Bowman, Salem, Roanoke county.

Hon. William H. Boaz, Coveseville, Albemarle county.

Hon. J. Thompson Brown, Briarfield, Bedford county.

Professor J. L. Phillips, State Entomologist, Blacksburg, Montgomery county.

Mr. W. W. Otey, Draper, Pulaski county.

Mr. Walter Whately, Crozet, Albemarle county.

Dr. J. R. Guerrant, Roanoke, Roanoke county.

**THE FRUIT EXHIBIT AT ST. LOUIS EXPOSITION.***Editor Southern Planter:*

I am now, along with other departments, com-

mencing my work on the State horticultural exhibit for St. Louis, and I am anxious to get specimens of cherries, berries, peaches and all other summer fruits in quantities of from one quart to two gallons to prepare in solution for exhibition.

I will appreciate it very much if you will give your assistance in this matter, either by sending the produce of your own orchard or obtaining from neighbors and express these fruits direct to me at Richmond, Va., notifying me by postal of shipment, and I will promptly prepare them and give due credit when on exhibition to the person and section furnishing the same.

We want to make the fruit exhibit a fine one, and unless the fruit growers will give me their cordial co-operation it will be impossible to make it as it should be made.

G. E. MURRELL,

Superintendent Virginia Commission.

Capitol Building, Richmond, Va.

**WHAT TO DO WITH THE STRAWBERRY FIELD AFTER FRUITING.***Editor Southern Planter:*

The most successful strawberry growers plow up their fields as soon as the berries are all gathered and sow them in cowpeas, thus putting the land in perfect tilth to reset in strawberries the following fall, winter or spring, as may be most convenient. But the vast majority of growers gather two, and sometimes three, crops of berries from the same field. How to do this successfully is the object of this article. Bar off with a turning plow the strawberry rows, leaving unploughed a strip about a foot wide containing the plants. On this strip chop out the plants, leaving them about eighteen inches apart. Always leave young (1-year-old) plants instead of old ones, when possible. In this chopping out also kill all weeds and grass. A week or ten days later sow cotton seed meal at the rate of 800 to 1,000 pounds an acre in the furrow left on each side of the row. Then split out the middles, throwing the earth closely around the plants, but not on them, or they will be smothered.

Whenever practicable—though with a large acreage it is not usually practicable—it pays to burn off the field or bed before barring off. To do this mow the foliage of the plants as closely as possible. Then loosen up the straw used as a mulch and on a dry, breezy day, after the mown foliage has got dry, set fire to the field along the border to windward. If there is a fair quantity of foliage or mulch the field will

burn quickly over, leaving the soil as clean as a floor. Weeds, seed and any insect pest that may chance to be present will meet their judgment day, and to a novice the strawberry plants will seem to have done so, too. But seeming will be all.

In a week, or earlier if it rains, in the fire-blackened, Sahara-like field a magic transformation will take place. Every strawberry plant will have put forth leaves of the most vivid and beautiful growth. The rows can then be barred off, chopped out, fertilized and treated just as above directed.

Subsequent cultivation should be the same as for young fields—shallow ploughing with a small-tooth cultivator and shallow hoeing frequent enough to kill all grass and weeds before they come and to keep the crust on the soil broken. This is all important, as in a dry time it greatly lessens evaporation and minimizes the effect of drought.

Kittrell, N. C. O. W. BLACKNALL.

### HORSE APPLE.

*Editor Southern Planter:*

Replying to J. F. Hunter's query in your May issue, "Will Horse Apples Come True from Seed," will say that there is no certainty of their doing so—they may and may not. Even if they should it would be a slow way of getting fruit from them. He had better send some buds from his horse apple tree to a nurseryman and have him bud them on entire root seedlings.

We notice also in the May issue Mr. W. F. Massey's advice as to the best privet for hedges. Our experience with the different kinds of privet is that the ordinary California privet (*Sigustonne Oalifolium*) is more desirable than the Amoor privet and withstands the cold of this climate better, though we think the latter is all right for the more Southern States.

A. W. WALLIS,

Franklin Davis Nursery Company.

Baltimore, Md.

### BETTER TOBACCO CAN BE GROWN.

Secretary Wilson, of the United States Department of Agriculture, who recently visited the tobacco raising districts in a number of the Southern States, has made an important announcement. As a result of a soil analysis, the department has found that the soil in parts of Texas, Alabama and South Carolina

is identical with that of Cuba and other countries which grow the very best qualities of the aromatic cigar tobaccos. The department is satisfied that the same soil exists in Mississippi, Louisiana and Florida.

If the results sustain the department's belief, the importance of the discovery cannot be overestimated. About \$10,000,000 worth of leaf tobacco was imported from Cuba last year, and more will be imported this season. The department states that the Southern growers can raise a crop of high-class tobacco as easily as the cheaper grades, which means they would obtain a large increase in their returns.

### A VIRGINIA FARMER ON VIRGINIA FARMERS.

*Editor Southern Planter:*

I always read the SOUTHERN PLANTER with great pleasure, and I find it a very valuable agricultural paper, especially in its horticultural notes. I love to see things grow well, properly and successfully in the garden and field. Our Virginia farmers in general know so little about farming. Now, I assert this with a full knowledge of their obsolete methods. I have farmed all my life. I owned and cultivated at one time (I am 63 years old) 1,200 acres of land. I still have lots to learn, but flatter myself, however, that I am gathering agricultural knowledge from experience and close study of articles in the SOUTHERN PLANTER, *Practical Farmer*, and *Green's Fruit Grower*. Our farmers don't study farming—they rely too much on what their daddies did. They don't read the PLANTER and other farm books. I have just finished saving my crimson clover hay. The weather was as propitious as could have been desired. I made a fine yield, only a small acreage, but at the rate of 4,000 pounds per acre. It was beautiful to behold. I cut it early, just in full bloom. By the way, I am the pioneer in crimson clover in this county (Franklin), introduced it about four years ago. Don't you know there are but a handful of farmers in this county who ever saw it; and many who never heard of it. I shall fallow the clover land at once, apply acid phosphate, plant in corn, and at the last plowing in August, resow in crimson clover. Just think of it? My crop of hay is cut, cured and housed at least three weeks in advance of other hay crops. Oh, what delicious strawberries I am eating! My peas are ready for the table. Loudon, Cuthbert and black raspberries are gloriously progressing. No bugs this year. Potatoes are happy.

G. W. B. HALE.

Franklin Co., Va.

## Live Stock and Dairy.

### HOG CHOLERA.

We regret to say that we have reports of serious outbreaks of hog cholera in Southern Virginia. Many farmers have lost all their hogs and one subscriber writes us that out of forty he has only seventeen left. We are begged to give some advice as to the best means of checking and preventing the disease. We regret to say that we are able to do very little in the way of help. Notwithstanding the fact that the Bureau of Animal Industry of the Department of Agriculture at Washington has been working on this subject for years, Dr. Salmon is able as yet to give only partial endorsement of any of the various remedies tested. The most hopeful seems to be that of inoculation with an anti-toxin serum and there is still considerable difficulty experienced in the preparation and use of this remedy. In the report of the Bureau for 1897 Dr. Salmon says: "There are but two methods of control which, from our present knowledge of the contagious diseases of swine, appear to promise adequate results. One is the old stamping-out method, the slaughter of diseased and exposed animals, the quarantine of infected farms and the disinfection of infected farms and all other places harboring the contagion. The other is the treatment of diseased and exposed animals with anti-toxin serum. \* \* \* The use of anti-toxin serum appears at present to be a much more promising method of diminishing the losses than the stamping-out process. \* \* \* The serum produced by the Bureau in 1897, when used in affected herds, saved over 80 per cent. of the animals. There is no danger connected with the use of the serum, as it is absolutely free from the germs of the disease. It is easily applied and the good effects in sick hogs are seen almost immediately. In reports made in later years down to the last, Dr. Salmon still expresses his confidence in this anti-toxin serum as being the best cure and preventative yet discovered; but there is still considerable uncertainty in results, arising, it is thought, mainly from the difficulty in preparing the serum so as to have it of a uniformly protective and curative character. Experiments are still being continued to endeavor to overcome this difficulty. Apart from the use of this serum, which we should certainly use in any case of the disease, the only other thing to be done is to isolate all sick hogs away from the healthy ones, and to be careful not to allow any one attending the sick ones to go near the healthy ones.

The yards and pens should be disinfected with corrosive sublimate solution and all dead animals be burned and every "turkey buzzard" seen should be shot at once. They carry the disease from farm to farm.

### MR. COOPER'S SALE OF JERSEYS.

We are glad to see that at the recent sale of imported Jerseys, held by Mr. T. S. Cooper, southern breeders were amongst the best bidders and buyers of the golden butter-makers. Amongst those who secured some of the choicest stock we find the well-known names of Fillston Farms, Maryland; Biltmore Farms, North Carolina, and Bowmont Farms, Virginia. Fillston Farms secured the finest bull, "Forfarshire," which sold for \$1,750. Mr. Swartout, who represented Fillston, bought nine head at an average of \$425. He also bought the bull Maret's Flying Fox, whose dam was Charley's Niece (a prize daughter of Golden Lad 2d) at a very low figure. Among his females the "plum" was a daughter of Forfarshire—Forfarshire's Perfection, only 23 months old, but a beautiful little cow that gave nine quarts in one milking the day before the sale. Two other daughters of Forfarshire went to Filston Farm, one of them—Forfarshire's Brown Lady—being out of a daughter of Golden's Fern's Lad; besides two elegant daughters of Golden Mon Plaisir. One of these Mon Plaisir cows, Golden Foam, was far advanced in milk and due to calve in August, or she would have brought more money. Her dam is by Golden Lad, and she is, besides being well bred, a show cow all over. Her bull calf by Prince Neddy (son of Golden Lad's Champion) went to Frank H. Shore, Fairmont, W. Vt. The other daughter of Mon Plaisir, Mon Plaisir's Jeanette, has also a magnificent udder with good sized and placed teats. She did not bring so much money simply because one of her teats had an extra opening.

Another elegant cow secured by Filston Farms was Golden Bagatelle, a daughter of Visitor, P. 2140, H. C., and Bagatelle, P. 6564, H. C. (now Golden Lad's Victoria, a daughter of Golden Lad that sold for \$745 in the sale of 1901).

The plum among the cows, Golden Lad's Blue Belle, and her son by Flying Fox, went to Biltmore Farms for \$1,725 and \$580, respectively. They were bought by Professor M. A. Scovell, director of the

Kentucky Experiment Station at Lexington, who had instructions to "buy them" without limit as to price. Golden Lad's Blue Belle is by that ever-popular sire, Golden Lad 2d, and out of Blue Belle, P. 4307, H. C., a prize-winning cow herself, and dam of Cautais Lad, who sired the great bulls Financial King and Guenon Lad. But what probably attracted the Biltmore folks most was the fact that she has a daughter in the Biltmore herd, Blue Nun, that made 18 pounds  $5\frac{1}{2}$  ounces butter in seven days and won sweepstakes at Ohio State Fair for them, besides other prizes. The son of such a finely bred and great individual cow as is Golden Lad's Blue Belle, should be a sire fit to associate with the great ones already at Biltmore.

The accession of such a family as that of Nanthorpe's Fontaine to the Jersey stables of America cannot fail to yield a great share of influence in the upward tendency of the breeding industry. Mr. Bowman, of Bowmont Farms, Salem, Va., her buyer, took with her and her granddaughter four other females, the six head costing him an average of \$467. Among them was Flying Fox's Brown Queen, one of the handsomest of the light fawns, that had given nine quarts of milk the night before sale—just a 2-year-old with first calf. He also got Flying Fox's Sweet Daisy and Golden Fern's Mabelle, the latter a 6-year-old gray fawn daughter of Golden Fern's Lad, a first prize winner over the Island, and said to have produced 12 pounds butter (Island weight) in seven days before she had a calf. She is due early next month by Shy Fox.

### POLAND CHINA HOGS.

At a recent sale of Poland China hogs at Pekin, Ill., a sow and litter of nine pigs sold for \$2,000, and the whole herd sold for \$13,535.

Such prices as these confirm the Irishman's description of his hog as the "Gentleman that pays the rint."

### THE HOG AS A MONEY-MAKER.

The following, taken from Country Life in America, shows what has been done by a girl:

Six years ago a daughter of Dr. W. Seward Webb, in order to show her business ability and to obtain a little additional pocket money, took a little "flyer" in stock breeding on Shelburne Farms, Dr. Webb's country seat at Lake Champlain. She invested \$20 in a brood sow, and, with her father's permission,,

made arrangements with his shepherd to care for the sow and the pigs. As there was an abundance of skim milk this was given her without cost, but all grain fed was charged for at market prices. From this single investment she cleared \$90 the first year, \$200 the second and \$300 the third year. By this time the stock had so increased in numbers as to outgrow its quarters, and was proving so profitable that Dr. Webb thought it advisable to buy her out. So at the end of the fourth year he took over the stock at market prices and gave her a check for \$700. From this start the present piggery has been developed, which is the most profitable department of the place. The past year 200 pigs were sold, averaging 250 to 300 pounds in weight and bring one-half cent per pound more than the ruling market prices, because of the superior conditions under which they are kept.

### THE BERKSHIRE HOG.

*Editor Southern Planter:*

I do not say it because I am a breeder of pure-bred Berkshire hogs, but my judgment, guided by the light of experience, is that for the average farmer in the Virginias and Carolinas there is more net profit in raising hogs than any other stock produced on the farm.

Berkshires have been, and are still, considered "mortgage raisers" in many of the Western and Northwestern States, although some persons have the mistaken idea that it is a small breed. As all-round hogs and for general purposes they have no equals. For quality of meat and its flavor, for early maturity, for capacity to take on flesh at any age and size, as well as the ability to make their own living, where others would fair badly, the Berkshires are an ideal hog.

They can be made to weigh, with good treatment, 250 pounds at 6 months of age, while the average farmer is well satisfied to get 200 pounds at the end of fifteen months. Let any of your readers good at arithmetic calculate the cost of the keep and he will have the net profit.

I now have several Berkshire sows, in stock order only, that will weigh between 500 and 600 pounds. I wish I could induce farmers in general to give more attention to hog raising.

It is an indispensable department of mixed husbandry.

S. BROWN ALLEN.

Augusta county, Va.

## JAPAN CLOVER AND MILCH COWS.

*Editor Southern Planter:*

In answer to your North Carolina correspondent in regard to Japan clover fattening cattle and decreasing milk flow, I have to say that I tested Japan clover in 1902 a full season with from seven to ten cows, and my experience and observation is that the fault is in the cow and not the clover. No first-class milch cow will lay on excessive fat on any kind of "ration," but one inclined to beef will grow fat on Japan clover and decrease in milk. My cows had no additional feed and some of them went to the butcher from the pasture. The meal that your subscriber fed his cows only helped the clover to fatten and cut down the milk flow. A cow that will grow fat on a well balanced ration for milk should go to the butcher as soon as the test has been made. It will not pay at any time or under any circumstances, to feed any cow for milk and butter if she persists in putting on beef. Your correspondent can get milk cows that will not get fat on Japan clover or decrease in milk flow from eating it exclusively.

.. . . JOHN M. GIBBS.

*Iredell county, N. C.*

## MONEY IN SHEEP IN EASTERN VIRGINIA.

A. H. Lindsay, an all-round farmer, who has a large farm ten miles south of Norfolk, keeps a flock of 600 to 700 head of sheep, mostly of the Southdown and Shropshire breed, and never feeds them a pound of grain, but allows them to run on tame and wild grass patches during the summer season. Mr. Lindsay raises several hundred acres of wheat and rye, four or five hundred acres of potatoes, and after the rye and wheat are cut and the potatoes dug he plants the land to corn for a second crop, and after he is through cultivating the corn sows therein fall rye in one place and turnips and rutabagas in another and rape still in another. When the summer pastures are short he lets the sheep into the corn-fields thus prepared and changes them about from one field to another, allowing them to feed on these green vegetables and rye until spring, when the sheep come out as fat as butter. The corn is gathered right along while the sheep are feeding in the fields, there being so much feeding in the fields the sheep never disturb the corn. Moreover, the corn stalks are so tall and the ears so high from the ground there is no danger of the sheep getting them: These sheep run anywhere and everywhere through the corn fields until the grass comes in the tame grass pastures in the spring. In this way the foul weeds are kept down and the land

is improved in richness. He arranges his breedings so as to have lambs come from the 1st of October until April, as there is no danger of loss by cold weather during the winter season. October lambs are marketed about March 1st and the balance along later on until July 1st, always bringing the top prices on the market.

Mr. Lindsay sold this last March 100 head of October lambs in one bunch to a dealer in Washington, D. C., at \$5 per head net to him, and it is safe to say they didn't cost 50 cents each to raise them.

This is only what one man can do and what every Virginia farmer *ought to do*, for sheep are a better farm fertilizer than any that was ever manufactured or discovered and beat all commercial fertilizers ever used as a money maker.

Farmers, study this point; you can make money by following this man's example. The sale of the wool from the sheep will twice pay for the keeping, besides selling spring lambs and mutton during the season.—  
Cornucopia.

## STOCK SALE AT ORANGE, VA.

We can assure readers of the Southern Planter who may attend the sale on the 30th of July at Orange, Va., advertised in this issue, that they will have the opportunity of buying some well-bred stock, seeing a very charming country and attending a well-conducted show of high-class horses, three factors in a very enjoyable outing.

## POINTERS ON FEED.

Professor W. J. Kennedy says in New York Farmer:

Alfalfa hay is the best kind of fodder a farmer can feed to his young stock, dairy cows and fattening cattle. It is rich in both protein and ash, and thus balances corn. Clover hay is good.

Bran is an excellent feed, except for young hogs; it is too bulky for them.

The by-products of the glucose factory, such as gluten meal, are exceptionally good feeds to mix with corn.

Cottonseed meal and oil meal serve the same purposes.

Dried blood is the richest food we have in protein.

The tankage products are excellent feeds to add to corn for swine feeding.

For calf-feeding purposes flaxseed meal should be added to skimmed milk.

Feeders must feed more protein foods. They must also feed less corn and lighter grain rations.

## The Poultry Yard.

### NUX VOMICA FOR HAWKS.

*Editor Southern Planter:*

In your issue for June, 1903, I see under discussion the old question of feeding nux vomica to young fowls to destroy hawks.

When a young man I was a devoted admirer and breeder of game fowls (pit), and I sometimes had as many as fifty "stags" on rural "walks" in the territory covered by Gaston and contiguous counties in North Carolina. Naturally the loss of young birds from hawks was very great in such a thinly populated region as this was in 1878-1879, and I made many unsuccessful efforts to check it before I tried nux vomica. The idea was, I believe, given me by some medical colleague of that county, and it was at once successful. It is true that most of my stags were placed out with negroes so ignorant as to call the drug "ox vomit," but the sum of the testimony was far too great to allow much for the factor of ignorance on the part of my observers. It was the unanimous testimony of all that if a chicken hawk ever fed on a young "Shawl neck" or "War horse" that had been fed on nux vomica *that morning*, the hawk never returned. There is no mystery connected with this result if we consider the following facts:

The evolution of the bird under the life conditions imposed on this earth, as we know it, would bring among the first variations a difference in feeding habits. Some would in the struggle naturally concentrate upon the vegetable seeds and grain foods, others would turn to insect life, others more predacious, adapted themselves to freshly killed flesh of other birds or animals, while some, once above such things, would satisfy themselves with putrid flesh.

These things did not all come in a day, and hence the first of the above groups became in time accustomed to, and hence immune to, the influence of any alkaloids or other poisons which might occur in the seeds and grain of *their range*, while even the last named would in time acquire freedom from the ills which others suffer from ingesting the ptomaines and other decomposition products of putrid flesh. In other words, vegetable feeders became tolerant of vegetable poisons, and flesh feeders indifferent to the toxins of flesh, while each is still more or less susceptible to the influence of things unaccustomed.

In using the poison it is best to use the crude drug in place of the active principles, for the reasons set forth below. The nux vomica of the druggist is the powdered seed of a small tree (*strychnos nux vomica*) growing in India, and from this same button or seed the alkaloid strychnine is obtained. The

first is slowly absorbed, while the latter, notwithstanding its relative insolubility among alkaloids, would soon pass into the general circulation and tissues.

The chicken hawk of the South is nine times out of ten Cooper's hawk (*Accipiter cooperi*), and with their genus it is, fortunately for our purpose, the habit of the thief to eviscerate its prey, and bolt the entrails at the first resting place on his toilsome homeward flight. Bring down any of the *Falconidæ* as they reach their nests with prey, and, as a rule, you will find the prey "stripped."

As regards the susceptibility of the guinea fowl mentioned, I know nothing of the facts—a guinea may be killed with strychnine, but as a graminivorous bird he should carry safely enough to kill a hawk. A spring chicken will carry morphine enough to kill the man that eats him entire.

One fact in connection with the guinea is suggestive, however. He is, as the name indicates, from the west coast of Africa, where, as far as I know, the strychnine and brucine bearing Longoniaceæ are unknown, while our fowls, all varieties of the Indian jungle fowl (*Gallus bankiva*), originated on the soil where we find strychnine bearing plants most abundant.

The duck, even in the domestic state, is not strictly graminivorous, and we would expect small doses of any poisonous alkaloid to give him trouble.

(Dr.) P. B. BARRINGER.

*University of Virginia.*

### PRECOCIOUS CHICKENS.

Mrs. Bellwood, of Drewry's Bluff, Va., had a brood of Plymouth Rock chickens hatched on the 25th of January, 1903. One of the pullets of this brood commenced to lay in the first week of May and is still laying. It is not often that one hears of pullets laying when less than four months old, but this particular one actually laid when only a little more than three months of age.

### PRESERVING EGGS.

Use one quart water glass and nine quarts water to preserve eggs. Put fresh eggs in a wooden, stone or glass vessel, and cover with this solution. Water glass a year old is all right to use, if the vessel containing it has been kept tightly closed.

## The Horse.

### HACKNEYS IN VIRGINIA.

Of all Virginia breeders not one has probably ever labored more unselfishly, and that on a large scale, too, to advance the horse interest in the State than the Hon. Henry Fairfax, owner of the noted Oak Hill Farm, near Aldie, Loudoun county, who imported the famous hackney stallion, Matchless, of Lonsboro, from England, in 1888, and later sold him to Dr. W. Seward Webb, of Vermont, for \$15,000. Apart from his extensive breeding establishment, Mr. Fairfax has played a prominent part in public life for years past, serving as a member of the State Senate, member of the Constitutional Convention and chairman of its Finance Committee, and is now one of the State Corporation Commission, which is one of the most important offices in the State Government. Breeding horses began at Oak Hill at an earlier date, of course, but the personal selection in England of Matchless by Mr. Fairfax, and his importation of the wonderfully potent stallion, was the master stroke that brought fame and fortune to the farm as the home of fine harness horses. In the beginning neighboring farmers were allowed to breed their mares to Matchless and other stallions at Oak Hill on the most liberal terms, oftentimes no service being charged, but simply an option taken on the foal at weaning time. Then, too, premiums were offered for the get of the Oak Hill sires, all of which encouraged and served likewise to promote an interest that has since grown into an industry of vast benefit to all that section.



Matchless Dane, chestnut horse, 7, by Matchless of Lonsboro, dam Lady Fife, by Danegelt, is the stallion now in use at Oak Hill. He has fine size, good looks and impressive action. The farm mares, some twenty in number, were all mated with him this season, while others of real class were received from northern owners. A number of the Oak Hill matrons are trotting bred and these, mated with hackney sires, have produced some great high-acting harness horses. The grand old imported mare, Go, is a fixture on the farm and well she may be, because her produce sold from the place, not including a couple of foals that died, have brought the snug sum of \$21,650, among them being the 3-year-old registered hackney Firey Dane, by Danegelt, purchased last fall by Jas. Hobart Moore, of Chicago, for \$10,000. It was the intention of Mr. Fairfax to reserve Firey Dane for the stud. Go was sired by Triffett's Fireaway, and is probably the only daughter of that stallion in America. There were seventeen foals dropped at

Oak Hill this season and among them are some that represent the richest hackney strains of blood in this country.



Whalebone, the son of Abdallah Wilkes and Maggie O., by Abdallah, 15, has been well patronized this season, and the list of well bred matrons sent to his court includes Lucania, by Woodbourn Hamletonian, one of the best bred sons of Balmont; Kitsy Blue, by Victor Blue, son of the noted Oakland Barn, 2:09½, and Chautauqua Belle, by Henry Coalter, son of Norfolk, the sire of Miss Nelson, 2:11½. The get of Whalebone all have fine size along with rich color, and are of tractable dispositions.



Peter Paul, the brown colt, by Aloha, dam Eminece, by imp. Kyrle Daly, bred and owned by Robert Bradley, of the Greenway Farm, Wilcox Wharf, Va., is the best two year old that has shown up this season. He has been winning right along in good company since the season opened with the Jockey Club spring meeting at Washington, and is now at Chicago, where he has been a prominent figure at the Harlem and Hawthorne meetings. Susie Christian, by Wyalusing, dam Gift, by imp. Charaxus, is another good two year old in the Bradley stable. Aloha, the thoroughbred son of imp. St. Mungo, got Robert Waddell, the American Derby winner at Chicago in 1901.



At North Bend Farm, which is near Phillis, Mecklenburg county, Va., Mr. Charles A. Birnie, has the California bred trotting stallion Anteeer, 16316, and the good-looking son of Eros and Ante, by Anteco, is doing nicely. Eros and Anteco are both sons of Electioneer, hence Anteeer is inbred to that famous son of Hambletonian, 10.



Lizzie H., full sister to the great race horse Morello, by Eolus, dam Cerise, by imp. Moccasin, one of the choicest bred mares in the Ellerslie stud of R. J. Hancock & Son, Charlottesville, Va., foaled on June 4th, a brown or black colt by imp. Fatherless, and was bred back to that son of Isonomy. This patrician bred youngster has been christened Ian.



Eon, by Eolus, out of famous War Song, by War Dance, heads the Ellerslie Stud, and he has a stud companion of rare breeding in imp. Fatherless, the English bred son of Isonomy and Orphan Agnes, by Speculum. The oldest of the get of Fatherless are



only yearlings, but Eon is credited with a number of winners, four of them capturing over \$20,000 in 1902. Ellerslie is the most noted of modern Virginia thoroughbred breeding establishments, and Eon, who was bred there, is one of the grandest looking thoroughbred stallions ever stripped. The full brothers Aurus and Aureus, by Eolus, are also in the stud at Ellerslie. Their dam is Sample, by imp. Rotherhill.



In a match race at the Deep Run Hunt Club mile track, on June 15th, between the pacers Fern, owned by Luther Libby, and Smith O'Brien, the property of J. C. Cheatwood, the former won in straight heats, time 2:19 1-4, 2:18 3-4, 2:22 1-4. Fern is a bay mare by Petoskey, dam Mannie, by Ajax, and Smith O'Brien is a brown gelding by Aparka, dam Ada M., by Corsair. On the same day Senator Little, the brown gelding, by Wilton, dam Ximena Wilkes, by Wilkes Boy, to decide a wager, trotted a mile against time in 2:27 1-2.



The well-known Virginian, Algernon Daingerfield, formerly a contributor to this journal, has been appointed assistant secretary of the Jockey Club, New York. Mr. Daingerfield is a son of Major Foxhall A. Daingerfield, manager of the famous Castleton Stud, Lexington, Ky., and a nephew of the multimillionaire James R. Keene, owner of Castleton. The position to which Mr. Daingerfield has been elected is an important one, and while his title is that of assistant secretary, the duties of the office really devolve on him.



C. A. Pusey, one of the veterans of the trotting turf, who took Lona Guffin, 2:23 1-4, down the Grand Circuit in the early eighties, and since been prominently identified with trotters and pacers, is now quartered at Glen Lea Farm, near the city, and is working the brown gelding Hulman, 2:20, and others for speed. Among other well known horses trained and driven during recent years by Pusey may be mentioned such good ones as Mosul, 2:09 1-4; Rustler, 2:15 1-4; Firewood, 2:17 1-4, and Little Betz, 2:23 1-4.



The Foxhall Farm, Norfolk, Va., has sold to John McGuire, New York, the speedy trotters Baron Wood, 2:15 1-4, by Baron Posey, and Princess Kenton, 2:32 1-4, by Great Stakes, dam Lady Kenton, by Hambeltonian Mambrino. The latter is six years old, and was driven a mile in 2:19 1-4 before the sale.



Bishop Wilmer, the bay colt one year old, bred and owned at Plain Dealing Farm, near Scottsville, Va., is a good-looking youngster, and should make a trot-

ter with age and development. He is a son of Virginia Chief, and Flora Jefferson, by Bay Diamond, son of Mambrino Patchen. The handsomest three year old at Plain Dealing and one of the best looking to be seen at any breeding establishment is Flora Allerton, chestnut filly, 3, by Allerton, dam Flora Jefferson. The filly was bred by C. W. Williams, owner of Allerton.



Norfolk has joined the circuit of Virginia Horse Shows, and will follow Richmond, the dates chosen being October 19th to 23d. The show will be held at the Fair Grounds, and the mammoth steel building there formerly used for exhibition purposes has been secured. The Norfolk show will be held on a large scale, and will prove a great success.



Diomed, winner of the first English Derby in 1780, was brought to Virginia when twenty-two years old, and \$1,000 was paid for the noted son of Florizel and the sister to Juno, daughter of Spectator. The chestnut stallion died in 1808 the property of Colonel Hoopes, when thirty-one years old, and left an imperishable renown. Diomed must have been a horse of unusual vigor, because he had reached the age to vote when brought to this country, yet the voyage of thirty days and tossing about in a sailing vessel did affect his spirits and he landed full of life. The fate, however, of two other winners of this classic event of the English turf was very different, as Blue Gown, winner of the ninetieth Derby, and Kingcraft, hero of the ninety-second, who were purchased by American breeders, both died on the journey over, though they were shipped on a steamship in comparative luxury. The cost of Diomed presents a strong contrast to the \$10,500 and \$150,000, paid respectively by Charles Reed for imp. St. Blaise, and W. B. McDonough for imp. Ormonde. The last named horses are the only other Derby winners that ever landed in this country alive, with the exception of Diomed and St. Giles, yet the son of Florizel proved more valuable than both of them put together, for he sired Sir Archy, the Emperor of American stallions, who, in turn, got Timoleon, and from his sons came the famous Boston, sire of the immortal Lexington. Sir Archy, Timoleon and Boston were all bred in Virginia. BROAD ROCK.



### Sale of Ellerslie, Virginia, Yearlings.

The Ellerslie yearlings (20 head) sold at Gravesend, N. Y., on June 12th, for sixteen thousand eight hundred (\$16,800) dollars, an average of eight hundred and forty dollars per head. This shows what Albemarle grit and grass will do. Mr. J. S. Stark's Red Reynard, by imp. Fatherless, dam Miss Rhodie, brought one thousand dollars.

## Miscellaneous.

### THE ACTION OF POISON ON BIRDS AND ANIMALS.

*Editor Southern Planter:*

As the nux vomica question is practically settled, I hope I may be pardoned for contributing an additional mite.

The late Judge Pressly, of this State, once published an article in the *Southern Cultivator*, stating that he had used it (nux vomica) with great effect for years. He could not say that it killed the hawks, but that they disappeared and did not return for a long time. He also quoted Mr. M. Pankerin, a distinguished chemist of Charleston, as saying that the poison was only effective upon such of the feathered tribe as came into this world with their eyes closed. This, I note, does not agree with the opinion of any of your correspondents.

Now, as to certain animals being immune from certain poisons, I can state of my own knowledge that a hog cannot be injured by strychnine. Have fed it to them myself, and a good many years since, when the negroes in a certain part of Georgia would not allow the farmers to own a hog, the latter were driven to the expedient of using strychnine, and it is on record that one morning a negro family failed to show up, and examination revealed the fact that they had gone to the next world, and the remainder of the hog was found in the house. The effect is said to last about three weeks, a teaspoonful to one dozen hogs. As the hog in his natural state kills and eats rattlesnakes, he must be proof against other forms of poison. Likewise, arsenic, so fatal to many animals, is a first class tonic for dogs. I have seen living dog skeletons made fat enough in a few weeks to work up into sausages by one dose of arsenic—i. e., a teaspoonful. Have poisoned rabbits with arsenic, and they were eaten by minks without ill-effect. I remember the case of one party using nux vomica on his fowls who found an owl of the heaviest calibre unable to make an attempt to escape, and so continued to live for some time. My idea is that instinct or common sense teaches them to boycott a territory where the diet is not suitable, or they find the natives can "go one better."

*Beaufort Co., S. C.*

SENEX.

### SOME GOOD SOUTHERN RECORDS.

The agriculture of the South, as well as that of the North, can show some good records. Those who have formed their ideas of Southern agriculture from the reports of methods practiced and results obtained by

the average or poorer class of farmers will doubtless be surprised at some of the following records given by the Practical Farmer, in reply to an Ohio writer:

While there is more general good farming in Ohio, it is not the only place where good farming is done. Even in the poor South there are farmers who need not be ashamed of what they are doing. We suppose that even in the "agriculturally prosperous North" a crop of 46 1-2 bushels of wheat per acre would be considered a fine crop over an 80-acre field. And yet this crop was made down in North Carolina on a clover sod by the late Governor Holt. Thirty bushels of wheat per acre from seed sown the middle of December, after a crop of \$50 per acre had been taken from the field the year before, does not look like bad farming. And yet Mr. Dautridge, of Edgecombe county, N. C., did this after getting \$50 worth of cotton per acre from the field. We suppose that 75 bushels of oats per acre would be thought a fine crop even in Ohio, and yet this crop was made in North Carolina, and the man who raised it cut two tons of pea vine hay from the same land after the oats were harvested, and left the land in crimson clover.

In Maryland the late General McKinney was assessed for taxation on one million dollars' worth of real estate made by farming since the war, and Capt. Andrew Woodall, of the same State, has become a millionaire at farming. In Georgia, Mr. Smith, near Athens, gets about \$75,000 a year from his crops and is a millionaire. How many more millionaire farmers are there in Ohio? In Eastern North Carolina we have seen a field from which over 75 barrels of Irish potatoes per acre were shipped North in early June, a crop of pea vine hay grown on the same land by August, and then a crop of late potatoes of 65 barrels per acre dug from the same land in December and the land set in cabbage for the next spring. And these 1,500 barrels of second crop potatoes were all sold for seed to the "agriculturally prosperous North" before Christmas at \$2.50 per barrel, the field showing a yield of nearly \$400 for the season per acre. Can you do that in Ohio, or anywhere else in the "agriculturally prosperous North?"

We suppose that it would be considered a great wonder if a man got \$3,000 an acre from land in Ohio between December and April, and yet the lettuce growers of Eastern North Carolina have been doing that for some time at a cost of about \$500 per acre. If a man in Ohio got \$900 for 30 crates of strawberries it would be heralded in the agricultural papers of that State. And yet last December this was done in Eastern North Carolina from the open field. Our Ohio friend is justly proud of his apple orchard. But if he had attended the State Fair of North Caro-

lina last fall he would have seen apples he has never yet seen. The judges at the fair on fruits were Prof. H. L. Bailey, of Cornell; Colonel Brackett, of the Agricultural Department, and F. W. Taylor, of the St. Louis Fair. They said that they had never seen such a display of apples, and Colonel Brackett said that such fruit grows only in North Carolina and on the Ozarks, and that North Carolina has the advantage in the exuberant fertility of her mountain lands over the thin lands on the Ozarks.

Ohio has fine grass and fine cattle. But out in the plateau region of North Carolina, where the whole land is in grass and the cattle are Shorthorns, we saw men shipping feeders at 4 1-2 cents, live weight, to Ohio, Indiana and Illinois. In Cherokee county we saw 200 big haystacks in one field on land overlaid with the finest of marble. Our friend thinks that the South cannot grow grass. The fact is, that the cotton farmers have been for generations hard at work to keep the grass down. They have neglected forage and stock too much, but are gradually waking up to their possibilities. We saw a man in Eastern North Carolina mowing over two tons of fine hay per acre from land that was in cotton the year before, and not a grass seed had been sown on the land. Can you cut such a grass crop in Ohio from land left idle?

At the North Carolina Agricultural Experiment Station there is a large lawn of Kentucky blue grass over fifteen years old, which is the admiration of all who see it, even of Ohio men, and we have several of them here. The dense sod springs like a mattress under the foot, and shows that grass will grow here if given half a chance. On the college farm last year a sod was plowed and planted in corn. It promised to make 75 bushels per acre, but was cut green and used for soiling, and peas were sown on the land, and these later in the season were soiled off, and land sown in rye and crimson clover, and now the cows are wading in the clover. Ohio land could hardly do much better.

The market gardeners in Eastern North Carolina habitually get two tons of volunteer hay, equal to the best of timothy, on the land from which their early crops of garden peas and snap beans are shipped, and never a seed is sown. They might do better by sowing peas, and some of them do. The South needs more good Ohio farmers, and good farmers from anywhere, to take up the idle lands. The South is "getting there," and while Southern born men greatly admire the farming of the North, they are not willing to admit that all the good farming is done there. With a kind soil and a climate that allows of cropping that can never be imitated in the North, the possibilities of the South are but little understood. The Southern farmers do not think they know it all yet, and I pity the man anywhere who thinks he has nothing to learn, even from the South.

## FILLING THE SILO.

*Editor Southern Planter:*

I have received numerous inquiries recently in regard to my opinion as to the best, as well as the quickest, way to put up ensilage. I am glad to see that the farmers in Virginia and the South generally are at last taking an interest in the silo. There is nothing made on the farm that gives results as quickly as corn put up this way. My object in writing this article is to attempt to save others the trouble, worry and expense in cutting ensilage and filling the silo that I have had to contend with by using different kinds of cutters and elevators. The cutters that deliver the ensilage into the silo by endless chains are a thing of the past. There is so much loss of time, teams idle, men standing around looking, no one at work but the "boss," and he tugging away at set screws, slats, endless chains and various devices that never work smoothly, that it is beyond endurance. I am confident if any one has as much as one hundred tons of ensilage to cut and has already a cutter and carrier of this kind it will pay him to dispose of it and get a "Blower." There is nothing about these machines to get out of order. The silage is blown into the silo through a pipe. There is no need of a stop, from morning until night. It can be put in place in one-fourth of the time it takes to place the elevator cutters, and the cost of the machines is about the same.

T. O. SANDY.

*Nottoway Co., Va.*

## BRIGHT OUTLOOK FOR SOUTHERN FARMING.

"There is no section of the world," said Secretary Wilson, in speaking of his last tour of the South, "which opens such inducements for diversified farming as the Southern section of the United States. I believe that the next few years will see a development greater than has ever taken place in any section of our country, and the keynote of this will be diversified crops, the doing away with the single farm crop, and the feeding of crops on the farm."

Secretary Wilson is a conservative as well as a far-seeing man and a farmer himself, and his words may be taken at their face value. We commend them to our young men.

The brown mare Frances S. Dayton, 2:27 3-4, by Cadmus, Jr., dam the great brood mare Daisy Dayton, dam of Lake Erie, 2:13 1-4, etc., by Rysdyk's Bellfounder, owned by James Cox, Belgravia Farm, Mt. Jackson, Va., foaled on June 1st, a shapely bay filly by Kelly, 2:27, and was bred back to the blood-like, handsome son of Electioneer and famous thoroughbred Esther, the dam of Expressive, 3, 2:12 1-2.



### THE FARMER'S DOG.

The true farmer's dog is a Collie. He is, when properly bred and trained, worth a half dozen "hands" in handling sheep and stock generally.

We have seen a shepherd with two dogs "round up" and hold a flock of hundreds of sheep on the wild, unfenced moorlands of the north of England, and then pass them through a small opening between two short lengths of hurdles and count them without the assistance of another man, and all this done by the dogs without harassing or chasing the sheep. The dogs and sheep are on the best terms with each other, all seemingly enjoying the "round up."

We produce herewith a picture of one of the handsomest dogs of this breed in the country, the imported "General French," owned by the Maplemont Stock Farm, whose advertisement will be found in our columns.

### GAPES IN CHICKENS.

The following comes from A. F. C., Rossville, Ind.:

"Our little chickens are all dying with the gapes. Please publish a remedy for this trouble."

The technical name for that disease of poultry commonly called the "gapes" is verminous trachei-bronchitis or Syngamosis. It is caused by a small round worm, curiously formed, the male being firmly attached to the female, giving it the appearance of having two heads. This worm—*Syngamus trachealis*—is a member of a family of parasites that develop without the assistance of an intermediate host, although undoubtedly it is often found in angleworms, and eating these worms often starts the disease.

Gapes recur year after year on some farms and never are known on others. Where they appear once they are likely to remain with considerable persistency. Sometimes removing the poultry yards even a short distance causes the disease to disappear.

A plan we have used with perfect success is one that we always hesitate to recommend, for a little mistake might do much damage. We prefer it to anything else we have ever tried and have never yet lost a chick, and there is no need of losing any if proper care is taken. This plan is fumigation with sulphur, and it is accomplished as follows:

In the bottom of an old kettle or similar vessel place some coals or a piece of brick or iron heated

red-hot. Have the chicks in a flat-bottomed basket, covered with a cloth; place on the coals or other heating material in the kettle a little sulphur, when a dense and suffocating smoke will rise. Through this smoke slowly pass the basket containing the chicks, allowing some of the smoke to rise through the spaces in the bottom. Pass the basket through the smoke only once before removing the cloth to allow the chicks to catch their breath, as they will be gaping from inhaling the suffocating fumes. Repeat the operation two or three times and then operate on another lot until all have been fumigated. The fumes of the sulphur kill the worms, which are attached to the inside of the trachea, and incidentally kill any lice that may be on the chicks. The fumes of carbolic acid have been highly recommended as a cure for gapes. Carbolic acid is used the same as sulphur, and is safer, but the chicks must be exposed to the fumes for a longer period than would be the case if sulphur were used. It is necessary to use almost as much care when using carbolic acid as when sulphur is the agent employed in destroying the pest. Some of the poultry supply houses have a little instrument called a gape-worm extractor, which is sold for a few cents.

GALLUS BANKIVA.

*Breeders' Gazette.*

When corresponding with advertisers, kindly mention the *Southern Planter*.

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PUBLISHER'S NOTES.

TO ADVERTISERS.

All advertisements and matter pertaining to advertising *must* reach us by the 25th of each month. Please bear this in mind.

WITH THE ADVERTISERS.

Superior Grain Drills are offered the farmers of the South through our columns again this season.

Mr. C. A. Saunders has for sale some finely bred Shropshire Ram and Ewe Lambs.

The Harris Hardware Company has a few Cultivators left, and is selling them at very low prices to avoid carrying them over for another season.

Look up the advertisement of the famous Bickford & Huffman Drill elsewhere in this issue.

Mr. J. H. Ellis is offering some nice Aberdeen-Angus Cattle. Refer to his ad.

Dederick's Hay Press, well known to hundreds of our readers, is offered in another column. This baler is one of the oldest on the market, and is better and cheaper than ever before.

Mr. J. Tabb Janney is offering for sale his splendid herd bull, "Hero of Bunker Hill." This is a splendid specimen of the Angus Breed and a most prepotent sire.

Empire Grain Drills are advertised in an attractive form in another column.

The Ohio Carriage Manufacturing Company makes an attractive offer in this month's advertisement.

Rose Dale Stock Farm is offering Aberdeen-Angus Cattle at "introductory prices." Look up the ad.

Dorset Sheep and Hereford Cattle are offered by H. Armstrong, Lantz Mills, Va.

Tamworth and Poland China Hogs, also Hampshire Down Sheep can be had of Mr. J. C. Graves, Barboursville, Va.

Shorthorn Calves—a couple of nice ones—can be bought of Repass Bros., Wytheville, Va.

The International Stock Food Co. has a large ad elsewhere in this issue. Look it up and send for their free stock book.

Nature's Remedy Company has a card elsewhere in this number.

A LESSON OF THE TIMES.

It is a very neat and attractive hanger in several colors and half-tone effects, handsome enough for home decoration, which the Studebaker Bros. Manufacturing Co. are sending out under the above title. It would be more aptly described as a pictorial history of the rise of a great manufacturing establishment. The upper panel pictures the unpretentious but

Wood's Seeds.

**Seed Potatoes**

for Laté Planting.

Our customers say that Wood's Cold Storage Seed Potatoes have solved the problem.

How to secure a bountiful supply of potatoes all through the year. Our special circular about Cold Storage Seed Potatoes gives full information. Write for it.

**Sow Cow Peas**

To follow your grain crops. They can be satisfactorily seeded all through July. Not necessary to replot grain fields for Cow Peas; run cutaway or sharp-toothed harrow over the fields, and it will give sufficient preparation and make a most satisfactory crop. Write for prices and special circular.

**T. W. Wood's & Sons,**  
SEEDSMEN, - Richmond, Va.

**CELERY** Plants—G. S. B. \$1.40 per 1000; \$300-500;

Strong healthy plants from French grown seed sown thin (in rows) in rich beds. Plants are kept in even steady growth by irrigation. (12 experiments, covering 3 years, by Maryland Agricultural Experiment Station, Bulletin No 83, with American and French seed, purchased from five leading seed firms, showed that American seed produce about 40 per cent of hollow stalks. French seed no hollow stalks.) W. P. G. H. and G. P. \$1.60 per 1000; \$1.00-500. 1,500,000 plants. 1 ship in ventilated boxes, roots in damp moss. F. W. Rochelle. Drawer 7, Chester, N. J.

**TURNIP SEED.**

Fresh Stock of All Varieties.

**DIGGS & BEADLES,**  
Seedsmen,

1711 E. Franklin St., RICHMOND, VA.

**BEESES!**

Mr. Farmer: Do you know that a few colonies of good Italian Bees will pay you a better revenue than any investment you can make? And besides are worth many times their cost to pollinize your fruit and vegetation each year.

My pure bred Italians cannot be beaten in Virginia. I am prepared to furnish Bees by the pound, nuclei or colony.

Full Colony pure bred Italians in complete Langstroth Hive including super and Foundation Starters, \$5.00 f. o. b.

Also A. I. Root's hives and supplies at catalogue prices. Extracted and Comb Honey.

Pure Italian Queens \$1.00 each. Write me anything you wish to know about BEESES or supplies, your correspondence solicited.

J. E. THOMASSON, Bumpass, Va.

Mention the *Southern Planter* in writing.

now famous Studebaker blacksmith shop of 1852—the bud in which was wrapped up the brilliant Studebaker future. For it was this humble shop that by growth, development and enlargement is the logical predecessor of all that the great plant now boasts. Following this is an excellent reproduction of the plant as it now is, with the legends "largest in the world" and "plant covers 101 acres." Below are tastefully grouped the five Studebaker brothers, whose faces have become so familiar, and from a cornucopia on either side of this group comes all manner of vehicles, typical of the endless stream which flows from the Studebaker factory to all corners of the earth. This hanger, 20x38 inches in size, tinned top and bottom, may be had by writing the Studebaker Bros. Manufacturing Co., South Bend, Ind., and enclosing six cents in stamps to pay postage. It ought to be in every school house in the land.

State of Ohio, City of Toledo, ) ss.

Lucas County, )

Frank J. Cheney makes oath that he is the senior partner of the firm of F. J. Cheney & Co., doing business in the city of Toledo, county and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.

A. W. GLEASON,

(Seal) Notary Public.

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

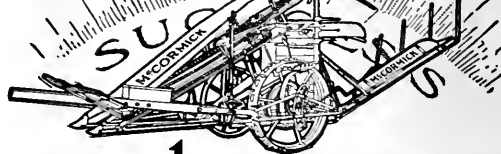
Hall's Family Pills are the best.

#### A NEW ALMANAC.

The 1904 Almanac to be issued by the America Seeding Machine Co., Springfield, Ohio, will be a most complete and valuable reference book. It will contain a complete Almanac, accurate weather forecasts for each month, valuable cooking and other receipts for the housewife, reliable veterinary receipts, reports of experimental stations, butter, egg, grain and produce account blanks, etc., etc., besides departments devoted to the interests of the young man, young lady, the girl and the boy. This Almanac will have a handsome lithographed cover in colors, and will contain 64 pages of the most useful information. The Almanac will be ready for distribution early in the winter. It will be mailed free to any person who will send their name and address. Requests should be sent at once to Department 89, American Seeding Machine Co., Springfield, Ohio.

Get the  
McCORMICK  
CORN BINDER

and



reach success

**T**

HE farmer who reaches success is the one who not only works hard, but who utilizes all of the means within his reach. The McCormick corn binder is within the reach of every man. It will save your corn crop—ears, fodder, stalks and all—and will help double the value of this great crop.

W. K. BACHE, General Agent for  
McCormick Machines, Richmond, Va.

**Bales Hay, Straw, Moss, Husks, Cotton, Wool.**

Reasons and durability are the features that have made Dederick's Baling Presses so famous. Satisfaction *always* follows their purchase. Our catalogue illustrates a variety of styles covering every baling need. You'll know how to buy to best advantage if you get a copy. It is free. Send for it to-day.

**Dederick's Full Circle Press**

is an all round machine for all baling purposes. Requires 50 per cent less draft than any other full circle press.

P. K. Dederick's Sons, 76 Tirrell St., Albany, N. Y.

Prof. JOHN SPENCER, Veterinarian, Virginia Agricultural Experiment Station, says:

**Chloro-Naphtholeum Dip**

"Insures the Destructions of Mites. Outbreaks which have come under our notice have been thoroughly stamped out by dipping in a 2 per cent solution of Chloro Naphtholeum Dip." If you've tried it, you know how good it is, if you haven't, try it now. One Gallon sent prepaid upon receipt of \$1.00 money order or check. Booklet free. It can make money for you. AGENTS WANTED. THE WEST DISINFECTING CO., Inc., 30 East 59th St., New York



## For 40 Years

The above U. S. Registered Trade-Mark has been a safeguard to the farmer that he made no mistake in buying

## Farmers' Favorite Grain Drills

For 1903 we offer to the Farmer many improvements and new devices of proven merit:

Steel Ribbon Grain Tobes,  
New Balanced Angle-Steel Frame,  
"Plowlar" Single Disc, Extension Chilled Hub,  
"Perfection" Grass Seeder,  
Improved Box and Roller Bearings.

Our FREE Grain Drill Literature tells all about it. Write for it to-day.

**BICKFORD & HUFFMAN DIVISION**  
American Seeding Machine Company,  
Dept. B. Springfield, Ohio.

## Pressing Hard Easy

sounds queer, doesn't it? But it isn't difficult to understand if you are using a



## RED RIPPER Hay Press

It bales tight bundles, large or small, and does so with the least amount of strain on the horse. The Red Ripper has been twice entered in competition with other presses, both times at the Georgia state fair, where it was awarded first premium. Dealers who handle the Red Ripper say that it just drives other hay presses out of the market. The lowest priced press on the market, and costs less than others to operate. Progressive, economical farmers will want to know more and can be sending for our new Catalog No. 453. Distributing points, Baltimore, Memphis, Cincinnati. Address **SIKES MFG. CO., Milledgeville, Georgia.**

## The Hay Baler

which is in a class by itself.



"ELI" PRESSES bale fastest and best for shipping and market. Largest Feed Openings, horse and team powers, 20 styles and sizes. Many featured machines, standard of the world. Get this Free Bill catalogue. **Cottrell Plow Co., 1188 Hampshire St., Quincy, Ill.**

## ATTAINING SUCCESS.

Success affords us the means of securing additional success, as the possession of capital enables us to increase our pecuniary gains.—Stanislaus.

Every one likes to succeed, no matter what the undertaking may be. The merchant strives to build up a large business, the scholar seeks to perfect himself in his studies, and the farmer is tireless in his efforts to increase the yield of his crops. Some succeed in their efforts, while others fail to attain success. Washington, Lincoln and Grant are splendid examples of what properly directed effort will accomplish, even though one is compelled to overcome seemingly insurmountable obstacles. Success on the farm to-day is secured largely by the proper selection and use of machines. It is impossible to save all of the corn crop without using machines, and the McCormick corn machines enable the corn grower to double the value of his crop. They are the machines to buy if you wish to attain success.

To supply a sufficiency of available nitrogen is the husbandman's most difficult, yet most necessary task. To furnish his animals with an adequate supply of digestible protein (nitrogenous ingredient) in their rations is equally perplexing to the feeder of live stock. Without a sufficiency of nitrogen, plants fail to acquire their full development and return ample profits in grain or other products. In a similar way animals cannot fully develop a strong muscular frame, perfect bones and tendons, or the vim and vigor of robust constitutions, in the absence of a sufficiency of protein. Corn lacks this principle. Oats and other cereals give us but some fl to 14 per cent., while wheat bran is not much richer than the grains in protein. Dried blood meal, manufactured by the Armour Fertilizer Works, and advertised elsewhere in this issue, shows an analysis of 37 per cent. of digestible protein, hence should at once command the attention of stock feeders. It has been fully tried as a food, is economical, prevents many diseases, and comes in a handy form for use. It will also keep poultry healthy, and make hens lay. Address the above firm for their booklet, giving full particulars.

## GENERAL CONUNDRUMS.

When is a kiss like a rumor? When it goes from mouth to mouth.

Why is the horse the most curious feeder in the world? He eats hest without a bit in his mouth.

Why is your nose in the middle of your face? It is the scenter.

What is the latest thing in dresses? Night dresses.

Why do chimneys smoke? Because they cannot chew.

When is a ship most happy? When she rests on the bosom of a swell.



## Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our

## ELECTRIC STEEL WHEELS

have given a new lease of life to thousands of old wagons. They can be had in any desired height and any width of tire up to 6 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white Dickey axle, steel wheels, steel bounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it.

**ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**



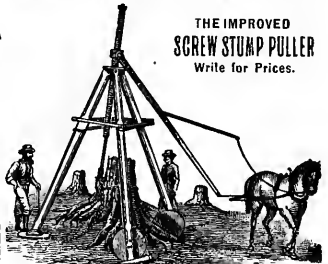
**ELECTRIC**

**WE'LL PAY THE FREIGHT**  
and send 4 Buggy Wheels, Steel Tire one, - \$7.25  
With Rubber Tire, \$16.00, 1 mfg. wheel 1/2 to 4 in. tread. Top Buggy, \$25.75; Harness, \$1.50. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. W. V. BOON, Chasman, Ga.



## THE IMPROVED SCREW STUMP PULLER

Write for Prices.



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

## STUMP PULLER

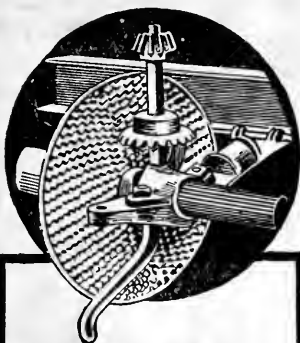


## HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

**Hercules Mfg. Co., 413 17th St., Centerville, Iowa.**



## ONLY ONE

more feature demonstrating the unquestioned merit of Superior Seeding Machines. The above illustration shows the Superior Disk Wheel with Sliding Pinion. It consists practically of 13 wheels of different sizes cast upon a solid plate. With it 13 different quantities can be sown from each side of the distributor wheel. This dispenses with all loose wheels and all side draft. There are no removable gears to get lost and cause annoyances. Change of quantity by change of speed. Our new catalogue No 14 which is free, tells all about this and other Superior devices. Write for it today.

## SUPERIOR

Seeding Machines will do more and better work than any other drill. Will not choke in trash, built solid and strong of the best materials. One man or boy can do perfect seeding in any field under all conditions. Superior Seeding Machines are guaranteed, and the guarantee is good.

**SUPERIOR DIVISION,  
AMERICAN SEEDING MACHINE CO.,  
SPRINGFIELD, OHIO.**

**The WEBER 14 H. P. Gasoline Engines** for cradling, grinders, shredders, cutters, breakers, etc. Free catalogue gives all names. Weber Gas & Gasoline Engine Co., Box 100, Kansas City, Mo.

Self-cleaning with bearing.

**RIFE HYDRAULIC ENGINE WATER RAISING** by water power is the sure, economical way. A constant stream for irrigation, stock or household use. **PUMP TO ANY HEIGHT.** No attraction. The thing for the country home. Sold on 30 days trial. Write for free catalogue. **RIFE ENGINE CO., 129 Liberty St. New York.**

## STEAM MERRY-GO-ROUND

for sale; Price \$300.00. Is 10 good shape and anyone with a little push can make it pay 6 per cent. on \$30,000. Satisfactory reasons for selling.

J. W. & T. H. MASSEY, Hampton, Va.

### A NEW ADVERTISER.

We invite attention to the advertisement of J. S. Moore's Sons, elsewhere in this issue. This firm succeeds Mr. D. O'Sullivan in the grocery business at Eighteenth and Main streets, Richmond, Va. The old store house is being renovated and remodelled and restocked with everything in the grocery line. As Mr. O'Sullivan sold the good will of his business also, the new firm is expecting his old customers to favor it with a share of their patronage. Best groceries, prompt attention and lowest prices in the city are the grounds upon which the trade of our customers is solicited.

### ELI HAY BAILERS.

Hay bailers on a large scale will be interested in the Eli Power Presses, which are advertised elsewhere, by the manufacturer, the Collins Plow Company, Quincy, Ill. All told, this company manufactures near two-score of presses, including about everything that could possibly be desired in pattern and size. The power "Elis" are distinguished by numerous specially valuable features, such as being self-feeding, automatic condensing hoppers, automatic block placers, signal bells for regulating size of bales, etc. These presses are made in both wood and steel cases. They have a record of three bales a minute, which, considering the shapely and solid, compact character of the bale, ought to meet the requirements of the most exacting buyer. The Eli press is past the experimental stage. It has established a most enviable character by long service in the field. Most of our readers are acquainted with it. Such as are not and are thinking of buying should not think of placing an order until they have procured the catalogue and made a study of its claims. Consult the ad. and write for catalogue. It is mailed free.

### HIS REASON.

It has been said of the southern dandy that he has not always a clear idea as to property rights, but on some points it appears that he is not in the least hazy.

An old colored man in the days "befo' de wah" was given one of his master's cast-off hats, which he wore with great pride. One Sunday his master met him coming home from a camp-meeting in a pouring rain, bare-headed and holding his hat under his coat. Later on the master questioned him jocosely, "Why didn't you wear your hat, Jerry? Did you feel the need of cooling your head?"

"You see it am laik dis, sah," responded Jerry. "Mah head am yours, but mah hat am mine, an' nachevly I feels laik takin' care ob it, sah."—*Youth's Companion.*

See the *Southern Planter*: In writing.

### "THE INVINCIBLE"

### POTATO PLANTER

is the most practical and successful hand potato planter made. Will not clog, but under all conditions does perfect work. Only planter made with open wire alleve. A boy can plant from four to six acres a day with an Invincible Planter. Strongly made. Handles unbreakable and adjustable. Read these unsolicited letters:

Gentlemen,—I am very highly pleased with the Invincible Potato Planter. Would not take \$10 if I could not get another. Not every farmer can afford to buy a \$100 two-horse planter to use only for a day or two and stand idle the rest of the year.

L. H. SNOW,  
Phoenixville, Conn.

Read this: Gentlemen,—I bought one of your Invincible Potato Planters as a trial sample last year and think it equal to an extra man, besides being a good back saver.

C. W. GRIGGS,  
Roan Valley, Pa.

Reliable Agents Wanted. Any farmer can not invincible Planters on sight. Write for terms.

Circulars Free.  
H. H. WABERS M'FG. Co.,  
Racine, Wis.



### SEPARATORS AND POWERS.

For 1, 2 and 3 horses, with governor, level or even tread. Catalogue free.

Sweep powers, Corn Shellers, Feed Mills, Steel Rollers, Mowers, Rakes, Cultivators, Saws, Engines—3 to 25 H.P., mounted or stationary. The Mooling Mfg. Co., Toluca, Pa.

## WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

Loomis Machine Co., Tiffin, Ohio.

## SEPARATOR FOR SALE OR EXCHANGE

A De Laval Hunning Bird Separator, in perfect condition, used about 20 times; will sell cheap for cash or will exchange for a pure-bred Bull Calf of any Beef Breed—Polled preferred.

W. H. MacNAIR, Tarboro, N. C.

## CULTIVATORS BELOW COST!

Roofing Materials.—Tin plate, iron roofing, paper roofing, nails, hardware. Carriage and wagon materials. Cook stoves etc. Don't write us unless you want the best at the **Lowest Price.**

**HARRIS HARDWARE CO.,** 409 E. Broad, Richmond, Va.

## ROUND SILO

THE PHILADELPHIA.

The only Perfect Continuous Open Front SILO made. See Open-Top Patent Roof. Ask for Catalogue. E. F. SCHLICHTER, 321 Vine St., Philadelphia, Pa. Also made in the West by Duplex Mfg. Co., South Superior, Wis.





**WIRE FENCE.**

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

THE HARD STEEL WIRE FENCE CO., Cuyahoga Falls, Ohio.

**MANLOVE SELF OPENING GATE**



The only machine that will pay for itself without help, or save your frisky horse of a write from a runaway.

Catalogue free  
MANLOVE GATE CO.  
272 HURON ST. CHICAGO, ILL.

**Genuine Spiral Spring Wire FENCES AND GATES**

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO. Columbus, Ohio.



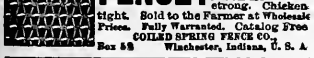
**PAGE 12-BAR, 58-INCH FENCE**

comes pretty near being the perfect farm fence. PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



**LAWN FENCE**

Many designs. Cheap in wood. 32 page Catalogue free. Special Prices to Contractors and Churches. Address COILED SPRING FENCE CO. Box 4, Winchester, Ind.



**FENCE! STRONGEST MADE.**

Light. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalogue Free. COILED SPRING FENCE CO. Box 58 Winchester, Indiana, U. S. A.

**FOR SALE. A McCormick**

IMPROVED Corn Harvester

It is in perfect condition and does fine work. W. E. THOMAS, Nassawadox, Va.

**NO HUMBAG! Three**

FREE from anxiety over wash day are those who use a DILLEY QUENCH WASHER. We manufacture three styles of washers: to introduce them we will give you the advantage of our factory prices for a short time. Write for catalogue and prices. Our Up-to-Date at \$2.50.

LYONS WASHING MACHINE CO., Lyons, Mich.



**HIGHEST PRICES FOR BALED HAY.**

The prices obtained for baled hay are largely influenced by its appearance. Uniformity of sections, evenness and squareness of ends, command both better sales and better prices than poorly baled hay. To get the best prices means the production of the best appearing bales, and in this respect the work done by the Dederick baling presses, manufactured by the P. K. Dederick's Sons, Albany, N. Y., places these machines in the lead. Every farmer interested in the baling of hay or straw should send to this firm for their latest catalogue. It is instructive and contains descriptions of baling machines in various sizes and styles for every baling need.

**FOR AN IDLE MOMENT.**

He kissed her back.—*Atlanta Constitution*. She fainted upon his departure.—*Lynn Union*. She seated herself upon his entering.—*Abia Democrat*. She whipped him upon his return.—*Burlington Hawkeye*. How about the woman who was hurt in the fracas?—*Railway Age*. He kicked the tramp upon his sitting down.—*American Pharmacist*. We thought she sat down upon being asked.—*Saturday Gossip*. He kissed her passionately upon her reappearance.—*Jefferson Souvenir*. A Chicago foot pad was shot in the tunnel.—*Western Medical Reporter*. We feel sorry for the poor woman who was shot in the oil regions.—*Medical World*. And why not drop a tear for the man who was fatally stabbed in the rotunda, and for him who was kicked on the highway?—*Medical Age*. How about the fellow that was shot in the tenderloin district?—*Rockwell Phonograph*. Please shed a few tears for the Ruthven girl who was hit on the front porch.—*Ruthven* (la.) *Appeal*.

**CHLORO NAPHTHOLEUM.**

This well-known Dip has received very strong endorsement recently at the hands of Dr. G. T. Seabury, State Veterinarian of Wyoming. He has issued a proclamation to the stockmen of that State, that all stock affected with Texas Itch, Spanish Itch, Range Itch, Mange or Lice must be dipped, and says that Chloro Naphtholeum is the best possible remedy to obtain, and strongly urges its use.

The West Disinfecting Co., manufacturers, of New York, no doubt feel proud of this strong endorsement, and very justly so.

Chloro Naphtholeum is advertised elsewhere in this issue.

Why is a kiss like a sermon? It requires two heads, and an application.

When was Shakespeare a broker? When he furnished stock quotations.

Why don't Sweden have to send abroad for cattle? Because she keeps her Stock-holm.

**The Editor**

of this paper would not publish this advertisement if it did not know the Ohio Carriage Mfg. Co. to be perfectly responsible, and that they would make good every claim they make for the celebrated

**Split Hickory Vehicles**

Sold on 30 Day Free Trial and covered with iron-clad guarantee for 5 years. This is our Celebrated

**Split Hickory Special** 4750

which has 100 points of merit,

sold direct from factory to user for \$47.50 if the price is just high enough to ensure a good job, and at least 25% below what a dealer would ask for a similar job—not a Split Hickory one. REMEMBER we manufacture only SPLIT HICKORY VEHICLES. Write at once for FREE Catalogue

OHIO CARRIAGE MFG. CO., Station 41, Cincinnati, Ohio.

**30 YEARS SELLING DIRECT**

Vehicles and Harness direct to consumer at factory cost plus one profit only. Large Catalogue Free.

ELKHART CARRIAGE AND HARNESS MFG. CO., Elkhart, Ind.

**FRAZER**

**Axle Grease** Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.

**SAN JOSE SCALE** and other insects can be controlled by using

**GOOD'S CAUSTIC POTASH WHALE OIL SOAP, No. 3.**

It also prevents Curl Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide. 50 lb. kegs \$2.50; 100 lb. kegs \$4.50. Half barrels, 270 lbs., at 3/4c per lb.; barrels, 425 lbs., at 2/4c. Large quantities, special rates. Send for circular.

939-41 N. Front St., JAMES GODD, PHILADELPHIA, PA.

**S. MITCHELL PRACTICAL BUSINESS COLLEGE**

Nearly 20 years we have been training men and women for business. Only Business College in Va., and second in South to own its building. No vacation. Catalogue free. Bookkeeping, Shorthand, Penmanship by mail.

*S. Mitchell*

"Leading bus. col. south Potomac river."—*Phila. Stenographer*.

**MARK YOUR STOCK.**

USE THE

**KENTUCKY ALUMINUM EAR LABEL**

Made by F. H. JACKSON & Co., Winchester, Ky Write to them for free samples.

## GRAIN DRILL and FERTILIZER

The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. So complex gearing to get out of order. Boxes are close to ground.

Guaranteed Fully Equipped

Easily recycles quantity of seed or fertilizer, and sows with regularity. Weights, Only 700 lbs. Agents Wanted. Write for Catalogue. THE HENCH & DRUGGOLD CO., 517 W. York, Pa.



### FREE SAMPLE

OF "THE STORY OF MY LIFE AND WORK," By Booker T. Washington.



Send us your name and address. We want you to have a copy of this autobiography of the greatest living Negro for the purpose of introducing it in your community. It is a remarkable seller, big profit; agents are making from \$4 to \$10 per day. Will you introduce it by selling or getting us an agent? If so, send at once for a sample.

J. L. NICHOLS & CO., Atlanta, Ga. Selling Price \$1.00. 415 Ansell Building.

## HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.  
C & O Main St. Depot Richmond, Va.

## TO HOMESEEKERS.

### "THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt., O. P. A., Lands and Immigration, Roanoke, Va.

WE HAVE A LARGE LIST OF **FRUIT, POULTRY and TRUCK FARMS** Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also **GRAIN AND STOCK FARMS** From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.  
J. R. HOCKADAY, Manager.

### EMILY'S CHARGE.

(A Serial Tale by Mary Washington.) CHAPTER I.

"Extraordinary!" exclaimed Mrs. Brown.

"Preposterous!" said Mrs. Smith.

"Absurd!" chimed in a third lady.

"Quixotic!" exclaimed a fourth.

All these comments were uttered over the tea table of Mrs. Brown, and the subject of them was a young girl in the neighborhood, Emily Heningham, an orphan left in charge of a young sister and brother. What they criticized in her was the fact that she had declined what they termed "highly advantageous offers" to adopt her brother and sister, declaring her resolution to keep them with her, and, if possible, rear and support them herself. She was a girl of nineteen, whose mother had recently died, leaving in her charge a sister of twelve and little brother of ten. Her father had died soon after the war, leaving his family much straitened, but Mrs. Heningham's right of dower had enabled her to retain a home for herself and children during her lifetime. Col. Heningham had been deeply involved in debt. Owing to the fatal credit system so commonly practiced in Virginia before the war, he had allowed himself to fall into debt almost before he knew it. He might have extricated himself without difficulty then, but his creditors did not press for a settlement nor indeed care for one, as they were getting a good interest on the claim, and his property seemed an ample security for its final settlement, but when the day of reckoning came after the war, it swept all he had except what the creditors allowed Mrs. Heningham for her contingent right of dower.

Mrs. Heningham's health had long been delicate, but after her husband's death she became increasingly frail, so that the care of the younger children devolved more and more on Emily, who loved them with the double love of mother and sister, an affection which they, on their part, returned warmly. The little girl, Alice, was very sprightly and strikingly pretty. The boy, Walter, was a bright, impressive child, warm hearted and generous, but of an easy, impressionable temperament, that made him peculiarly susceptible to any strong influences, either good or bad, that were brought to bear on him. This latter trait his mother noted in fear and trembling, and as she found her health declining, this subject occasioned her more anxiety than any other. "I wish, dear Emily," she said, "that you could keep your brother and sister with you, especially the former. You understand his disposition and temperament so well, and would strive as earnestly as I would to guard against and counteract his weak points. But I do not see how this can be, and therefore I will hamper you with no promise, and scarcely feel regret to hamper you even by expressing this wish. I ear-

## IF YOU WISH TO SELL -OR BUY- VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.

R. B. CHAFFIN & Co., Inc., No. 1 N 10th St., Richmond, Va.

## VIRGINIA FARMS

\$3 PER ACRE AND UPWARDS. EASY PAYMENTS. CATALOGUE FREE.

GED. E. CRAWFORD & CO., Richmond, Va. Established 1875.

## "PIEDMONT" And all that it implies!

Good land, climate, markets, shipping facilities, churches, schools, good health, moderate prices, easy terms.

TACON & CO., Orange, Va.

**FINE FARMS** in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address ALBEMARLE IMMIGRATION CO., SAM'L B. WOODS, Pres. Charlottesville, Va.

## VIRGINIA FARMS

All prices and sizes. Free list on application.

WM. B. PIZZINI CO., RICHMOND, VA.

## Go South.

For full particulars write A. JEFFERS, Norfolk, Va.

**SOUTHWESTERN VIRGINIA BLUE GRASS FARMS and MINERAL LANDS.** Send for Free Real Estate Bulletin. Southwestern Va. Land Agency, Wytheville, Va.

**WANTED** By a practical Pennsylvania farmer, to rent or manage a good Virginia farm. Best reference. Address "FARMER," Williamsport, Pa.

**WANTED**

POSITION by Practical Poultry man to plan and build a duck and poultry plant for market, for a man having location and capital. None other need answer. Salary expected until business is established. No. 1. references given and same required. Address C. F. G., Care Southern Planter.

**WANTED—A WHITE FAMILY TO WORK** for wagons in the country; woman to cook; another to work in house and dairy (fuel and water right at hand) and a man or boy care for driving horses, work in garden, etc. All at the same home. Address, WALTER RANDOLPH CRABBE, Hague, Westmoreland Co., Va.

**RUPTURE CURED** while you work. You pay \$4 when cured. No cure, no pay. ALEX. S. PEIRS, Box 844, Westbrook, Maine.

# FARMS FOR SALE!

## Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

## No. 3.

Contains 430 acres; 350 acres under cultivation; 80 acres in good original oak and hickory timber. Situated in Loudoun county, four miles from railroad station; one mile from proposed electric railroad. Soil in fine state of cultivation; adapted to grain and grass. Land level and watered by streams, and a beautiful, bold spring in the yard. Good dwelling and outbuildings; two new stock barns. Greater part of farm in grass. Price now, \$20 per acre.

## No. 4.

Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

## No. 5.

Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

## No. 11.

Contains 315 acres in high state of improvement. Large frame dwelling, 10 rooms, 2 large cattle barns, and all necessary farm buildings in good repair. Land watered by spring branches. Situated in aristocratic neighborhood. Convenient to depot and to Washington market. Price, \$50 per acre.

The above-described farms are situated in a neighborhood of refined citizens, with good labor plentiful, and will not be on the market long before being sold. For further information and a more detailed description of any one of them, write to

W. E. MILLER,  
Herndon, Va.

nestly hope, however, that our Heavenly Father may open a way for you to do so."

A few weeks after the conversation recorded above, Mrs. Heningham passed away, heaven borne for dying seems scarcely the right term to apply to the passing away of so pure and gentle a soul. The neighbors thought Emily not only peculiar, but somewhat insensible, because she did not give way to stormy grief or gloomy despair; but amid her grief and loneliness she was sustained by a keen realization of the truth that her mother had passed into "the land of the living," the truly living, returning into the flower of an exquisite and eternal youth, reunited to the lover and husband of her youth, and enjoying every truly human faculty, only exalted to a far higher degree of perfection than is possible in the life of the body.

But although Emily did not give up to clamorous grief nor persistent depression, yet all her life long she cherished as something inexpressibly dear and sacred, the memory of her mother, whose influence always lingered about her, helping to shape and ennoble her whole subsequent life.

After the first few days of bereavement had passed away, Emily began to revolve in her mind what arrangements she should make for the future. Fortunately, she was naturally of a decided and self-reliant disposition, and these traits had been strengthened by the experiences through which she had passed since her father's death. They could no longer live at their old home, which, for several years past, they had held only by the frail tenure of their mother's life estate, and now with the exception of a small piece of property that had belonged to her, they had nothing. Their old home was a noble one, situated in the Piedmont Valley on James river. It bore the name of "Soldier's Joy," which Emily's great grandfather had bestowed on it, in the joy of his heart when he returned from the Revolutionary war, to sit tree under his own vine and fig tree with his family.

Situated on a gentle hill, the house commanded a landscape of peaceful beauty, James river flowing between its willow fringed banks, wide bottom lands on either side, covered with tobacco, or waving grass or long serried ranks of corn, the canal following the line of the river, bordered by locusts and other trees, which in summer were profusely festooned with garlands of white dermats and scarlet trumpet flower, whilst "Some blue peaks in the distance rose to give a finishing beauty to the scene."

The yard at "Soldier's Joy" was encompassed by a belt of beautiful, cone-like cedars, whose boughs were musical with the songs of birds. The garden was bisected by a central walk dividing the flower and vegetable departments, like the line between poetry and prose. The walk was bordered with box, a shrub dear to our

# MORPHINE

OPIUM AND WHISKEY HABITS CURED AT  
YOUR HOME.

Private Sanatorium for Complicated Cases.

WHAT THOSE SAY WHO ARE CURED.

Evidence Voluntary and From Such Men as Dr.  
Tunstall and Others Admits of No Doubt.

THE NELSON COUNTY MEDICAL & SURGICAL  
SOCIETY.—DR. W. M. TUNSTALL, PRES'T.

LOVINGSTON, Va., Dec. 12, 1902.

Dr. B. M. WOOLLEY, Atlanta, Ga.:  
Dear Doctor,—As I am alone in my office to-night, and supposing that you are not unlike other M. D.'s in appreciating good reports from their patients, I shall do what I have often and for quite a while intended, drop you a few lines.

You have a great number of cases, but I shall feel it deeply if you do not recall my sad case. I am glad to say that I firmly believe that I am entirely and permanently cured of the Drink Habit, as I have never even so much as wanted a drink in any form since I took your eradicator, now eighteen months ago. It was the best Ten Dollars I ever invested. Unfortunately people are skeptical, and especially so as regards whiskey cures, as I freely admit I was. But not so now (as regards your remedy), and my chief regret is that I had not used it before I did and that I cannot personally tell every one addicted to the use of intoxicants my experience.

This endorsement of your remedy, as you are doubtless aware, is positively prohibited by the "American Code of Medical Ethics," of which I am a strict adherent, but my excuse is plain, for I would feel that I was not a "manly man" could I not speak my honest convictions not for your advantage, but all mankind.

I am glad to say the above is entirely voluntary on my part, as I have not, as you know, heard from you for fully twelve months. With my best wishes I am sincerely and gratefully yours,

W. M. TUNSTALL, M. D.  
Address for book and full particulars, Dr.  
B. M. WOOLLEY, 200 Lowndes Building, Atlanta, Ga.

The RICHMOND, FREDERICKSBURG  
and POTOMAC R. R.  
and WASHINGTON SOUTHERN R'Y

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Atlantic Coast Line R. R.,  
Baltimore and Ohio R. R.,  
Chesapeake and Ohio R'Y,  
Pennsylvania R. R.,  
Seaboard Air Line R'Y  
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Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Routes between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.

Mention the *Southern Planter* in writing.

ELMWOOD NURSERIES.

## ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for BARR'S, PALMETTO, CONOVER.

## APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

## Splendid Assortment of Ornamental, Shade and Fruit Trees.

**EGGS** from B. P. Rocks, Light Brahmas, Brown Leghorns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hallsboro, Va.

### Why Not Get the Best?

**Pierce's Celery Compound** for Constipation, Dyspepsia, Malaria and Chills and Fevers, and a general tonic tablet. Send for free sample, its costs you nothing to try the best family medicine on earth.

AGENTS WANTED.

NATURE'S REMEDY CO.,  
WASHINGTON, D. C.

## PILES CURED PERMANENTLY By LOMOLO TABLETS.

A pleasant home remedy that is guaranteed to cure. One of the purest and best medical preparations ever compounded. Let us prove our statements. All correspondence strictly confidential. Write us. Dr. M. L. GATES, Pres. Lomolo Remedy Co., 288 Stewart Bldg., New York City.

**THE NEELEY INSTITUTE**  
GREENSBORO, N. C.

For the treatment of THE LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

AGENTS.—We can but you next to the best sellers out sell everywhere on sight; failure impossible; our proposition surprises everybody; work up steady trade and income. Sample circulars free.

DULL SUPPLY CO.,

126 Wallace St., FORT WAYNE, IND.

ancestors' hearts. The flower beds were planted in lilies of the valley, hyacinths, white violets, tulips, pinks and peonies. The roses consisted of the Greville, the damask, the velvet, the tiny little multiflora, the moss rose, the seven sisters with their varying tints, all blushing on one stem. Then there were lilacs, both white and purple, the fragrant yellow jessamine and delicate, white star jessamine, noblest of all flowers. Altogether, it was a charming old garden.

We have seen above that the orphans had one little piece of property inherited from their mother. This was a cottage within a mile or two of a popular watering place in the mountains of Virginia, with twenty or thirty acres of land attached to it. The way it came into Mrs. Heningham's possession was as follows: She had an old aunt, Miss Melissa Allison, who had great faith in the efficacy of the waters at the above mentioned resort, but who could not stand the noise and hustle of a crowded watering place, and who therefore bought a little tract of land a few miles from the springs and built herself on it a cottage, to which she resorted each summer in her own carriage, attended by her own cook and maid, and accompanied by one or two nieces or cousins. When the old lady died she bequeathed the cottage and tract of land attached to it to her niece, Mrs. Heningham, and now this little piece of property was the only resource Emily had, except her capacity to teach.

(To be Continued.)

### ASTOUNDED.

During a visit to the South with an eclipse expedition some years ago an eminent American professor met an old negro servant whose duty it was to look after the chickens of the establishment where he was staying. The day before the eclipse took place the professor in a fatal moment called the old man to him and said: "Sam, if to-morrow morning at 11 o'clock you watch your chickens you will find they will all go to roost."

Sam was skeptical, of course, but when at the appointed time next day the sun in the heavens was darkened and the chickens retired to roost, the negro's astonishment knew no bounds. He approached the professor in awed wonder. "Massa," he asked, "how long ago did you know dat dem chickens would go to roost?" "Oh, a long time," said the professor, airily.

"Did you know a yeah ago, massa?" "Yes."

"Den dat beats de debil!" exclaimed the astonished old man. "Dem chickens wuzn't hatched a yeah ago!"—*The American Inventor.*

What should you do if you split your sides with laughter? Run 'till I got a stitch in them.

## Little! Chicks

Thrive when fed on our

**BABY CHICK FOOD.**

A perfect balanced food. Send for free sample and our large illustrated catalog of POULTRY SUPPLIES.

INCUBATORS and BROODERS.

FANCIERS' SUPPLY CO.,  
517-519 West Broad St.,  
Richmond, Va.

EVERYTHING FOR THE FANCIER.

## White Plymouth Rock

Eggs during June and July, 13 for 75c; 30 for \$1.50. No White Holland Turkey eggs for sale after June 10th.

JOHN A. CLARK, - Shirley, Va.

## SPECIAL SALE

Pen, very fine Barred Plymouth Rock chickens, as follows:  
8 3/4 full stock 1 year old hens, my own raising; 1 thorough-bred hen from S. B. Johnson yards; thorough-bred cockerel, my own raising. These are very fine birds, beautifully marked. They are well worth \$15.00, but to sell quickly will take \$12.00. This is a rare opportunity.

PIEDMONT POULTRY PLACE,

Miss E. Callie Giles, Prop. Whittle's Depot, Va.

## 32 Varieties Best Poultry

in either old or young stock.

JNO. E. HEATWOLE, Harrisonburg, Va.

## BROWN LEGHORNS.

Young stock for sale in

Fall. Prices reasonable.

White Plymouth Rocks.

R. W. HAW, Jr., - Centralia, Va.

## PIT GAMES:

Black Devils and Red Horses.

These cocks won 90 per cent of battles fought in 1901 and 1902 and have never lost a battle when comeness and cutting qualities could win. Choice lot of young and old stock for sale.

THOS. W. JARMAN, Yancey Mills, Va.

Pure-bred, young,

## Barred Plymouth Rock

hens and roosters, for sale; 75 cts. each. Miss S. M. HITER, Ellisville, Louisa Co., Va.

ANGORA GOATS are handsome, hardy and profitable for large circular address E. W. COLE & CO., Big Gifty, Ky.

**WANTED!**

ALL KINDS OF

**LIVE WILD BIRDS AND ANIMALS**

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Etc.

**CECIL FRENCH,**

718 Twelfth St. N. W., Washington, D. C.

**BARRED and BUFF  
PLYMOUTH - ROCKS  
AT HALF PRICE.****FRED NUSSEY SUMMIT, Spots. Co., Va.****HAWKSLEY STOCK FARM.****Large ENGLISH BERKSHIRES****B. P. ROCKS FOWLS,**

Eggs from same, \$1 per 13.

**J. T. OLIVER, Allen's Level, Va.****FOR SALE.****Large English Berkshire Hogs,  
Barred Plymouth Rock Chickens**

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. #3 EGGS IN SEASON.

**JOHN P. FOSTER, Norecreek, Ohio Co., Ky.**

CHOICE YOUNG

**BERKSHIRES**

of Both Sexes, for Sale.

By Highclore Topper of Blitmore II, out of Imported Harlene.

**Mitiborya Farm, Box 901, Richmond, Va.****ESSEX PIGS—FOR SALE.**

Some fine Pigs, from Registered Stock, not mated, at \$10.00 per pair, crated F. O. B. 8 to 10 weeks old. Your orders solicited.

**L. G. JONES, Bethania, N. C.**

Registered P. Chinas Berkshire, C. Whites. Fine large strains. All ages, mated not a in 8 week pigs. Pigs and Sows, Service boars and Poultry. Write for prices and free circular.

**P. F. HAMILTON, Cochranville, Chester Co., Pa.****Don't Like Cheap Stuff No How**

Even the best is never too good. You'd better buy of Owens. Finest Stock. Prices right. DUREC JERSEY, best all purpose hog; also POLAND CHINA. E. P. R. Chickens, M. B. Turkeys, M. P. Ducks. Eggs in season. Write, or better still, call and see.

**THE CEDARS****W. G. OWENS,****P. and S. FARM.****Milothian, Va.**

WANTED—Fair Pure Bred PERCHERON and CLYDESDALE Brood Mares; DUREC Boar and Sows; one SHROPSHIRE, SOUTH-DOWN and LINCOLN Ram and five Ewes. Address STOCK, care Southern Planter, with prices and particulars.

**SOME AMUSING LETTERS.**

Platte City, Mo., Jan. 25, 1903.  
Gentlemen,—The wheels I got of you carried an old Spanish cannon from Tracey to Platte City over a turnpike road with rocks sticking above the surface four inches. The cannon weighed 14,000 pounds, and people expected to see the wheels break down, but they didn't. I broke two axles and pulled the tongue out once, but the wheels did not break, and if in 1,000 years from now any one visits Platte City the old cannon will still be standing and people will tell about the little sprindling wheels that carried it there.

Yours truly,  
J. C. H.

Evansville, Ind., April 21, 1903.  
Gentlemen,—Some time ago I bought a set of metal wheels of you, and like them very much. I have trouble keeping my wagon at home, as my neighbors have bothered the life out of me ever since I got it. I would not do without it, and never use my high wagon at all, except when my neighbors have my little wagon. As ever, I remain,

Yours respectfully,  
C. H.

Dover, N. H., April 6, 1902.

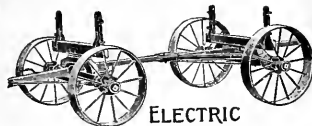
Dear Sirs,—From your catalogue I believe you sent me stronger wheels than I ordered. You must have thought I was looking for a bargain, and I certainly got one, as they are as good to-day as when they left the shop and run one-third easier on smooth, hard road, and two-thirds easier on a soft or sandy road. We would have better roads with less expense, could draw the same load easier, have fewer balky horses, and our chances of reaching heaven would be increased 25 per cent. if we all used wide tired metal wheels.

Thanking you for the new catalogue and booklet, I am,

Very truly yours,

C. E. H.

The original of these letters can be seen at the office of the Electric Wheel Co., Quincy, Ill., to whose

**ELECTRIC**

wheels and wagons they refer. Send for their free catalogue and know more about their wheels and wagons.

**A BUSTED BRONCO.**

To the Gazette:

Bronco busting on the range is always an interesting topic to the boys who are raised upon the farms of the great Central West, and who often mount unbroken colts for the first time while they are running in the pasture, frequently without having saddle or bridle on them. After wit-

**Warranted  
to give satisfaction.****GOMBAULT'S  
CAUSTIC BALSAM**

A safe, speedy and positive cure for

Curb, Spint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sores, Thorns, etc., it is invaluable. Every bottle of Caustic Balsam is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

**THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.****DEATH TO HEAVES**

Guaranteed

**NEWTON'S Heave, Cough, Diarrhoea and Indigestion Cure.** A veterinary specific for wind, hiccups and stomach troubles. Strongly recommended. \$1.00 per can. Dealers, Mail or Ex. paid. **Newea Horse Remedy Co., Toledo, Ohio.****Shropshire Rams.**

In this my annual offering of Rams, I feel safe in saying that it contains the best lot of yearling Rams that has been offered at the price in the United States for a long time. These Rams are 14 months old, and weigh (May 15th) 150 to 165 pounds, actual weight. They have individual merit backed by strong breeding. Careful selection will be made for pairings at a distance.

ENGLISH SETTER PUPS.  
(Count Rod, ex-Glady's R., both prize winners.)**WARREN RICE, Winchester, Va.****WOODLAND DORSETS.**

ONE of our customers writes: "My sales of grade Dorset winter lambs run this year; first 87 head brought \$870; then prices declined somewhat. I am looking for another good Dorset ram." Woodland Dorsets are standard in excellence.

**J. E. WING & BROS., Mechanicsburg, Ohio.****150 JACKS, JENNETS  
and Mules 150****BAKER'S JACK FARM,**

Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell two Percheron Stallions at close figures.

**Lawrence, Ind.**Mention the *Southern Planter* in writing.

# BERKSHIRES

ANNEFIELD HERD

Represents the

## Finest Blood Lines

In England or America.

Stock for sale at all times.

Correspondence Solicited, Inspection Invited.

EDW. G. BUTLER, Annelief Farms,  
Briggs, Clarke Co., Va.

## Poland-China and

## Tamworth Pigs for Sale—

eligible to registration; also

## Hampshire Down Sheep

and grade Hereford cattle,  $\frac{1}{2}$  or  $\frac{3}{4}$  bred. Calves, yearlings and 2 yr. old.

J. C. GRAVES, Barboursville, Orange Co., Va.

"MEADOW BROOK STOCK FARM,"

## Shropshire Sheep.

Very fine yearling bucks, sired by best English bucks, from pure-bred native ewes. Fine ewe lambs for sale.

C. A. SAUNDERS, Culpeper, Va.

## SHORTHORN BULL CALVES

3 to 10 mos. old

FOR SALE.

Close descendants of the World's Fair greatest winners in 1893, and also up to the present time. SPECIAL OFFER:—A 1-year old Roan Bull Calf at  $\frac{75$ ¢ if taken soon.

Poland-China Pigs of the best and most fashionable breeding. Spring Pigs now ready. Pedigree furnished with all stock sold. Come or write.

WM. T. THRASHER, Springwood, Va.

2 Nice Red

## SHORTHORN BULL CALVES

for sale, ages 2 mos. and 6 wks.

Sire, Reg and Scotch topped; Dams high grade shorthorns, dairy strain.

Prices cheap, quality considered.

REPASS BROS., Maplewood Farm, Wytheville, Va

## 2 SHORTHORN BULL CALVES FOR SALE.

Calved May 1st and 8th

Grandparents Registered.

THOS. B. DAVIS, Stanardsville, Greene Co., Va.

## Aryshires, Berkshires and Oxford-Downs.

Aryshire Calves of both sexes, Berkshire Pigs and Boar and 2 Oxford-Down Rams for sale. MELROSE CASTLE FARM, Enos H. Hees, Manager, Casanova, Va.

nessing a genuine bronco busting I can truthfully say that although "busted" may be rather an inelegant phrase it much more comprehensively and correctly expresses the condition of the bronco, or horse, after he has survived the course of treatment commonly known as "busting," than does "trained" or "broken." To give the impression that it is the only method employed, that there are no carefully-trained horses, would be a great injustice to the very many excellent horsemen of the West who love their horses and whose horses love them.

One bright Sabbath morning last summer I saw a group of horsemen approaching at a gallop—half a dozen wild, happy, young fellows from 18 to 20 years of age, who, in response to a greeting and a query, shouted back: "We're going to have some fun; we're going to bust a bronco." Having nothing else to do just then (there was no church within twenty miles) I decided to watch the sport. The victim selected was an under-sized 3-year-old, tough and wiry, and the blood of the cayuse ran strong within his veins. A few minutes' hard riding separated him from the band. Then how hard he tried to regain it, dodging, turning, running until the sweat streamed from every pore, of his body and his breath came quick and hard! Suddenly a lasso whirled through the air, the loop encircled the bronco's neck, the thrower drew in his horse, but the bronco did not know what was coming. When the rope tightened with a jerk the bronco was thrown sprawling on the ground. Quickly he jumped to his feet and stood tugging at the rope that tightened around his neck, shutting off his wind until another rope was thrown around his fore legs and he was again thrown upon the ground. Next a heavy cowboy saddle was put upon his back. Poor bronco groaned as a pair of muscular arms drew the cinch up tight around his body. After vainly striving to throw the saddle from his back and to crawl through the girth the bronco stopped to rest a moment.

One of the boys was a newcomer, a lank, ungainly youth of 18. It now became apparent that the sport was to be something of a boy-busting as well as bronco-busting. After much persuasion, taunts and the exaction of a solemn promise from the other boys to keep hold of the rope so bronco could not run away, he consented to mount. He settled himself nicely in the saddle, the bronco being too surprised to move, when Jim quickly ran behind bronco, catching him across the thighs with an upward jerk of the rope. The bronco jumped straight up in the air; he went so high he had time to arch his back like a rainbow, tuck his tail between his hocks, his nose between his knees and set every muscle in his legs firm and rigid before coming back to earth again. When his hoofs struck the ground a look of mingled pain and terror came over the

## Kentucky HEREFORDS

Headed by the famous  
ACROBAT

No. 68460 and the celebrated

## IMPORTED BRITISHER

No. 145096 Champion Bull over all breeds in England and Grand Sweepstakes Champion at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they wish from the FANCIEST THAT CAN BE BRED to the cheaper class usually desired by the beginner. Write us before buying. Glad to answer inquiries.

Giltner Bros., Eminence, Ky.

## Hereford Cattle.

A number of young Registered HEREFORD Bulls and Heifers, not skin, at reasonable prices.

STONEHURST FRUIT AND STOCK FARM,  
Unloh Mills, Fluvanna Co., Va

FOR SALE

## 8 Reg. HEREFORD BULLS

From 6 mos. to 3 yrs. old.

## 8 Reg. HEIFERS

From 6 to 18 mos. old. At reasonable prices.  
HAYFIELDS STOCK FARM, Cockeysville, Md.

## DORSETS and HEREFORDS.

I am now offering my superior herd bull ROY MAY, 80183; and some fine male calves. I am also booking orders for Dorset rams and ram lambs.

H. ARMSTRONG, LANTZ MILLS, VA.

## ELLERSLIE FARM

### Thoroughbred Horses

### AND SHORTHORN CATTLE,

### Pure Southdown Sheep and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,  
CHARLOTTESVILLE, VA.



COOK'S CREEK HERD

## Scotch-Topped Shorthorns

Herd Headed by Governor Tyler, 1585-48. Young Bulls for sale. Inspection and correspondence invited.  
HEATWOLE & SUTER, Dale Enterprise, Va.

## REGISTERED JERSEY BULLS FOR SALE AT A BARGAIN.

Calves 1 and 2 yr. olds; also EGGS FOR HATCHING, W. & B. P. Rocks, W. & B. Leghorns, and S. L. Wyandottes, 75 cents for 15.

J. B. JOHNSON, Manassas, Va.

"CLOVER HILL FARM."

## ANGUS CATTLE FOR SALE AT A BARGAIN.



High-Grade and Registered Angus Cattle; all ages of males and females. Get our prices before you purchase. We can save you money.

One Very Fine Dark-Gray Horse, 16 hands, weighs 1,125. He is very stylish, quick and active. A splendid driver, well broken in single and double harness and a fast mover. He is cheap at our price, \$200.00.

W. M. WATKINS & SONS,  
Randolph, Va.

Charlotte county.

### ABERDEEN-ANGUS BULLS FOR SALE.

1. My Herd Bull, ROCKBRIDGE ABACTOR, No. 40864, 2 yrs. old Dec. 24 last; \$400.  
2. A Bull Calf, born Dec. 20th; sired by the above "Abactor"; dam, "Pride of Potomac"; No. 42607; \$160.

3. A Bull Calf, born Dec. 12th; sired by the above "Abactor"; dam, a thoroughbred Angus Cow bred by the late William A. Ruff. Pure breeding can be shown for this calf, but being out of an unrecorded dam he cannot be registered; \$50.

None of these will be sold until October, and should the calves at that time not prove to be good specimens of the breed they will be withdrawn from sale.

B. F. DAT, Glasgow, Va.

### MONTEBELLO HERD OF

## Aberdeen-Angus Cattle.

3 Reg. Bull Calves for sale. Ages, 10, 6 and 5 months.  
1 Thoroughbred (not entitled to registration), male, 2 months old.

### BERKSHIRE PIGS of Biltmore strain.

L. H. GRAY, LOCK BOX 58, ORANGE, VA.

## FOR SALE.

My ABERDEEN-ANGUS Herd Bull,

Hero of Bunker Hill, No. 31,462.

He is an extra good breeder.

J. TABB JANNEY, Van Clievesville, W. Va.

### "PINE PARK STOCK FARM."

## Aberdeen Angus

Cattle for sale.

J. H. ELLIS, Thornhill, Orange Co., Va.

## Shadow Brook Poultry Farm.

Extra fine pedigree Scotch Collie Pups \$5.00 each. A trained yearling female \$10.00. Thoroughbred H. F. Rock eggs \$1.00 per 30. Yearling hens \$1.00 each. Pekin ducks \$1.00 each. M. E. turkeys, one year old, \$5.00 pair.

C. H. BENNETT,

Goodman, Va.

countenance of his rider, who bounded from the saddle and a moment later stood at a safe distance pale and trembling, looking with surprise and fear at the bronco, by no means enjoying the shouts of laughter from his companions.

A more experienced rider next mounted; if the bronco bucked the quirt lashed his sides; if he tried to run the heavy curb bit brought him to his haunches; if he stood still he cruel spur was dug into his flank. Thus one by one the boys tried their skill at the busting until the bronco was completely exhausted and looked as though he wanted to die. As a last resort an old, battered tin pail was tied to his tail. He spent a few moments in a fruitless endeavor to kick it off and then collapsed entirely. Nothing could make him budge an inch or lift a foot. He was pronounced "too tame" by the boys, who pulled off the bridle, mounted their horses and disappeared in a cloud of dust. Two days later I saw the bronco sneak out of a clump of scrub pine and greasewood. There was a look of sadness in his eye. His ears drooped and his tail hung limp as with suspicious glances and halting steps he dragged his stiffened legs across the range to join the band—busted bronco.

Breeders' Gazette. HAYSEED, JR.

### WAS HE THE LAST?

President Tucker, of Dartmouth College, is made the victim of one of the best jokes of the season by a story told by one of his closest friends, now in the city. A couple of summers ago the college president spent a part of the heated season on a farm up in the northern part of Vermont. It was a delightful place, but the classical visitor found that even that haven of rest had some drawbacks. As the following summer approached Dr. Tucker again thought himself of the quiet farm as a place of summer refuge, and wrote to the farmer: Your place is a well-spring of delight; it is picturesque, comfortable, home-like. The house is well kept, the table worthy of the highest commendation, and, in short, everything save two features is conducive to utmost satisfaction. These exceptions are the kitchen methods of your hired girl; and second, the fact that the pen in which you maintain your swine is located in too close proximity to the house. If these exceptions were eliminated it would be a source of the most profound pleasure for me to again join you this coming summer."

The farmer received the note, and anxious to again have the distinguished boarder with him, wrote:

"Dear Mr. Tucker,—Yours rec'd, and I hasten to reply. We will be glad to have you with us. Hannah has went, and there have not been any Hogs on the place since you left last summer."—*New York Tribune.*

# V. P. I.

## Farm Bulletin

Our Jersey Herd Bull for sale—PEDRO'S VIRGINIUS, 45919, grandson of Pedro, 2187, and of Marjoram Second, 12806, both of World's Fair fame. The Bull offered has been used in our herd for several years, and is sold to prevent in-breeding. Price low, quality considered.

D. O. NOURSE, Prof. of Agr.  
Blacksburg, Va.

## Red Polled Cattle FOR SALE.

ALL PURE BRED & REGISTERED.  
1 Bull, 3 years old. Large and well formed. Price, \$125.00.  
1 Cow, 4 years old. In calf by above bull. Price, \$125.00.  
1 Heifer, 2 years old. In calf by above bull. Price, \$15.00.  
1 Bull calf sired by above bull, four months old. Price, \$50.00.

The above cattle are all in fine, healthy condition, and are sure breeders.

H. K. FOSTER, Blacksburg, Va.

### Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

## JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

## ST. OMER HERD

Offers young bulls fit for service, most of tested dams with good yearly records. Strong in Exile of St. L., King of St. L. and Stoke Pogis of Prospect. Reasonable prices.

JOS. T. HOOPEES, Bynum, Md.

## FOR SALE.

2 JERSEY COWS; 1 SHARPLES SEPARATOR 10 cans and jackets for same, 1 ICE BOX.

Am changing my business, so will sell the above at very reasonable price. address

C. T. BASS, Rice Depot, Va.

### COLLIE PUPS

By Imported Sires. Sable and white and tri-colors. Prices, \$8 to \$15. (Other ones correspondingly low. Book on Training, 50 cents; FREE if you buy a Collie. MAPLEMONT STOCK FARM, Albany, Vermont.

## ANGORA GOATS.

57 head pure, grade and common goats for sale.

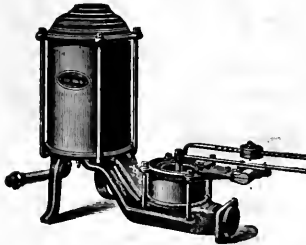
C. H. NOLTING,

P. O. Box 322,

RICHMOND, VA.

### GETTING A CONSTANT WATER SUPPLY.

Of the many plans in use for the raising of water there is nothing that takes precedence of the power of the natural stream, when proper machinery is installed to apply it. And just here it is proper to remark that our advertising columns are showing in the Rife Hydraulic Engine, a machine most excellently adapted to this purpose. Its varying sizes meet the requirements of a large or limited service, and the power required is so small in proportion to the duty it performs that there are but few country places with running streams where it will not give most satisfactory service. An idea of the machine may be gathered from the cut shown here. It is not only effective, but simple in the extreme and very durable. A beauty about all such powers, and particularly the Rife Engine, is that when once installed there is practically no expense for many years to come in the running. Many Rife Engines have been in constant operation for upwards of ten years without a dollars'



worth of repairs. In the vicinity of New York, where they are best known, they are a familiar sight, seeming to have been adopted with one accord as the improved plan of raising water for all purposes at the country seats. About a dozen years ago, one of these engines was installed on the famous Biltmore estate at Asheville, N. C., and it proved so effectual that to-day there are now fourteen Rifes employed, furnishing water for all the various purposes for which they have use. Very recently an irrigating plant has been established in the Hawaiian Islands, near Honolulu, with a Rife Engine for its base, and furnishing 3,000 gallons per minute. These are but suggestions of its popularity and scope of duty. To the small country user it suggests easy possibilities in the way of an economical and constant fresh water supply. Whoever is wrestling with a water problem should write to the Rife Engine Co., 126 Liberty street, New York, for their catalogue, and get further information.

What is the difference between a clock and a partnership? When a clock is wound up it goes; when a firm is wound up it stops.

## ARMOUR'S BLOOD MEAL Cures Scours in Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

PREVENTS weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

**A Potent Food for Work Horses, Dairy Cows, Poultry.** Write us for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

**THE ARMOUR FERTILIZER WORKS,**

Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

"ELLERSLIE."

## SHORTHORNS SOUTHDOWNS

Red Bulls from 3 to 6 mos. old, all by Fairfax (very handsome red bull) by Knight of The Clifton; out of registered cows which have been selected for milking as well as beef purposes.

1 and 2 yr. old rams by Warwick, imported from the Sandringham flock of KING EDWARD VII, out of ewes from the celebrated DRUID HILL PARK (Baltimore flock) These are nregistered-

ed but are first class in every respect.

REMEMBER.—We do not ask fancy, but *farmers' prices.*

Our stock is not in show ring but *working condition.*

**R. J. HANCOCK & SON, Charlottesville, Va.**

### HILL TOP STOCK FARM.

## Berkshire Hogs and South-Down Sheep

A SPECIALTY.

S. Brown Allen, who succeeds H. A. S. Hamilton & Co. in the ownership and management of this celebrated Stock Farm, offers a few Berkshire Pigs that have been bred without regard to cost, and one and two year old

## SOUTHDOWN BUCKS,

that cannot be excelled in this country. We have swept premiums on this stock over all competitors at Fairs in this and adjoining States

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)

## BERKSHIRES.

Imported Sir John Bull, No. 3609—B. H. B.  
Imported Dansfield Roland, No. 60528—B. H. B.  
Imported Columbia, No. 60527—B. H. B.  
Imported Royal Carlisle, No. 4841—B. H. B.

And that Immensely Princely Hog

**Uncle Sam, No. 7233** are the sires of my Spring and Summer offerings of pigs. Does this list of Royalty suit your fancy? They represent the most famous Berkshire breeders of England. Fancy stock, moderate price

**Hunting Dogs** and pups for sale. Setter pups, \$5.00 each.

**Short Horn** (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

When corresponding with our advertisers always mention the *Southern Planter.*



## HOW THE DEBT WAS PAID.

This anecdote was told by the late Zebulun B. Vance, at one time Governor of North Carolina, and afterwards United States Senator.

He was seated in his office one day when an old negro, one of his "charity" clients, came in. Taking off his hat, the old man scraped his feet, and, bowing very obsequiously, said:

"Good mornin', Marse Zeb; how is you an' de Mistis dis mornin'?"

"Quite well, thank you, Romulus. How are you this morning?"

"So's to be about, thank de Lord, but I still got a little misery."

"Well, Romulus, you are always complaining, but what can I do for you this morning?"

"Dat's jest what I come to see you 'bout, sah. You know dat triflin, nigger Jim Simpson, doan you?"

"Oh, yes; certainly I know Jim, but what's he done to you?"

"Dat's jest hit, Marse Zeb; dat's jest hit; he ain't done nothin', dat's de trouble; dat nigger been owin' me ten dollars for nigh onto five or six years, an' he ain't never pay me nair cent, not nair cent, sah."

"Well, have you ever asked him for it, Romulus?"

"Ax him for it? Cose Ise axed him for it, and dat's how I come to come to you."

"Well, when was the last time you asked him for it?"

"Yistiddy, sah; jest as de sun was goin' down."

"Well, you say he didn't pay you?"

"No, sah; 'deed he didn't, an' dat's jest 'zactly how come I come to see you."

"Well, as he didn't pay you, what did he say; what excuse did he give?"

"Marse Zeb, dat no 'coun't triflin' nigger say he done been owin' me dat money so long, sah, dat de intrust done eat it all up, an' he didn't owe me nair cent, sah, not nair cent."

It was a busy thoroughfare in Edinburgh, and as the old lady was exhausted with the stir and bustle, she hailed a passing cab. The driver was at her side in a moment. Opening the door, he stood back to allow the lady to enter.

She made one or two weak efforts, but was unable to mount the step, and, at last, looking imploringly at the driver, she said:

"Help me in, good man, for I am very old."

The driver gently assisted his fare into the cab, and then he gallantly said:

"Well, mem, nae matter what age you are, you dinna look it."

His fare was increased by a shilling when the old lady reached her destination. And he deserved it.

What is the difference between a life of leisure and a life of idleness? They are the same thing, only different titles.

## STUDEBAKER

A name that stands for character in vehicles—that guarantees you the worth of your money. You don't buy often. You want service. Then don't take chances. The character in Studebaker

## Vehicles and Harness

starts in the raw material—that's the best obtainable and there's everything in the selection and the curing. The honesty continues all through the making and finishing. Results, longest life, fitness and greatest service. You Always Find the Essentials

in Studebakers. There's no slighting, no deception, no variance from high quality. That's why multiplied thousands pin their faith to them. Are you of the number? Local dealers most everywhere. Catalogue and particulars direct if requested.

STUDEBAKER BROS. MFG. CO.,

South Bend, Ind.

Chicago, New York, San Francisco, Kansas City, Portland, Ore., Denver, Salt Lake City, Dallas, Texas.



## JERSEY CATTLE.

We have for sale, **Young Cows, Heifers and Young Bulls**, from cows testing **18 to 24 lbs. of butter in seven days**, and giving **40 to 60 lbs.** of milk per day. Also—

## LARGE YORKSHIRE PIGS,

The coming bacon breed. Our stock is from the most noted breeders in England and Canada.

Write for prices. Address—

## BOWMONT FARMS, SALEM, VIRGINIA.

## JOHN S. FUNK,

GLEN FARM,

—IMPORTER AND BREEDER OF—



Polled  
Durham  
Cattle,

Shropshire Sheep,  
Southdown Sheep,

Poland-China Hogs.

Berkshire Hogs.

All carefully bred regardless of cost.  
SINGER'S GLEN, VA.



## COMBINATION SALE of Thoroughbred Stock.

July 30th 1903, Orange, Va., Second Day of Horse Show.

Shorthorns, Polled Angus, Holsteins, Devons, Jerseys, Guernseys, Hampshire and Shropshire Downs. Berkshires, Poland-Chinas and Tamworths.

Catalogues July 1st Further entries solicited.

MACON & CO. Auctioneers, Orange, Va.

When corresponding with our advertisers always mention the  
*Southern Planter.*

## A CROSS-BREED.

A buxom negro woman who had cooked for a number of years in the family of a Jewess announced to her mistress one morning her intention of quitting the job.

"Why are you going to leave us, Mary?" inquired the Hebrew lady.

"Well, Missus," explained the cook, "I's gwintah git married."

"That won't make any difference," said the lady, "there's room enough in my yard for you and your husband; you don't have to leave because you're going to be married."

"But," replied the colored woman sheepishly, "you don't know who I's gwinetah mary"; and, without giving the Jewess time to ask further questions, she said, "I'se gwinetah mary a Chinee, Missus."

The employer raised her hands in holy horror. "Oh, Mary," she said, "have you thought of what you're going to do?"

"Oh, yas, Ma'am," said Mary; "we's thought about it—we loves each uddah, Missus."

"I don't mean that," said the Jewess, "I'm thinking about your children, Mary. Have you thought about what they'll be?"

"Oh, Missus," said Mary, looking up in meek submission and intending no insult, "I knows dey'll be Jews, but I can't he'p it."—*Silas Xavier Floyd, in June Lippincott's.*

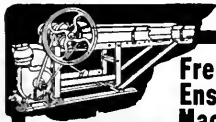
## ONE BOTTLE CURED RINGBONE.

Schilling, W. Va., Jan. 23, 1903.

The Lawrence-Williams Co., Cleveland, O.:

I used GOMBAULT'S CAUSTIC BALSAM on a mare for ringbone. I cured her with one bottle. She is well and works all the time. I have ordered several bottles since for my neighbors. They have used it with good results. Two cases of ringbone I know of have been cured with it. I believe it the best liniment on the market to-day.—H. S. McCully.

When does a dog become larger and smaller? When let at night, and taken in in the morning.



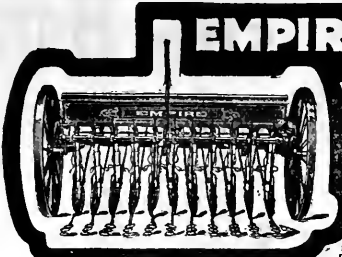
### Freeman Ensilage Machinery

represents the modern idea. Illustration shows typical cutter with blower attachment. 11 sizes, hand cutting to belt power, with capacity ranging from 5 to 24 tons per hour. Traveling force feed reduces labor of feeding. Each machine ensilage and quickly fitted with shredder attachment.

Also make Wind Mills, Corn Shellers, Wood Saws, etc. Write for free catalogues 110.

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**ACCURATELY MEASURE  
ALL KINDS OF GRAIN  
WITHOUT CHANGE.**

That is, if you set the Empire Feed to sow any amount from 24 to 128 quarts per acre, it will sow exactly that amount of wheat, oats or any other small grain without further change. A good stand of grain is assured, when you sow with an Empire Drill. Empire Grain Drills do not bunch, skip or choke. Made in all styles and sizes.

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AMERICAN SEEDING MACHINE COMPANY,  
28 Monroe Street,  
Springfield, Ohio.**

## DUNTREATH BERKSHIRES

"BRED-IN-THE-PURPLE."

EXTRA CHOICE Young Pigs for sale, all eligible to registry, and now ready for shipment. Orders also taken now for late Summer and Fall shipments.

### DUNTREATH STOCK FARM,

Box 666.

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REFERENCE: American National Bank of Richmond.

## CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

16, S. LINDENKOHL, Keswick, Albemarle Co., Va.

## For Sale—A. J. C. C. BULL CALVES

Good individuals; well grown  
and from heavy milking cows.

—Write—

## FOREST HOME FARM,

So. R. R.

PURCELLVILLE, VA.



HAVE YOU EVER BEEN THERE?

# SPLENDID FOR CALVES AND PIGS

"INTERNATIONAL STOCK FOOD" and SKIM MILK.

UNION CITY, Pa., Jan. 3, 1903.

International Stock Food Co., Minneapolis, Minn.

DEAR SIR:—I have used your "International Stock Food" for the last year and am very much pleased with it, because it is all you claim. I have fed it to Cows, Calves and Pigs. Last year I raised my calves on "International Stock Food" and skim milk and not one of them had the scours. Yours truly, MATH. ALLEN.

We Have Thousands of Similar Testimonials and Will Pay Ten \$1000 Cash to Prove That They Are Not Genuine and Unqualified.

We own "International Stock Food Farm," which is located 12 miles from Minneapolis and contains 150 acres. We feed "International Stock Food" every day to all of our World Champion Stallions, Dan Patch 1:59 1/2, and Discard 2:05 1/2; to our Extra Stallions, Brood Mares, Colts, Work Horses, Cattle and Hogs. "INTERNATIONAL STOCK FOOD" FEEDS FOR ONE CENT" is Prepared from Roots, Herbs, Seeds and Berries and Won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fatening stock because it increases the appetite and Aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fatening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Colts, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Stomach of any animal. It is a stomach tonic and warm medicine. Properly administered it stimulates the Human System. You insist on eating medicated ingredients with your own food as a means of curing disease. Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary an addition to the regular food of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Hops Cash Guarantee" by Fifty Thousand Dealers throughout the World. "Our Money will be Promptly Refunded in any case of failure." It will make your Calves or Pigs grow Amazingly and has the largest sale in the World for keeping them healthy. Beware of the many Cheap and Inferior Imitations! We Chemist can separate all the Diseases powdered Roots, Herbs, Berries and Seeds that we use. Any One claiming to do so Must be an Ignoramus or a Falsifier.

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INTERNATIONAL STOCK FOOD CO.,

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Dear Sirs:—I received your "International Stock Book" and was more than pleased with it. It is worth more than \$10.00 to me. Very truly yours, RICHARD J. MORRISSEY.

INTERNATIONAL STOCK FOOD CO.,

ONESA, MO.

Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish. Respectfully, GEO. W. NULL.

# A \$3000.00 STOCK BOOK FREE

## IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, OATLE, SHEEP, POULTRY, ETC.

The Cover of this Book is a Beautiful Live Stock Picture Printed in Six Brilliant Colors. Size of the book is 6 1/2 by 9 1/2 inches. It cost an \$800.00 to have our Artists and Engravers make these Engravings. It describes common Diseases, and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains Life Engravings of many very noted Animals, and also Testimonials from the Editor of "The Planter" Will Tell You That You Ought To Have This Book in Your Library For Reference. It Contains a Finely Illustrated Veterinary Department That Will Save You Hundreds of Dollars.

WE WILL MAIL IT TO YOU ABSOLUTELY FREE. Postage Prepaid.

We Will Pay You \$10.00 Cash if book is not as described. Write us at once, letter or postal card, and ANSWER THESE 3 QUESTIONS:

1st.—Name This Paper. 2d.—How Much Stock Have You?

INTERNATIONAL STOCK FOOD CO., Minneapolis, Minn., U. S. A.

We Employ Over 500 People and have Hundreds of Thousands of Testimonials. Refer to Any Bank in Minneapolis.

Largest Stock Food Factory in the World. Capital Paid in, \$1,000,000. 600,000 Feet of Space in Our New Factory.

When President Edwin T. Alderman, of Tulane University, was called upon at a dinner he made a speech that suggested the oratory of the late Henry W. Grady, and its effect on the audience was electrical. By way of introduction he told of an old colored man named Pompey down in Louisiana who was stopped on the road by a white man with the question:

"Say, Pomp, where you going?"  
"Ain't gwine nowhere," said Pompey, promptly. "I'se been where I'se gwine, I has."—*New York Sun.*

A professor in a western college had been annoyed by the tardy entrance of a student into the lecture room, and pointedly stopped talking until the man took his seat. After class the student went to the desk and apologized.

"My watch was fifteen minutes out of the way, sir. It's bothered me a good deal lately, but after this I shall put no more faith in it."

"It's not faith you want in it," replied the professor, "it's work."—*The*

## Reg. HOLS EIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

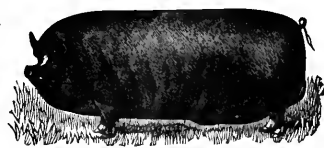
Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.

## —DORSET SHEEP—

## B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R. T. O. SANDY, Burkeville, Va.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock. WALTER B. FLEMING,



Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.

THREE OF A KIND.

While we were visiting at a small village in one of the Carolinas we went one afternoon to see one of the old negro mammals in her own log cabin. She was highly honored at the condescension of "de ladies," and was much concerned that the call might not be disturbed by the presence of her children—"fo'teen pickaninnies," she called them. Of course, curiosity was too strong for the youngsters, and soon the one door was blocked with curly heads and wide-open eyes. When Mammy perceived them, she just turned around and, gathering up her skirts as one does in front of a flock of trespassing chickens, cried out "Shoo!" and the cough drops disappeared.

But towards the end of our visit Mammy needed the services of a helper to put out the jelly and cake that she insisted we eat. Stepping to the door, she called:

"Mariana!"

Soon three girls in single-piece coverings came bashfully, but curiously, through the door, and all were given orders by the bustling mother.

"But," said one of the callers in a half-jesting way, "are all three named Mariana, Mammy?"

"Yes," the old woman explained, "all three. You see, when de ill' g'il's came, fo' I got 'round 'gain, de folks jest call 'em all Mariana, an's no good changin'. An', anyhow, when I wants a pickaninny, I jes' calls 'Mariana, an' one's sho' to come."—*June Lippincott's Magazine.*

ALL-ROUND CURES.

"Twere a new Governor of Newfoundland, and he were shocking careful of the sealers' health," began the old sealing captain, his deep-set eyes twinkling.

"The night afore the North Star left Sen John's for the ice he came aboard t' inquire what for medicine-chist we had.

"You ought to have a ship's doctor aboard her with two hundred men shipped," says he. 'Who gives out the medicine?"

"The cook, o' course," I answers. 'But I'm sarten o' one thing, Governor,' I says, 'there's nothin' there that's pizen.'

"How do you know?" he asks pretty sharp.

"Well,' I answers, 'a man comes runnin' to the cook and he says, 'My chum's sick, and I want some medicine for he.' The cook never asks no questions as to what's ailin'. He grabs up the first bottle he gits his 'and on and pours out some in a cup. If it don't do the man's chum no good, he comes back and the cook pours something out of another bottle, and so on till he strikes something that 'elps him. That's why I know there's nothin' pizen in that chist, or the cook would ave killed 'art of 'em twenty v'ages ago."—*Suzette, in June Lippincott's.*

# Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.  
**FOR SALE**—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos old. Call and make your own selection. Prices right.  
**MURRAY BOOCOCK, Owners, Keswick, Va.**

\*\*\*\*\*

## HEREFORDS

Champion Prince Rupert No. 79,539  
 at head of herd.

A Few High Class Bulls and Calves For Sale.

Write me before  
 elsewhere. **EDWARD G. BUTLER,**  
 BRIGGS, VIRGINIA. Send for  
 illustration of  
 Prince Rupert.

\*\*\*\*\*

Bacon Hall Farm.

# Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.  
 MOTTO—Satisfaction or no sale.

**E. M. GILLET & SON,** - Glencoe, Maryland.

Reg. and Grade HEREFORD CATTLE  
 BRONZE TURKEYS & MUSCOVY DUCKS

**C. C. TALIAFERRO,**  
 NASONS,  
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 1903

**"MOUNT SHARON STOCK FARM"**  
 Registered SHROPSHIRE SHEEP  
 Registered POLAND-CHINA PIGS




**NOW OFFERS FOR SALE**

**HEREFORD CATTLE**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

**SHROPSHIRE SHEEP**.—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

**POLAND-CHINA HOGS**.—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

**M. BRONZE TURKEYS**.—Toms, \$1. Hens, \$3. Eggs, per sitting of 12, when in season, \$1.

**MUSCOVY DUCKS**.—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

**BARRED PLYMOUTH ROCKS.**

**ROUEN GESE**.—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

**WILLIAM L. Jr.**, No. 21058, half brother of Axtell, will serve a limited number of sires for the season. Mares boarded at lowest figures per month.

### THE ONION AS A SEDATIVE FOR PAIN.

*Editor Southern Planter:*

My little boy, aged five years, had been suffering for a number of days with toothache and earache, caused by an abscess in process of formation at the root of the affected tooth. He had had a variety of treatment from various sources, including a good physician, but without relief, and last evening the pain and nervousness caused by lack of sleep seemed about to culminate almost in convulsions, and his mother and I had the prospect of a sleepless and anxious night before us. I happened to remember a simple remedy that my mother used with myself when a child. We took a large onion (the old Richmond onion they are called around here), roasted it in the fire, and when thoroughly done, mashed it up and bound it to his pulse as hot as could be borne on the side opposite to the affected tooth. The effect seemed almost magical. In twenty minutes the child became quiet, and in half an hour sunk into a profound slumber, which lasted the entire night, and he awoke in the morning much better and free from pain. Now, it seems to me that so simple and harmless a remedy and one so entirely free from danger ought to be generally known. It is certainly better in case of nervousness and pain to use this than to fill the system with dangerous drugs. I don't suppose any possible harm could come from its use under any circumstances. With the hope that its trial may bring the relief to some tired, wornout mother and suffering child, that it did in this case, I send this account to you, leaving it to your discretion to give it publicity through the columns of your valued publication. JOHN I. PRITCHETT.  
Whitmill, Va.

### MAGAZINES.

The July Century is distinctively a fiction number; and the list of stories is long and varied enough to please the most omnivorous appetite for fiction. Easily first in interest is Homer B. Hulbert's "The Sign of the Junma," telling the thrilling details of a British subaltern's search among the Himalayas for literary treasure-trove. How he found a remarkable book, now in the British Museum, but at the cost of twenty-three years' imprisonment in a mountain monastery, makes an unusual and engrossing tale. John Luther Long's "The Siren" is far from being a conventional romance, and it has the flavor of the sea; the coast is just the place to read the story of savage Brassid and the laughing Sea Lady. "Mahmoud Pasha of the D. P. W." is the title of an Egyptian and English story, by Frederic Courtland Penfield, former United States Diplomatic Agent to Egypt, which tells of a clever Indian device which located a disastrous break in the great dam. Other fiction of the issue includes: "A Lost Story," a posthumous work by

## St. Albans School



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PUBLISHED "PLAN OF ST. ALBANS SCHOOL."

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Head Master,  
RADFORD, - - - VIRGINIA

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SUNNY HEADLAND  
ABOVE THE  
BANKS OF NEW RIVER,  
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BLUE GRASS REGION  
OF VIRGINIA

## SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

**BARON ROSEBOY 57666** (The great Westertown Rose, son of the world-famous GAY BLACKBIRD) In service.

The Sire is half the herd. In Baron Roseboy, is combined the typical "daddy" form with a pedigree that cannot be excelled. He is a brother of the great "Gay Lad" (sold at \$3000), who heads the largest Angus herd east of the Mississippi, is also brother of "Hector of Ikside" at the head of the great Pope River herd of Illinois; is uncle of the "10th Laird of Estill" at the head of the greatest Angus herd in America.

On dam's side, Baron Roseboy traces direct to the Imp. Blackbird Bull, "BASUTO," said to be the best Blackbird Bull ever imported.

The females in the herd are "chips off the same block". Great bulls, great cows, mean great calves. Come and see them, or write

**A. L. FRENCH, Proprietor, Fitzgerald, N. C.**  
Rockingham Co., 24 miles southwest of Danville, Va., on D. & W. Ry.

**We Are Still in the Business...**

### "HILL TOP" Stock at Shadwell, Va.

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**Jersey Cattle, Southdown and Shropshire Sheep,  
Berkshire Hogs and B. B. R. Game Chickens.**

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship by September 1st. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

**H. A. S. HAMILTON & SONS, Shadwell, Va.**

**"The Oaks" Herd.**  
**OFFERS** 2 Registered SHORTHORN COWS,  
**FOR** 2 Registered MORGAN COLTS, and a few  
**—SALE—** good yearling SHROPSHIRE RAMS.  
**B. B. BUCHANAN, Bedford City, Va.**

the lamented Frank Norris, author of "The Octopus"; Margaret Sutton Briscoe's "Red Tassels," David Gray's "The Braybrook Baby's Godmother" (another Gallop story), Will H. Harben's "A Question of Valor," Philip Berrill Mighels' "A Forty-Horse-Power Stratagem," and more chapters of Richard Whiteing's "The Yellow Van." Edwin L. Sabin continues his charming series on the life of the American village boy, this month sketching "A Boy's Loves."

For readers of the July Century who want something beside fiction there is no lack of more solid reading. Nothing could be more timely, in view of the bicentennial of Wesley, than the life of the founder of Methodism, by C. T. Winchester, professor of English literature at Wesleyan University, and well known on other platforms as a lecturer. The July issue brings, too, the long expected "Unpublished Letters by Sir Walter Scott," edited by Horace P. Hutchinson, with notes by Mrs. Mary Anne Waits Hughes, to whom the letters were written, and an introductory sketch of Mrs. Hughes by her grandson, Mr. W. H. Hughes, the American brother of the famous "Tom Hughes." Dr. William Hayes Ward answers the question asked by so many since a recent letter of the Emperor William, "Who was Hamurabi?" Hermann Klein's "Modern Musical Celebrities" gives pleasant behind-the-scenes glimpses of Jean and Edouard de Reszke, Tamagno, Lassalle, Augustus Harris and Mme. Nordica.

A. M. Bowman, the proprietor of Belmont Farms, of Salem, and the popular representative in our State Legislature from Roanoke county and city, has for a number of years been engaged in collecting what he claims to be the best collection of high testing and deep milking Jerseys on the continent, and his herd is attracting the attention of breeders and buyers from all parts of the country, and from foreign countries. He has also recently introduced the large Yorkshire breed of hogs, which are now attracting so much attention as a "bacon breed" in Canada and other districts, where high class bacon is made.

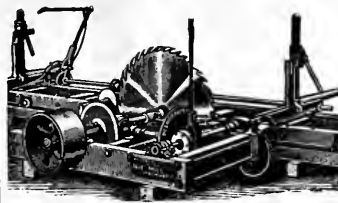
In another column he has an interesting change in his advertisement.

In a little town in Nova Scotia are two churches, situated in the two divisions of the village locally designated as the "North End" and "South End." At a Sunday morning service the officiating clergyman read the following notice:

"There will be preaching at 11 o'clock next Sunday morning in the church at the North End, and at 4 o'clock in the afternoon in the church at the South End. Infants will be baptized at both ends."—*New York Times*.

## The DeLOACH Saw Mills are Sure Winners.

Eight sizes, from Farmers' 4 h. p. up to 200 h. p. Interested, write for large illustrated catalogue of DeLoach Patent Saw Mills to suit any power from 4 to 200 h. p.; Single Mills, Planers, Edgers, Trimmers, Stave and Lath Mills, Boilers, Corn and Burr Mills, Water Wheels, etc. To introduce our New Farmers' Saw Mill, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



We will deliver on cars at factory our No. 0 Pony Farmers' Saw Mill, with Duplex Dugs, Improved Head Blocks and Hatch-et Set Works, complete as shown in cut, except it has Carriage made in two 4 foot sections, with Rope Drive instead of Rack and Pinion without Saw or Belt, for \$115.00 Spot Cash!

With 36" Solid Saw, \$127.50; 40", \$132.50; 44", \$140.00; 48", \$150.00.

With 36" Inserted Saw \$147.50; 40", \$152.50; 44", \$160.00; 48", \$170.00.

Best Rubber Belting, 4-ply, 6", 20 cents per foot; 8", 30 cents per foot, NET.

No discount from these prices.

Our Warranty: This mill is warranted to be made in a workman-like manner, of first class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. Any one with ordinary intelligence can set and operate without the assistance of an experienced Sawyer. It will easily cut 2,000 to 2,500 feet of first class board lumber per day with only 4 h. p.; 3,000 feet with 6 h. p.; 4,000 feet with 8 h. p.; is adapted to any kind or size power up to 15 h. p.

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The DeLoach is the only mill made that is shipped to all parts of the world. Over 10,000 in use;

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From Fowls of High Merit, Fresh, and a Good Hatch  
Guaranteed of the following varieties:—

PLYMOUTH ROCKS, BROWN LEGHORNS, WHITE LEGHORNS and PEKIN DUCKS at \$1.00 per sitting of 15  
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MENTION THIS JOURNAL.

CHAS. N. FRIEND, General Agent,  
CRESTER, VIRGINIA.

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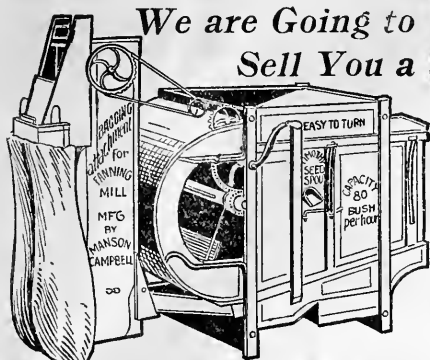
Needs an education. Send for Catalogue of WOODLAWN SEMINARY & MUSICAL INSTITUTE, GORDONSVILLE, VA. Beautifully and healthfully situated at the foot of the Blue Ridge Mountains. Prepares for any College or Special School or for Teaching. Beautiful home; thorough instruction. All Grades, including English, Elocution, Music and Art. Expenses very low.

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Talenge Hardware Co.,  
Agents for Chatham Fanning Mills, High Shoals, Ga., May 25th, 1903  
Athens, Ga.

Gentlemen:

The Chatham Fanning Mill bought of you is by far a more valuable machine than I first thought. As you know I did not get this machine until after I had begun to plant my cotton. When the Fanning Mill arrived, in order to test its merits, I fanned out a lot of the remainder of the seed of my cotton and to my surprise on looking over the farm I found that the seed fanned before planting came up a great deal better. In fact one would not believe that the Fanning Mill would make such a difference. In addition to the stand of cotton I saved at least one-third of the seed. I do not think that I can afford to do without this machine even at double the price I paid for it. I have had several of my neighbors to fan their seed and they all speak in the highest of terms so far as they can see at present. I have only used it on cotton seed and fanning press, and as stated above I would not think of doing without it at even twice the cost.

Dist. to V. G.

Yours respectfully,  
J. B. Baxter, Supt.

It tells ways of making easy money that you never thought of. We will also outline our **THREE YEARS' Plan** of selling you a Chatham. It will surprise you by its liberality and convince you that we believe in our mill. It gives you a chance to let the mill pay you before you pay us for the mill.

Here are some of the things others have done with the help of the Chatham Fanning Mill:

Fred Dietz, Ransomville, N. Y., got \$108 cash for timothy seed out of his wheat, and didn't know there was any there.

O. E. Perkins, Hallsport, N. Y., got \$550 more for 1000 bushels of wheat than his neighbor did. Perkins used the Chatham; neighbor didn't.

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Read this letter from the Superintendent of the High Shoals Manufacturing Company.

Now write us and get that free book and our proposition to make you money. Address

**M. CAMPBELL FANNING MILL CO., Ltd.,** Manufacturers of the Chatham Fanning Mill **116 Wesson Avenue, Detroit, Mich.**

### CATALOGUES, ETC.

International Harvester Company of America (McCormick Division), Chicago Ill. King Corn. The McCormick Corn Binder.

American Devon Cattle Club. Year Book for 1903.

Kentucky State Fair, Owensboro, Ky., September 21-26, 1903. Premium List.

The Nutgrowers Association, DeWitt, Ga., invite attention to the subject of nut trees for timber. In the Nutgrower for March, 1903, there is an interesting article dealing with the subject.

### LIFE'S PROBLEMS.

Marion has reached the age when the problems of life assume interesting proportions.

"I was born in Washington, D. C., grandmother. Where were you born?" she asked recently.

"Way out in Kansas," answered the old lady.

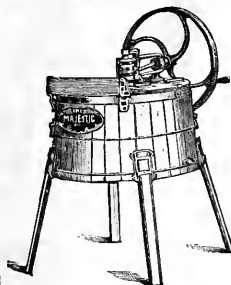
"Father was born in New Orleans," continued the child, "and mother in Denver. Do you know"—reflectively—"it seems to me people are liable to be born most any place."—*May Lip-pincott's Magazine.*

A WASHING MACHINE is as great a necessity in the house as a wringer

## THE MAJESTIC ROTARY WASHER

has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of wood ware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

THE RICHMOND CEDAR WORKS, Richmond, Va.

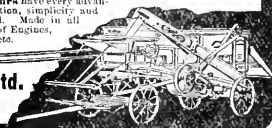


## ENGINES AND SEPARATORS

There is no record of a FARQUHAR BOILER ever exploding.

The Farquhar threshing machinery is the perfect product of the pioneer manufacturers of grain separators and threshing engines. It is the most durable and the most interesting until a farmer can buy. The Celebrated Ajax Threshing Engines, made in sizes from 4 h. p. up, have seats, foot brakes, and two injectors. Provided with every approved safety appliance. Farquhar Separators have every advantage of capacity, thoroughness of separation, simplicity and durability. Every part thoroughly tested. Made in all styles and sizes. Send for free catalogue of Engines.

A. B. Farquhar Co., Ltd.  
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## REPORTS.

- U. S. Department of Agriculture, Washington, D. C. A Directory for farmers, with weather conditions. Crop injures for 1902.
- Bureau of Plant Industry, Bulletin 41. The Commercial Grading of Corn.
- Bureau of Soils, Bulletin 21. Reclamation of Alkali Lands in Egypt.
- Office of Experiment Stations, Experiment Station Record, Vol. XIV., No. 10.
- Farmers Bulletin 169. Experiment Station Work.
- Farmers Bulletin 170. Principles of Horse Feeding.
- Farmers Bulletin 171. The Control of the Codling Moth.
- Farmers Bulletin 172. Scale Insects and Mites on Citron Trees.
- Kentucky Experiment Station, Lexington, Ky. Bulletin 105. The Broom Rapeseed.
- Bulletin 106. Feeding Dairy Cows.
- Louisiana Experiment Station, Baton Rouge, La. Fifteenth Annual Report.
- New York Experiment Station, Geneva, N. Y. Bulletins 220 and 227. Popular Edition. Apple Troubles in 1902.
- Bulletins 223 and 224. Popular Edition. Gsape Pollen and Pollination.
- Bulletin 225. Popular Edition. Rusty Spot and a Remedy.
- Bulletin 226. Popular Edition. Two New Raspberry Diseases.
- Ohio Experiment Station, Wooster, Ohio. Bulletin 140. The Corn Crop.
- South Carolina Experiment Station, Clemson College, S. C. Bulletin 75. Cotton.
- Bulletin 79. A Rotation Study.
- Bulletin 80. Analysis of Commercial Fertilizers.
- South Dakota Experiment Station, Brookings, So. Dak. Bulletin 76. A Study of Northwestern Apples.
- Bulletin 78. Frilled Tape Worm of Sheep.
- Virginia Weather Bureau, Richmond, Va. Report for May, 1903.
- Imperial Department of Agriculture for the West Indies, Barbadoes, W. I. Agricultural News.

## EQUALS.

Mr. Jones was a deacon in the Methodist church, his religion being reserved for the Sabbath. One day he overheard a workman swearing, and he stopped to argue with him on the enormity of his sin. "Oh well," said the man, "you pray a little and I swear a little, and we don't either of us mean anything."—Mary H. Northend, in July Lippincott's.

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Or for Cash  
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SEND US YOUR WOOL  
WE PAY THE FREIGHT.  
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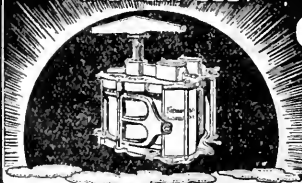
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AMERICAN SEEDING MACHINE CO., KENTUCKY BRANCH, Successors to Brennan & Co., LOUISVILLE, KY.



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Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❀ ❀ ❀

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.

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**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO *BILTMORE FARMS, BILTMORE, N. C.*

# IMPERIAL FRUIT AND POULTRY FARM

Is now booking orders for Eggs from the best strains and careful matings of

**Barred, Buff and White Plymouth Rocks,**

**Silver=Laced and White Wyandottes,**

**S. C. B. Leghorns and Mammoth Pekin Ducks,**

**AT \$1.00 PER SITTING.**

**EGGS FROM BLACK DEVIL PIT GAMES.**

Never known to run. The grittiest of all games. **\$2.00 PER SITTING.**

We give 15 Chicken and 13 Duck Eggs for sitting. **Order at once.**

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

**P. H. HEYDENREICH, - Staunton, Va.**

Two years ago Lippincott's Magazine published a "Complete Novel" called "The Lifting of a Finger," which made a decided hit. The July number now contains another novel from the same pen, that of Ina Brevoort Roberts. Like its predecessor, "The Pretenders," is a tale of modern society treated with the same brightness and charm, yet showing a great advance in the handling of delicate situations and subtleties in plot. Mrs. Roberts surely has the gift for "making love." Those who are "in the game" say she does it just right. For a journey on cars or boat this story is an ideal pastime.

All short stories in the July Lippincott's are suited to the "good old summer-time" when one is not ashamed to confess he wants something not solid but entertaining. After the novel there is a touching little tale of a girl to whom a passing flirtation on the man's side means eternal remembering on hers. She can boast that "her mother had been a Boston woman," too! Its title is "The Broken Vase," and its author, Marceje Endicott, Henry Wysham Lanier, the gifted son of Sidney Lanier, contributes "The Odyssey of Piscator," a fishing story. The sportsman's pursuit of his fascinating "Peri" rivals that of his avowed sport and makes of him quite a globetrotter. Girl athletes of the present day have very well-defined ideas of what comes up to their standard in masculinity, and woe betide the man who falls short. "The Modern Sabine," by E. Ayrton, is an instance of this in which the exacting heroine finds she has not "exercised" her heart out of her body, after all, and it joyfully asserts itself in an unusual but no less convincing manner. Agnes Louise Provost's story called "Jacky" is cheerful evidence of the theory that a man is thoroughly bad. It is told with spirit.

The labor story by Edith Robinson, called "The Vanderdonek, Sandbank" (where the scene is Schenectady, N. Y.), stands for right on both sides. It should be read by laborer and capitalist, and by those in between, because it is a really good story.

#### FRECKLE PROOF.

Little Marie hated freckles, and with good reason, for she was like the proverbial turkey egg. Her small nurse, Rhody, was as black as tar, except her beautiful white teeth.

One day Marie said regretfully, "Wisht I was black like you, Rhody; aint nowhere for you to get freckles 'cent your teeth."—Florida C. Orr, in July Lippincott's.

## Best for medicinal uses

Your physician will tell you that you should always have some good whiskey in the house. For accidents, fainting spells, exhaustion, and other emergency cases, it relieves and revives. But you must have good whiskey, pure whiskey, for poor whiskey, adulterated whiskey, may do decided harm. HAYNER WHISKEY is just what you need for it goes direct from our own distillery to you, with all its original strength, richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE and saving the dealers' enormous profits. We have over a quarter of a million satisfied customers, exclusively family trade, who know it is best for medicinal purposes and prefer it for other uses. That's why YOU should try it. Your money back if you are not satisfied.

**Direct from our distillery to YOU**

**Saves Dealers' Profits! Prevents Adulteration!**

# HAYNER WHISKEY

**PURE SEVEN-YEAR-OLD RYE**

**4 FULL \$3.20 EXPRESS  
QUARTS 3 PREPAID**

We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. Try it and if you don't find it all right and as good as any you ever used or can buy from anybody else at any price, send it back at our expense and your \$3.20 will be returned to you by next mail. Just think that offer over. How could it be fairer? If you are not perfectly satisfied you are not out a cent. Better let us send you a trial order. If you don't want four quarts yourself, get a friend to join you. Shipment made in a plain sealed case with no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo., must be on the basis of 4 Quarts for \$1.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

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 AND MAKE EASIER DRAFT  
 THAN ANY OTHER PRESSER  
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 GREATEST POWER WITH  
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 BUCKWHEAT, OATS and CANE SEED.

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### DAILIES.

	Price.	With Alone. Planter.
Times-Dispatch, Richmond, Va.	\$5.00	\$5.60
The Post, Washington, D. C.	6.00	6.00
The Sun, Baltimore, Md.	3.00	3.10
News-Leader, Richmond, Va.	3.00	3.00

### TRI-WEEKLY.

The World (thrice-a-week), N. Y.	1.00	1.25
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### WEEKLIES.

Harper's Weekly	4.00	4.00
Harper's Bazaar	1.00	1.40
Montgomery Advertiser	1.00	1.00
Nashville American	50	75
The Baltimore Sun	1.00	1.35
Freder's Gazette	2.00	1.75
Hoard's Dairyman	1.00	1.35
Country Gentleman	1.50	1.75
Central Presbyterian, "	2.00	2.25
Religious Herald, Richmond, Va.	2.00	2.25
Times-Dispatch, Richmond, Va.	1.00	1.25
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We furnish NO SAMPLE COPIES of other periodicals.

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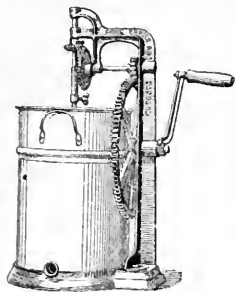
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**We want information** from every reader on the above questions, and shall be very glad to have you clip this advertisement out, fill it in and send it to this publication. On its receipt we will put in your hands a beautiful illustrated booklet on the farming mill question, free of cost.

**Editor, Southern Planter.**

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MILK EXTRACTOR and CREAM SEPARATOR.

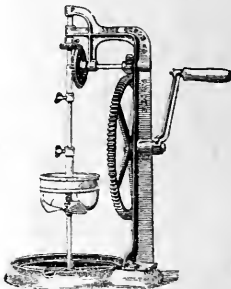


Guaranteed to make butter from sweet or sour cream in from three to ten minutes. The manufacturers offer \$100 to any one who can beat this machine on time, quality and quantity on any given amount of sweet or sour cream. Made of the very best materials and is guaranteed.

The number of inquiries received from our first Ad., on page 209, April PLANTER, shows the great interest taken in this new invention by the butter makers of this and adjoining States. It is a new machine, patented and fully protected; and the greatest labor saver of its kind on the market. It has but recently been offered to the public, and by merit alone is making a name and place for itself in enterprising and progressive homes, where it lightens and lessens the labor of those who need it most.

The cut is the Single Standard, in 3 and 6 gal. sizes. In the Double Standard, the iron frame is on both sides and across the top, is heavier and stronger, with an extra wheel at the handle for either hand or light power. In 6 and 10 gal. sizes. You can rely upon what is said about this machine.

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THE MOLINE WAGONS. *Light Running and Durable.* Guaranteed to be made of best air-dried lumber. Handsomely finished, and have feature not found in any other.

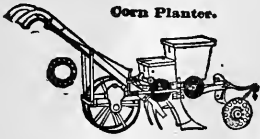
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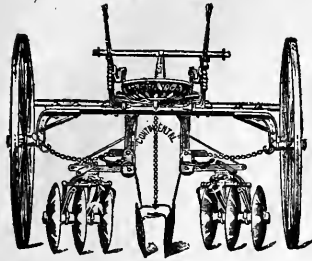


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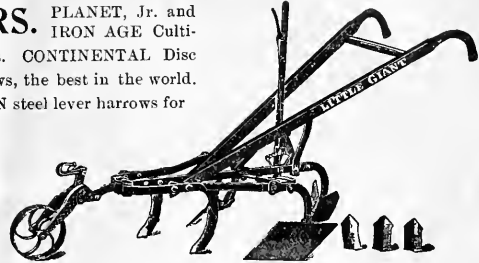
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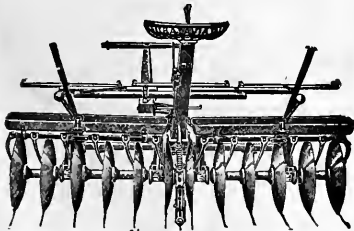


HORSE HOE.

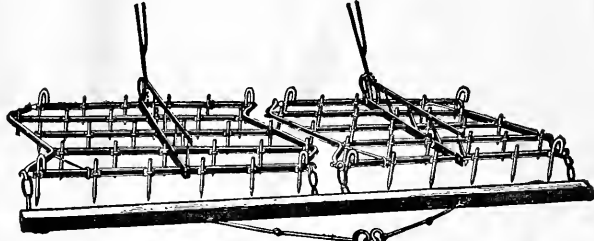
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Single or Double Disc.



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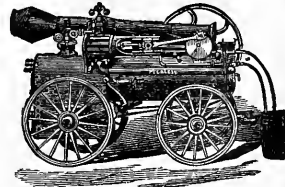


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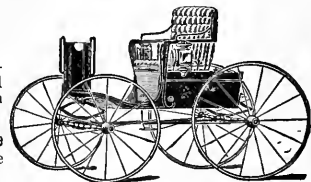


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They are SIMPLE, DURABLE and EASY TO WORK.

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1903 IN THE STUD AT LAUREL HILL FARM 1903  
 THE FINE HACKNEY STALLION

### + HEIDREK +

Bay horse, foaled 1898; 16 hands high. This horse has  
 great natural action, and is capable of getting  
 the highest class harness horses.

FEE, \$10.00 the Season or \$15.00 to insure.

Address **C. F. & J. BUTTON, Walker's Ford, Va.**

1903. IN THE STUD. 1903.

### WEALTH, 29579.

RACE RECORD, 2:17 $\frac{1}{4}$ , Pacing.

Timed separately in 2:08 in a race at Indiana  
 State Fair, 1902

Bay horse, foaled 1897; 16 hands high, weight, 1,200 lbs.  
 Sired by Gambetta Wilkes, 2,193, dam Magnolia, by Norfolk.  
 3670. Wealth is grand individually and in appearance.

FEE, \$20 the Season with return privilege, or \$25 to insure,

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### GREAT STAKES, 25521.

RACE RECORD, 2:20 Trotting.

Bay horse, by Billy Thornhill, 2,24, dam Sweetstakes, by  
 Sweep Stakes, 298. Great Stakes has sired Captain,  
 2,164; Foxhall, 2,193, and four others in the list

FEE, 25.00 for the Season of 1903.

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Pedigrees traced and tabulated. Catalogues compiled and  
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### WHALEBONE, 7872.

Sired by Abdallah Wilkes, son of George Wilkes, 2,22.  
 dam Maggie O., by Abdallah, 15, sire of Goldsmith Maid,  
 2,14; second dam Viley Filly, by Pilot, Jr., sire of dam of  
 Maud S., 2,083.

NOTE.—Whalebone is a richly colored bay horse of fine  
 size, handsome and well formed. His disposition is perfect.  
 He has sired Visitor, 2,264, and other winners.

FEE, \$15, with usual return privilege.

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## Wholesale and Retail Grocers, Feed and Liquor Dealers.

Granulated Sugar	43	Raisons, lb	06	Tea, extra best	40
Pure Leaf Lard	11	1 lb. Bottle Olive Oil	25	Tea, fine	30
Good Family Lard	09	3 lbs. Graham Crackers	25	Table Peaches	10
Dunlop Flour, bbl	\$4 20	Ginger Snaps	04	2 cans Pie Peaches	25
Obelisk Flour, bbl	4 25	Cream Crackers	07	Plum Tobacco, 3 plugs	25
Daisy Flour, bbl	4 00	Soda Crackers	41	Grape Tobacco, 3 plugs	25
Good Family Flour	3 75	6 lbs. Lump Starch	25	Old Peach Tobacco, 3 plugs	25
Good Rice	42	11 large bars Soap	25	Ward Brand Tobacco, 3 plugs	25
Country Meal, peck	18	12 cakes Toilet Soap	25	200 lbs. Sack Salt	85
or bushel	70	Lem. Cling Peaches, can	15	Ice Cream Salt, sack	80
Mountain Butter, lb	17	4 cans assorted Soup	25	Currants, lb	06
Cooked Ham	123	Large bottle Honey	09	Pure Pepper, lb	15
Country Ham	17	Navy Beans, quart	08	Matches, dozen	04
Good Salt Pork	09	Large Postum, pkg.	21	5 String Bloom	25
California Ham	103	Small Postum, pkg.	11	Large Tubs	60
Bologna Sausage	07	Try our Elcin Butter	07	Cedar Buckets	25
Full Cream Cheese	15	Preserves, 6 lb. pail Home Made	30	Lemons, dozen	16
3 large cans Tomatoes	25	Potted Ham	04	1 gal. can P. R. Molasses	40
3 cans 3 lb. Peaches	25	7 cans Sardines	25	Syrup, gallon	35
Large Jars Mustard	08	Arncliffe's Coffee	93	N. O. Molasses, gal.	40
Large Bottles Catsup	08	Rio Coffee	09	7 lbs. Bread Soda	15
3 lbs. Apricots	25	Cut Herrings, dozen	10	Rye Whiskey, per gal.	\$1.50 to \$3.50
7 lbs. Prunes	25	Roe Herrings, dozen	18	Corn Whiskey, gal.	2.00
3 cans Corn	25	Lake Fish, dozen	15	Cut Herrings, bbl.	1.25

Prices Subject to Market Fluctuations. Order Now.

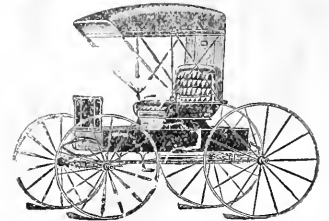
In fact we have everything in the GROCERY and FEED line at prices that will astonish the best posted people. All we ask is a trial.

Write for prices on anything in above line not quoted.

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RIGHT HERE  
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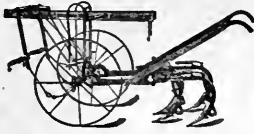
The BARBOUR BUGGY CO.,  
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All of Virginia.

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Genuine BROWN Walking and Riding Cultivator. All styles. Write for circular and prices.

**Buckeye Cider Mills. All Sizes. Also Chattanooga Cane Mills and Evaporators and Furnaces.**

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Scientific Steel Corn Harvester. The best Harvester on earth. For standing corn Safety seats. Safety shafts.



TIGER Steel and Wood Self-Dump Rakes, GRANGER Steel and Wood Hand-Dump Rakes, all sizes.

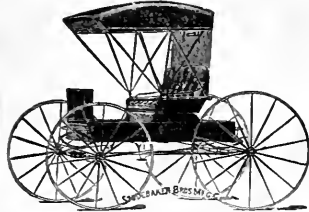
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- Genuine Oliver Chilled Plows and Repairs.
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Special prices given on Studebaker and Brown Wagons, Buggies and Carts.



Studebaker Buggies, all styles. Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.



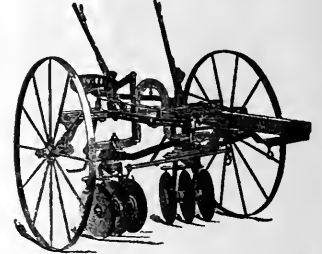
Genuine BROWN Single and Double Plows, wood or Steel beam.

**Buckeye Force Pumps. Porcelain Wood Pumps. Wood and Steel Wind Mills.**

Superior Grain and Fertilizer Drills. Hoe and Disc.



Steel Lever Harrows.



Bement Disc Cultivator, with 6 or 8 Disc.

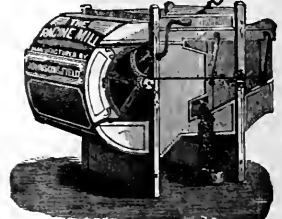
Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.

## ANTI-DIRT MILK PAIL



Only Pail made that prevents Dirt and Hair from dropping into the Milk and STRAINS IT TWICE while milking. Aerates and Cools it.

Every Farmer and Dairyman Should Use It.



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PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,  
TRUCKING, LIVE STOCK AND THE FIRESIDE.

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Agriculture is the nursing mother of the Arts.--XENOPHON.  
Tillage and pasturage are the two breasts of the State.--SULLY.

---

64th Year.

Richmond, August, 1903.

No. 8.

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## Farm Management.

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### WORK FOR THE MONTH.

With the first days of July we had the first touch of real summer weather, and the temperature became more nearly that which we are accustomed to have in May and June. Since that time, up to the date of this writing the temperature, though below normal for July, has yet been seasonable and has been accompanied by warm rains at intervals close enough to prevent any approach to drought. This most desirable change has had a great and beneficial influence on the growing crops and they are now making good progress, but are yet much behind their normal condition at this time of the year, and we shall need a continuance of this genial weather for some time to bring them so forward as that early frosts may not catch them before maturity.

The wheat crop of the country has now been all harvested, except in the North and Northwest, and the latest reports place its average condition as below that of last year. All through the sections where threshing has been done the yields are disappointing, and especially is this so in the South and East. The indications are that the crop will fall very much short of what has been predicted.

The very cold, wet and unfavorable spring has had a disastrous effect on the corn crop prospect. Owing to the impossibility of preparing the land and planting the crop the acreage in corn is greatly reduced. The government report makes the reduction in area over 4,000,000 acres, whilst other more sanguine

estimates place it at something over 3,000,000 acres. But this alone does not tell all the tale. That planted was so backward in growth on the 1st of July that much of it, unless the weather is most propitious and the frosts late, will have great difficulty in reaching maturity. In the great corn belt the condition is from 15 to 20 points below that of last year at the same time. In the South, whilst the average condition is higher than in other parts, it is yet below that of the ten-year average. The indications, therefore, are for a considerably less crop than that of last year and below the average of a normal year.

The cotton crop is still reported as very late and small in growth, with considerable injury from boll weevil in the extreme Southwest and a very irregular growth in other States.

The tobacco crop is planted on a larger area than that of last year and is making good progress, though somewhat late. The outlook in the bright sections is not so promising as in the sections where darker types and shipping are grown. Some of the reports from the Carolinas are very disappointing as to the quantity and quality of the leaf.

The apple crop throughout the South is still promising, a smaller proportion of the fruit having dropped than the average. From the Piedmont section of this State we hear some excellent reports.

Live stock is doing well generally, as pastures have

kept full of feed owing to the rains. The demand on the market keeps good and prices are firm. The man who has plenty of stock is not likely to regret it.

Forage crops are making good growth and a large acreage of these, especially peas, has been planted within the past month. It is not yet too late to plant peas or peas and sorghum to make a hay crop, but no time should be lost in getting them in.

The harvesting of these crops will require attention as they become ready. Do not wait until the leaves and stalks are being dried up before cutting. Where the object in growing these crops is forage, and not seed, they are in the best condition when just forming the seed. Peas should be cut when the first pods are turning yellow. The pea crop is best cut with a grain reaper which throws the crop out of the way of the horses when coming round again. If cut with a mower hands should be employed to follow the mower and throw back the cut crop, or much of it will be injured by the tramping of the team. Leave broadcast until thoroughly wilted and partially cured, then rake into windrow and leave for a day or two, then put up into cock and leave to cure out, but do not leave the cocks standing in the field until they are wasted and weather-beaten. If the weather be fine and dry twenty-four hours in the cock will make the hay fit to store in the barn. Before hauling open the cocks to the sun to dry off any excess of moisture caused by heating or dew, or both, and the hay may then be safely packed away closely in the barn where it will heat and cure out finely. Be particularly careful not to haul the peas when at all damp with rain or dew or they mould and spoil. Soy bean hay should be cured in the same way, but it is less susceptible to injury from rain than peas and may be left in the cock longer without loss. Where peas are grown for the seed the crop should be allowed to stand until the most of the pods are turning ripe and then be cut with the mower, reaper or scythe and be handled as carefully and little as possible to avoid shelling the peas. Put into cocks as soon as fairly dry and leave there to cure out.

Soy beans, when grown for seed, are best cut with a reaper and tied and set up in shocks like grain.

Sorghum should be cut like corn, but be allowed to remain laid on the ground for several days to wilt and largely cure before being shocked up. It is a crop which does not spoil easily with the weather

and may remain in the field without loss for several weeks if need be.

Millet should be cut before the seed forms. It is at its best for hay when in bloom and should be cured like a grass crop. By the end of the month the corn crop intended for silage will be sufficiently matured to cut and store. See that you have the silo ready and the cutter and elevator, or better, the blower, in place. Do not hurry the work of filling the silo. Better silage is made and much more can be put into the silo by filling slowly. Cut half a day and fill half a day, thus giving opportunity for the mass to settle and get up a good heat to expel the air. There is no necessity for treading the silage or weighting the top of the filled silo, as was formerly thought necessary. All that is needed is to keep a man or two in the silo when filling to see that the corners and round the sides are kept well filled and the cut ears distributed equally over the silo. When full or the whole crop put in, cover with a foot of freshly-cut marsh grass or chaff or cotton-seed hulls or cut straw. Water this covering well and in a few days it will be all matted together with mould, which will effectually seal the silage and keep it good.

The seeding of forage crops to provide winter and spring grazing and for cutting for green feed in the spring and for an early hay crop and to conserve the fertility of the soil and improve the land for next year's crops, should now be attended to. Crimson clover is one of the best of these crops. The only drawback attending it is its liability to be killed after germinating by the sun and drouth. As, however, it may be sowed from this time to the end of September, or even the middle of October, there is ample time within which to secure a stand. The best way to proceed is to sow an acre or two and then wait a week and sow another acre or two and so on until all the land available has been seeded. In this way some part, if not all, will make a stand and a crop, larger or smaller, will be secured. It is too valuable a crop as feed and for an improver of the soil not to be worth some special effort to secure a stand. We have known a crop of it to so improve a piece of land as to make it produce from ten to twenty bushels more of corn to the acre, and this, after having served as pasturage for a large number of animals during the winter and spring. Prepare the land well and if poor give a dressing of 300 pounds of acid phosphate to the acre and sow twelve to fifteen pounds of seed per acre. When seeding this crop always sow with it about three-fourths of a bushel of wheat and oats mixed and one pounds of

Dwarf Essex rape per acre may also be sowed along with the seed if the crop is only intended for pasture and as an improver. Where it is intended to be cut for hay the rape should be omitted. A pound or two of turnip seed per acre may also be sowed if desired and will provide a nice crop of roots for winter pulling and feeding. The advantage of sowing this mixed seeding is that if the clover should be killed there will be sure to be something left to cover the land during the winter and thus conserve the fertility of the soil and provide some humus making matter to be turned down for the benefit of the following crop.

Another crop which should not be overlooked is hairy vetch. This should be seeded in August and September and will make spring pasturage and a fine hay crop, which can be cut in May and be followed by corn or peas. This is one of the leguminous crops which add fertility to the soil and conserve the land. Sow twenty pounds of seed to the acre on well-prepared land and sow with it three-fourths of a bushel of wheat and oats mixed. Harrow in and if the land is dry roll. If the land is not in good fertility apply 300 pounds of acid phosphate. It makes an excellent pasture for hogs and cattle in the early spring and will make a hay crop of from two to three tons to the acre.

The work of preparing the land for the wheat and winter oat crops should be commenced at once. Experiments have fully demonstrated that the success of these crops depends much more on the physical and mechanical condition of the soil than upon the fertilizer applied. In a series of rotation experiments conducted recently in South Dakota, where wheat has been grown after a great variety of different crops and also after a summer fallow, during which the land was continuously worked and brought into a fine mechanical condition, the yield of the wheat was greater after the fallow than after any crop. Where wheat succeeded wheat the yield was only a little over three bushels to the acre, whilst after a summer fallow it was eighteen bushels to the acre. Wheat grown after corn always made a better yield than after a crop that was not cultivated, thus showing that what is needed to secure a profitable growth of wheat is perfect preparation of the land so as to make available the plant food in the soil. The yield of wheat after corn was only about a third of a bushel less per acre than after a summer fallow. Get the plows into the fields intended to be sown with wheat and oats as soon as possible and plough the land

deeply. Follow the plows with the cultivator, harrow and roller and keep these going over the land every week or ten days until time to seed the crops. The better and more frequently the land is worked the better will be the yield. Let the land to be seeded to winter oats receive first attention, as these to be grown profitably—and they are, on an average of years, the only oats which can be grown profitably in the South—ought to be sown in September, whilst wheat should not be sown until after we have had a frost or two, say, in October or November. The essential for success in wheat growing is a fine, deeply-broken seed bed, yet with a compact subsurface and land free from weeds. By breaking at once and frequent harrowing and cultivating these essentials can be secured.

Turnips should be sown this month. To make the heaviest yield they should be planted in drills 2 feet 6 inches apart and be thinned out after they have made two or three leaves, so as to stand about nine inches apart in the drill. The land should be finely broken and the seed be drilled in—about two pounds to the acre—and be rolled with a light roller. If sown broadcast it will take three or four pounds of seed per acre. Turnips, to make a heavy crop—we have made thirty tons to the acre—require heavy fertilization. From ten to twenty tons of farm-yard manure to the acre may be applied with advantage, and in its absence, or even as a supplement to it, 400 or 500 pounds to the acre of acid phosphate should be used. A crop of turnips makes such a valuable addition to the winter rations of cattle, sheep and hogs that an effort should be made to secure them. With turnips, straw or corn fodder and a pound of cotton-seed meal per head per day young cattle can be carried through the winter in a constantly improving condition.

Dwarf Essex rape should now be seeded for a fall, winter and spring pasture for sheep and hogs. This crop is one of the most valuable for these animals and will make meat and growth very cheaply. Sow two to four pounds to the acre broadcast on well-prepared land and harrow lightly and roll. Let the plants make a fair growth before turning stock on to them, and do not graze too closely and they will then continue to make growth all through the winter and spring and provide constant pasturage.

Do not pull fodder, but wait until the corn is glazed and dented and then cut up at the root and

shock to cure and thus save all the crop, which has cost labor and money to produce it. Pulling fodder means wasting a large part of the crop and injuring the yield of corn.

### ALFALFA.

In recent issues we have strongly urged the growth of this crop in the Southern States, and have most satisfactory reports as to the success made in experiments with it in various sections. The only discouraging report is that recorded in this issue from South Carolina, where, in one case, a fungoid disease has attacked the crop. Notwithstanding this we still urge that efforts should be made to establish the growth of alfalfa as one of the regular crops of the southern farm. Its value as a feed and sale crop and the great yields which it makes for a series of years on suitable land when once established, warrants some risk being taken of its being now and then and here and there attacked by this fungoid disease. Even if it should only stand one year it will in its several cuttings, make a yield of hay three or four times heavier than clover or any grass crop. An average yield per year may be taken, on suitable land, at 8,000 pounds of dried hay per acre. Ten thousand pounds, and even more than this, has been frequently cut. It should be cut when one-third of the bloom is appeared. It is then richest in feeding value. We are asked frequently as to growing it on poor land. In reply, we would say that it is not a poor land crop. No plant producing such yields as it does can be expected to flourish on poor land. Experiments made at the Minnesota Experiment Station show that an average crop of 8,000 pounds to the acre will remove from the soil 200 pounds of potash, 98 pounds of phosphoric acid, 80 pounds of lime and 22 pounds of magnesia. It, therefore, calls for a soil rich in the mineral fertilizers, potash and phosphoric acid. The nitrogen it requires it obtains from the atmosphere when once it is established and the soil fully inoculated with the specific alfalfa bacteria. A suitable fertilizer to apply as indicated by this analysis of the plant food removed, would be 300 pounds of muriate of potash and 500 pounds of acid phosphate (14 per cent.) per acre. This should be applied broadcast some weeks before seeding and be well worked into the land and an application of lime—twenty-five bushels to the acre—should be also made broadcast and well mixed with the soil. When the crop is once well established it should be top

dressed each year with farm-yard manure, supplemented with 150 pounds of muriate of potash and 300 pounds of acid phosphate per acre to maintain the fertility of the soil and sustain the draft upon the land of the heavy crops which will be produced. We refer our readers for further information as to the crop to our articles in the June and July issues.

Since we wrote the foregoing we have had the pleasure of a call from Dr. Stubbs, the director of the Louisiana Experiment Station, who was on his way to spend his vacation on the old family plantation in Gloucester county, Va. This plantation the Doctor is bringing into a highly fertile and profitable condition under the management of his nephew. He has already a considerable acreage in alfalfa, some of which has already stood for five years, and off which he has this year cut already two heavy crops with a third now ready for cutting. He finds that he can cut on the average four crops per year, each averaging from one and a half to two tons to the acre. For this hay he has a demand for all that he can spare and finds it a most valuable sale crop, as well as a feed crop for his stock. He intends to put at least one third of the plantation into alfalfa as fast as he can get the land into good enough order and rich enough to grow it, and he will then be able to carry a heavy head of live stock all the year round. In summer he will cut the alfalfa and feed it to the stock and in winter will feed the hay along with his other roughage. We asked him about the fungoid disease above referred to. He said that he had had experience with it. It attacked one of his fields one year, being brought, he believed, with the seed. As soon as it was seen to be spreading he had the crop cut down with the mower as close to the ground as possible. The alfalfa was at once put up into lumps and allowed to heat. This heating destroyed many of the fungoid spores. The crop was then dried out and then set on fire and burned up completely, and he had no further trouble with the disease. He has also had "dodder" to attack the crop. This is a parasite like the "dodder" which attacks clover, and is brought into the field with the seed. The only remedy is to cut the crop and burn it up as soon as it is attacked and before seed is formed. The Doctor is emphatic in his opinion that neither the fungoid disease nor any other hindrance should be allowed to stand in the way of growing alfalfa. His experience with the crop, both in Louisiana and in Virginia, is large, and he is satisfied that it has in it elements of more permanent value for the farm and the farmer than any other crop which can be produced.

### GRASS SEEDING.

For many years past, indeed ever since we have edited this journal, we have been urging, in season and out of season, that Southern farmers should grow grass and forage crops for hay and pasture and for the permanent improvement of their farms. Experience the world over has shown that only those countries which have made these crops a leading factor in their systems of agriculture have become permanently agriculturally prosperous. Without these crops it is absolutely impossible to carry live stock on the farm with profit, and without live stock no system of farming can, in the long run, result in anything but the ruin of the land and of those owning and farming it. The months of August and September being the time of the year when grasses can be sown in the South with the greatest probability of success, we propose to say something on the proper method of proceeding in order to secure a good stand. At the outset let us say that statistics go to show that the South is making progress in grass growing. The value of the hay crop on the farm in Maryland, Virginia, North and South Carolina was, in 1902, \$14,280,220. This nearly equalled the value of the wheat crop in those States in the same year, which was \$15,285,225. It was nearly three times the value of the oat crop in those States. The average value of the hay crop per acre in those States in 1902 was \$14.98; that of wheat was \$6.41; corn, \$10.87; oats, \$7.94. When the cost of producing the crop of hay is compared with the cost of producing any of these cereals, it will be seen how much more profitable it is to grow hay. But this does not exhaust the advantages. In producing grass and hay not only is there a large saving in labor, but there is at the same time a large conservation of the fertility of the land and permanent improvement of the farm. Another great factor is that the hay crop can practically be made to a very great extent a sale crop, for which there is an unlimited demand in the large cities of the South, a demand which the South does not begin to satisfy, as hundreds of car loads of Western and Northern hay are shipped into the South every year. Growing forage crops at the same time as the hay crop sets the hay free to be sold, and yet permits of the keeping of a heavy head of live stock, which can be profitably carried on the forage crops alone or supplemented with a little cotton-seed meal. The average yield per acre of hay in the South is nearly as large as that of the Northern and Western States, whilst the average value per ton is greater than in most of those States. We know farmers who

have been selling hay nearly all last winter and during the spring at from \$18 to \$20 per ton on the farm. With such an opening and prospect before him it is time for the southern farmer to cease killing grass and go to producing hay and permanent pasture. The essentials for success in growing grass are rich, finely-prepared land, the seeding at the best time with proper varieties of grass, the seeding of grass alone without a grain crop and the keeping of stock off the newly-seeded land until a dense sod has been secured. One of the great causes of failure to secure a stand of grass is land inadequately prepared for the crop and not made rich enough. Whilst grasses are shallow-rooted plants it is essential to their success that land shall be deeply broken in order that the soil may be capable of holding a reserve of moisture to meet the needs of the crop during a dry time and over a series of years. It is also essential that there should be an abundance of available plant food in the soil, and nothing so much conduces to the availability of this food as repeated cultivation of the land so as to secure that to the depth broken the soil should be in as finely a broken condition as possible. Grasses will not germinate and grow well unless the soil is so finely broken as that the seeds are closely surrounded with fine soil into which the tiny rootlets can make their way and absorb the plant food. This deep breaking should be followed by the cultivator and roller until the seed bed can be made no finer. Grasses call for all the elements of plant food, therefore a complete fertilizer should be applied. Where barn-yard manure can be had no better fertilizer can be used as the basis for the fertilization. This, however, can be usefully and profitably supplemented with acid phosphate or bone meal and possibly with some potash, though if lime has been, or is, applied to the land this may, in most sections of this State, be omitted, as there is a reserve of potash in most of our soils which only requires to be made available by the use of lime. Our own experience is strongly in favor of the use of bone meal as a permanent fertilizer for grass. It is slower in its action than acid phosphate, but more lasting. Where acid phosphate is used it should be supplemented with some nitrate of soda, though we would not apply more than 50 or 75 pounds to the acre at seeding, and would top dress the stand in the spring with another 75 pounds after the grass has commenced to grow. Apply 500 pounds to the acre of acid phosphate or bone meal before seeding and work this well into the soil. The variety and quantity of seed to be sown is an important point. If the field is intended for a meadow then only those

varieties should be seeded which mature at the same time. If intended for a pasture the greater the variety seeded within reasonable limits the better, as this will prolong the grazing period from spring to fall. The grasses in a pasture should keep succeeding each other all through the grazing season, and in the South this practically means all through the year. At the foot of this article we give particulars of varieties of grasses to be sown on different soils for these different purposes. We are strongly in favor of heavy seeding. We would never sow less than two bushels of seed to the acre, and prefer two and a half, except in the case of timothy, when seeded alone, when a peck is sufficient. The majority of the grass seeds are so small and so liable to be of uncertain germinating power, owing to climatic conditions at blooming time, that it is never safe to rely upon light seeding. To be valuable a meadow or a pasture should as quickly as possible be covered with a dense sod. This can only certainly be secured by the use of plenty of seed. Sow the seed broadcast—half one way of the field and half across the first seeding. Harrow in with a light harrow and then roll. Do not sow any grain crop with the grass. The practice of seeding grain with grass is one not adapted to the South. It succeeds in the North and in England, from which country it was introduced here, but the climate there is very different from here. Here, instead of being a "nurse crop," it is a robber crop, depriving the grass seeds of the moisture and plant food which they need and causing the growth to be spindling and weak and then just when shade is most essential the grain is cut and the grass perishes in the hot weather. Sown alone the grasses make a strong, vigorous growth and are gradually inured to the heat of the sun and go through the hot weather without injury, if only there be sufficient moisture in the soil. In thus advising seeding grasses alone we speak from experience. We have tried both ways many times, and whilst we have often failed when seeded with grain, we never failed to secure a stand when the grasses were sown alone or only with clover. We are in favor of seeding some clover with all grass seeds, except timothy, which always sells best when clear timothy alone. The clover helps to make a heavier crop the first year before the grasses are thoroughly established and in the decay of its roots in subsequent years makes food for the grass. Sow the clover at the same time as the grass and not in the spring. If the fall seeding is killed out it may be resown in the spring. When grass is sown alone a crop may usually be cut the first year in the early

fall. No stock, except it may be sheep or calves, should be pastured on the grass the first year, and these should not be allowed to be on the land when it is wet. Pasturing with heavy cattle or horses before the grasses have made a good root-hold and the sod is thickening, is certain to result in permanent injury.

Grass seed mixture for a meadow on good loam soil.—Orchard grass, tall meadow oat grass, meadow fescue, perennial rye, red top.

Grass seed mixture for permanent pasture on good loam soil.—Tall meadow oat grass, Virginia blue-grass, orchard grass, perennial rye, red top, Kentucky blue, meadow fescue.

Sow with the meadow mixture six pounds of red clover per acre, or alsike clover.

Sow with the pasture mixture five pounds of red clover and five pounds of white clover.

### ALFALFA.

*Editor Southern Planter:*

If it is not asking too much will you please give me some information about a piece of "alfalfa clover" that I prize very highly. It was seeded the first of last September on a piece of rich, loamy soil that had been freed of weeds. It was twenty-seven inches high the 15th of last December, and I cut it at that time, as you advised me to do. I have cut two crops of hay off it this spring and it is now about twenty-six inches high and beginning to bloom. After cutting it the last time I top dressed it with fertilizer (2-8-2 goods) at the rate of about 600 pounds to the acre. I find now that here and there the leaves and stalks are turning yellow and dying. I have examined it carefully, but cannot find any insect or parasite preying upon it. Any information or advice you may give me will be very much appreciated.

The rapidity of its growth in dry weather was simply wonderful. It grew, by *actual measurement*, sixteen inches in eleven days during the dry spell we had in May. DR. G. H. FINCH.

*Mecklenburg county, Va.*

When we received the foregoing communication we wrote Dr. Finch that we thought it probable that the trouble he complained of was caused by the wet weather of June. The alfalfa plant is easily injured by water standing or wet vegetable matter lying upon the plants. These cause the crowns of the roots to decay and the plant then soon dies. We have known one or two good stands to be lost from these causes, hence the importance of seeing that land seeded to alfalfa has good drainage, and that after the crop is cut it is quickly made into hay and got off the field.

If the hay is caught in a wet season and cannot be quickly dried, it should be hauled off the field to the barn yard and be made into manure and thus save the plants, which will give another crop to take the place of the lost one in a month or five weeks. Since we wrote Dr. Finch we have received the following communications from another subscriber, Mr. Roddey, of Rock Hill, S. C., which may explain the trouble. We trust, however, that this is not so, as we should regret to know that the disease mentioned is prevalent in these South Atlantic States. We have known several good stands of alfalfa in this section which have stood for a number of years, and heard of no indications of the disease. Mr. Roddey says:

I have read with a great deal of interest your article in the SOUTHERN PLANTER of July, 1903, and as I am interested in alfalfa, it occurs to me to give you the benefit of my recent experience. I have about an acre of alfalfa, from which two good cuttings have been secured this year. Quite recently it appears to have been attacked by a fungus disease, and I sent some specimens of the diseased alfalfa to the Department of Agriculture at Washington, and enclosed you will find a copy of the letter which I received in reply to my communication relative to the subject. Quite a number of our farmers proposed planting alfalfa this fall, and quite a local enthusiasm has been manifested in its growth. The department's letter, however, is a knock-out blow and we are somewhat at a loss to know how to proceed further. My present idea is to discontinue its cultivation and to advise my friends who intended growing it that in view of the fungus disease which has appeared, it would probably be best to go slow in any further experiments in its growth.

Copy of letter referred to:

WASHINGTON, D. C., July 6, 1903.

Mr. W. L. Roddey, Rock Hill, S. C.:

DEAR SIR.—Your letter of the 1st instant with the accompanying specimens of diseased alfalfa has been referred to this office. An examination of the specimens shows that they are badly attacked by a fungus disease generally called leaf-spot, known to botanists as *pseudopeziza medicaginis* (Lib.) Sacc. This disease has been reported from several States, especially in the East, and has proved particularly troublesome in some parts of Delaware, where some experiments have been carried on in treating it. Thus far, however, no satisfactory remedy has been found. It is possible that some benefit may be derived from a thorough treatment with Bordeaux mixture if commenced early in the spring before the plants are attacked. Where the plants have become so badly diseased that there is no hope of curing them,

it would probably be best to burn the field and plant it to some other crop. Very truly yours,  
(Signed) C. L. SHEAR, *Pathologist*.

### HESSIAN FLY.

As is the case in almost every year, we have this year had complaints of "fly" in the wheat from various sections of this and the adjoining States. Now is the time of the year when effective steps can be taken for lessening the risk of damage from this pest. If every farmer would act now the damage could be reduced to the very smallest proportions, but if only an isolated farmer here and there takes the proper steps, whilst some good may be done, nothing like extermination can result. Each farmer should at once plough a bed of land across a field and sow it with wheat; very soon after it becomes green with the young plants if any Hessian flies are about they will settle upon it and lay their eggs. When the strip is thoroughly infested with the flies plough the crop down deep and roll the land. This will bury and destroy the flies and their eggs, and then if the seeding of the wheat crop be deferred until after we have had a sharp frost very little fear of damage need be apprehended from this source. Where only one or two farmers in a section adopt this course only partial relief can be secured, as the flies will be bred on one farm and make their way to others. Urge your neighbors to join you in this campaign.

### OATS TURNING TO CHEAT.

Editor Southern Planter:

In the last issue of the PLANTER a subscriber asks, "Will gray winter oats turn to cheat?" You reply that neither oats nor wheat nor any other kind of grain will turn to cheat or ches.

Now, Mr. Editor, I am aware that your answer is in conformity with the prevailing opinion of botanists and scientists. However, in the light of recent experiments by horticulturists and others upon various shrubs and plants in the way of hybridizing, the theoretical deductions of past scientists have frequently come to grief.

I will say for the benefit of your subscribers that cheat, or ches (*Bromus secalinus*), is a hybrid (or like a hybrid) of the order Gramineæ, originating from the changed condition of the organization of either wheat or oats, and perhaps other grains, and thereafter, like many other hybrids, retaining the power of propagation.

All this may be demonstrated by seeding to either fall wheat or oats a plat where excessive water and frost in the latter part of winter shall so nearly exhaust the vitality as to change the organism of the plant, yet not quite destroy it. Many of the plants will show up chess when headed.

I can call to mind several instances in my memory where I have seen this, and also several examples of wheat and chess grown on the same root and very carefully examined to see that no mistake was made.

York county, Va.

B. F. WRIGHT.

We would like to have the opinion of some of our specialists on plant breeding on this question. The best authorities we know are entirely opposed to the idea that one plant can change into another. They stand by the doctrine that "like produces like." We grant the possibility of such a combination of unfavorable circumstances as may cause a plant or an animal to degenerate into a wretched specimen of the original and true type of the species or breed, but that such degeneracy should cause a change so great as to make the species or breed a perfect plant or animal of another kind is beyond our conception. *Bromus secalinis* (cheat or chess) is a distinct botanical species of grass reproducing itself truly generation after generation and showing little or no variation in type. So also are wheat and oats. They all belong to one great botanical family, and it is beyond our comprehension that any one of them should, under any circumstances, change so as to become a perfect plant of another member of the same family. If wheat and oats can change to cheat, why not cheat change to wheat or oats. Such a change has never yet been recorded so far as we know. Hybridization has, no doubt, produced some strange freaks, but it is, we believe, an essential in all cases of hybridization of plants that there should be a cross fertilization of the pollen of the flowers. Contrary to this principle the claimed change or hybridization of wheat or oats to cheat occurs in winter when there is no pollen or flowers on either plant.—En.

### VETCH, COW PEA, AND SOY BEAN HAY AS SUBSTITUTES FOR WHEAT BRAN.

The object of the feeding experiments herein described was to ascertain whether hay made from hairy vetch, cow peas and soy beans could be advantageously substituted for most of the wheat bran in the ration of dairy cows.

The following values per ton were used in calculating the cost of food:

Wheat bran, \$20.00; vetch hay, \$10.00; cow pea hay, \$10.00; cotton seed, \$12.00; cotton seed meal, \$20.00; cotton seed hulls, \$5.00.

Vetch hay proved fully equal in feeding value to a similar weight of wheat bran. By this substitution the cost of the food required to make a pound of butter was reduced 25 per cent., which is equivalent to a monthly saving of \$22.20 in a herd of twenty cows.

With the vetch ration the cost of food for one pound of butter averaged 10 cents in contrast with 13.4 cents when wheat bran was fed.

The waste in feeding vetch hay was, with most cows, about 6 per cent. of the amount offered and with cow pea hay about 16 per cent.; the latter residue being useless, is charged as a part of the ration.

That portion of the cow pea hay actually eaten proved fully equal in feeding value to a similar weight of wheat bran. Charging the cows with all the cow pea hay offered them, we find that cow pea hay had 86 per cent. of the feeding value of wheat bran, one ton of this hay being equal to 1,720 pounds of wheat bran.

When wheat bran was worth \$20 per ton cow pea hay was worth \$17.20, and vetch hay \$20.00.

The monthly profits per cow were \$4.65 on the vetch ration and \$4.35 on the cow pea ration.

One of the Jersey cows used in this test produced butter at a cost for food of only 8 1-3 cents per pound, when fed on the vetch ration.

Running cow pea hay through a feed cutter did not decrease the waste in feeding this food.

Four and a half per cent. more butter was produced with soy bean hay than with cow pea hay, if we take account of the portion of each actually eaten; however, a larger proportion of the coarse stems of the soy bean hay was left uneaten.

When corn hearts was substituted for wheat bran the yield of butter was increased by 8 per cent.

J. F. DRUGGAR,

Agriculturist Alabama Experiment Station.

### BORERS.

One pint of carbolic acid, five gallons of whitewash, one pound of sulphur, half pound of salt, one quart of soap—used in Georgia largely for peach trees, and prevents borers. Use just before the trees bloom. Dig around the tree close to the body, exposing the roots slightly, and apply the wash from roots to crotch of tree. The scent of the acid remains three months. When this wash is used, one never has any trouble with wormy peaches, the scent probably keeping curenlios away.





### CLOVER IN EASTERN VIRGINIA.

*Editor Southern Planter:*

It is generally agreed and understood by tillers of the soil that clover is the best friend the farmer has in the line of grasses. The general idea and verdict is, that if clover will grow, and there be a substantial subsoil, such land can be easily brought up to a high state of cultivation, and to a great degree of productiveness. In short, nearly everybody has a good word and kindly feeling for clover on the farm.

In my correspondence and conference with people from the East, West and North, I find the idea generally prevailing that clover will not do well in the South. This seems to be the general opinion.

How this idea gets its hold upon so many people I cannot say; but presume it may be from the fact that clover is not more generally grown in the South.

Then, too, in some portions of the South the soil may be too poor, and the subsoil too light, or the dry spells in summer too long, or the winter frosts too severe.

But none of these causes or drawbacks can be urged against the growing of clover down here in Eastern Virginia. The soil is of alluvial character, very friable, easy to cultivate and the subsoil is a good, substantial clay.

The coldest drop of the thermometer very seldom

gets below 20 degrees above zero, and the summer months are liberally supplied with rains. The monthly average rainfall for July and August during the past thirty-three years being almost six inches per month, and, as a result our pastures and meadows are about as green in July and August as in April, May and June.

The one lone Jersey cow, shown in the accompanying cut, seems to have a government contract under her feet to keep down the volunteer growth of white and red clover on a ten acre patch of land, which, only a year ago, was in potatoes.

In March, 1902, potatoes were planted where the cow now stands. In June and early July, 1902, the potatoes were dug and the surface smoothed down a little with the harrow. At once the crabgrass took full possession of the potato patch, and in October, 1902, one and one-half tons of crabgrass to the acre was cut and stacked for consumption on the farm.

In the mean time the owner having sold his farm to a syndicate to be cut up into little five acre garden farms, did not touch this plat, and when we took our photograph, about the middle of May, 1903, the clover covered the ground almost completely—a volunteer crop. This shows how rapidly the clover comes in and occupies the land where it is given a chance and where the soil is in fair condition.

This old Jersey, up to her eyes in clover, is the

only cloven-hoofed animal on a 500-acre farm, excepting, perhaps, a venerable old "Billy goat."

All a man has to do here is to keep some stock on the farm and let the clover seed get into the manure heap and get scattered over the farm, and it will come up here, there and everywhere, often getting where it is not wanted, as our truckers class clover as a "weed." So it is often a weed, as the definition of a weed is a "plant out of place."

Our people do not like clover in the potatoes or corn or in the berry fields. They root it up and dig it up when it gets in the way, and do not seem to understand that, properly cared for, and encouraged, and permitted to grow it would soon lift the mortgage off every farm in Eastern Virginia.

I long to see the day when we shall see clover fields and herds of Jersey cows on every farm in Virginia. It was a beautiful view, this May morning, to see this fine Jersey cow in the clover field. The sun shining warm and genial, the bees industriously at work at the clover blossoms, a light haze between us and the distant woodland, the song of birds, the shouts and laughing of the berry pickers in the adjoining fields, making a combination of sights and sounds very pleasant to the senses.

When Virginia is once properly settled and farmed it will lead the entire country. We should grow clover—plenty of it—red, white, mammoth and crimson.

There should be a herd of cows and clover fields on every farm. Why not? Nature encourages and permits, and the markets demand.

Why not raise the clover and the cows?

Norfolk, Va.

A. JEFFERS.

## CHEAT OR CHESS.

*Editor Southern Planter:*

I noticed in the July PLANTER the question asked if oats will turn to cheat. This question was discussed for years by my father and myself, my father contending that cheat was a grain of itself and was not a degenerated grain, whilst I maintained a contrary opinion. I thought I brought ample proof to sustain my views, but could not convince him. After his death I saw a case that I think would have compelled him to give up his view. The case was this:

Mr. William Brackman, a neighbor of mine in Louisa county, had been sowing winter oats for a number of years. They became so filthy with cheat and cockle he concluded he would sow them in the

spring so as to cleanse them. He sowed in the spring two years and got them perfectly clean of all cheat and cockle. He then sowed them in the fall. (I saw them every few days from the time they were seeded until cut.) They stood the winter well. When they began to head I noticed that the first heads were all cheat. I thought that it was owing to some cheat that was in the land and being a volunteer crop was earlier than the oats and that later the oats would head, but to my surprise the whole crop was cheat. I do not think I would put it too strong to say there was not a head of oats to a thousand of cheat. Mr. Brockman cut the crop for hay, and it was as fine a crop as you generally see. The crop that came up after the cheat was cut was oats.

These facts can be proven by as good and honest farmers as you will find in this section. This has proven to me what I have always known, that cheat is a degenerated grain, not only of oats, but of wheat as well.

Now, Mr. Editor, I do not write this to try and change your views in the matter, but if there is any one who doubts this let him sow winter oats twice in the spring then sow them in the fall and he will see, to his sorrow, the truthfulness of my statement.

Orange county, Va.

J. H. ELLIS.

In this issue will be found some further remarks by us on this subject in reply to a communication.—Ed.

## THE INADEQUACY OF THE PREVAILING METHOD OF APPLYING FERTILIZERS THROUGHOUT THE COTTON STATES.

*Editor Southern Planter:*

Over and over again I have been confronted with the question, Do fertilizers impoverish land? and just as often as I am asked the question, just that often I answer it both in the affirmative and in the negative.

Fertilizers applied in an improper manner are liable to impoverish even the very richest of soils.

I have repeatedly stated the fact heretofore that the chemical fertilizers—nitrogen, phosphoric acid and potash—put in the very best work of which they are capable in correcting known deficiencies in the soil.

2. In bringing about an increased yield of a cash or sale crop, let the crop be what it may.

3. To fertilize the crop that is to be used strictly for recuperative fertilizing purposes.

I know very well that it is popular just at this

present time to transpose this arrangement of mine and place the last-named use of the chemical fertilizers first, in front and on top all the time.

Now, I have no kick to make about which method of use of these all important agents is of the greatest importance to any individual farmer. The point I wish to make and emphasize is that the prevailing method of using fertilizers, as invariably used throughout the entire South by the average user of fertilizers, is utterly and entirely inadequate to subserve either one of the above named three uses.

I refer to the customary, reprehensible, yet, unfortunately, widespread habit, that has somehow or other gained hold, of applying 200 pounds of a low-grade fertilizer per acre, said low-grade fertilizer analyzing about 8-2-2.

These 8-2-2 goods are not adapted to the needs of a cotton crop on any soil: not adapted to a corn crop on any soil; not adapted to a vegetable crop on any soil: not adapted to even a cow pea or clover crop, nor any other leguminous or renovating crop of any kind. I fancy I hear one say, If this is the case, why is such a fertilizer manufactured? To this I would answer: In order to cater to the popular demand for a "fancier" cheap fertilizer. Even if the fertilizer was the fertilizer par excellence for the crops (cotton or corn) for which it is put up and sold, which it is not, 200 pounds of it applied per acre is utterly and entirely inadequate to either furnish said crops of cotton and corn with a sufficiency of plant food to ensure even good, much less best, results, and also utterly and entirely inadequate to even maintain, much less increase, the fertility of the soil. This brings me again to the question, Do fertilizers impoverish land? To this query I would answer: It is not that which is applied to the soil that impoverishes soil, but that which is withheld from it. The fertility of millions of acres has become exhausted North, East and West, as well as in the South. Was it the application of chemical fertilizers that caused their exhaustion? Not at all, for not an ounce of fertilizer of any kind was ever applied to them at any time. What, then, is the cause of their exhaustion? It was caused by the annual taking off of everything possible from the soil and never putting anything back. Not satisfied with the destruction of fertility brought about by this system of wholesale spoliation, for the accommodation of a Mustang pony, as well as for the ease of the soil tiller, the residue, after both man and animals have gotten off all they possibly could utilize, is set fire to and burned.

Many tons of fertilizer are annually sold of even

a lower grade than the 8-2-2 goods, analyzing 8-1½-1. It is needless to state that either of these are entirely too low a grade to either be sold, bought or used. It is through a very costly ignorance that farmers can be prevailed on to use them at all. This deplorable ignorance annually costs the farmers more than sufficient to obtain a thorough, practical education along this line that would be ample to prevent his being imposed upon by dealers who often are as ignorant as the farmer himself of the general principles that underlie the truly scientific (hence intelligent, judicious, rational and profitable) system of fertilization. The manufacturers make money on them, pandering to the popular demand for something cheap. The dealers are going to so handle them to make money on them anyhow, while the plants starve on any such an insufficient, innutritious diet; the lands are continually growing poorer under their use, and the poor, deluded farmer has to bear all the losses, while, unfortunately, the blame for this condition of things lies with himself exclusively. Through his own negligence he is forced to furnish the feathers for the other fellows to feather their nests with. A little study on the part of the soil tiller would so change the face of things as to make the fertilization of the various cultivated crops a never ending source of satisfaction, profit and delight.

"A thing of beauty is a joy forever." A judicious system of fertilization would undoubtedly make the "thing of beauty" just as surely as liberal and judicious feed and intelligent care and painstaking will make a beautiful cow, horse, ox or hog. A yield per acre of 5 bales of cotton; 100 or upward bushels of corn; 150 bushels of oats; 60 bushels of wheat; 6 tons of hay; 700 bushels of potatoes, etc., etc., have often been, and could still oftener be, obtained by judicious (which means economical) fertilization. It is false economy to buy low-grade goods at any price. There is no true economy in it. The best of anything and everything is none too good, and the best is always the cheapest in the end, regardless of price.

By applying 200 pounds of low-grade 8-2-2 goods per acre one applies but 16 pounds phosphoric acid, 4 pounds ammonia and 4 pounds of potash per acre. Now, if any of my farming brethren will show a single cultivated crop that will abstract this amount from the soil and no more and still make a profitable crop; or, if any one, let him be whom he may, can shew that this compound or combination is adapted to cotton or corn, or any other crop for which it may be recommended and so adapted, that "best," or even "good," results may be reasonably

expected therefrom, I will agree to give that party my head for a foot-ball, or to be branded for an ignominy to the end of my days, or to be dumped off into the nearest creek with a rock around my neck and say "here goes nobody." A fertilizer analyzing 8-3-3 or 10-3-4 and from 500 to 1,200 pounds applied per acre will, when coupled with deep preparation and thorough culture, ensure best—i. e., most profitable—results. This being the case, this latter seemingly very liberal application is, in fact, the most economical application that can be made, for the reason that it gives the greatest profit or largest cash returns.

An application of less than 600 pounds per acre of even as high grade as above, tends to impoverish, instead of enriching, the soil, as in this case the fertilizer acts somewhat as a stimulant and causes the plant to withdraw from the soil more plant food than the applied fertilizer furnishes.

To this extent, and to this extent only, do the chemical or commercial fertilizers actually impoverish soils. Messrs. Lawes and Gilbert, of Rothamstead, England, after upward of a half century's experience in their use, summarize results by stating that: 1. "Complete fertilizers are not exhaustive, and land can be kept permanently fertile by their use. 2. Heavy applications of fertilizers are the most profitable." This is also the experience of all those who have used them extensively in this country.

Burgess, Miss.

G. H. TURNER.

### ENQUIRERS' COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

#### Alfalfa.

Having read a great deal about alfalfa in the *PLANTER*, I have become interested enough to try it, especially for grazing for hogs in spring and early summer. Would like to have answers to the following questions in your next issue:

1. On what kind of soil will it grow, and if it will grow on comparatively poor land well manured and fertilized?

2. What kind of commercial fertilizer should be used in connection with stable manure?

3. Where could the bacteria-infected soil be gotten: how applied and how much per acre?

4. How should the land be ordered and what time should the alfalfa be sown?

5. If it would be advisable to sow land in cow peas before seeding it with alfalfa?

6. What soil is adapted to the growth of Dwarf Essex rape for fall, winter and spring grazing for hogs?

7. How should the land be prepared for same?  
*Amelia county, Va.* G. C. A.

In our articles in June, July and this issue we have, we think, fully covered all the questions asked by our correspondent as to alfalfa. We refer him to these.

In this issue we give advice as to sowing Dwarf Essex rape. A fertile loam soil is the best for this crop, though it will often do well on heavier land if well prepared and in good fertility. Any soil that will grow turnips or cabbages will grow rape.—Ed.

#### Cattle With Sore Eyes.

I have noticed several of my cattle with sore eyes, and a great deal of water runs from the eye, and it looks as though it was blind. The cattle have good pasture and there are some woods they can go to. Is it probable that some poisonous weed has gotten into the eye? Will you kindly let me know what to do and if it is a disease is it a dangerous one?

*Warren county, Va.*

E. C. GATEWOOD.

This looks very like a case of specific ophthalmia. This generally appears in an enzootic form and affects a number of the cattle at the same time. It is characterized by a muco-purulent discharge of the eyes, an intense degree of inflammation, swelling of the eyelids and opacity of the cornea, making the animals appear blind. There is a constant flow of tears, sometimes streaked with blood. The unaffected animals should be at once removed to another location possessing a different character of soil, feed and water. Those affected should be housed in a cool, dark stable and be supplied with plenty of fresh water to drink and be fed on soft, succulent feed. Give a dose of one pound of Epsom salts to each sick animal in two or three pints of water. Give tincture of veratrum veride every two hours in thirty drop doses and half an ounce of saltpeter three times a day. For an eye wash use boracic acid, one drachm, and pour four ounces of boiling water over it. Use this frequently, applying it directly to the eye.—Ed.

#### Cement for Walls.

In the June issue a reference was made to cement walls for an ice-house. How would same do for a horse cellar wall and for well curbing in place of brick? If good, please state what thickness of wall

would be best? What proportion of cement and sand would give best results. Could ordinary field stones be used as a filler?

Please suggest a way of building same.

*Spotsylvania county, Va.*

CONCRETE.

See reply to Subscriber as to concrete building in this issue. The concrete will make a good wall. Make the wall nine inches thick.—Ed.

### Concrete Buildings.

Can you oblige me by giving some information through your Inquirer's Column concerning the construction of farm buildings out of a mixture of air-slacked lime, sand, gravel and stones?

I understand that most masons use unslacked lime, but I have heard that air-slacked lime has been used in some cases.

Can you tell me what proportion of lime should be used and just how the mixture should be prepared to put in the wall so that it will not crumble? Can such a wall be built so that it will not be damp on the inside? Will slate stone put into the wall prevent moisture from going through?

Any information on these subjects will be very gratefully received by

SUBSCRIBER.

*Spotsylvania county, Va.*

Buildings for all farm purposes, and even for dwellings, can be erected with concrete. They are practically indestructible and are damp proof. They are largely built in some parts of the North and in Canada. Neither air-slacked nor water-slacked lime can, however, be used for this purpose. The material used to bind the sand and stone together must be cement. The buildings are erected by mixing the stone, sand and cement into a mortar and pouring this into wooden moulds. These moulds are fixed on the site of the building and when filled are allowed to stand until the concrete has set and are then raised and again filled until the height of the wall has been built. The proportions for good concrete are, for one cubic yard: Crushed rock, 27 cubic feet; gravel, 13 cubic feet; coarse sand, 6 cubic feet; cement, 3 cubic feet.—Ed.

### Alfalfa.

Would you advise sowing alfalfa clover in the fall, and at what time for this section? Can you inform me where infected soil may be obtained? What fertilizer would you advise for alfalfa on land where red clover sod has been turned under?

*Albemarle county, Va.*

H. R. BOSWELL.

See our reply to G. C. A. in this issue. In all sections where it is safe to sow red clover in the fall

alfalfa may be there sown at that time and this would cover your section. Sow as soon as you can get the land ready so that good root-hold will be obtained before winter sets in. Use acid phosphate on the clover sod, 300 to 500 pounds to the acre. In the mountain sections of the western part of this State it will be better to sow in the spring, as the winters are often severe enough to kill out any of the clovers.—Ed.

### Seeding Winter Oats.

Can you advise sowing winter oats on corn land well prepared as for wheat, or would it be too late for oats? We cannot be ready before the last week in September.

C. A. S.

*Culpeper county, Va.*

If the oats can be gotten in in September they may be sown with a good prospect of success.—Ed.

### Plant for Name.

I enclose specimen root and flowering branch of a plant which seems to propagate itself freely in this section. It is relished by stock, both in the green and cured states. An identification will be greatly appreciated.

SUBSCRIBER.

*Lowndes county, Miss.*

The plant from Columbus, Miss., sent for identification, is *Prairie Mimosa—acuan illinoensis*.

This plant is native from South Dakota to Florida and Texas. It is more abundant in the southern part of its range. It belongs to the mimosa family, but is not a true mimosa. So far as I can learn it has not heretofore been regarded as a forage plant of any particular value, but if stock eat it with relish, and without any ill effects, as stated, it is doubtless of some value as a pasture plant.

LYSTER H. DEWEY,

Botanist in Charge of Fiber Plants.

*Department of Agriculture, Washington, D. C.*

### Plant for Name.

The enclosed plant is springing up after wheat in Franklin county thick and flourishing. Can you tell me what it is and if of any value as a fertilizer? Stock will not eat it.

W. H. WORKMAN.

*Roanoke county, Va.*

The plant sent for identification is Bracted Plantain—*Plantago aristata*.

LYSTER H. DEWEY,

Botanist in Charge of Fiber Plants.

*Department of Agriculture, Washington, D. C.*

Bracted plantain is a troublesome weed a native

of the Mississippi Valley. It is an annual and propagates from seeds, of which it produces a great number. It has probably been introduced in the East and South largely in clover seed. The only way to get rid of it is to put the land into a hoed crop. If not checked it is likely to become as troublesome as rib grass. It is of no value either as a feed or a fertilizer.—Ed.

### Grass for Name.

I enclose a head of grass that came up in my oats, Will you please give its name and its value as hay? *Isle of Wight Co., Va.* THOMAS B. WRIGHT.

The grass is chess (*Bromus Secalinus*). It is of small value as a hay grass.—Ed.

### Improving Land for Corn.

We have about seven acres of land of a light sandy soil with a yellow clay foundation in peanuts this year. This land, when planted in cotton, will produce about 1,000 pounds to the acre. After the peanuts are dug we want to put the land in something that will improve it for corn next spring. Please tell us what to get and how much? What kind of fertilizers and how much? Please give us all the information you can, as we want to try to make a success the first year. HENRY & MORRIS.

*Bertie Co., N. C.*

As soon as the Peanuts are dug apply 25 bushels of lime to the acre and harrow in. Then in a week or ten days apply broadcast 500 pounds to the acre of acid phosphate, and 50 pounds of muriate of potash, and sow a mixture of 10 pounds of Crimson clover, 15 pounds of sand vetch and half a bushel of wheat and oats mixed. This should make a good green fallow to plow down for the corn in April.—Ed.

### Cramp in Horses.

In our last issue, in the reply to the enquiry of Mr. H. Jackson, on page 443, there occurs an unfortunate printer's error, which we desire to correct as early as possible. We wrote that a proper remedy to use was chloral hydrate *one ounce* in a half pint of water. The printer makes us say ten ounces. *One ounce* is the proper dose. This is apparent later in the reply where the remedy is again mentioned for another form of cramp.

### Home Made Pickles, Wine, Grape Juice.

We have had several enquiries recently as to making these, and have not been able to give satisfactory

replies from the absence of personal knowledge on the subject. We have now secured a correspondent, who will give information on these and other household questions. The first article will be found in this issue in the Publishers' Department, in columns alongside the advertisements. The Department of Agriculture, Washington, has just issued a Farmers' Bulletin, No. 175, giving information as to grape juice, etc. This can be had on application to the Department.—Ed.

### Fertilizer for Clover.

Five years ago I moved to a wornout farm. Since that time I have improved it very much by sowing cow peas and hauling woods mould, but have never made much success with clover, especially red clover. It starts off nicely, but turns yellow in early spring and does not grow much more. Will you kindly advise me what fertilizer to use to remedy this, for it seem deficient in something? In giving me your opinion of a fertilizer please give me the analysis also. I shall sow clover in August in corn.

*Accomac county, Va.*

W. S. NELSON.

We are of opinion that if you would give your land an application of lime—say at the rate of 25 to 50 bushels to the acre—that you would secure a good stand of clover. This should be repeated—say, every five years. The lime is best applied in the fall and winter, after the land has been plowed. Spread broadcast and harrow in lightly. As you propose to sow clover in the corn, and it will not be practicable to spread the lime in the corn, we would give the application on the clover in the early spring.—Ed.

### Rotation of Crops for Hogs.

Your valuable journal has, I think, been worth much to me, and I come for some more information, though you have detailed it time and again, but I haven't time to look the particular Planter up, so a repetition will perhaps help some other poor fellow. It is this. I have a lot of some 15 or 16 acres, at present divided in half, and I wish to divide the two halves, making four lots out of the whole, as suggested by the PLANTER some time ago, and keep this in something for my hogs. Last year I had seven acres of this land, in peas and soy beans, and my hogs got fat eating them. This year I have eleven acres of the same land in peas. I sowed soy beans, but they failed to come up, so I sowed in peas. Now, what I wish to know is this. What crop must I put in each of these lots for first, second, third and fourth, so as to have something for the hogs all the time as near as possible. I know that German clover is an early

crop, but it is said to be uncertain in getting a stand. If you suggest that, could you suggest something to be sown with it, so that in case of failure in clover, I would have the other? Would it pay to put one or two of the lots that are now in peas (after the hogs eat the peas) in oats, and when they begin to turn in June next, turn the hogs in on them, then follow in peas again. Information on this line will be generally helpful no doubt.

N. E. HAYES.

As soon as the peas are off seed one of the lots in crimson clover, wheat, oats, rape and turnips. In this issue in the article, Work for the Month, will be found the proportion of seed to use. Seed another lot a little later with Hairy Vetch, wheat and oats. In December or January seed another lot with Canada peas and oats, two bushels of peas and one bushel of oats to the acre. As these different crops are consumed seed the lots in order in cow peas, sorghum, soy beans and corn, to follow for eating in summer and fall. Plant part of one lot in artichokes in April to make winter feed.—Ed.

### Johnson Grass.

Can you tell me in your August number anything about the seeding of Johnson grass? Can it be sown in the fall with a reasonable prospect of getting a stand? If so, about what time and with what kind of preparation?

J. O. BARKSDALE.

Johnson grass may be sown in either fall or spring, but if sown in the fall it must be got in early—enough to get good root hold before severe frost. Prepare the land as for other grass seeding and sow one and one-half bushels of seed per acre, so as to secure a thick stand, and thus a finer growth of stalk.—Ed.

### Peach Trees Dying.

You will find a sample of small black beetle which is very abundant upon one of my peach trees. The tree is, and has been, losing a branch here and there for the past three months; the bark looks dry and fly specked. This is the third tree I have had affected in this way in three years. Both the others died after a few months. Can you tell what is the trouble and advise a remedy through the columns of the PLANTER.

PERCIVAL HICKS.

Mathews county, Va.

We referred the foregoing to Professor Galloway. The following is the reply received.—Ed.

Your letter of the 15th instant addressed to Prof. Galloway, of this department, duly received and referred to this office for attention, inasmuch as the samples submitted show insect injury, and therefore do not fall within the province of his bureau.

The insect sent, on examination, proves to be one of the smaller species of lady birds, *Pentilia misella* Lec., which is one of our most efficient natural enemies of the San Jose scale. The fact that your subscriber has collected these specimens on his trees, together with the report of damage to the trees, would seem to indicate the presence of the scale insect mentioned. To confirm this belief, it will only be necessary for you to send to me a few branches of these infested trees showing the injury noted. The remedies for the San Jose scale are detailed in two circulars of this office, copies of which I enclose.

L. O. HOWARD, *Entomologist.*

Department of Agriculture, Washington, D. C.

### Alfalfa.

I am very much interested in your articles on alfalfa clover. I have two acres I want to seed this summer or fall. About what time would you advise seeding it? It is in wheat stubble now.

Worcester county, Md. A. C. HOLLOWAY.

Plow at once and harrow and encourage the weeds to grow. Kill these by reharrowing as fast as they germinate. Then in the first half of September sow the alfalfa. See replies and articles in this issue as to alfalfa.—Ed.

### Cross-Breeding Sheep.

May I ask if a cross of a Dorset ram on Shropshire ewes is desirable? A NEW SUBSCRIBER.

Bedford county, Va.

We do not think the cross would be a desirable one. The Dorset is not as good a mutton and wool sheep as the Shropshire, whilst, as an early lamb producer, it is not much better. The two breeds each fill a distinct place in sheep husbandry, and should be kept pure to fill that place, or, if crossed at all, should be crossed on grade Merinos, whose quality as lamb producers and mutton and wool makers they can and will influence favorably. It is rarely good policy or profitable to cross two pure breeds. They scarcely ever "knick" well, and the result is often a nondescript of no value.—Ed.

### Apple Scab—Bitter Rot or Brown Rot.

I wish to trespass upon your space to ask our Blacksburg friends, so well versed in sporeology, if *sclerotinia fructigena* is the English Latin, whilst *deutricium fuciocladium* is the American Latin for apple scab?

In the *English Field* I notice that the Board of

Agriculture gives the following solution: Sulphate of iron, 25 pounds; sulphuric acid, 1 pint; water, 50 gallons, to be used as a spray when buds are dormant, as an application against what reads from its description as being apple scab, though called by the Board of Agriculture brown rot, and which is possibly the same as our bitter rot. The description is: "Brownish scattered patches on the skin, followed by the growth of dull-gray tufts arranged in irregular concentric rings. The fruit attacked does not rot or decay, but becomes mummified."

Anything tending to fight the terrible scourge of the more especially beloved winesap, must be of interest to its growers. An attack of scab as fruit is setting is by many misconstrued to frost, cold wind, etc., instead to the insidious spore destroying its prey.

Let us not deceive ourselves, thinking all will be well another season, though a dry one may bring some amelioration. Either the grower must get the better of his enemy or hope deferred will cause regret of a tolerance in not surplanting. I encountered the owner of a large orchard of winesaps not long ago who accounted for the barrenness of his trees by their being all "he" trees, and consequently not bearing ones. If a microbe has a sense of the ludicrous how it must have been amused. W. M.

*Albemarle county, Va.*

Will the Mycologist at the Experiment Station kindly note and reply. The inquiry reached us too late for us to send it to him for reply in this issue.—Ee.

### Bermuda Grass.

Can I set a field in Bermuda grass and seed it in wheat at the same time and get a stand of Bermuda grass? O. E. SHOOK.

*Iredell county, N. C.*

Whilst we have had no experience in planting Bermuda grass and wheat together, yet we do not doubt but that you can succeed in getting a stand in this way. If the wheat crop is thick the grass will not make much growth until the wheat is cut, as shading heavily is one of the best methods known for destroying Bermuda.—Ed.

### Spraying Fruit Trees.

I dare say it is quite puerile to say what I must in this. It is about spraying fruit trees with the different preparations given in your March number. I know nothing of the orchard. Have never before had the care of one, so don't know when nor how to spray them. My apples and pears are doing moderately well. Pears are better than apples; but peaches and plums do all right till the turning

period. Then they rot, shrivel up. The orchard is low and almost sobby. I remember my father used to bore into the body of his trees and fill the hole with sulphur and stop it up, but for what purpose I've forgotten, or with what result. I dug around a few of my trees last spring and put lime around some, sulphur around others and sol. carbolio acid around others—experimenting. So far can see no difference. I am in the country forty-odd miles from a market, so find it inconvenient to get the sprays as per your journal. I keep a dispensary on hand—an old druggist. Is there no cheaper method of treating my sick trees and no way more convenient than that given in the SOUTHERN PLANTER?

*Berkley county, S. C.*

JAMES JOYNER.

The advice given in our March issue as to spraying trees is founded on the best authorities on the subject in this country. No other means are known for the control of fungoid and insect enemies than those given in the spray calendar. You might as well bore holes in the trees and fill them with wine in order to strengthen them as fill them with sulphur or any other drug to cure them. The trees will not utilize either the one or the other. It will remain inert in the holes.—Ed.

### Ice House.

I wish to build an ice house convenient to my dwelling, but cannot build in the ground on account of water rising. I can go down about five or six feet in the ground and get drainage, and what I wish to do is to have the house six feet in the ground built up with rock and cemented and six or seven feet above ground; double wall packed with sawdust. Now, what I wish to know is will ice keep next to rock or cement? I have also heard that ice will not keep for five or six feet below the earth's surface on account of the heat in the earth to that depth. Is this true? If so, of course all above would melt and the house would be a failure. Please give me the above information in your August number.

A SUBSCRIBER.

Whilst an ice house built below ground, with either stone or cement, will keep ice if the walls are thick enough, yet the best modern ice houses are now altogether built above ground as being cheaper, more convenient, and equally effective. What is needed is a building with double walls a foot apart, and the foot space tightly packed with sawdust, with a double roof. There must also be good drainage provided, and the drain should be trapped by having a bend in it to hold water so as to prevent the access of warm air. Provide for good ventilation over the top of the ice by having a ventilator in each end of the roof.—Ed.



## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

All crops of fruit and vegetables should be carefully gathered as they mature and become fit for market or storage. They should be placed under cover and out of the sun to cool off before being either packed for shipment or put away in storage. Carefully sort and cull out all defective specimens and ship or store only the perfect ones. If the defective culls amount in quantity to more than can be conveniently used at home ship them in separate packages and mark them distinctly as culls and they will not then prejudice the sale of the best. Mixed shipments always sell for the price of the poorest. As far as possible keep the defective products off the markets as they only serve to glut them and bring down the price of the first quality.

Fall cabbage seed should be sown at once on rich beds in a moist situation and push on the growth of the plants as quickly as possible, so that they may escape the attacks of fly and worms. A light sprinkling of nitrate of soda over the beds just previous to a gentle rain will help them. The plants should be ready to set out in September and they will then make nice heads in the late fall. Flat Dutch and Savoy are good varieties.

Broccoli plants may be set out during the latter part of this month. They will make heads for cutting in October and November. Treat like cabbages. They are as easily grown as cabbages and sell well. They make a head like a cauliflower.

English peas and snap beans may be sown for a fall crop in Eastern Virginia and North Carolina. They are uncertain as to yield, but if the fall be mild and frosts hold off they make a crop which sells well and is always acceptable at home.

Kale and spinach may be sown at the end of the month.

In our last issue we wrote on the fall Irish potato crops, and to this issue refer our readers. No time should now be lost in getting the crop planted.

Celery plants may now be set out from the seed beds. Celery requires rich, moist soil in order that the growth may be quick or the stalks will not be ten-

der. Make the land rich with well rotted farm-yard manure, which may be supplemented with a fertilizer having 7 per cent. of ammonia, 5 per cent. phosphoric acid and 8 per cent. potash. The land should be deeply broken and cultivated finely. The plants should be set out about six inches apart, so as to grow closely and exclude the light and thus help in bleaching the stalks. If the variety grown is not a self-bleaching variety the plants should be set in rows five feet apart, so as to allow banking the soil up to the plants to bleach them. When setting out in rows we always set two rows of plants about six inches apart in each row and they can then be earthed up together. As the plants grow a little soil should be drawn to them at intervals so as to keep the plants from spreading out, and then when fully grown be earthed up to the top. When banking the soil up to the plant hold the stalks of each plant close together, so as to keep the soil out of the hearts of the plants. If celery can be set out where it can be irrigated it will be a great advantage, as it succeeds well with frequent irrigation.

As the crops mature clean the land of all trash and waste, and if not wanted for any other crop sow crimson clover to occupy the land during the winter and conserve and improve the fertility.

All cultivation should cease in the orchard and small fruit patches, so as to encourage ripening of the wood.

The land for strawberry planting should be ploughed and harrowed so as to encourage germination of the weeds, which can then be killed.

### GROWING STRAWBERRIES IN POTS.

A subscriber asks us to tell him about growing strawberries in pots to secure plants which will give a crop the first year. There is no difficulty about this work. Some writers advise that pots should be filled with soil and be sunk in the ground near the old plants and the runners be trained and pegged over them so as to root in the pots; but this is a work which causes much unnecessary labor. We would fill the pots with good rich soil, providing plenty of drainage in each, and then cut off runners which have commenced to form roots and set them in

the pots and keep them moist and shaded for a few days, when they will at once commence to grow. In selecting the runners take the plant first formed on the runner for potting. It will be the strongest plant. Growth should be encouraged in the pots by watering with weak manure water or water in which a little nitrate of soda has been dissolved, and on the approach of cold weather they should be protected at night. In the early spring they should be turned out of the pots without disturbing the roots and they will continue their growth and make fruit.

### ORCHARD AND GARDEN NOTES.

*Editor Southern Planter:*

Harvest time in the orchard and garden has now come. The fruits of our labors can now be seen. The pleasures that come from gathering and eating the fine fruits and vegetables from our own gardens are great. These fruits and vegetables, as they appear growing upon the trees and vines look much more beautiful and taste much better than those bruised and inferior flavored ones that are shipped long distances to the cities. Many of our city friends do not know any thing about the best fruits and vegetables.

While we are gathering these fine products we must not fail to learn lessons about effects that different varieties, different soils and different cultural methods have produced upon the quality and quantity of the crops. I have had an opportunity to notice the fruiting habits of Early Harvest, Red June and Transparent apples, and to test their table qualities. Each one of these early fruits has some special claim in its favor different from the others.

Red June has a better color, but appears to be rather a shy bearer; Early Harvest is a little small, but is prolific and of good flavor, and Transparent is almost too acid, unless extremely ripe, but it is of good size and bears quite young.

The great rush of spring and summer work is now over. The farmer usually has more spare time during this month than any other summer or spring month. I want to suggest that the farmer's family take a few days for rest and recreation. Let us change the scenes a little. "All work and no play makes a dull boy." Take an outing. Drive the family to some good spring near by and spend a few days. Dine at some good hotel in the city and let the boy get a glimpse of city life. Then explain to him how city folks live, so that he may not be so anxious to

leave the old homestead to learn about city life by himself. A few dollars spent for the family in this way may prove to be the best investment the farmer can make. Try it. Let the boy go with a large shipment of produce to the market and watch the various ways it is handled before it reaches the consumer. This will teach him how to prepare things for market in the best possible manner. This question of how to market products is of as much importance frequently as how to grow them. The farmer should study the marketing now when taking his vacation.

Shall the farmer's boy be sent to college this year? If so, where? This is one of the most important questions that usually engages the farmer's attention during this month. Does the farmer's boy need an education? If not, why do men go to colleges to study law and medicine? The father sometimes tells his boy that he (the father) has made a success in life without a college education and his son ought to do equally as well without one. This kind of reasoning has frequently decided the fate of many bright and ambitious farm boys. While such reasoning appears sound on its face, still it is very unsound and misleading. The same father might ask also how many men *without* a college education have made *failures*. Conditions have greatly changed since he grew up. People are more thickly settled, population has increased, competition has become great and the requirements of society and the business world have grown immensely. There are many more avenues of pleasure opened up to the educated man than the uneducated. He is of more benefit to his fellow-man and the community. Instead of leaving the young man so many dollars to spend after the father is dead it would often be far better to spend the money in educating the young man and leave him a well-trained mind and a sound manhood. The boy will climb the ladder then instead of coming down.

But what kind of an education is best for the farmer's boy? This question should be discussed with the boy very frankly, and some time should be given before making a decision. If the boy wants to make a farmer the decision is made at once. Send him to a good agricultural and mechanical college. While a good farmer's boy will usually be successful in most any business or professional line he may choose to enter, still the great demand now is for men trained in the technical branches. The demand for men with a classical education has become very limited. The dead languages no longer hold the greater influence in our colleges and universities. If the boy

is sent to college to make such things his main study, that is his first step in being educated away from the farm. The dignity of farming in Virginia and other Southern States is gaining ground rapidly. Virginia has an ex-Governor who was proud of the title, "Farmer Governor." Some of the wealthiest and most influential men of the State now own large pippin orchards or fine herds of registered cattle. One of our senators delights to spend his summers on his farm. Things are turning farmerward in Virginia. Encourage the boy to be a farmer. Teach him that it is honorable. There is at least one good college where he can go, at small expense, to study agriculture or horticulture. He will be respected and encouraged in his work at this institution. Send a postal-card for a catalogue of the Agricultural and Mechanical College (Virginia Polytechnic Institute) located at Blacksburg, Va. This catalogue is now before me, and I notice that a two-year course in "*practical agriculture*" is given at this institution. I would like to see a number of young farmers take this course. The President of the Board has approved the short winter course idea that I suggested in the *PLANTER*, and I hope to see this course offered at the college in a short time. More money is needed for broadening the agricultural features at this institution, and I hope the necessary money will be given by the next Legislature. The Legislature of Illinois recently gave the agricultural college of that State \$100,000 for "equipment and instructional work in the Department of Agriculture." Virginians have not been educated up to the point to even ask for such an amount, both for equipment and building, for the agricultural work of the State, but we are coming. If the farmers will vote in the primaries this fall for those who favor the advancement of the agricultural interests of the State we will be coming faster.

R. H. PRICE.

Montgomery county.

### FIRE BLIGHT ON PEARS.

At the Virginia Experiment Station at Blacksburg, a pear orchard was planted in 1889, in which were set out over thirty different varieties. This orchard has had the constant care and attention of the Horticulturist and Mycologist of the station, with the hope of demonstrating the possibility of growing pears successfully in this State where fire blight has been a constant source of loss and discouragement to orchardists. Up to 1899, when the orchard was 10 years old, this care resulted in gratifying success, there being to that date only slight attacks of the

disease, and these were controlled by cutting away the diseased portions supplemented by thorough use of the Bordeaux spray. During 1900 the attack of blight became very severe, and regardless of cutting out wood and thorough application of Bordeaux, some of the trees were entirely destroyed before mid-summer. In a further effort to save the orchard the trees were carefully gone over in the winter of 1900-1901 and all blighted wood removed, except blight spots on the trunks and main limbs of trees that were desired to be attempted to be saved. These were carefully scraped, removing all the dead bark as far as possible and later the trunks and main limbs were treated with a lime-bluestone wash made by using two pounds of bluestone, four pounds of lime and three gallons of water, and was prepared as follows: The bluestone was dissolved in hot water, the lime carefully slacked in hot water and the two were then mixed together and thinned so as to make three gallons of the mixture. This was applied so as to thoroughly coat the trunks and main limbs. The trees themselves were thoroughly sprayed in March with a solution of bluestone—two pounds to fifty gallons of water. In April and twice in May the trees were sprayed with Bordeaux mixture. Notwithstanding all this work and the cutting out of all diseased wood, the blight continued to make headway.

On June 4th the pear blight was again quite general throughout the orchard, and certain trees were so badly diseased that it was decided to remove them. At the end of the season of 1901 the orchard presented a most serious condition of affairs. A considerable number of trees had already been removed, others had been cut to stumps, and it was now necessary to again remove a considerable number of trees and to cut others back to mere stubs or to short spurs of limbs around the head of the trunk in order to remove, as far as possible, the diseased wood.

The subsequent efforts made to combat the disease and the result are described in the following bulletin from the Mycologist, Professor Alwood:

During the winter of 1901-1902 the trees were carefully searched for blighted wood and the same removed, except where certain blight spots on the trunk and main limbs could not well be cut away without destroying portions of the trees which were yet alive. Those trees which were thought to be quite beyond remedial treatment were cut out. All the wounds made in the heavy cutting of diseased tissue were covered with thick white lead paint, this being our usual custom in such work.

During the last week in March the pear orchard was sprayed so as to thoroughly drench all parts of

the trees with a lye wash, made by using concentrated lye in solution, so as to give a strength of 3 degrees on the Beaume spindle, it requiring about seven pounds of the concentrated lye to each fifty gallons of water to make the strength required. This wash was given for its cleansing effect, as has been our custom to do about once in three years.

On April 3d the trees still remaining in the pear orchard were treated as follows with a prepared fertilizer composed of 300 pounds of 16 per cent. dissolved South Carolina phosphate and 150 pounds of muriate potash. There were seventy-five trees still standing in the pear orchard, and this quantity of fertilizer was sowed broadcast in equal quantities around these trees, thus making an application of six pounds per tree. The ground had been previously cultivated with a disc harrow, and after the application of fertilizer was made a slight cultivation was given with a straight-tooth harrow. The trees were still dormant. About two weeks later the orchard was recultivated with the disc harrow, and no further cultivation given for the year.

On April 25th the pear orchard was given the first spraying of Bordeaux, made in the usual manner. The buds were just bursting at this date and the trees were coated so as to show a thin layer of bluish powder when dry.

On May 7th the pear trees were given the second spraying with the Bordeaux mixture, care being taken to thoroughly treat all parts of the trees and to again coat the limbs and trunks with the spray preparation. This was the last treatment with Bordeaux for that season.

Slight trace of blight showed here and there on the early growth, but no serious development of the disease occurred. The only noticeable progress that the disease made during the season was on limbs and smaller branches adjacent to hold-over cases which were not cut out at the winter pruning as noted above. No summer pruning for blight was attempted during 1902. These slight occurrences resulted in the death of a few large limbs and occasional branches, but there was no spread of the trouble to the young wood as the season progressed. The trees, in many instances, took on a new vigor, and the appearance of the orchard at the close of the summer of 1902 was far better than at the close of 1901. In fact, the disease was so decidedly checked that one could not help being greatly encouraged with the result.

It should further be stated that, with the checking of the blight in the pear orchard, scarcely a twig blighted in the large variety apple orchard standing adjacent, whereas, the previous year twig blight occurred very generally throughout the apple orchard.

SPRING OF 1903.

This season the orchard has been treated as fol-

lows: The few dead limbs and branches resulting from last season's action of blight were cut out when still dormant. No winter wash was used. Though the orchard has a dilapidated appearance from severe cutting, it shows no particular extension of blighted areas on trunks and limbs. Unfortunately, the impassable condition of our road to the depot rendered it impossible to secure the material for making the tonic fertilizer as early as we had wished. The application was prepared, however, as specified under a previous section of this report, and *ten pounds* used broadcast around each tree, on April 22, 1903, spreading the same for a radius of six to eight feet about the trees.

The first Bordeaux treatment was given April 20th, just as buds were opening, and the second May 18th, after bloom had fallen.

The orchard has been cultivated three times with a disc harrow, and will be given no further culture or treatment of any sort. The coming fall we ought to be able to make pretty positive statements as to the results of this tonic treatment for pear blight.

At this writing (June 1, 1903), the trees are, with few exceptions, making a vigorous growth, and in some cases forming new heads from bare trunks where the tops were cut away at 12 and 13 years old.

#### CONCLUSIONS.

1. Our efforts to stay the fire blight by cutting out diseased tissue and by the use of Bordeaux sprays over the entire trees, and washes on the trunk, have failed to hold the disease in check, but we think this preliminary effort to control the disease should not be neglected.

2. It appears that we are warranted in saying that the fertilizer used on pear trees suffering from fire blight has enabled them to resist the disease to a very marked degree. These tests must be repeated for a series of years, and under varying conditions, before a final pronouncement can be made.

3. It is, in our opinion, bad policy to cultivate pear orchards in summer, or, in fact, after the bloom falls, and such orchards are apparently more healthy if planted on rather dry, stiff soil.

b. After our experience with the blight we suggest the following list of varieties for home use and commercial planting. Well treated, these would appear to promise the best results:

For summer.—Bartlett and Tyson.

For autumn and late fruit.—Seckel, Bosc (finest quality, amateur only), Louise, Rutter, Kieffer (especially for commercial purposes) and Lawrence. This latter, if well handled, can be held until late; quality is fine.

WILLIAM B. ALWOOD,

*Mycologist, etc.*

Experiment Station, Blacksburg, Va., June 30, 1903.

## Live Stock and Dairy.

### A DEHORNING PEN.

A subscriber writes us asking that we give him some points about building a pen for holding cattle whilst being dehorned. A very simple arrangement will meet all the needs of a dehorning pen. Indeed, we know of one gentleman who every year dehorns a large number of cattle whose only pen (if such it can be called) is simply a forked tree. Near to his stable a large tree has grown which, at about three feet above the ground, divides into two limbs between which the head of a cow can be easily passed. When once through, pressing the head down a little and holding it there by the nose, fixes the animal so that the head cannot be moved. The horns are then taken off and the head of the cow raised and the animal set at liberty. A dehorning pen can do no better than follow this simple plan, except that it should be made of strong rails down each side so that when once in it the animal's body will be also confined, so as not to have room to move to either side. Make the end of the pen through which the head projects of two strong upright posts and a couple of rails near the bottom to hold these together and let the space between these two uprights be only sufficiently wide for the head below the horns to pass through. Fix a strong cross-bar with a hinge to the top of one of these uprights and when the head is in position between them close this down on the neck and fasten with a staple in the other upright and thus hold the head fast.

### LIVE STOCK AT ST. LOUIS.

F. D. Coburn, Chief of the Department of Live Stock of the Louisiana Purchase Exposition, has arranged for a total of over 26,000 prizes in the classifications for horses, cattle, sheep, swine, poultry, etc., for the World's Fair show next year. These are unprecedented in amount and are divided among twelve breeds of beef and dual purpose cattle with 2,352 prizes; four breeds of dairy cattle, 560 prizes; nineteen breeds of horses, 3,458 prizes; eleven breeds of swine, 2,772 prizes; fourteen breeds of sheep, 2,548 prizes; 375 varieties of poultry and pigeons, 10,300 prizes; fifty-seven breeds of dogs, 2,604 prizes. There are thirty-two additional prizes for single cows and herds entered in the dairy demonstration; five for oxen; fifty-five for mules and 1,310 for the estimated displays of pet stock, vehicles, etc.

Provision has been made for five cash prizes and two honorable mention awards in most sections except poultry. The final arrangements of the classifications may still further enlarge the number of prizes offered.

### THE PROFITABLE COLT.

*Editor Southern Planter:*

In many cases some of the work horses on the farm may be brood mares. Usually such mares have less to do in winter. They can have their colts in November and suckle them through the winter months. Sometimes it is difficult to get the mares to breed at the desired time of the year. At least have the colt come in April or not before September 30th.

As soon as the colt comes into the world see that its nose is uncovered as soon as the body is exposed to the air, and there may be cases where the navel needs attention, but nature generally takes care of that. Leave the colt with the dam for awhile and let her take care of it, but if after two or three hours it has not had any milk help it to get some. As a rule the foal gets a good portion within a half hour after being born. Be sure the dam has sufficient milk, or if the udder is full and hard rub it and start the flow. If the milk does not move the bowels properly a little castor oil should be given, and sometimes it is necessary to give an injection. When the colt is about a day old go into the stable and get in front of him, sitting down several feet away. Just sit still with your hat off so he will not knock it off and scare himself. He is a very curious little fellow and will not be long in getting to see what you are. Be very quiet and let him have his own way till he begins picking at you. After giving him time to become interested reach out quietly and tickle him a little on the breast, which he will greatly enjoy. After a short time you may begin to rub him a little and tickle him between the forelegs till he begins to try to lay down on you. Now you have his confidence, which, if you will repeat the lesson once or twice more, you may have always, if you will treat him kindly. Always catch the colt and hold him by putting one arm in front and one back of him. The pivotal point of action is the center of the body—fasten him in front and he tries to go backward; fasten him at the rear and he tries to go forward. You can easily hold the colt if you place one arm

under the neck and the other under the ham. Handle him first on one side then on the other, and give him a lump of sugar. He may not eat it at first, but pass it around his mouth and he will soon learn to like it.

When about a week old put on a strong, neatly-fitting halter and tie the colt up. If the halter does not fit he will soon learn to rub it off and a habit is formed that is almost impossible to cure. If he pulls back, to counteract this, place a strap around his body just in front of his hind legs. Attach a rope to this and run it through a ring in the halter. When the colt goes back pull him up to you; then give him some sugar. By the time he is two weeks old he should have been taught to lead and stand while his mother is taken out to water. Next put on the headstall with a bit and let him get accustomed to it.

The mare should be kept in a box stall for a short time after foaling, and as soon as the colt becomes accustomed to being haltered tie the mare in a single stall. When she goes to work he should not be allowed to follow her, but is better off in the stall—all the better if a paddock is attached. For the first month if the colt cannot be taken to the dam she should be brought up in the middle of the day to suckle him. If she is on pasture the colt will early learn to partake of the same. Teach him to eat when from 3 to 4 weeks old by providing a self-feeder where he can get oats and bran at all times. There is no danger of him eating too much. Aim to keep him growing well and see to it that he is getting a good grain ration and is in good thrift at weaning time—5 or 6 months old. Separate the two so they cannot see or hear each other and by kindness and perseverance the colt will soon forget to worry. To dry the mare feed straw and decrease the amount of water.

The first year after weaning is usually the hardest time in the life of the colt, and we should give him extra care and feed at this time. Some breeders feed much grain the first winter. At any rate, he should be kept growing, but not at all fat before he is 3 years old. There are no grain feeds better adapted to growing muscle and bone than oats and bran with an addition of about a pint of oil meal a day. No corn is needed, except in cold weather. Clover or alfalfa hay and bluegrass pasturage furnish excellent feed. Grinding feed is unnecessary, as the operation takes time and money. The time of the colt is not worth anything; therefore, he can safely put it in grinding his own feed. He has nothing else to do and likes it. He will not pass any

grain whole if he is in perfect health. Potatoes are an excellent food for the colt. It is well to cut them and dust over with a little grain. Carrots are also recommended as a feed to build a good frame and solid body. If he is nervous decrease the quantity of oats.

Allow him free range and exposure to outdoor weather common to older stock in the more clement seasons. Keep the feet straight with a rasp.

A fall colt thus treated is ready to make full growth, and instead of being at two and a half years no better than the 2-year-old, as is often the case, he will be about as good as a 3-year-old.

GEORGE H. C. WILLIAMS.

*United States Department Agriculture, Washington, D. C.*

## MORE LIVE STOCK.

*Editor Southern Planter:*

The market conditions for stock-raising—including all meat-producing animals—offer such inducements to farmers as ought to influence them to produce all the live stock their farms will sustain. Beef is way up in price, and the demand is greater than the supply. This is just what the farmer wants. Breeding stock is also scarce and must be grown to meet the demand. So also is good dairy stock. For milk and butter prices are so favorable and demand for good milk and butter so great—that of the "gilt-edge" variety, especially—the supply does not begin to meet the demand.

Prices of both mutton and wool are high, and indications point that they will go still higher. The heavy sheep losses in Australia and the great decrease in exports of both sheep and wool from such an extensive shipping point, indicate at least no decrease from present prices.

The losses among the flocks and herds throughout the Northwest will also influence prices for some time to come.

Every one at all acquainted with stock raising knows of the shortage in hogs for both breeding and market purposes. Hogs bring quick money, and if properly handled plenty of it and good returns on capital invested.

Sheep are easily handled and they also bring quick money and from two sources—mutton and wool.

Cattle have made many rich, and will still make many more rich, unless vegetarians get us. Goats are also attracting much attention, and if figures

speak truly they can be profitably handled, especially so where land is to be cleared of weeds and scrub growth.

Fortunately, there is variety enough of live stock for each man to select that which best suits his fancy, his ability or his surroundings. He can select which ever breed of stock suits his purpose best, but when choice is followed thus far let him stick to it. Rarely ever does the man who changes from sheep to hogs and hogs to cattle and perhaps from cattle to horses, do well. There are exceptions—this only proves the rule—where circumstances are such that a change is beneficial, even essential; but, generally speaking, the man who studiously makes his choice, sticks to it and is carefully observant of the details of his business is the successful man.

Another condition besides that of the markets must be considered by the farmer. The time is passing when cattle and sheep can be run on the plains in any number. These plains are rapidly being turned into farms, and for some years ranches have been moving farther and farther west to give place to settlers. Sheep and cattle have moved nearer together, until the result has been the war between the sheep and cattle men so disgraceful to our history; and the end is not yet. These wars but prove the shortage of grazing lands. In all of the Western States range lands are taken up by settlers—thousands of farms in each State every year—until the end must be—and that not far distant—when live stock growing and grain growing must be done together on the farm. This has great advantages for the farmer, especially those who possess farms where grain growing solely has weakened the soil, as in the southern part of the United States, separated from the North and West to some extent by the civil war and the consequences resulting. Here are many large farms where part of the land is cultivated, part in timber and much left unused, save for commons. Take, for example, the State of Virginia. These conditions are existant here. Grain and tobacco are produced in considerable quantities; much commercial fertilizer is used. Thoroughbred stock for breeding purposes is raised throughout the State to some extent; but little feeding is done, however. Where either is followed the difference in the condition of that farm and those joining is amazing. There are many sections of the United States where grass for hay or grazing purposes cannot be produced that will compare with that grown in these places. Corn, grains and clovers, including alfalfa, will compare well with those raised in other sections, and the water supply is as good as can be had anywhere.

Land throughout this section can be bought very cheap—from \$5 per acre up—in some instances very good improvements included. However, when the farmer awakes to the fact that the best way to market farm produce is in the shape of meat or dairy products, these conditions will change.

If every farmer would put, or keep, on his place all the stock it would carry until every field and pasture came into a high state of fertility, the ease and profit with which he could handle his farm would be a pleasant surprise to him. The more stock he raised the more and better grain he could grow, and with more grain more stock would follow, until our lands attained as high a state of fertility and cultivation as the world-renowned agricultural lands of England.

While there is much to be said in favor of herding on the ranges, there is to that, as to most things, two sides. Range stock is frequently exposed to diseases by bringing in new stock, to poison from eating poisonous plants when grazing is scarce or when moving from one place to another; also, some loss from wild animals, more especially among sheep, and in time of drought to intense suffering and loss for want of both feed and water, and every winter leaves tales to tell of snow-covered ranges, where the weakest in every herd succumb to cold and starvation.

Any, or, indeed, all, of these conditions may confront a farmer-stockman, but at the same time he has at hand means to combat them that a range man has not. With a part of his land in grass and cultivation he can, in the most unfavorable season, provide enough feed to bring his stock through. By judiciously fencing, water can be provided on most farms so as to be available in each grazing field, and facilities are at hand for separating from the herds those in a poorer condition and giving to them the extra attention required to put them into shape.

There is also an advantage in producing stock as near as possible to where it is to be marketed, and this can be done here to a far greater extent than it is anywhere east of the Mississippi river. where markets are so near at hand and of the highest.

The time is at hand when every farmer—yes, and stockman—must settle this matter for himself and put it into practice. The time is past when a man who was not possessed of wit enough for anything else would do for a farmer. The government has done much toward educating as to the need of scientific farming and farming as a business investment, by publishing and freely circulating the annual reports of the Departments of Agriculture in each State, the Experiment Station reports and by aiding State ag-

ricultural colleges, etc. When we really know what we need we are sure to have it. In the last decade we have made rapid progress in our farming methods, both as to agricultural features and stock raising. The up-to-date farmer has a comfortable home with some of the luxuries in it that are so attractive to the people, that were exclusively city conveniences not many years ago. He has a carriage and horses that are frequently used by the family, also has time and sympathy for social enjoyments. These things, with an agricultural college education, will fit the young people to become good farmers. Simply because a certain boy is a little more intelligent than the average is no reason why he should go away to the city to shut himself up in a little, dark office and for fifty weeks a year do precisely and exactly as he is told or lose his job. Many do that when they might be the owners of fine farms with fields of waving grain and herds of sleek cattle and sheep grazing contentedly on the pastures, and all as a result of their own ability and management.

A man is tied to his farm? Certainly, who is not tied? It is only the question of the length of the rope with which he is tied, and, broadly speaking, the salaried man of the cities is tied with the shortest.

Fluvanna county, Va. E. A. KENNICOTT.

When sending us the foregoing, Mr. Kennicott said: "It has been my lot to become acquainted with farming and stock-raising conditions through the North and West, and in no place have I seen equally good conditions, naturally, as here. I have also seen corn and forage grown here that are entirely convincing as to what can be done." He said that a friend of his, one of the editors of the *Chicago Daily Drover*, had recently visited him in Fluvanna county. This was his first visit to this part of the country and he remarked that he had never seen such possibilities for sheep raising as in this part of the State of Virginia, though his travels had been considerable. Mr. Kennicott is one of a class of men of whom we want to see hundreds in the South. A man who realizes and knows what are the possibilities of live-stock farming and who appreciates the truth of what we have so frequently asserted, that there is no location in the whole country so well fitted in every way for the wideawake, live stockman as this Atlantic coast section of the South.—Ed.

### RAISING COLTS.

Editor Southern Planter:

Your correspondent, "R," of Henderson county, N. C., whose inquiry for "points" on raising colts,

suggests that he does not incline toward the scrub product, as usually seen on our farms. Breeding and raising colts is very much like cropping, it depends wholly upon your theory of what you want to produce. If you intend to raise a first-class animal you must begin the operation before the colt is born by selection of dam and sire. An over-worked, poorly-nourished mare cannot be expected to produce a good colt from a cross-roads scrub sire, nor could any mare, no matter how high bred, for that matter. There is a difference of opinion whether it is best for the colt to be born in the spring or in the fall. As a matter of fact, it does not make as much difference as some people imagine, provided the dam and colt have the proper food and nourishment. The dam should not be worked but very lightly during the suckling of the foal. There are many reasons for this. Among others, the mare needs all her nourishment to maintain her own physical condition during the period of suckling her foal. If she becomes heated during work it affects the colt through the milk, and the colt is often injured in following its dam while at work.

Up to the fourth month of age the colt will thrive on its mother's milk alone: at that age it can be taught to eat finely-ground oats, one cupful, and one teaspoonful of old process linseed oil meal twice a day. At six months this should be increased to one pint of ground oats and two teaspoonsful linseed meal twice a day. It makes no difference whether the colt is on grass or hay, it should have the grain ration. Beginning with the winter it should have one pint of ground oats, one pint bran and one tablespoonful linseed-oil meal three times a day with a *light* hay ration. Never overfeed colts with hay. This can be increased until at springtime, say, 12 months old, it is getting one quart ground oats, one quart bran, one tablespoonful (heaping) of linseed-oil meal at a feed. When ready for pasture nail a small box to a post about the right height for the colt to feed easily and give him a quart of whole oats morning and night. Keep a piece of rock salt in the box all the time. If the pasture is of poor quality increase the oats. You cannot grow a good colt without good feed. You cannot raise a good crop without good land or plenty of fertilizer for plant food. This rule holds good in 999 cases out of 1,000. I have often heard of a scrub turning out to be a rarely good horse, but the other 999 were scrubs pure and simple. The fact of the matter is, you cannot produce something from nothing. Only the Almighty can do that. You cannot raise a colt, cow, sheep or hog without feed: the better the feed the



better the animal, provided always, it has the proper progenitors. We do raise horses, cows, sheep and hogs without *much* feed, and when we sell them we do not get *much* for them; but we get *much* loss in time, labor and fruitlessness of effort. One well bred, well fed, well grown colt is worth two or three scrubs, so far as profit goes, and worth twenty times as much so far as pride goes, and who has no pride?

Mecklenburg county, Va.

WHITBY.

## A NOTABLE SHIPMENT OF BERKSHIRES FOR BILTMORE FARM.

Editor Southern Planter:

Berkshire breeders do not need to be reminded of that notable shipment made from the leading English herds in 1902, for they have before them the record of the annual sale held at Biltmore on February 3, 1903, when the world's average for Berkshire auction sales was made. The sound judgment and expert knowledge displayed by Mr. G. F. Western and his most able assistant, Mr. R. Gentry, in making that notable importation, was more than confirmed and justified by the grand result then obtained.

Experience has proved that, notwithstanding the size of the Biltmore herd, it has been of itself unable after supplying the heavy requirements of private customers, to accumulate a sufficient reserve for its annual sale, and hence for this object, as well as because there is no question but that the results secured from English stock are such as justify their importation, another visit has just been made to England, and, to the surprise of both Mr. Weston and Mr. Gentry, they have been able to secure for their fourth importation a selection of swine which, for their grand breeding, individual merit and typical character are far ahead of any of the previous importations. Why is this so many on your side will naturally be inclined to ask. The reply is, however, one easily given—namely, that the recuperative power of the English herds is so great that were 75 per cent. of their best pigs taken the breeders would, with perfect ease, from those left soon produce as good, or even a better, lot.

The main reasons why Mr. Vanderbilt, by the aid of the consummate judgment and skill of Mr. Western undertakes these annual importations, is a most laudable one—namely, the improvement of the breed in America. The experience at Biltmore is such that there is now no question but that if one desires to secure the most typical and best Berkshires he must either secure the services of an English animal or some of their direct descendants. This having been

proven beyond dispute, there is no further occasion for argument, and it may, therefore, be anticipated with certainty that the Biltmore sale on February 9, 1903, will prove equally as successful as the previous annual sales have been, which, like the forthcoming sale, consisted entirely of imported stock. The present importation left England on the 19th of June under the personal control and management of that well-known expert and judge, Mr. Gentry, and, like all the preceding importations, contained only animals of the very choicest pedigree and breeding, which were either themselves or their sires and dams prize winners. In fact, none but prize winning stock have been taken. Another, and probably equally important *sine qua non* was also made a condition of selection—namely, that no pig, no matter how choice its pedigree or perfect its symmetry, was included unless it had plenty of stamina, sound constitution, good joints and feet and that had not in its veins that blood which had in previous importations proved itself to be specially fitted for crossing with American-bred stock.

The present consignment of about seventy-five head includes the following noted swine, which were selected regardless of cost and at about from 25 to 30 per cent. higher prices than the previous importation, which arose from two facts—first, higher quality; and, secondly, on account of the increased demand for Berkshires in England:

Taking the different herds in order, we first deal with that record selection made from the herd owned by Mr. R. W. Hudson, of Danesfield, Marlow, Berkshire, from which forty-eight head were selected, a fact that at once discloses the very exceptional merit of this notable herd. All the show pigs of the present year, except one, were taken, this one having been previously sold. The first selected was Danesfield Warrior, by Manor Favorite out of D. Porter's 1st, tracing to the well known Pinnock blood. This boar is a noted winner of first and champion prizes, including the Royal Show at Carlisle. He was left last year because he had not then proved himself a stock getter, this he has done and will be a valuable acquisition to any herd. D. Julius, an own brother to this boar, is now stud boar in Sir A. Henderson's herd. Nine other boars are included from this herd, amongst them Danesfield Huntsman, First at Royal Counties Show this year. His own brother, who has been bred on many of the imported sows, being also included. The last named, by a very choice boar by Danesfield, Haymaker, out of Danesfield Huntress, one of the choicest strains of blood. The old sow, The Huntress, has also been secured from Mr. E. Hayter, and is included in this consignment. The Vain Maid blood

is typically represented by Danesfield Swansea, a choicely bred boar, for he comes out of a daughter of old Vain Maid, imported by Mr. Vanderbilt in 1898, and whose produce has been eminently successful wherever exhibited.

The sows and gilts from Mr. Hudson number thirty-eight head, a notable lot they are, space will not allow of detailed mention of all, but we take a few as typical of the rest. Gentle Jane is the dam of Swansea, stud boar at H. R. H. Prince Christian's farm, and a dam of many winners, including the Royal Show from 1901 to 1903. Danesfield Huntress, to which reference has been made above, and three of her best daughters, all by Lord Carnarvon's noted stud boar, Drogheda. Two grandsons out of Danesfield Mistress by Danesfield Haymaker, five sons out of Danesfield Governess, who was not for sale, her value being so great. These have as their sire Danesfield Loyal, a son of Loyal Berks, whose value is so well known and appreciated in America as to render any further reference unnecessary. Then we have that grand sow, Highclere 57th, by Blenheim, a most valuable strain of blood. This sow's exportation is a serious loss to the English herds because with her goes almost the last of this most valuable strain of blood; three of her daughters go with her, all by that notable boar, Danesfield Haymaker: Danesfield Countess, out of Danesfield Duchess by Manor Favorite, served by Danesfield Loyal, goes as well, a grand, typical son of highest merit. Links Alive, by Manor Very Choice, by Julius Cæsar, is another valuable sow. Manor Very Choice was sire of many animals sold at Biltmore sale in 1900, and is a double cross of Ministry blood, a line of blood that has been most successful both in England and America.

Mr. E. Hayter's grand herd, one of those small, select herds which are good all through, supplies six head, amongst them The Huntress, a grand sow, founder of her line of blood, and one so highly appreciated at Biltmore that an effort is being made to secure the whole of it, no less than five generations are now at Biltmore. Tact, by History, a notable boar, being a combination of very choice lines of blood, is a grand brood sow, a dam of prize winners for two of her gilts were at Andover in keen competition and are included in this selection, as is also Sterling Bahn, a daughter of the noted Blenheim, out of a Stumpy Sow, whose pedigree includes those noted sires and dams Ministry, Hampton Park, by Longstock, out of Wicket Lass. The other animal from this herd is Lord Lyon, by Handyman, imported as a stud boar for Biltmore. He will not be included in the sale unless later arrangements cause

alteration. He is about the best boar that has left England for many a day, and his stock, if all goes well, will be of the highest value.

Mr. C. C. Smith's herd provides a very typical lot of sows, mainly of the Rubicell blood, as represented by that grand old sow, Old Queen of Hearts, already well known to Americans by her produce at previous sales. These are sired by Lisle Grand Duke 1st at Andover; 2d at Southampton, and 2d at the Bath and West of England in 1903, two other gilts by College Boy, out of Lisle Duchess, a thoroughly typical lot of highest merit. A pair of specially well bred sons from Mr. P. L. Mills of the noted Melody strain of blood, by Flagstaff, and a selection of special merit and quality concludes this most notable shipment, which takes from England some of the choicest of her Berkshires to enrich and improve those of America.

W. W. CHAPMAN.

*London, England.*

## TICKS ON CATTLE.

*Editor Southern Planter:*

Referring to your remedy for ticks on cattle, in reply to inquiry from T. C. Massie, please allow me to suggest a better and simpler one: Mix equal parts of common table salt and sulphur, pulverize and put in the troughs or on any clean, hard surface where the cattle can lick it, giving as much as they will lick up clean, say, as much as can be picked up in the hand, and give regularly once a week during the tick season. If ticks are very bad three parts sulphur to one part salt can be used. The sulphur works out through the pores of the skin, making the ticks drop off, and it is also a fine blood purifier, keeping cattle and all kinds of stock in excellent condition. The cattle seem to like it, and mine lick it up clean. I put it on clean, flat rocks, boards, in troughs, or if none of these are convenient on bare, hard ground.

I started out this year to keep my cattle free from ticks if possible, and had often heard of the sulphur remedy before, but had never given a thorough and persistent trial. I put my cattle on pasture March 30th, and at first gave them a mixture of one part sulphur to three parts salt. First ticks appeared April 27th, and I at once increased the sulphur to one half. Since then my cattle have been comparatively free of ticks and in first-class condition in every way. Occasionally I will see one with a few ticks, but they do not amount to anything. Last year they were covered with ticks. The mixture must be thoroughly pulverized and mixed together, and given once or twice a week, as necessity demands.

*Lafayette county, Ala.*

WALTER ANDREWS.

## The Poultry Yard.

### EGGS AND THE COST OF PRODUCTION.

In our October issue last year we published a report giving the results of co-operative experiments made in New York State with a number of different flocks of poultry to ascertain the average cost of winter egg production. The experiment was under the supervision of the Cornell Experiment Station. This experiment, which concluded in March, 1902, was continued with four of the flocks then amalgamated into three, so as to cover a whole year. The flocks experimented with were A, B and C and K. The following report gives the result of the year's work:

#### YEARLY PRODUCTION OF EGGS.

Flock.	Average number of hens.	Total No. of eggs produced.	Average No. of eggs per hen.	Average daily production per 100 hens.
A.....	508½	59446	116.9	31.3
B and C....	289¾	39813	137.4	36.8
K.....	308½	14641	134.8	36.
Average....	.....	.....	129.7	34.7

It will be seen by the above that the average number of eggs produced per hen is much less than that often claimed. Records of 200 eggs and more per hen have been frequently published in the agricultural press and elsewhere. Inasmuch as these flocks represent the better class of poultrymen, and the fowls were in all probability much better fed and cared for than average flocks, it would seem that all claimed records of more than 150 eggs per hen per year should be abundantly verified before being accepted.

#### FOOD COST OF ONE DOZEN EGGS.

The average monthly food cost of one dozen eggs for each flock per year was: For Flock A, 10.1 cents; Flock B and C, 7.7 cents; Flock K, 10. Average, 9.2 cents. Average selling price, 21.4 cents.

#### PROFIT AND LOSS.

By "profit and loss" is simply meant the relation between the cost of the food consumed and the value of the eggs produced at market rates. No account is made of anything else, and it is, therefore, not really a discussion of profit and loss, but the term is used for want of a better. In the table below is given for each flock the total cost of food, the total value of product at market rates, the total profit and the average profit per hen.

#### PROFIT (EXCESS OF PRODUCT OVER COST OF FOOD.)

Flock.	Average number.	Total cost of food.	Cost of food per hen.	Value of eggs.	"Profit."	"Profit" per hen.
A.....	508½	\$499.58	\$ .982	\$1060.72	\$561.14	\$1.10
B and C....	289¾	257.10	.887	694.38	437.28	1.51
K.....	308½	347.85	1.119	757.18	409.33	1.33
Average....	.....	.....	.996	.....	.....	1.31

It will be seen that it cost just about \$1 each to feed the 1,200 fowls under experiment for one year, and that the value of the eggs at market rates exceeded the cost of food by \$1.31 each. From this must come the cost of labor, interest on investment and equipment and profit to the owner. Of the gross income very nearly 44 per cent. was required for food, leaving 56 per cent. for cost of labor, interest on investment and profit.

#### CONCLUSIONS.

In the year from December 1, 1901, to November 30, 1902, in three flocks representing 1,250 fowls, the average daily production of eggs was 34.7 per cent. The total yearly production per hen averaged 129.7 eggs.

The average food cost of one dozen eggs for the year was 9.2 cents.

The average cost of feeding a hen for the year was 99.6 cents.

The average value of the eggs at market rates exceeded the cost of food by \$1.31 per hen.

Forty-four per cent. of the total value of product was required for food.

### DON'T WE KEEP TOO MANY ROOSTERS?

*Editor Southern Planter:*

I see in July PLANTER you say to "Enquirer" not to keep over twenty hens to one rooster. Now, Mr. Editor, I would like for you to unravel a puzzle of mine. It is this: Last February and March I had from 400 to 500 hens and about twenty-five roosters. I set in those months 130 hens, which all hatched out by the middle of April about 1,600 chickens. As I did not wish to set any more eggs I disposed of my roosters except four. Those I kept to do the crowing for the farm. I have raised to eating size 1,500 chickens. Now, in the last few days two hens that stole their nests have come out and brought twenty beautiful chickens. We have found the nests and one hen sat on eleven eggs and the other on twelve eggs—only three this hot weather that did not hatch and one rooster to 100 hens. Now, this is my puzzle. Will you be so kind as to answer, and oblige your friend,

JOHN O. OREY.

*Charles City county, Va.*

Our friend puts to us a poser. When we advised keeping one rooster to twenty or twenty-five hens we wrote from our long practical experience in poultry-keeping, during which time we had always found that we got best results from about this proportion. We have known good hatches to come from eggs where only one rooster ran with fifty hens, but

this is very uncertain in our experience. Every poultry keeper knows that roosters have, like human beings, their favorites amongst the female members of their flocks and will be found always consorting more continuously with these than with the whole flock. The larger the flock the greater the proportion of neglected hens and the larger the percentage of unfertilized eggs. In explanation of the good hatches made by the two hens mentioned it may be, and probably was, the case that these two hens were favorites with one of the roosters and hence the fertility of the eggs. We know it to be possible to keep too many roosters for the best fertility of the eggs. Between this and keeping too few there is, no doubt, a considerable margin, but we are inclined to the belief that we came near the correct proportion in the figures named. What say others on this subject?—  
En.

### HAWKS AGAIN.

*Editor Southern Planter:*

Will some of the gentlemen who have been kind enough to give the information about killing hawks with strychnine help me a little further on the same subject while the case is up?

I have tried to keep hens for laying purposes, and only raise enough chickens to keep the stock up, and although the information about young chickens is very valuable, it does not meet my case, which is this: When I do not have young chickens the hawks take the hens, and you know the best layers are always the greatest foragers and will wander far from the house, so that it is impossible to watch them. The hawks then strike them down a long distance away and eat them on the spot. The hawks have grown so cunning that to trap or shoot them is out of the question. Now, what I want to know is, can I give strychnine to the grown hens so as to be effectual in killing the hawks and not hurt the eggs for eating or hatching purposes? As this poison gets assimilated with the blood will it not affect the eggs more or less?

If any one can answer they will help me very much, for I can scarcely keep a hen on the place, much less make anything by them.

*Chesterfield county, Va.*

H. DENHURST.

### GAPES.

To an enquirer in July I give my preventative and remedy for gapes. Mix a small quantity of red pepper, pulverized (or cayenne) with the dough,

say, four or five times during the time the chickens are small and most liable to the disease. A little experience will tell how long this will be necessary. This has always with me been a *certain preventative*.

One day I observed a little chicken gaping. I procured a pinch of black pepper, inserted it in his mouth, dropped him and off he went rejoicing. I observed the brood more closely and nearly all had gapes. Same treatment cured all completely, and at once. This is my *remedy*. S. E. MORGAN.

*Wood county, W. Va.*

### LICE.

I notice several persons are enquiring through your columns for a preventative of vermin in poultry houses. One that we have tried and found very effective is common coal tar. Simply paint the nests and roosts with it and they disappear as if by magic.

It is also good to dab a little on the hogs' backs with a paddle, but be careful not to rub it in too much or it will cause the skin to peel.

*Louisa county, Va.*

J. E. THOMASSON.

### THE TOMATO AN INSECT REPELLER.

"I planted a peach orchard," writes M. Siroy, of the Society of Horticulture, "and the trees grew strongly. They had just commenced to bud when invaded by the *circulio* (*pulyon*), which insects were followed, as frequently happens, by ants. Having cut some tomatoes, the idea occurred to me that by placing some of the leaves around the trunks and branches of the peach trees I might preserve them from the rays of the sun, which are very powerful. My surprise was great upon the following day to find the trees entirely free from their enemies, not one remaining, except her and there, where a curled leaf prevented the tomato from exercising its influence. These leaves I carefully unrolled, placing upon them fresh ones from the tomato vine, with the result of banishing the last insect and enabling the trees to grow with luxuriance. Wishing to carry my experiment still further, I steeped some leaves of the tomato in water and sprinkled this infusion on other plants, roses and oranges. In two days these were also free from the innumerable insects which covered them, and I feel sure that had I used the same means with my melon patch I should have met with the same result. I, therefore, deem it a duty I owe to the Society of Horticulture to make known this singular and useful property of the tomato leaves."

## The Horse.

### NOTES.

The Virginia Circuit of horse shows has assumed much greater importance than its originators even looked for, and the present season promises to be the most successful in its history. The horse show is an educator and certainly merits the generous patronage so freely accorded it by the best people of the communities in which its exhibitions are held. It opens and provides markets for our highest class horses and has been of untold benefit in encouraging and promoting the breeding interest. The season began with a fine show at Leesburg in June and was followed by another of equal merit at Upperville during the same month. Then those at Culpeper, Manassas and Orange came off in July. During the present month the Front Royal show is booked for the 5th and 6th; Berryville the 12th and 13th; Harrisonburg the 19th and 20th, and Warrenton the 26th and 27th. The dates fixed for Charlottesville are September 2d and 3d, which marks the last of the open-air affairs, and then the scene shifts to Lynchburg, where active preparations are being made for a high-class show during the week of October 7th to 10th, to be held in the amphitheatre erected for the purpose. The Richmond Horse Show will come off during the week of October 12th to 17th, and will be the greatest affair of the kind ever seen in the South. It has also been decided to hold a show at Norfolk, to follow right after Richmond, and substantial men are backing the venture and will doubtless make it a success.

Recent foals at Belgravia Farm, Mount Jackson, Va., the property of James Cox, include a bay filly by Kelley, 2:27; dam Frances S. Dayton, 2:27 3-4, by Cadmus; second dam, Daisy Dayton, of Lake Erie, 2:13 1-2, etc., and a bay colt by Kelly, dam Cherie, by Astelleoid; second dam Lady Purdy, the sister to Charlie C., 2:13 1-4, by Sam Purdy. The colt is stoutly made and rather on the coarse order of its dam; but the filly has all of the exquisite quality and elegance of Kelly, son of Electioneer and famous thoroughbred Esther, dam of Expressive, 3, 2:12 1-2, that heads the Belgravia stud. Kelly has a record of 2:27, but in his work while being trained could show two minute flights of speed. Lucy Montrose, the bay mare 4, bred and owned at Belgravia, is in the stable of Tom Cannon at Baltimore, as is Helen Wilmer, the chestnut filly 2, both of whom are by Kelly. Lucy Montrose shows speed and is highly thought of, but for elegance of form, beauty and finish Helen Wilmer is not sur-

passed by a 2 year old in all Virginia. She is out of the great brood mare Erena, 2:19 3-4, dam of Allercyone, 2:17 1-4, etc., by Alycune, 2:27, son of George Wilkes and Alma Mater.

Virginia horses made quite a clever impression at the recent Atlantic City Horse Show, especially those from the stables of Charles H. Hurkamp, of the Boscobel Farm, Fredericksburg, and Courtland H. Smith, Hampton Farm, Alexandria. The Boscobel horses were badly shaken up by the car being struck heavily just before shipment, and all of them were thrown down. Amaret, the crack high jumper, and Hornpipe, the sturdy roan heavy-weight hunter, both escaped with shaking up, but Field Marshal, Meadow Plume and Colonel Hawkins were not so fortunate, and sustained considerable injury. Hornpipe was first in the class for heavy-weight hunters and Amaret second in that for jumpers, open to all, his successful competitor for first being the noted Heather-bloom.

Lucy Sutherland, from the Hampton stable, was first in the classes for light-weight hunters, green, and in that for thoroughbred hunters. This good-looking bay daughter of St. Carolus and Expensive, by Spendthrift, was formerly a member of the brood mare band at Hampton, but since being taken up and schooled to jump she has developed into a performer of real class. Among the competitors in the field for thoroughbred hunters were the brown gelding Joker, owned by T. L. Evans, of Warrenton, and Colonel Hawkins, from the Boscobel stable. The two last named came second and third. In Class 38, open hunt clubs, for best three hunters from one hunt, ridden by members or subscribers of the respective hunts in the hunt uniform, the blue ribbon went to the Cameron Hunt Club, Alexandria, and the red to the Deep Run Hunt Club, of Richmond.

One of the most prominent and probably the best known of North Carolina breeding establishments is beautiful Alamance Farm with its thousands of fertile acres near the busy manufacturing town of Graham, and it is there that L. Banks Holt, a wealthy cotton factor, banker, man of affairs, breeder and owner of trotters and pacers makes his home and dispenses hospitality of the typical southern kind. John R. Gentry, 2:00 1-2, ex-pacing King, and one of the greatest and handsomest of trotting bred lateral gaited performers, was formerly a member of the Alamance stud, and some of his get are there

now, among them the beautiful brown stallion, Giles Mebane, who now heads the farm. He has a pacing record of 2:16 3-4, and is out of the great brood mare, Winnie D., dam of four in the list and others to follow. Gregorian, 2:29 3-4, the sire of Glencoe, 2:16 1-4, and other good horses, is the stud companion of Giles Mebane, while the brood mare band includes Winnie D. and Blondette, dam of Governor Holt, 2:15, and Eliza Ingram, 2:21 1-4.

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In Peter Paul, Robert Bradley has a worthy successor to Robert Waddell, the noted son of Aloha that won the American Derby in 1901. Peter Paul is also by Aloha, and, like Robert Waddell, may be returned a winner of the American Derby, as he is entered in that event for 1903. This 2-year-old unsexed son of Aloha was bred at Mr. Bradley's Greenway Farm, near Wilcox Wharf, and has clearly shown himself to be one of the greatest youngsters out this season, as he retains his form and wins about two races each week on average. Peter Paul's dam, Eminence, the daughter of Imp. Kyrle Daly, is owned at Greenway, and was bred again last spring to Aloha. The latter is Mr. Bradley's principal stallion, and at 18 is vigorous and well preserved. Little chance has been given the brown son of Imp. St. Mungo to distinguish himself as a sire, but his get are coming to the front as race winners, nevertheless.

\* \* \*

The annual catalogue and prize list of the Rockingham Horse and Colt Show Association has been issued, and premiums are offered for thoroughbreds, trotters, high stepping harness horses, park saddlers, hackneys and various other classes. The show will be held at Harrisonburg August 19th and 20th, and is one of the most important in the Virginia circuit, being right in the midst of a big breeding and grazing district. Mr. J. Samuel Harnsberger is the president of the Association, and Dr. John A. Myers has served as secretary for years past, while the board of directors is made up of these gentlemen along with other well known and prominent breeders and stock raisers in the "Valley of Virginia."

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Mr. Henry L. Upshur, of the Elkington Farm, Eastville, Va., who is one of the best known owners and breeders of trotters and pacers on the Eastern Shore, writes us that his horses are all doing well. Salem, son of Iroquois and Fernwood, by Lancewood, is the premier sire at Elkington, and some of his get are being worked for speed over the half mile track at the farm. Sam Patch, 2:23 1/4, the bay gelding by Salem, dam Pansy, by Bajardo, is in training, and will be raced again this season. He is in fine shape and will be likely to materially reduce his record. Hardy H., by Salem, has trotted to a re-

cord of 2:17 1/4 this season in a long drawn out race, and Sam Patch is considered equally as fast. Among others in the training stable at Elkington are Monnie J., bay mare, 4, by Salem; bay gelding, 1, by White Tip, dam by Lancelot, fast but erratic; and a couple of promising three-year-old colts, one owned by Albert Savage. Stewart's Wharf, Va., and the other by W. Gibb, Capeville, Va. The Savage colt was sired by Bursar, 2:17 1/4, the dead son of Stranger, dam, the dam of Stella, 2:24 1/4. He is a pure gaited trotter and promises speed and race horse quality of a high order.

\* \* \*

One of the best looking yearlings around here is the bay colt by Eloroy, 2:14 3-4, dam Fern, 2:18 3-4, by Petoskey, owned by his breeder, W. H. Nelson. Eloroy, the son of Simmons, that sired this youngster, was a horse of more than ordinary finish, looks and speed, and highly regarded by the Nelsons, who sold him for export to Austria in 1902. Fern, the dam, is now owned by Luther Libby, who bred her this season to Great Stakes, 2:20, and she appears to be in foal to that good son of Billy Thornhill.

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Dr. J. T. J. Battle, of Greensboro, N. C., has sold to George R. Richmond, who trains at the Deep Run Hunt Club track, this city, the bay pacing gelding Doug. Thomas, 2:16 3/4, by Blue Hal. This horse is much faster than his record indicates, as in the hands of T. M. Arrasmith he paced a trial in 2:10 1/4 last fall. The price was close to \$1,000, and to Richmond the big son of Blue Hal is worth the money.

\* \* \*

Among the thoroughbred foals of 1903, the property of P. S. Hunter, Loretto, Va., dropped at Otterburn Stud, are a bay filly, by Judge Morrow, dam Ginka, by imp. Emperor, and a bay colt, by the same sire from Sneeze, by imp. Mortemer. Judge Morrow, the son of Vagabond, that heads Mr. Hunter's stud, was a crack race horse, and will most likely sire winners.

\* \* \*

BROAD ROCK.

Dr. Kerr reports the following foals at Antrim Stud, Warrenton, Va.:

January 31st, Valorous, by imp. Stalwart-Minority, a bay or brown colt by Chorister.

February 10th, Onslea, by Fremont-Nellie Van, a bay colt by Chorister.

April 10th, Bona Dea, by imp. Eolus Sis O'Lee, a bay colt by Chorister.

May 18th, Merrie Antoinette, by Buchaman-Highlander mare, a bay colt by Chorister.

April 30th, Chestnut Mare, by Knight of Ellerslie-Pogaine, a bay colt by Chorister.

May 12th, Thirty, by St. Blaze-Habinera, a bay colt by Chorister.

## Miscellaneous.

### THE VIRGINIA CROP PEST LAW.

The Virginia Crop Pest Commissioners invite attention to the provisions of the act passed by the Legislature amending the law and providing funds for more efficient dealing with some of the serious pests like San Jose scale. The Commission has been reorganized, and has prepared a bulletin setting forth the terms of the law, and pointing out the lines of work thought to be most expedient. Copy of this bulletin can be obtained on application to Professor J. L. Phillips, the State Entomologist, Experiment Station, Blacksburg, Va.

### VIRGINIA AT THE ST. LOUIS EXPOSITION.

The Commission appointed for collecting and arranging the exhibit of Virginia at the Exposition is actively engaged in securing exhibits, and asks that all who desire to see Virginia well represented will communicate with them as to anything worthy of being exhibited. An effort is being made to erect on the grounds at St. Louis a State building as a centre for the distribution of matter calculated to help in the advancement of the interests of the State. The Commission has no power to use any of the money appropriated by the State for this purpose. If, therefore, a building is to be erected it will have to be by public subscription. Any who may desire to help in this matter should send their contributions to the Commissioners, care of the State Department of Agriculture, Richmond, Va.

### SALE OF PURE BRED SHORT HORNS.

Major W. W. Bentley, of Pulaski county, Va., and Major J. T. Cowan, of Montgomery county, Va., both well known and long time breeders of the finest strains of Short Horns, announce in this issue a sale of fine stock. Major Bentley will practically sell the whole of his herd, only reserving a few animals. The reputation he has sustained for a lifetime for breeding only the choicest strains and the finest grown cattle will be sustained by the animals he will offer. The draft from Major Cowan's well known herd will include some finely bred animals. We bespeak for these gentlemen a good attendance at the sale and hope to hear that good prices have been realized. Those who want Short Horns—and a better breed of beef and milk producing stock cannot be kept—

should make a note of the date of sale and be on hand. The sale will take place at Radford, on the Norfolk and Western Railroad, and will therefore be convenient for attendance.

### HOGS AND STRYCHNINE.

*Editor Southern Planter:*

I see a communication from Burfort, S. C., from Senex, saying strychnine would not kill hogs. I was once bothered, as he says, that certain parts of Georgia were, with hog thieves. I had gathered my corn from the river bottoms, and was going to turn my hogs out to glean the fields. I had heard that feeding hogs strychnine would kill the thief, and not hurt the hogs. I put about a teaspoonful of strychnine in slop for thirty hogs. The first eleven that got a swallow or two died. Some of them did not take time to turn over. They were dead almost before you could say "scat," and I believe it would have killed the whole thirty if I had let them eat the slop. The hogs weighed from two to two hundred and fifty pounds. I never lost any more hogs by thieves or strychnine. Would like "Senex" to explain why strychnine killed my hogs. Let those who want to catch hog thieves by poisoning hogs be careful or they will get the hog first. I have used strychnine on a good many things, and have never had it fail on anything that had an eye or heart, even if it was born or hatched blind. I hope the letter of Senex will not catch any one as I was caught by relying on the old saying, "Poison the hog to catch the thief." I cannot see how any animal can get enough poison in its system by taking it to kill another animal or man without serious effects.

SUBSCRIBER.

*Chester county, S. C.*

### CROPS AND STOCK IN PULASKI CO., VA.

*Editor Southern Planter:*

The season has improved things for us very much in the last month. But the crops still show the effects of the drouth in the early season. The cattle market is very unsatisfactory. Cattle in the county are fully up to the standard at this season of the year, notwithstanding the short feed crops of last year, only the price seems wanting. We have no

complaints, through the press or otherwise, against the beef trust, only the farmer suffers this time. The spring lambs have helped us some, as they have so far brought fairly good prices, and this county furnishes quite a large supply to the Northern markets. There was shipped to Jersey City on June 1st one carload of half Suffolk Down lambs, every one a black face, and the average weight was 99 pounds. They brought a quarter of a cent per pound over the top of the market. If any county in the State can beat that for the same date of shipment, we would like to hear from them. The Suffolk has so far proven to be an excellent cross on our native and high grade sheep. They are large and handsome, with very black faces and legs. The cross rarely ever fails to bear in a marked degree these characteristics. It is the most striking and attractive bred of sheep I have ever seen. I believe your excellent paper better adapted to the practical use of the Virginia farmer than any other agricultural paper in the country. I wish it came every week instead of once a month.

D. M. CLOYD.

Pulaski Co., Va.

### CALIFORNIA PRIVET.

In our last issue the types make our correspondent, Mr. Wallis, when writing on this subject, make a most annoying blunder in the botanical name of the plant. What he wrote was "*Ligustrum ovalifolium*," and not as printed. We corrected the proof, but the printer overlooked the correction. We apologize for the error.

### Fertilizer for Raspberries and Strawberries.

I raise, for family use only, strawberries and raspberries. I do not like to fertilize with stable manure, because it introduces grass, clover and weeds. I have some chicken manure, but not enough. Can I profitably apply commercial fertilizers? If so, what should I use for each; how much and when should it be applied? Would it not be well to mulch the raspberries thickly with forest leaves?

Would it pay to sow crimson clover as late as October to plough under in the spring? C. W.

Potash is a most desirable fertilizer to use on all fruit crops, as it improves the quality and appearance of the fruit. You also need some phosphoric acid. The chicken manure will give you all the nitrogen you need. Apply 300 pounds of acid phosphate and 100 pounds of muriate of potash per acre

with the chicken manure. Although October is rather late to sow crimson clover, yet we have known good stands made sown in that month. Mulching will help both raspberries and strawberries.—Ed.

### Improving Poor Land.

I wish you would please answer a question for me and make any improvement you think best on my plan of raising corn on poor, gray land: First, plough land deep and harrow until thoroughly pulverized; streak off in rows eight feet apart and plant corn eighteen inches apart with 500 pounds potash and phosphoric acid per acre; cultivate with weeder and cultivator and at the last cultivation sow peas broadcast, using 150 pounds potash and phosphoric acid broadcast; then cut corn and sow in annual clover or annual clover and something else (how about rye?) using 200 pounds some fertilizer; cut for hay and pursue same method. Now, will my land improve under such a system carried out fully and continually cropped in those three plants, two of them being legums? GEORGE TARRY.

Vance county, N. C.

If you will follow out the rotation you have described you will undoubtedly succeed in making the land produce good crops and become fertile. We would suggest that you make the fertilizer acid phosphate and potash rather than potash and phosphate. What you most need is phosphoric acid. We would apply two-thirds acid phosphate to one-third potash. If you would give a dressing of lime, say 25 to 50 bushels per acre, we believe you need not apply any potash or only a very light application, say 50 pounds of muriate of potash per acre. After two or three years you should be able to make your corn rows closer than five feet, say three feet six inches. We assume that you intend to plow down the peas at any rate for a year or two.—Ed.

### ROOT PRUNING OF TREES.

The Netherland Pomological Society records in its year book an experiment made in root pruning. The experimenter selected 1-, 2- and 3-year-old apple and pear trees. One half of each lot were transplanted in the usual manner, whilst the others had their roots so severely pruned that only a stick was left. The trees of the first lot started off most vigorously in the spring, but before the end of June the closely pruned trees were larger than the others, and this lead was maintained throughout the season. When the trees were dug up it was found that the closely pruned ones had developed a much better root system than the others.



THE

# Southern Planter

PUBLISHED BY  
THE SOUTHERN PLANTER PUBLISHING COMPANY,  
RICHMOND, VA.

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J. F. JACKSON,  
Editor and General Manager.

B. MORGAN SHEPHERD,  
BUSINESS MANAGER.

TERMS FOR ADVERTISING.  
Rate card furnished on application.

TERMS FOR SUBSCRIPTION.

THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

ALWAYS GIVE THE NAME of the Post-Office to which your paper is sent. Your name cannot be found on our books unless this is done.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetables not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

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## PUBLISHER'S NOTES.

### TO ADVERTISERS.

All advertisements and matter pertaining to advertising must reach us by the 25th of each month. Please bear this in mind.

### Trial Subscriptions.

August, in this section, is essentially a month of picnics, barbecues, camp-meetings, etc. It is something of a holiday for the farmer after his arduous work of spring planting and summer harvesting. We wish to ask our friends who attend these various gatherings not to forget the SOUTHERN PLANTER. Numbers of farmers in the South do not take the SOUTHERN PLANTER or any other agricultural journal, which fact accounts for us being behind the North and West in our farming operations. These are the farmers we want to get at. To induce such to subscribe, we will accept a 3 months' trial subscription for 10 cents. If any one feels that he hasn't gotten his money's worth, and a great deal more, just say so and we will refund the money at once. We know, however, from experience that a large majority of such subscribers renew their subscriptions after having read a copy or two. Mention this little offer to your friends, and we will return the favor at any time.

### PERFECT BLISS.

William's table manners were notoriously bad—so bad that he was facetiously accused of spoiling the manners of a pet coon chained in the back yard. He gripped his fork as though afraid it was going to get away from him, and he used it like a hay fork. Reproaches and entreaties were in vain. His big sister's pleading, "Please, William, don't eat like a pig," made no impression upon him.

One day William and his bosom friend, a small neighbor, dined alone, and William was heard to say in a tone of great satisfaction as he planted both elbows on the table, "Say, Harry, there's nobody but us. Let's eat like hogs and enjoy ourselves."—Caroline Lockhart, in July Lippincott's.

# Wood's Seeds

## FOR FALL SOWING.

Farmers and Gardeners who desire the latest and fullest information about

### Vegetable and Farm Seeds

should write for Wood's New Fall Catalogue. It tells all about the fall planting of **Lettuce, Cabbage** and other **Vegetable crops** which are proving so profitable to southern growers. Also about

**Crimson Clover, Vetches, Grasses and Clovers, Seed Oats, Wheat, Rye, Barley, etc.**

Wood's New Fall Catalogue mailed free on request. Write for it.

**T. W. WOOD & SONS,**  
Seedsmen, - Richmond, Va.

Virginia Polytechnic Institute  
STATE AGRICULTURAL AND MECHANICAL COLLEGE  
at Blacksburg, Va.,

### A JOURNAL INSTITUTE OF TECHNOLOGY.

Forty-five instructors. Thoroughly equipped shops, laboratories and infirmary. Farm of four hundred acres. Steam heating and electric lights in dormitories. Degree courses in Agriculture, Horticulture, Civil, Mechanical and Electrical Engineering, Applied Chemistry and General Science. Shorter courses in Practical Agriculture and Practical Mechanics. Total cost of session of nine months, including tuition and other fees, board, washing, text-books, medical attendance, etc., about \$165. Cost to State students about \$165. Next session begins September 21, 1903. For catalogue and other information, apply to

J. M. McBRIDE, Ph. D., LL. D., President.

## YOUR GIRL

Needs an education. Send for Catalogue of WOODLAWN SEMINARY & MUSICAL INSTITUTE, GORDONSVILLE, VA. Beautifully and healthfully situated at the foot of the Blue Ridge Mountains. Prepares for any College or Special School or for Teaching. Beautiful home; thorough instruction. All Grades, including English, Elocution, Music and Art. Expenses very low.

EDGAR STINSON, M. Sc., Principal.



Nearly 2 score years we have been training men and women for business. Only Business College in Va., and second in South to own its building. No reaction. Catalogue free. Bookkeeping, Shorthand, Penmanship by mail.

*T. W. Wood*  
President.

"Leading bus. col. south Potomac river."—Phila. Telegraph.

Mention the Southern Planter in writing.

### BEWARE OF OINTMENTS FOR CATARRH THAT CONTAIN MERCURY.

As mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten-fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by Druggists. Price, 75c. per bottle.

Hall's Family Pills are the best.

#### WITH THE ADVERTISERS.

Slug Shot, for cabbage worms, is advertised by Benjamin Hammond, Fishkill, N. Y.

The German Kali Works renews its contract for another term, beginning with the card elsewhere in this issue.

Antrim Stock Farm has an announcement in another column.

Celery plants are offered by Mr. E. A. Swinesford, of Richmond, Va.

Mr. W. B. McGregor has Aberdeen-Angus cows and bulls for sale.

Ormsby Bros. are new advertisers in this issue. Fine Scotch Topped Shorthorns are their offering.

Look up the advertisement of W. T. Brown, the Pittsburgh real estate man.

Foxhall Farm, Norfolk, Va., has an advertisement in this issue.

Majors Cowan and Bentley advertise a public sale of shorthorns. Look up the advertisement for particulars.

Mr. A. E. McMurdo has some good wine barrels for sale.

The Havana Metal Wheel Company is a new advertiser in this issue.

Mr. James Boyle is advertising his steel stanchion and modern sanitary stalls.

Ware View Stock Farm has some choicely bred Berkshires at reasonable prices.

The Spangler Low Down Drill advertisement makes its appearance in this number.

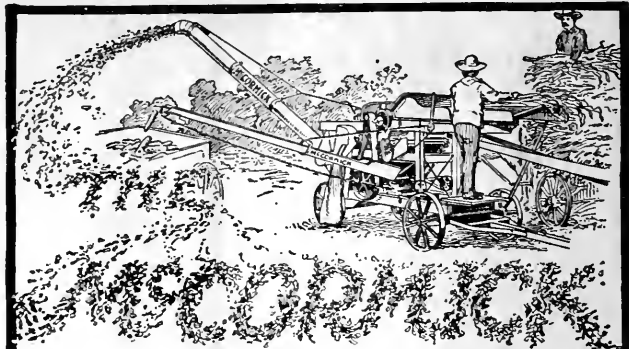
H. R. Graham offers his entire flock of registered Shropshires.

D. M. Cloyd has some Suffolkdowns for sale. Look into the merits of this breed.

The Chicago House Wrecking Company has three advertisements in this issue.

The Florence Wagon Works is with us with an advertisement again this fall. Their product has been on the market for 22 years and always gives satisfaction.

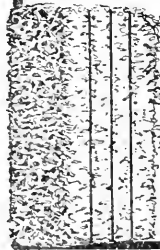
Polled-Durhama can be bought of J.



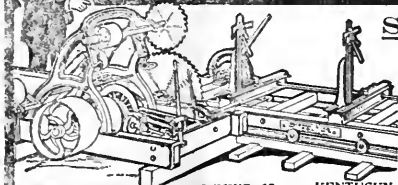
husker and shredder is a "Little Giant" when it comes to considering the amount of work it will do in a day. Every corn grower can well afford to own the McCormick "Little Giant" husker and shredder. The machine has capacity enough for several farms where two or more want to join together in the purchase. The stover from the McCormick is relished by the stock.

W. K. BACHE, General Agent for

McCormick Machines, Richmond, Va.



## A Mill that Will



### SAW LUMBER

**WE MAKE SAW MILLS** that cut accurate lumber and plenty of it. 8 to 30 horse power. Capacity 4,000 to 20,000 feet of lumber per day.

Prices from \$160 to \$700

Reasonable in price, economical to maintain, greatest capacity. Every Mill is a Money Maker. Write for large free Catalog No. S 30.

AMERICAN SEEDING MACHINE CO., KENTUCKY DIVISION, Successors to Brennan & Co., LOUISVILLE, KY.

## Cabbage Worms

KILLED BY DUSTING WITH Hammond's Slug Shot.

Sold by the Seed Dealer. For Pamphlet on Bugs and Blights address: B. HAMMOND, Fishkill-on-Hudson, N. Y.



**This Is Another**

Superior device. It shows the Superior Disc and Shield, Chilled Spindle and Chilled Tapered Boring. The Disc Shield and Removable Chilled Boring never wear out. Over 300,000 now in use. Not one case of "wear out". Just think of it! We agree to renew them at a cost of only one dime.

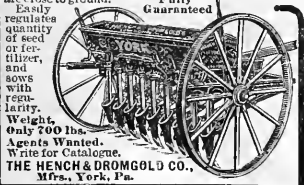
**SUPERIOR**

Seeding Machines are used by the most prosperous farmers in all sections of the world. They do the work of seeding just right—never clog in trash. They successfully sow and cover the seed in any field where a disc harrow will run. A man or a boy can seed one-fourth to one-half more land in a day than with any other drill. Superior Seeding Machines are made solid and strong of the best materials. They are light draft. No neck weight. Easy on man and team. Our new Catalogue No. 14 is free. Write for it today.

**SUPERIOR DIVISION,  
AMERICAN SEEDING MACHINE CO.,  
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**GRAIN DRILL** and FERTILIZER

The **YORK FORCE FEED DRILL** combines lightness with strength. Most complete drill made. No complex gearing to get out of order. Boxes are close to ground. Fully Guaranteed



Weight, only 700 lbs. Agents Wanted. Write for Catalogue. **THE HENCH & DRUMGOLD CO.,** Mfrs., York, Pa.

**Land Above Ditch?**

Its only hope is effective and economical pumping. You can raise water where you want with the



**RIFE Hydraulic ENGINES.** Will lift a storage tank any height above the source of supply, when water may be drawn through buildings, dairy houses, stables, yards, water of a spring with muddy water without mixing. Write us your needs and we'll send plans and estimates of cost. **RIFE ENGINE CO., 126 Liberty St., New York.**

L. Humbert, Charlottesville, Va. Lee's Prepared Agricultural Lime is offered our readers, as usual, this season. Look up the advertisement and send for testimonials and circulars.

Byrd Brothers are offering good, growthy Poland-China pigs at pork prices.

Arrowhead Stock Farm is offering some royally-bred Poland Chinas; also registered Shropshires.

Note the change in the advertisement of the Hayfields Stock Farm.

Sunny Home Aberdeen Angus cattle are in fine shape, so Mr. A. L. French, the proprietor, tells us.

International Stock Food Company has a large advertisement on another page. Look it up and send for their free \$3,000 stock book.

**HOW TO HANDLE LIVE DUCK FEATHERS.**

The feathers of Pekin ducks are of especial value from the fact of their being white. That are termed "live feathers" are always in demand, and this means feathers picked from live geese and ducks. As feather producers alone, Pekin ducks may be made a profitable industry on every farm. They will produce some three or four crops of feathers during the months that are sufficiently warm to pick them, and a dozen ducks will soon furnish one with a beautiful new pair of feather pillows.

When the ducks begin dropping their feathers, or molting them, as the process is called, they are then ripe, and fit for picking, and the feathers, can be pulled out without having blood left in the end of the shaft. Better to pick, and thus save the feathers, than to have the farm covered with them. Ducks well washed in cold or warm water before picking then put on clean straw to dry, give beautifully white, clean feathers.

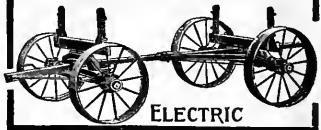
When the picking is done, put the feathers into several sacks of very thin material and hang them out of doors in the air all day and every day. I have learned by experience to put the down into one sack, and the feathers, into another, when picking. To take from new feathers the disagreeable odor that stays with them so long usually, and which comes from the meaty end of new picked feathers, they can be plunged into very hot water, left there to scald for a little time, then rinsed and hung in the hot sun to dry. Having taken the precaution to keep down and feathers separate, the feathers will dry in fluffy shape and make desirable pillows.

In one lot of feathers in which we put a heavy picking of down, and then scalded, we found they would not return to their original state of lightness, but were inclined to be pasted together with the down, and remain somewhat rolled.

After feathers have been scalded and dried, the down can be mixed with

**Wise Man's Wagon.**  
The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. OUR **ELECTRIC STEEL WHEELS**

have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. Wagon is made by skilled workmen, of best selected materials—white hickory axle, steel wheels, steel hubs, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our cost of despoiling the base of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**

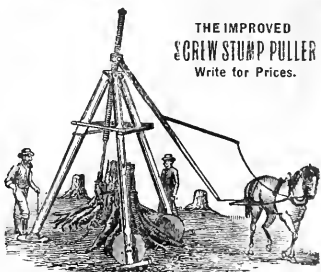


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We are the largest manufacturers of Grooved and Plain Tire Steel Farm Wagon Wheels in America. We guarantee our patent Grooved Tire Wheels to be the best made by anybody anywhere. Write us.

**HAVANA METAL WHEEL CO.**  
HAVANA, ILL.

**WE'LL PAY THE FREIGHT** and send a Huggy Wheel, Steel Tire on, - \$ 7.25 With Rubber Tire, \$15.00. 1 size, wheels 27 to 41 in tread. Top Buggies, \$28.75; Harness, \$3.60. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. W. V. HOOB, Chelmsford, O.



**Chamberlin Mfg. Co., Olean, N. Y., U. S. A.**

**HERCULES STUMP PULLER**



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

**Hercules Mfg. Co., 413 17th St., Centerville, Iowa.**

## Crop Success

never comes from faulty sowing. A few dollars invested in the Improved Low-Dump Pennsylvania Force Feed Fertilizer Grain Drill



Brings the biggest return of any investment you ever made. Sows all grains—corn, clover, soybeans—all fertilizers, whether clumpy or dry. It's the standard for all farmers. Made with the best and most durable free illustration of complete farm machinery and implements.

A. B. FARQUHAR CO., Ltd., York, Pa.

## Just Ask the Horse.

He knows whether it's hard work to run a hay press. If he's worked on a




## RED RIPPER Hay Press

he will tell you that it is the lightest running press in the market. A lever gives the compression, and the power increases with the resistance, but the horse doesn't know that. He knows that it is just as easy at the end of the stroke as it is at the beginning. The Red Ripper has an capacity 30 bales per hour. It is a low priced, in fact, the lowest priced hay press in the market, and so strong and simple it never gets out of repair. It can be loaded on a farm wagon. Our 24 page Catalogue No. 433 tells you more and contains many testimonials we have received from Red Ripper purchasers. Distributing points, Baltimore, Memphis, Cincinnati. Address **SIKES MFG. CO., Helena, Georgia.**

## DEDERICK'S

### STEEL CASE POWER PRESS

is a world-beater. Send for our catalogue and get posted on the latest and greatest improvements known in hauling and crushing hay. It will surprise you.



P. K. Dederick's Son, 711 Tremont St., Albany, N. Y.

## STEEL ROOFING.

Strictly new, perfect, Semi-Handed Steel Sheets two feet wide, six feet long. The best Roofing, Siding or Ceiling you can use. We furnish mill finished paint roofing, two sides. Comes either flat corrugated or "V" crimped. Delivered free of all charges to all points in U. S. east of Mississippi River and north of Ohio River at \$8.25 PER SQUARE. Price to other points on application. A square means 100 square feet. Write for Free Catalogue No. 100 on application to Sheriff and Receiver's Sale. **CHICAGO HOME WRECKING CO., W. 85th and Iron Sts., Chicago.**

Mention the *Southern Planter* when corresponding with advertisers.

them if desired, or kept to make down cushions and pillows. If the feathers are not scalded, the disagreeable odor of new feathers remains a long time, yet it disappears if the sacks of feathers are kept out of doors or in an open, roomy chamber or storeroom.

### CURIOS GRAFTING.

Professor Green, of the Minnesota State School of Agriculture, has, by a process of grafting, grown fully developed tomatoes on a potato vine. He cut off the young shoots of a potato vine, making a V-shaped slit in the top, into which he inserted a freshly clipped young tomato plant, and bound the joint with straw and supported it by long rods. Nature did the rest; the tomato drew its substance from the earth through the roots of the potato, and in return furnished what was required in the way of the action of light and air upon its own leaves to its adopted roots. Professor Green's sole object was to show what could be done in the way of grafting widely separated plants. The work is a proof of skill in the craftsman, but it shows the extent to which nature will act to repair a wound. It shows also that the action of the stalks is not dependent wholly upon the action within its own particular variety. The plant is now nearly five months old, and several tomatoes have ripened upon it, and fairly developed potatoes have grown in the ground. There are no leaves suggestive of the potato on the plant, which is three feet high.

### ANGUS CATTLE AT "ROSE DALE."

Mr. A. G. Parr, Superintendent of Rose Dale Stock Farm, Jeffersonson, Culpeper county, Va., writes us that his cattle are in fine shape, and that he is selling splendid stock at low prices. This popular breed has certainly excelled all others in winning honors in the hottest sort of competition during the last year or two, the world over. Angus Bulls are prepotent sires, invariably stamping their most desirable characteristics, smooth, blocky, harness, black carcass on their grade offsprings.

### LEGERDEMAIN.

A man in a certain New England town was noted for telling extravagant stories. One evening while loitering in the country store the conversation turned upon feats in gunning. The man listened attentively and in silence for awhile, then suddenly he exclaimed excitedly: "Wall, boys, I can tell you a queer thing that happened to me the other day. I went to Rye Beach shooting in when I see a nice, large flock of yellow-legs. 'Aha,' says I to myself, 'now for a shot at them.'" So I crept up near by, raised my gun to my shoulder and fired. But I aimed just a bit too low, and they riz up and flew off. As I walked along the beach I found two bushels of their yellow legs that I had shot off."—*Lippincott's for June.*



## Freeman Feed Cutters

are in a class by themselves. All sizes to meet all requirements. Smallest has a lever to largest self-feed cylinder cutters, shredders and carriers for fodder, ensilage, etc. Widely popular through many years' service. Also Wind Mills, Corn Shellers, Wood Saws, etc. Catalogue 110 sent free.

**S. Freeman & Sons Mfg. Co.,**  
Racine, Wisconsin.




## The "Weber Junior" Pumper

It is all complete, ready to go! Each to pump, 20 feet in p.m. pump, water. Use but little gas. It is shipped completely erected, all connections made, so that any one can operate it. Every size from 1 1/2 to 5 1/2 H.P. Send for catalogue. Weber Gas & Gasoline Engine Co., 107 1/2 Kansas City, Mo.

## WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

**Loomis Machine Co., Tiffin, Ohio.**



## PIPE.

Good second-hand Wrought Iron Steam Gas or Water Pipe, in sizes from one inch to twelve inches diameter. It is complete with threads and couplings. 1 1/2 inch, per foot, 8 1/4 cts. 1 3/4 inch, per foot, 4 1/4 cts. We handle all kinds of well casing. Write us your wants in the pipe line. We have all kinds of supplies of this character. Write for Free Catalogue No. 166.

**CHICAGO HOME WRECKING CO.,**  
West 85th and Iron Street, Chicago.

## SEPARATOR

FOR SALE OR EXCHANGE

A De Laval Humming Bird Separator, in perfect condition, used about 20 times; will sell cheap for cash or will exchange for a pure-bred Bull Calf of any Beef Breed—Polled preferred.

**W. H. MacNAIR, Tarboro, N. C.**

## CULTIVATORS BELOW COST!

Roofing Materials—Tin plate, iron roofing, paper roofing, nails, hardware. Carriage and wagon materials. Cook stoves etc. Don't write us unless you want the best at the **Lowest Price.**

**HARRIS HARDWARE CO.,** 409 E. Broad, Richmond, Va.

## ROUND SLO

### THE PHILADELPHIA.

The only Perfect Continuous Open Front SLO made. See Open-Top Patent Roof. Ask for Catalogue. E. F. SCHLICHTER, 321 Vines St., Philadelphia, Pa.

Also made in the West by Duplex Mfg. Co., South Superior, Wis.

## A SOUND REASON.

At a rural watering place the guests were sitting on the front piazza, which overlooked the street.

A rustic, who was greatly under the influence of liquor, found his way up there and became offensively "agreeable." Being admonished to desist, from his attentions many times, he persisted, and at last approached one of the ladies and commenced to annoy her with crude attempts at smartness.

A gentleman who had been watching him closely, but saying nothing, now swiftly approached him and tossed him over into the wet sand below.

He got up, pulled a much-soiled handkerchief from his pocket, wiped the sand from his eyes and mouth, and then, looking up as he swayed back and forth, addressed the man who did the deed:

"Yes, — you! I suppose you think you're smart, but I don't. I expect you think I don't know what you done that fer; but I'll let you know that I do. Blank your buttons! the reason why you throwed me over them banisters was that you don't want me up there — you!"—July Lippincott's.

## AN UNFORTUNATE INVESTMENT.

A Southern clergyman had married a pair of negroes. After the ceremony the groom asked, "How much yo' charge fo' dis?"

"Well," said the minister, "I usually leave that to the groom. Sometimes I am paid five dollars, sometimes ten, sometimes less."

"Dat's a lot ob money, pahson. Tell yo' what Ah'll do. Ah'll gib yo' two dollahs, an' den ef I fin' I ain't got cheated, I'll gib yo' mo' in a monf."

A month later the groom returned. "Ah's yere, lak Ah promised, pahson."

"Yes," said the minister, expectantly. "Ah tol' yo' dat ef it was all right. Ah'd gib yo' mo' money, didn't Ah?"

"You did."

"Well, pahson, as dis yere am a sort of speclation, Ah reckon yo' owe me about a dollah an' eighty-five cents, an' Ah come ter get it."—Philadelphia Telegraph.

A well-known judge on a Virginia circuit was reminded very forcibly, says Harper's Magazine, of his increasing baldness.

One of his rural friends looked at him and drawled, "It won't be so very long, jedge, 'fo' you'll hev to tie a string round your head to tell how fer up to wash yer face."

A couple of pretty girls at the church fair last night tackled Alec. Smart to take a 10-cent chance on a piano. He flashed a \$20 note on them, thinking they wouldn't have it any chance.

But they did have it, eh?  
No, they told him they never gave any chance.

**Free Books for Farmers**

These books are compiled from the publications of the various Agricultural Experiment Stations, and are of great value to all practical farmers.

We mail them free to all farmers who apply for them.

GERMAN KALI WORKS,  
93 Nassau Street, New York.  
ATLANTA, GA. BRANCH:  
22 1/2 So. Broad St., Inman Bldg.

## SEED OATS FOR SALE

—1,000 BUSHELS—

## VIRGINIA WINTER GREY or TURF.

These oats were sown in the fall, are of a superior quality and EXTRA HEAVY. Grown in Albemarle county, in the Piedmont section of Virginia, where the best seed oats obtainable are produced. Address

WOODSIDE STOCK FARM

P. O. Box 145, Charlottesville, Va.

## TURNIP SEED.

Fresh Stock of All Varieties.

DIGGS &amp; BEADLES, Seedsmen,

1711 E. Franklin St., RICHMOND, VA.

## 20,000 Celery Plants —FOR SALE—

GIANT PASCHAL, the finest variety and easiest to raise. Plants ready to ship now. Should be set out this month. 25 cents per 100 ft. a. b. here. No plants sold after August 31st. E. A. SWINEFORD, 1110 E. Main street, Richmond, Va.

## SAN JOSE SOAP and other Insects can be controlled by using

GOOD'S CAUSTIC POTASH WHALE OIL SOAP. No. 3.

It also prevents Curf Leaf. Endorsed by entomologists. His soap is a fertilizer as well as insecticide. 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50. Half barrels, 270 lbs., at 35c. per lb.; barrels, 425 lbs., at 34c. Large quantities, special rates. Send for circular.

JAMES GOOD, PHILADELPHIA, PA.

909-41 N. Front St.,

**MANLOVE SELF OPENING GATE**

Operated easily by any vehicle, always in order. In reach of every home at factory prices. No fine driveway complete without it.

MANLOVE GATE CO.  
272 HURON ST. CHICAGO, ILL.

## STEEL TUBULAR FENCE POSTS.

Absolutely indestructible. A permanent Fence Post suitable for fields, farms, pastures, etc. Made of a one-piece hollow tube. Costs no more than the ordinary cedar post. We have all kinds of wire for sale. Write for Free Catalogue No. 146 CHICAGO HOUSE WRECKING CO. West 25th and Iron Streets, Chicago.

## Genuine Spiral Spring Wire FENCES AND GATES

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO. Columbus, Ohio.

PAGE

## For Unruly Stock

It is the only one that PATENT. It's so much stronger. PAGE WOVEN WIRE FENCE CO., 342 E. 9th St., Toledo, Ohio.

STOP THAT RATTLING, TIGHTEN YOUR OWN BUGGY TIRES. No heating; does not mar the paint; any one can operate. Machine complete with 100 washers sent on receipt of \$2.00. Guaranteed to do the work. Your money back if not as represented. RAPID TIRE TIGHTENER CO., Station F., Toledo, Ohio.

FREE from anxiety over washing your clothes with a DILLEY QUEEN WASHER. We manufacture three styles of washers. To introduce them we will give you the advantage of our factory prices for a short time. Write for catalogue and prices. Our Up-to-Date at \$2.50.



LYONS WASHING MACHINE CO., Lyons, Mich.

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A few 160 gallon wine barrels for sale.

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**A Steel Stanchion** beats anything you ever saw for tying cattle. Lighter, stronger, neater. Swings on chains. Saves the way when lunging down. Agents wanted. Write for special terms and prices. Jas. Boyle, Mfr., Salem, O.

## Consulting Entomologist

A. Arsene Girault, CARE ALLEGHANY ORCHARD CO., Paw Paw, W. Va.

Answering in detail, accompanying, where possible with specimens and explanatory notes: life-history a specialty; charges low. Not a bureau of information. Write at once and worry me.

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No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

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C & O Main St. Depot Richmond, Va.



WILLIAM T. BROWN, 114 Brown Law Bldg., Lancaster, Pa.

## CASH FOR YOUR FARM OR ANY REAL ESTATE.

No matter where located. Send description and lowest cash price. I succeed by giving personal attention. Interesting and valuable particulars FREE. Write today. Bank references.

## TO HOMESEEKERS.

"THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Act.,  
G. P. A., Lands and Immigration,  
Roanoke, Va.

WE HAVE A LARGE LIST OF  
**FRUIT, POULTRY AND TRUCK FARMS**  
Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also  
**GRAIN AND STOCK FARMS**  
From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.  
J. R. HOCKADAY, Manager.

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Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.  
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**VIRGINIA FARMS**  
\$3 PER ACRE AND UPWARDS  
EASY PAYMENTS. CATALOGUE FREE.  
GEO. E. CRAWFORD & CO., Richmond, Va.  
Established 1875.

"PIEDMONT And all that it implies."  
Good land, climate, markets, shipping facilities, churches, schools, good health, moderate prices, easy terms.  
MACON & CO., - Orange, Va.

## SUGGESTIONS TO HAY RAISERS.

In the past it was considered that baling hay was only profitable where the crop was large, and with the intention of shipping. It has come to be a recognized fact, however, that there is economy, and consequent profit in baling hay, whether the crop is to be shipped or used for feeding purposes. For shipment baling is an absolute necessity. The economical points of having the crop baled for feeding or storage purposes are readily admitted—viz., ease in handling; no loss from exposure or transporting; saving of space; destruction by fire almost an impossibility.

According to the statistics of the United States Department of Agriculture, the hay crop is the most valuable crop raised in this country. Under these circumstances, modern methods should be employed in handling it. Do not wait for your neighbor to get a press, get one yourself.

The Kansas City Hay Press Co., of Kansas City, Mo., have been for twenty years in the manufacture of hay baling machinery. Their line is very extensive, presses being offered for hand, horse or steam power. From these numerous styles the purchaser has no difficulty in selecting a machine to suit his needs. Every press they make is absolutely guaranteed, and each in its class is unexcelled by anything on the market. It will pay the reader to send for their catalogue.

This company also make a line of Standard Scales, of guaranteed accuracy and durability.

Their gasoline engine made in different sizes is adapted to all farm purposes, and has become very popular in the last few years owing to its economical and durable features. Write them for prices, terms and further information. Refer to this paper when making inquiries.

## AN ECONOMICAL MOTHER.

Small Katherine, who had been forbidden to touch the ink bottle, had accidentally spilled its contents not only all over her mother's desk, but on the rug, several chairs, and her own apron. Her mother, on discovering the state of affairs, had expressed more surprise than pleasure. When the father of the family returned at night his little daughter met him at the door and asked—

"Papa, how much does a bottle of ink cost?"

"Oh, about five cents."  
"Five cents!" exclaimed the aggrieved youngster, in a tone of deep disgust. "And to think that mamma would make all that fuss about one little bottle of ink!"—July Lippincott's.

"The new railroad's comin' our way."  
"Yes, an' soon as we kin git damages out of it we're a-goin' to grade the cemetery an' plant the town hall."

SOUTHWESTERN VIRGINIA  
**BLUE GRASS FARMS AND MINERAL LANDS.**  
Send for Free Real Estate Bulletin.  
Southwestern Va. Land Agency, Wyltheville, Va.

**FINE FARMS** in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address  
ALBEMARLE IMMIGRATION CO.,  
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**VIRGINIA FARMS**  
All prices and sizes. Free list on application.  
WM B. PIZZINI CO., Richmond, Va.

**Go South.** For full particulars write  
A. J. JEFFERS,  
Norfolk, Va.

**WANTED, TO BUY A FARM OF 50 OR 60 acres, with 4 room-house, out-buildings, good water and some wood—in South-Western Virginia, or North Carolina. I will pay \$1 to \$5 per acre. Detailed statement, address "R. K." Care of Southern Planter.**

**A Splendid Opportunity for an Experienced Trucker. address,**  
W. S. MATHEWS,  
Big Stone Gap, Va.

**WANTED**  
By an experienced farmer, a position as manager on large farm. Can take charge at once. Best references given. Address "FARMER," R. F. D. No. 5, Richmond Va.

**WANTED**  
A white man for general farm work. Not a manager. Good wages. Good home. Near Richmond, Va. Address GEG. M. WEST, Richmond, Va.

**WANTED—A WHITE FAMILY TO WORK** for wages in the country; woman to cook; another to work in house and dairy (fuel and water right at hand) and a man or boy care for driving horses, work in garden, etc. All at the same home. Address,  
WALTER RANDOLPH CRABBE,  
Hague, Westmoreland Co., Va.

**FRAZER**  
**Axle Grease** Best to the world.  
Its wearing qualities are unsurpassed, actually outlasting 3 times any other brand, not affected by heat. Get the Genuine.  
FOR SALE BY ALL DEALERS.

**MARK YOUR STOCK.**  
.....USE THE.....  
**KENTUCKY ALUMINUM EAR LABEL**  
Made by F. H. JACKSON & Co., Winchester, Ky  
Write to them for free samples.

# FARMS FOR SALE!

## Farm No. 2.

Contains 265 acres; 125 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

## No. 4.

Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

## No. 10.

This farm contains 100 acres—40 acres in white oak, chestnut and pine; 60 acres in a high state of cultivation. In lots of from 8 to 12 acres in a field; well fenced. Especially adapted to fruit and wheat and clover. Has a nice 8-room house, two porches, new barn, double grainary, wagon drive and cow sheds. A good 4-room tenant house. Situated 2½ miles from station on main line of Southern railroad; 5 miles from county seat of Fairfax county. Price, \$20 per acre.

## No. 11.

Contains 315 acres in high state of improvement. Large frame dwelling, 10 rooms, 2 large cattle barns, and all necessary farm buildings in good repair. Land watered by spring branches. Situated in aristocratic neighborhood. Convenient to depot and to Washington market. Price, \$50 per acre.

## No. 12.

A desirable farm of 96 acres, all under cultivation. Situated in upper Fairfax county, Va., 22 miles from Washington, D. C., by railroad; 6 miles from station on Blumont Division of the Southern railroad; fronting on a Macadamized pike leading into Washington. A substantial dwelling house with five rooms; stable and granary. A large orchard of apples and peaches in full bearing. Land all in good state of improvement and is productive; fine for wheat and grass. One mile from village with post-office, stores, churches, canning factory and mill. Water by spring branch, well and cistern.

Market wagons pass this home every

day, paying cash for all country produce. Price of farm \$1,800, on easy terms.

## No. 13.

An excellent little farm in lower Loudoun county, Va. Contains 117 acres; 90 under cultivation, balance in hardwood timber. Land is chocolate clay and loam with a stiff clay subsoil. Adapted to grain and grass. Has a new 9-room dwelling, with a fine cold well at the back door; good barn, 35x40; large wagon and machine sheds and granary. Situated 4 miles from railroad station, 20 miles from Washington, D. C. About 100 apple and peach trees in bearing. Land is gently rolling and well drained. Price \$27.50 per acre, on easy terms.

W. E. MILLER,  
Herndon, Va.

Fertilizer is a very important item to every farmer. In buying his fertilizer he should know that he is getting an article that is not only going to stimulate and increase the yield for a short time, but an article that will permanently enrich the soil and keep up the fertility of the farm, and to accomplish this bone, tankage and blood should be extensively used in the manufacture of high grade fertilizers, because the nitrogen and phosphoric acid in these ingredients are not leached out of the soil by heavy rains, yet are in the best and most available form of plant food. The fertilizer should be made from well cured stock, which has been carried long enough to insure the material going through the drill as easily as the wheat.

The question of chemical proportions must be thoroughly considered in the manufacture of fertilizers, and a fully equipped chemical laboratory is an absolute necessity. The analyses of the different grades of tankage, bone, blood, potash, nitrate of soda, etc., vary considerably. To produce a high grade, even product requires a number of careful analyses by expert chemists.

To the farmer, especially in the fall, the question of prompt delivery is all important—he does not want to wait for his fertilizer—his needs then are imperative. The shipping season for fertilizer is so short—from the first of August to the later part of September—that large warehouses and perfect shipping facilities are necessary to prompt shipments. Positive assurance of prompt shipments can only be given by factories well equipped and of sufficient capacity to handle large quantities on short notice.

The advertisement of the Armour Fertilizer Works, in another column of this paper, calls attention to some of the foregoing points. The name of Armour has always been synonymous with the production of reliable goods; their equipment is unsurpassed, and their success indicates the character of their business dealings in the past.

## Horse Owners! Use

GOMBAULT'S



## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Taken the place of all liniments for mild or severe action. Removes Bunches or Blebbers from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scab or blench. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.



NEWTON'S Heave, Cough, Dis-temper and Indigestion Cure. A veterinary specific for wind, throat and stomach trouble. Strong recommendation. \$1.00 per case. Dealers, Mail or E. C. Newton Horse Remedy Co., Toledo, Ohio.

## Why Not Get the Best?

### Pierce's Celery Compound

for Constipation, Dyspepsia, Malaria and Chills and Fevers, and a general tonic tablet. Send for free sample, its costs you nothing to try the best family medicine on earth.

AGENTS WANTED.

### NATURE'S REMEDY CO.,

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## THE WEELEY INSTITUTE GREENSBORO, N. C.

for the treatment of THE LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

## Little Chicks

thrive when fed on our  
BABY CHICK FOOD.

A perfect balanced food. Send for free sample and our large illustrated catalog of POULTRY SUPPLIES.

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EVERYTHING FOR THE FANCIER.

## NO HUMBUG. in One

Swiss V. Stock Marker and Call Debtor. Stops every kind of stock trading. Makes different one market. Extracts Horse, Price \$1.50. Send \$1 for trial. If it fails, send back same. Path \$100. Blue and Gold. Mail order only. FARMER BRIGHTON, CARROLL, IOWA.



ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big City, Ky.

## ELMWOOD NURSERIES.

## ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 10'0 for 2 mos. for BARR'S, PALMETTO, CONOVER.

## APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

## Splendid Assortment of Ornamental, Shade and Fruit Trees.

**EGGS** from E. P. Rocks. Light Brahmas. Brown Leghorns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hallsboro, Va.

## FREE SAMPLE

OF "THE STORY OF MY LIFE AND WORK," By Booker T. Washington.



Send us your name and address. We want you to have a copy of this autobiography of the greatest living Negro for the purpose of introducing it in your community. It is a remarkable seller, big profit; agents are making from \$4 to \$10 per day. Will you introduce it by selling or getting us an agent? If so, send at once for a sample.

J. L. NICHOLS & CO., Atlanta, Ga.

Selling Price \$1.00. 615 Anselm Building.

## SPECIAL SALE

Pen, very fine barred Plymouth Rock chickens, as follows:  
8 1/2 full stock 1 year old hens, my own raising; 1 thorough-bred hen from S. B. Johnson yards; 1 thorough-bred cockerel, my own raising. There are very fine birds, beautifully marked. They are well worth \$15.00, but to sell quickly will take \$12.00. This is a rare opportunity.

## PIEDMONT POULTRY PLACE,

Miss E. Calle Giles, Prop. Whittle's Depot, Va.

## 32 Varieties Best Poultry

in either old or young stock

JNO. E. HEATWOLE, Harrisonburg, Va.

Mention the Southern Planter when corresponding with advertisers.

## SHREDDED FODDER.

About one-half the feed value of the corn crop is in the stalks, and whenever this fact is thoroughly understood the corn grower considers it just as important to shred the fodder as to husk the ears. If the stalks are allowed to stand in the field until after the corn is husked, the fodder has little or no value as feed stuff, and this explains much of the misinformation that is still extant relative to shredded fodder. Neither timothy nor clover would make good feed if allowed to stand too long before cutting. If, however, the corn is cut at the right time, the fodder when shredded makes excellent feed, which analysis shows to be fully as nutritious as timothy hay. The McCormick Husker and Shredder enables the farmer to husk and shred his corn at one operation, thus saving time as well as all of the corn, and practically doubling the value of the crop.

The advertisement of the Eli Hay Presses, manufactured by the Collins Plow Co., Quincy, Ill., is running in our columns. Our readers cannot help but be familiar with these famous presses. As made to-day they are the result of many years' experience in hay press manufacture. A feature of the No. 1 continuous travel two-horse press, which perhaps has the widest use of any, is the immense pressure applied to the hay for the power used, the manufacturer stating it as 65 to 1 or concretely, a horse draft of 500 pounds exerts a pressure of upwards of over 30,000 pounds. This explains the solid compact bales for which this press is noted. This, with their uniform shapeliness, gives the Eli product a preference in the market, receiving also the favor of shippers, who are able to get the maximum amount in the car. The Elis are strong and durable machines, have large feed openings and do rapid work. The advertisement should be consulted by every prospective buyer.

## DANVILLE MILITARY INSTITUTE.

On page 2 of the cover of this issue will be found the advertisement of this well-known school. We invite the attention of every father to this card, and ask that they send for the year book of this Institute. In addition to being one of the handsomest catalogues we have ever seen, it contains a full and thorough description of the plan and scope of the institute, explaining fully everything necessary for a parent to know before sending his boy to college. Colonel Horace Campbell, A. M., Ph. D., will take pleasure in giving his personal attention to all inquirers.

How did you come to get the medal? Were you first in the class?

Tommy: Naw; I licked de boy what was.

## BROWN LEGHORNS.

Young stock for sale in

Fall. Prices reasonable.

White Plymouth Rocks.

R. W. HAW, Jr., Centralia, Va.

## PIT GAMES:

Black Devils and Red Horses.

These cocks won 90 per cent of battles fought in 1901 and 1902 and have never lost a battle when fanciness and cutting qualities could win. Choice lot of young and old stock for sale.

THOS. W. JARMAN, Yancey Mills, Va.

## WANTED!

ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkey, White Squirrel, Ducks, Swans, Etc.

CECIL FRENCH,

718 Twelfth St. N. W., Washington, D. C.

## FOR SALE.

Large English Berkshire Hogs, Barred Plymouth Rock Chickens

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. 4 EGGS IN SEASON.

JOHN P. FOSTER, Noecreek, Ohio Co., Ky.

## ... DUROC JERSEY ROOTERS ...

THE KIND YOU SHOULD HAVE.

Fancier's Stock :: Farmer's Prices  
Spring pigs all sold, now booking orders for Fall pigs; you'd better get in line.  
Finest strain B. P. Rocks in Virginia!

THE CEDARS W. G. OWENS,  
P. and S. FARM, Midlothian, Va.

## READY FOR IMMEDIATE DELIVERY:

A limited number of big bone POLAND-CHINA pigs. Good, growthy, thrifty stock, 8 to 10 weeks old at pork prices to make room for young stock.

W. P. ROCKS Cheap.

BYRD BROS., R. F. D. 3,

Salisbury, N. C.

## WANTED

If you have any GOOD ANGORA GOATS to sell, give lowest cash price on a lot from twenty-five to fifty does—also on same number of does with kids at side. Address, FOXHALL FARM, Norfolk, Va.

## ... FOR SALE ...

Six Beagle Pups pure bred and beautifully marked.

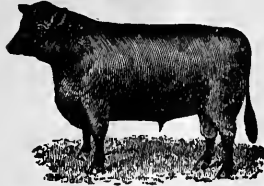
C. T. SMITH,  
Croxtan, Va.

## ● COLLIE PUPS ●

By Imported Sires, sable and white and tri-colors. Prices \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents. FREE if you buy a Collie. MAPLEONT STOCK FARM, Albany, Vermont.



## Market Toppers for Sale, Low.



One thoroughbred Angus cow, unregistered, coming 3 yrs., with heifer calf at foot  
 Four three-fourths Angus heifers, two coming 3 yrs., two coming 1 yr., bred to reg. Angus bull.  
 Four seven-eighths Angus heifers, coming 2 yrs., bred to reg. Angus bull.  
 Three seven-eighths Angus heifers, coming 1 yr.  
 Four one-half Angus heifers, coming 1 yr.  
 Several fine reg. Angus bull calves from 3 to 7 mos. old at a bargain  
 2 nice grade Dorset ram lambs at a bargain.  
 One 12 mos. old reg. Angus heifer.  
 All of the above cattle are black, and are well polled as a thoroughbred Angus. Address

W. M. WATKINS & SONS,  
 Randolph, Va.

Charlotte county.

## ANGUS BULL CALVES

SIRED BY THE

Champion Bull **BARON IDA.**

These calves are choice individuals.

ENGLISH SETTER PUPS.

Sire and dam prize winners.

WARREN RICE, Winchester, Va.

## FOR SALE.

My **ABERDEEN-ANGUS** Herd Bull,

Hero of Bunker Hill, No. 31,462.

He is an extra good breeder.

J. TABB JANNEY, Van Clevesville, W. Va.

## ... FOR SALE ... HOLSTEIN BULL

Pure bred, 2 years old, fine order, perfectly gentle, and SURE reasons for selling to him to my stock; also offer a pure bred calf by above Bull. **JOS. HARDIE**, Brown Summit, N. C.

Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

## JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. **POLAND CHINA PIGS**, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

## FOR SALE.

10 JERSEY COWS; 1 SHARPLES SEPARATOR  
 10 cans and jackets for same, 1 ICE BOX.

Am changing my business, so will sell the above at very reasonable price. address

C. M. BASS, Rice Depot, Va.

## YOU WILL FIND THIS INTERESTING.

By a resolution of the Virginia Commission of "the Louisiana Purchase Exposition," the undersigned have been designated to superintend the collection of minerals and mineral products for exhibition at St. Louis, and to prepare a description of the mineral wealth of Virginia.

We, therefore, request all owners of mines or mineral lands, and all persons interested in the mineral resources of Virginia, to aid us in making this exhibit a creditable one to our State, their district and themselves.

To do this, send, without delay, a statement of what minerals you have and propose to exhibit; what developments have been made on these—that is, whether or not they have been opened up and are being worked, and if so, to what extent. If the material has been analyzed, send copy of the analysis, with date and name of chemist.

On receipt of this information, we will at once send full information how to select a specimen for exhibition, with directions for shipping. We desire to call special attention to building stoves, and in case a good building stone is known to exist, and has been partially developed, which is not now being worked (quarried) elsewhere in this State, we will, on receipt of a sample, sent by mail or express prepaid, examine the same, and if we find it of sufficient value, send an expert to assist in collecting a specimen and attend to its being properly cut and finished for exhibition.

We are also endeavoring to have a creditable exhibit of the clays of Virginia, and desire to call the attention of owners to clay lands to the advantage presented by this exposition to draw attention to their valuable deposits.

Owners of mineral springs are requested to notify us if they desire to make an exhibit. The commission is endeavoring to make this part of the exhibit as complete as possible. The exhibit should consist of bottled waters, with analysis, date and name of chemist, photographs of surroundings of springs, hotels, etc.

All communications should be addressed to us at 17 South Twelfth street, Richmond, Va.

FROEHLING & ROBERTSON.

## CAMPBELL FANNING MILL.

The M. Campbell Fanning Mill Company has an advertisement on another page in this issue. Look it up and write to them for their most liberal terms for this machine. They will take pleasure in forwarding catalogues or any other information desired.

What is better than presence of mind in a railroad accident? Absence of body.

## Kentucky HEREFORDS

Headed by the famous  
**ACROBAT**

No. 63460 and the celebrated

## IMPORTED BRITISHER

No. 145696 Champion Bull over all breeds in England and Grand Sweepstakes Champion at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they wish from the FANCIEST THAT CAN BE BREED to the cheaper class usually desired by the beginner. Write us before buying. Glad to answer inquiries.

Giltner Bros., Eminence, Ky.

## Poland-China and

amworth Pigs for Sale—

eligible to registration; also

## Hampshire Down Sheep

and grade Hereford cattle,  $\frac{1}{2}$  or  $\frac{3}{4}$  bred. Calves, yearlings and 2 yr. old.

J. C. GRAVES, Barboursville, Orange Co., Va.

## HAYFIELDS STOCK FARM HAS

## FOR SALE

Seven Registered HEREFORD BULLS 8 months old to 2½ years. Two Registered HEREFORD HEIFERS 8 months old and 1 year. SIX OXFORDDOWN BUCK LAMBS.

WM. D. MERRYMAN,  
 Cockeysville, Md.

## DORSETS and HEREFORDS.

I am now offering my superior herd bull ROY MAY, 80183; and some fine male calves. I am also booking orders for Dorset rams and ram lambs.

H. ARMSTRONG, LANTZ MILLS, VA.

## V. P. I. Farm Bulletin

Our Virgin Herd Bull for sale—PEDRO'S VIRGINIUS, 45919, grandson of Pedro, 3187, and of Marjoram Seend, 12305, both of World's Fair fame. The Bull offered has been used in our herd for several years, and is sold to prevent in-breeding. Price low, quality considered.

D. O. NOURSE, Prof. of Agr.  
 Blacksburg, Va.

## ST. OMER HERD

Offers young bulls fit for service, out of tested dams with good yearly records. Strong in Exile of St. L., King of St. L., and Stork Pegasus of Prospect. Reasonable prices.

JOS. T. HOOPES, Elynn, Md.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## WARE VIEW FARM

GLOUCESTER, VA.

### == OFFERS FOR SALE ==

3 large Berkshire Boars :

BEAU OF BILTMORE,

COLUMBIANA'S MASON, and

BOB LOOMIS, JR.

Will be priced low, also about 100 head of extra fine Boar and Sow pigs by the above Boars and out of the best Sows. Entitled to registry Price, \$12 each, or 3 for \$30. Send stamp for reply.

R. S. CAMERON & SON, Props.

## BERKSHIRES

ANNEFIELD HERD

Represents the

**Finest Blood Lines**

in England or America.

Stock for sale at all times.

Correspondence Solicited.  
Inspection Invited.

EDW. G. BUTLER, Annefield Farms,  
Briggs, Clarke Co., Va.

CHOICE YOUNG

## BERKSHIRES

of Both Sexes, for Sale.

By Highclere Toppet of Biltmore II, out of Imported Harlene.

Miniborya Farm, Box 901, Richmond, Va

## Registered Berkshires

Duke of Mansfield (68561) 2½ years, \$15.00.  
Mansfield Cricket (68709) 2 years to Farrow  
September, 1903, \$20.00.

2 Gilts 4 Months, \$8.00 each.

Write at once.

W. ELLIOT HAMMOND,  
Goochland C. H., Va.

## Hawksley Stock Farm

has some extra nice Berkshire Pigs for sale. Also one handsome young boar, seven months old. All entitled to be registered.

J. T. OLIVER,

Allens Level, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

### MAGAZINES.

The midsummer holiday Century is characterized by articles on unknown regions, by a varied personal interest and by an appeal to artistic taste, both in color work and in black and white.

The most out-of-the-way articles are "New Light on Lhasa, the Forbidden City" with unpublished photographs taken by a Kalmuk pilgrim which Mr. Rockhill, the Tibetan traveller, in a prefatory note, pronounces "of extraordinary interest," and "An Artist in the Antarctic," by F. W. Stokes, whose pictures are the first news in color from that still mysterious region.

Other out-door subjects are Yellowstone Park ("A Place of Marvels"), by Ray Stannard Baker, in "The Great Northwest" Series, illustrated by Blumenschein, and "An English Game Park," with text and pictures (antelope, rabbits and foreign animals) by the artists, Gleason and Knight.

The personal articles comprise letters of Walter Scott, recounting his "Later Days," with much variety of detail; "Chapters from a Diplomatic Life," reminiscences of people and events, by Andrew D. White, and "Wesley's Days of Triumph," a pen portrait of this great preacher and interesting character, by Professor Winchester, supplemented by an editorial article, "Wanted, Another Wesley."

An authoritative and important special article on a topic of current interest to both town and country is "A City's Campaign for Pure Milk," by Miss Fallows, with pictures by Miss Harding.

The fiction includes "The Yellow Van," Richard Whiteing's novel, with a scene revealing high play at bridge whist among English women of society; a short tale by David Gray (a horse-sale story); "Overhauling the Politicians," a humorous sketch of the Maine coast, by George S. Wasson; "Chills," a tale of a Missouri overflow, by R. E. Young; "To Her Who Loved Him Best of All," by Cyrus Townsend Brady—in a new vein, for that author—and "The Tramp," a curious "Pa Gladden" story by Elizabeth Cherry Waltz.

T. B. Aldrich contributes a paper of random observations on life and literature, and there is an example of Frederick MacMonnies's portraiture and the usual humorous miscellany.

\*\*\*

Lippincott's Magazine for August provides a feast of fiction for idle days. The opening number, by Elizabeth Duer, is called "The Green Dragon," and possesses all the qualities desirable in a magazine novel. There is not a dull paragraph in it. Through an opportune spill out of his automobile the "Greek type" chauffeur is cast upon the hospitality of an engaging widow, who sees it her duty to take him in and do for his broken hip-bone until it mends. By that time lots of unexpected things happen, not the least of them being a bit of burglary, which

## POLAND-CHINA ... PIGS ... FOR SALE

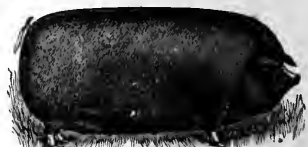
sired by a son of Corrector, the great prize winner that sold for \$2,500.00 and out of sows by Chief Tecumseh II, Zenith Chief, J. H. Sanders and other prize winners. No better bred in the U. S

Pure bred SHROPSHIRE SHEEP.

ARROWHEAD STOCK FARM,

SAMUEL B. WOODS, Prop.

Charlottesville, Va.



LARGE

## == POLAND-CHINAS ==

Choice pigs, boars and brood sows, registered, Shropshire Sheep and Short-Horn Cattle. Write for prices and testimonials. J. F. DURRETTE  
BIRDWOOD, Albemarle Co., Va.

## .. BURKE'S GARDEN DORSETS ...

I NOW HAVE READY A NUMBER OF

## CHOICE YOUNG RAMS

and about 300 fine grade Ewes. Prices within reach of all. Correspondence solicited. SAM'L T HENINGER,  
BURKE'S GARDEN, Tazewell Co., Va.

## WOODLAND DORSETS.

ONE of our customers writes: "My sales of fine grade Dorset winter lambs run this year: first 87 head brought \$570; then prices declined somewhat. I am looking for another good Dorset ram." Woodland Dorseta are standard in excellence.

J. E. WING & BROS., Mechanicburg, Ohio.

## DORSET RAM

Woodland No. 118 (1723) for sale. He is three years old, and in first class condition, and a twin setter. Must sell to prevent in-breeding. FRID. E. BRECHER, Clanton, Va.

## 150 JACKS, JENNETS and Mules 150



Best assortment I ever written. Can suit you exactly. Write for description and prices. Also will sell two Percheron Stallions at close figures.

BAKER'S JACK FARM.

Lawrence, Ind.

Poland Chinas, Chester Whites and Mammoth Bronze Turkeys at Farmers prices

S. M. WISECARVER,

Rustburg, Va.

## —6 Scotch Topped—

**SHORT HORN BULL CALVES**

6 Scotch Topped SHORT HORN Bull Calves 3 to 15 months old; reds and roans; sired by Verberna's Champion No. 129851, and Royal Chief No. 185432, and he by Imp. Royal Stamp No. 146562. Poland China Spring pigs, good ones, sired by Coler's Perfection No. 56105. Pedigrees furnished with all stock sold. Come or write your wants.

WM. T. THRASHER, Springwood, Va.

**ELLERSLIE FARM****Thoroughbred Horses****AND SHORTHORN CATTLE,  
Pure Southdown Sheep  
and Berkshire Pigs.**

FOR SALE R. J. HANCOCK & SON,  
CHARLOTTESVILLE, VA.

**COOK'S CREEK HERD****Scotch-Topped  
Shorthorns**

Head Herded by Governor Tyler, 1855-48. Young Bulls for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

**FOR SALE**

Two good young SCOTCH TOPPED SHORT-HORN BULLS, a red and a roan, about six and ten months old. Will sell low if taken soon. Also some nice helpers and Berkshires pigs. Address, ORMSBY BROS., Lakeland, Ky.

**SHORTHORNS, BRED HORNLESS.**

The coming breed of beef cattle.

Have all the merits of Shorthorns and more, because they have no horns.

Buy a Polled-Durham Bull

J. L. HUMBERT, Charlottesville, Va

**REGISTERED JERSEY BULLS FOR SALE  
AT A BARGAIN.**

Calves 1 and 2 yr. olds; also

EGGS FOR HATCHING, W. & B. P. Rocks, W. & B. Leghorns, and S. L. Wyandottes, 75 cents for 15.

J. B. JOHNSON, Manassas, Va.

"CLOVER HILL FARM"

**REGISTERED ABERDEEN ANGUS**

Cows and heifers for sale.  
Prices low.

W. B. MACGREGOR,  
Avon, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

is specially thrilling in the telling. Needless to say, the end is love.

Marion Harlan outdoes herself in the powerful story she contributes to the August Lippincott's, called "The Seventeenth of August, 1844." The title smacks of history, but the pathetic tale is pure fiction of the most appealing sort. An adventure story by William Le Queux, called "The Man with the Black Spectacles," is a rousing good one about a royal disguise and what comes of it.

The way a medical man sacrifices himself for a friend, whose wife finds some compromising letters in her husband's pockets, is told under the title "Another Man's Excuse," by E. Spence de Due. This sounds true.

Edward Boltwood's sketches of western camp life are well liked. That in Lippincott's August number, entitled "Cupid in the Horse-Camp," is one of his best.

Churchill Williams tells stories as if he saw before him what he is writing about, and so impresses it upon the reader. His tale of a strike at the Sampson Steel Mill, called "The Siren," is most graphic and interesting, showing what one man can do against many.

"For A' That," by Clinton Dangerfield, hides a moral under a parable, in which a German monarch and an American ranchman become the best of friends. There is an amusing easy-dialect tale by Ella Middleton Tybout, entitled "The Offending Eye."

A single exception to fiction in the August number of Lippincott's Magazine is a paper entitled "Father Kneipp and His Cure," by Maud Howe. She says that Father Kneipp dislikes "women who wear gloves, a veil and a good bonnet," so let all such beware if their troubles lead them to him for a cure.

**REPORTS.**

U. S. Department of Agriculture, Washington, D. C. Year Book of the Department of Agriculture, 1902. This is a most excellent issue of this valuable publication, and ought to be in the hands of every farmer. Write your congressman or senator for a copy. The department itself has no more copies allowed it than suffice for its correspondents.

Bureau of Plant Industry, Bulletin 42. Japanese Bamboos and Their Introduction into America.

Bureau of Plant Industry, Bulletin 44. The Bitter Rot of Apples. Division of Foreign Markets, Bulletin 32. Distribution of the Agricultural Exports of the United States, 1898-1902.

Bureau of Forestry, Circular 25. Forestry and the Lumber Supply. Progress in Secondary Education in Agriculture, by A. C. True. Practices in Crop Rotation, by G. K. Holmes.

Bureau of Soils, Circular 10.—The

**My Fine Herd of Registered  
SHROPSHIRE SHEEP**

FOR SALE—As I retire from farming after this year, I offer the above at a very great discount. Write me for prices on come, see them.

H. R. GRAHAM,

BARCLAY, P. O., Queen Anne Co., Md.

**FOR SALE****SHROPSHIRE SHEEP**

1 yearling buck, 1 two year old buck, and several buck lambs, all registered.

Apply to, ANTRIM STOCK FARM,  
Warrenton, Va.

"MEADOW BROOK STOCK FARM."

**Shropshire Sheep.**

Very fine yearling bucks, sired by best English bucks, from pure-bred native ewes. Fine ewe lambs for sale.

C. A. SAUNDERS, Culpeper, Va.

**Suffolk-Down Sheep for Sale.**

I now offer Buck and Ewe lambs of this splendid breed which has proven itself the best adapted for crossing for early lambs Single Buck, \$15.00; Buck and 2 Ewes, \$40.00.

D. N. CLOYD, - Dublin, Va.

Registered P. Chinas Berkshire, C. Whites. Fine large strains. All ages, mated not a in 8 week pigs. Bred sows. Service boars and Poultry. Write for prices and free circular. P. F. HAMILTON, Cochranville, Chester Co., Pa.

**Aryshires, Berkshires and Oxford-Downs.**

Aryshire Calves of both sexes, Berkshire Pigs and Boar and 2 Oxford-Down Rams for sale. MELROSE CASTLE FARM, Enos H. Hess, Manager, Casanova, Va.

**The RICHMOND, FREDERICKSBURG  
and POTOMAC R. R.  
and WASHINGTON SOUTHERN R'Y**

Form the Link connecting the

Atlantic Coast Line R. R.,  
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and Southern R'y.

Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va

Mention the *Southern Planter* in writing.

Use of Alkaline and Saline Waters for Irrigation.

Publications of the United States Department of Agriculture for sale by the Superintendent of Documents.

Farmers' Bulletin, 159. Scab in Sheep.

Farmers' Bulletin, 173. A Primer in Forestry.

Farmers' Bulletin, 174. Broom Corn.

Farmers' Bulletin, 175. Home Manufacture and Use of Unfermented Grape Juice.

Farmers' Bulletin, 176. Cranberry Culture.

Farmers' Bulletin, 177. Squab Raising.

Alabama Experiment Station, Auburn, Ala. Bulletin 123. Vetch, cow peas and Soy Bean Hay as Substitutes for Wheat Bran.

Bulletin 124. The Horticultural Law. Notes on some of the insect and fungous diseases affecting horticultural crops.

California Experiment Station, Berkeley, Cal. Bulletin 147. Culture Work at the Sub-Stations. 1899-1901.

Bulletin 148. Resistant Vines and Their Hybrids.

Bulletin 149. The California Sugar Industry.

Bulletin 150. The Value of Oak Leaves for Forage.

Idaho Experiment Station, Moscow, Idaho. Bulletin 38. Grass and Forage Plants in Idaho.

Kansas Experiment Station, Manhattan, Kan. Bulletin 117. Bacteria of the Soil.

Bulletin 117. Flesh and Fat in Beef.

Maryland Experiment Station, College Park, Md. Economical methods for Improving the Keeping Qualities of Milk.

Maryland Agricultural College Quarterly, May, 1903.

Missouri Experiment Station, Columbia, Mo. Bulletin 62. Hessian Fly in Missouri.

Bulletin 61. Apple Growing in Missouri.

Nebraska Experiment Station, Lincoln, Neb. Bulletin 80. Experiments in Mulching Garden Vegetables.

New Hampshire Experiment Station, Durham, N. H. Bulletin 102. Insect Record for 1902.

New York Experiment Station, Geneva, N. Y. Bulletin 232. Popular Edition. An Unsuccessful Cabbage Rot Remedy.

New Mexico Experiment Station, Mesilla Park, N. M. Bulletin 44. Ash Analysis of Some New Mexico Plants.

Bulletin 45. Pumping for Irrigation from Wells.

Ohio Experiment Station, Wooster, O. Bulletin 139. A Rosette Disease of Potatoes.

Rhode Island Experiment Station, Kingston, R. I. Fifteenth Annual Report.

South Dakota Experiment Station,

## • DUNTREATH BERKSHIRES •

"BRED-IN-THE-PURPLE."

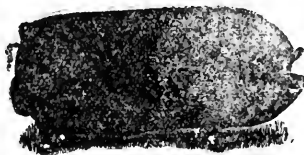
EXTRA CHOICE Young Pigs for sale, all eligible to registry, and now ready for shipment. Orders also taken now for late Summer and Fall shipments.

### DUNTREATH STOCK FARM,

Box 666.

RICHMOND, VA.

REFERENCE: American National Bank of Richmond.



## BERKSHIRES.

Imported Sir John Bull, No. 3609—B. H. B.

Imported Dansfield Roland, No. 60528—B. H. B.

Imported Columbia, No. 60527—B. H. B.

Imported Royal Carlisle, No. 4841—B. H. B.

And that Immensely Princely Hog

**Uncle Sam, No. 7233** are the sires of my Spring and Summer offerings of pigs. Does this list of Royalty suit your fancy? They represent the most famous Berkshire breeders of England. Fancy stock, moderate price

**Fancy Pups** and fancy pigs do not fancy each other; be prompt if you want a ready-for-field pup at a sacrifice.

**Short Horn** (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

### HILL TOP STOCK FARM.

## Berkshire Hogs and South-Down Sheep

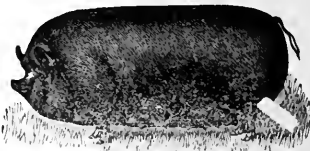
A SPECIALTY.

S. Brown Allen, who succeeds H. A. S. Hamilton & Co in the ownership and management of this celebrated Stock Farm, offers a few Berkshire Pigs that have been bred without regard to cost, and one and two year old

## SOUTHDOWN BUCKS,

that cannot be excelled in this country. We have swept premiums on this stock over all competitors at Fairs in this and adjoining States

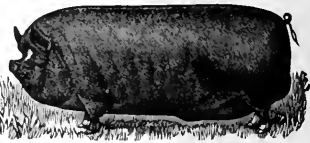
S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)



We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING.

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



Prof. JOHN SPENCER, Veterinarian, Virginia Agricultural Experiment Station, says:

## Chloro-Naphtholeum Dip

"Insures the Destructions of Mites. Outbreaks which have come under our notice have been thoroughly stamped out by dipping in a 2 per cent solution of Chloro Naphtholeum Dip." If you've tried it you know how good it is, if you haven't, try it now. One Gallon sent prepaid upon receipt of \$1.50, money order or check. Booklet free. It can make money for you. F. V. GUNN & Co., Richmond, Va., Agts. Va. & N. C. • The WEST DISINFECTING CO., Inc., Mrs.

Brookings, S. D. Lamb Feeding.  
Fattening Sheep on Grass.  
Virginia Experiment Station, Blacks-  
burg, Va. Virginia State Crop  
Pest. Commission Announcement  
in Regard to Enforcement of the  
Law.  
Virginia Weather Bureau, Richmond,  
Va. Report for June, 1903.  
Imperial Department of Agriculture  
for West Indies, Barbadoes, W. I.  
Agricultural News, June, 1903.  
PAMPHLETS, ETC.  
Sheep Upon the Cotton Fields and  
Other Matters. By Edward Atkin-  
son. An address prepared for sub-  
mission to the Southern Cotton  
Spinners Association.  
Fuel—What We Don't Know About It.  
By Edward Atkinson. There is  
much food for thought and many  
suggestions of value in this pam-  
phlet.  
International Live Stock Exposition,  
Union Stock Yards, Chicago, No-  
vember 28th to December 5, 1903.  
Preliminary classification.  
St. Louis Exposition, Department of  
Horticulture. Circular of infor-  
mation as to exhibits and methods  
of preparing and preserving them.  
Copy will be sent on application  
to F. W. Taylor, World's Fair, St.  
Louis.  
Franklin Davis Nursery Company,  
Baltimore, M. Catalogue.  
Danville Military Institute, Danville,  
Va. Prospectus, 1903-1904. This  
is a most beautifully got-up pam-  
phlet with a pile of information  
as to this excellent school.  
American Devon Cattle Club, Newark,  
O. Year Book for 1903. L. P.  
Sisson, Secretary, Newark, O.  
International Stock Food Company,  
Minneapolis, Minn. Dan Patch  
March. Composed by Carl Willis.

#### BACK NUMBERS WANTED.

The file of the SOUTHERN PLANTER  
in the Library of Congress lacks:

Volume 1 to 10 (1841-'50). N. S., 8,  
9 (1874-'75).

Volume 38 to 40 (1877-'79).

Volume 18, No. 12—December, 1858.

Volume 19, Nos. 1, 9, 10—January  
September, October, 1859.

Volume 21, No. 6 to 12—June to  
December, 1861.

New Series, Volume 1, Nos. 1 to 5—  
February to June, 1867.

New Series, Volume 6, Nos. 5, 6,  
7—May, June, July, 1872.

New Series, Volume 7, Nos. 2 to  
12—February to December, 1873.

Volume 37, Nos. 5 to 12—May to  
December, 1876.

Volume 41, Nos. 2 to 6—February  
to June, 1880.

Volume 43, Nos. 9, 11—May 15,  
June 15, 1882.

Volume 46, No. 7—July, 1884.

Volume 50, No. 10—October, 1889.

If any of our subscribers have any  
of the above numbers and desire to  
part with them, kindly write Mr. Her-  
bert Putnam, Librarian of Congress,  
Washington, D. C.

## PUBLIC SALE.

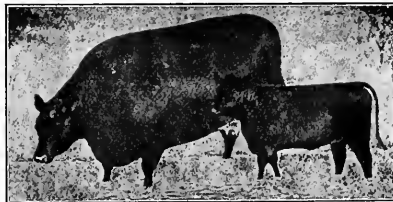
60 Head of Pure Bred SHORTHORN Cattle  
WILL BE SOLD  
AUGUST 25, 1903, AT RADFORD, VA.

The offering will include almost the entire herd of W. W.  
Bentley, and a draft from J. T. Cowan's herd. Altogether  
a rare good lot of breeding cattle of high merit.

J. T. COWAN,      W. W. BENTLEY,  
Cowan's Mills, Va.,      Pulaski City, Va.

## ABERDEEN-ANGUS CATTLE

FOR SALE AT INTRODUCTORY PRICES.



Choice Bulls from 3  
months to 2½ years  
old.

The Best Breed in  
the world for  
grading-up  
purposes.

Call and see them or write for prices.

ROSEDALE STOCK FARM, Jeffersonton, Culpeper Co., Va.

SUNNY HOME HERD OF

## ABERDEEN-ANGUS CATTLE.

Baron Roscoy, 57666, by the great Gay Blackbird, dam by Eulalie Eric, 2d prize  
yearling at Columbian Exposition, 1893, heads the herd. Pedigree means only the tracing  
of good or bad qualities through several generations. The animals comprising this herd  
are direct descendants of the greatest prize-winners of the breed for the past twenty-five  
years. Does this mean anything to you, who are in need of an animal of this the GREAT-  
EST BEEF BREED? If so, come and see the best lot of calves we ever bred, or write.

A. L. FRENCH, Proprietor, R. F. D. 2, Byrdville, Va.

(Note change of P. O. address).

Depot and shipping point, Fitzgerald, N. C., on D. & W. R'y., 24 miles southwest of Dan-  
ville, Va.

### EMILY'S CHARGE—A BID FOR WALTER.

#### CHAPTER II.

A few days after the funeral the orphans received a visit from their father's brother, Dr. Henningham, a man who, whilst possessing much of their father's frankness and geniality, was very different from him in some of his traits and habits. Dr. Henningham was of a convivial nature, and though not a confirmed drunkard, he drank enough to impair his vigor, both of mind and body, and to cast a shadow over his household. Emily had many a time turned away with tearful eyes and burning cheeks as she observed the thick utterance and shaking hand of her uncle, whose kindly and genial nature attached her to him, despite his weakness.

Dr. Henningham had no son. His family consisted of his wife and two daughters, and he now proposed to adopt Walter. Grateful as she was for the kind spirit displayed in the offer, Emily shrank back reluctantly from accepting it. True, her uncle had his good points and attractive qualities, but with his fatal weakness this would but render his influence stronger, and hence more dangerous to a youth under his charge. Dissipation would appear more tolerable and even attractive in a person so agreeable and warm-hearted, than in a churlish and ungifted one. Besides, she could already discern a family likeness between her uncle's temperament and Walter's, which would make the risk all the greater. Were she to give up the boy into the former's keeping. True, he could give Walter more material comforts and advantages than she could possibly do, but then she had learned from her mother to consider, first of all, what would nourish and conduce to the higher life, and then to take a secondary view of those that conduce to natural life, and when these conflicted, she always aimed to make the lower and transient give way to the higher and the enduring. Looking at the subject in this way, she could not feel it right to accept her uncle's offer for Walter, especially as she had promised her mother to guard the boy from temptation, as far as in her lay. After maturely considering the subject, she came to the conclusion that her uncle could give Walter no advantages that would offset or neutralize the harmful influences and examples to which the boy would be exposed, and, therefore, she thanked her uncle, affectionately, but declined his offer.

"I think I must try to keep Walter myself," she said. "He is almost like my own son, and my mother was so anxious for me to keep him with me, if possible."

"But, Emily," exclaimed her uncle, "you surely cannot realize what you are saying; what you are declining for Walter. I propose to support and educate him, as if he were my own son. You will not find it such a light

### The Old Way—Kicking Corn With Knife Fastened to Boot



### FARMERS DON'T KICK NOW!

Their corn is cut with

## DEERING IDEAL CORN BINDERS

Deering Corn Binders gather all of the corn. They do not waste. They are constructed on the grain binder principle; the corn is bound while in a horizontal position in the same manner as a sheaf of wheat. They do not knock off ears.

### Deering Corn Binders, Corn Shockers, Huskers and Shredders

are money-makers for the farmer. Ask the nearest Deering agent for a "Deering Corn Annual."



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CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.

### DORSET SHEEP

## B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

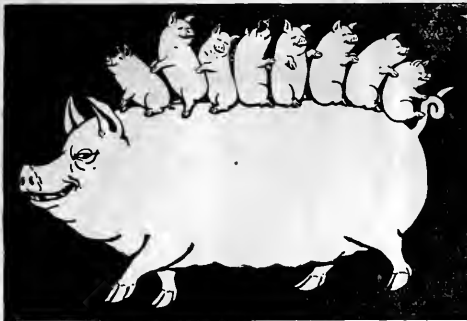
T. O. SANDY, Burkeville, Va.

## WE OFFER a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young Berkshire boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

**M. B. ROWE & CO.,** - Fredericksburg, Va

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## MAKES PIGS GAIN 3 LBS. PER DAY

BLANCHARD, IOWA.

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GENTLEMEN:—This is to certify that having used "International Stock Food" for three years I cheerfully recommend it to all stockmen, and especially those who raise hogs. Last spring with a bunch of the runtiest pigs I ever had they made a gain of three pounds apiece per day.

J. S. BELL.

**WE HAVE THOUSANDS OF SIMILAR TESTIMONIALS AND WILL PAY YOU \$1000 CASH TO PROVE THAT THEY ARE NOT GENUINE AND UNASSILTED.**

is known "International Stock Food Farm," which is located 10 miles from Minneapolis and contains 600 acres. We feed "International Stock Food" every day to all our World Champion Stallions; DAN PATEN 1:59 1/2 and DIRECTOR 2:05 1/4; to our YOUNG STALLIONS, BOGG MARE, CULLE, WALK HORSES, CATTLE and HOGS. "INTERNATIONAL STOCK FOOD" is 3 FEEDS for ONE CENT and is Prepared from Roots, Herbs, Seeds and Berries and Won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fatening stock because it increases the Appetite and Aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fatening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Geese, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Human System. You insist on eating medicinal ingredients with your Own Food as every meal. Salt is a stomach tonic and worm medicine, Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and this proves that these Medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary an addition to the regular feed of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. Your Money will be Promptly Refunded in Any case of failure. It will make your Calves or Pigs grow Amazingly and has the largest sale in the World for keeping them healthy. Beware of the many Cheap and inferior Imitations. No Chemist can separate all the Different powdered Roots, Herbs, Berries and Seeds that we use. Any One claiming to do so Must be an Iconoclast or a Falsifier.

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RICHARD J. MORRISSEY.

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Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish.  
Respectfully,  
GEO. W. NULL.

# A \$3000.00 STOCK BOOK FREE

## IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.

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Largest Stock Food Factory in the World.  
Capital Paid in, \$1,000,000.  
600,000 Feet of Space in Our New Factory.

job to do this. In fact, you will find it impossible."  
"I think, uncle," she replied gently, but firmly, "I shall keep him with me, and do the best I can for him, though I thank you from my heart for your kind offer."

"How do you propose to support him?" asked her uncle, half in kindness, half in irony.

Emily detailed their resources, their little piece of property and her plan of teaching school, adding that she had collected a hundred dollars of rent just before her mother's death, and she had a few pieces of old family silver to dispose of.

"A blue prospect!" exclaimed Dr. Henningham. That little cottage and tract of land, if sold in the present depressed condition of real estate, would scarcely bring enough to support you six months."

"But I don't want to sell it," replied Emily, my plan is to live there and try to get a school in that vicinity."

### VIRGINIA DIVISION.

## Farmers Mutual Benefit Association

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address, CHAS. N. FRIEND, General Agent, CHESTER, VIRGINIA.

MENTION THIS JOURNAL.



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### HAY BALER WITH A RECORD,

the pride of shippers. Steel or Wood, Horse or Steam Power. Such automatic features as self-feeding, block placing, bay connecting, bell ringing, etc. See other models in our free Elicatalog.

**COLLINS PLOW COMPANY, 185 Hampshire St., Quincy, Ills.**

"Teaching is a precarious business," said her uncle, "and not well paid. Still you might make a living by it if you only attempted to provide for yourself; but with two mill stones around your neck—"

"One point you overlooked, uncle," she rejoined. "Walter is now twelve. In a few years, say, five or six, he will probably be able to support himself and protect and help his sisters." "It is not so easy," replied her uncle, "for young men to find openings to support themselves, and Walter will find unusual difficulties if you persist in debarring him from such advantages as are within his reach. You are so quixotic, so Utopian, I scarcely know whether to laugh or be provoked. You are as ignorant of the ways of the world as a baby. I give you a year, however, to come to your senses, and then I shall prepare to receive Walter. Doubtless some of the other relatives will adopt or help you to support Alice, and then you may reasonably hope to support yourself by teaching, after you have given up the impracticable task of trying to keep your brother and sister." So saying, he arose and took his leave, a little testily, though not unkindly, reiterating to Emily as he started that she might consider his offer as holding good for twelve months.

(To be Continued.)

#### FIFTY DOLLARS FOR A BOTTLE OF GOMBAULT'S CAUSTIC BALSAM.

Jonesboro, Tenn., Feb. 4, 1903.  
The Lawrence-Williams Co., Cleveland, Ohio:

I have used your GOMBAULT'S CAUSTIC BALSAM for wind galls, saddle galls, collar bruises, cuts by barbed wire, splints, knots, etc. I have part of one bottle left, and if I thought I could not get another I would not take fifty dollars for it.—D. G. KEEBLER.

#### WOODLAWN SEMINARY.

Elsewhere in this issue will be found the advertisement of the Woodlawn Seminary and Musical Institute, of Gordonsville, Va. This splendid boarding school for girls is beautifully and healthfully situated in the Piedmont section of Virginia. Under Professor Edgar Stinson it has all the advantages of a Christian home, fitting pupils for college, teaching or the active duties of life. Send for further information.

Bacon: A dog that runs under a carriage is called a carriage dog, is it not?  
Egbert: Certainly.

Bacon: Well, what would you call a dog that runs under an automobile?  
Egbert: A dead dog.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## SEE THAT TUBE



This illustration shows our **STEEL RIBBON GRAIN TUBE**

It is made of one continuous piece of Ribbon Steel. It is perfectly collapsible and flexible. It can not buckle or stop the flow of Grain or Fertilizer. It is used on all

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Our FREE Grain Drill Literature tells all about our other features. Write for it to-day.

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IT STANDS THE TEST

## JERSEY CATTLE.

We have for sale, **Young Cows, Heifers and Young Bulls**, from cows testing **18 to 24 lbs. of butter in seven days**, and giving **40 to 60 lbs. of milk per day**. Also—

### LARGE YORKSHIRE PIGS,

The coming bacon breed. Our stock is from the most noted breeders in England and Canada.

Write for prices. Address—

## BOWMONT FARMS, SALEM, VIRGINIA.

### JOHN S. FUNK, GLEN FARM.

—IMPORTER AND BREEDER OF—



Poland-China Hogs.

### Polled Durham Cattle,

Shropshire Sheep,  
Southdown Sheep,

Berkshire Hogs.



All carefully bred regardless of cost.

SINGER'S GLEN, VA.

## CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

G. S. LINDENKOHL, Keswick, Albemarle Co., Va.



## **BILTMORE FARMS, = Biltmore, N. C.**

**Headquarters for GOLDEN LAD JERSEYS,**

**Also Get of TREVARTH and GEN. MARIGOLD.** ❁ ❁ ❁

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



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# **IMPERIAL FRUIT AND POULTRY FARM**

Is now booking orders for Eggs from the best strains and careful matings of

**Barred, Buff and White Plymouth Rocks,**

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**EGGS FROM BLACK DEVIL PIT GAMES.**

Never known to run. The grittiest of all games. **\$2.00 PER SITTING.**

We give 15 Chicken and 13 Duck Eggs for sitting. **Order at once.**

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

**P. H. HEYDENREICH, - Staunton, Va.**

## GOOD HOUSEKEEPING.

In the July number of the SOUTHERN PLANTER there was a request for a recipe for putting up cucumbers for a pickle. This suggested the idea that a Housekeeper's Column might add something to the interest and value of the magazine, so we have decided to make the experiment, and the readers may rest assured that any recipe published has been thoroughly tested and found reliable. Most of them are in constant use in a country neighborhood which has long been celebrated for its "good living."

**BRIED CUCUMBERS.**—I like the cucumbers for pickle to be about two and a half or three inches long. They should be gathered every morning and put into a jar or tub of weak salt water; after a few days (take them out and pack them closely in a tight keg or a large jar and pour over them a brine made of one quart of salt and one gallon of water and an inch or two of horseradish; boil and skim and pour it over the cucumbers hot. The horseradish prevents moulding. After nine days they are ready for making up, but they will keep a year if you prefer to make the pickle just as you need it. The pickle we get in the stores in barrels is prepared by soaking all the salt out of the cucumbers (and it takes about three days, changing the water twice a day), and pouring over them enough boiling vinegar to cover, in which you have boiled one cup of brown sugar, one pod of red pepper and one tablespoonful of black pepper and a small piece of horseradish to each gallon. Tie it up and let it stand for two months.

**GREEN CUCUMBER PICKLE.**—After soaking the salt out of the cucumbers put them into a brass kettle, a layer of cucumbers and a layer of grape leaves, until the kettle is full. Pour over them a weak vinegar, or one quart of strong vinegar to three quarts of water, and set them on the stove and cook very slowly for several hours, or till they are a bright green. Take them out and wipe them dry and pack two gallons into a jar and spread between the layers three tablespoons of white mustard seed, two tablespoons of black mustard seed, three tablespoons of celery seed, two tablespoons of whole black peppers, one tablespoon of cloves, one heaping tablespoon of allspice, one tablespoon of cracked ginger, one tablespoon of cracked nutmeg, one stick of cinnamon, two pods of red pepper and one cup of grated horseradish. Pour over it all three quarts of good vinegar, in which you have boiled ten cups of brown sugar. Heat the vinegar two mornings and the pickle will be ready for use in a month, but is better if kept.

**MEXICAN MIXED PICKLE.**—Two dozen large cucumbers cut into large pieces. Chop eight heads of cabbage, six dozen onions, two dozen green peppers. Sprinkle nearly a quart of salt over it all and turn it into a bag and hang it

# HEREFORDS

CHAMPION PRINCE RUPERT No. 79,539, ... at head of herd. ....

A Few High Class Bulls and Calves For Sale.

Write me  
before buying  
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EDWARD G. BUTLER,  
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Send for  
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## Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.

**FOR SALE**—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos. old. Call and make your own selection. Prices right.

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"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

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1903

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**“MOUNT SHARON  
STOCK FARM”**

Registered HEREFORD CATTLE  
Registered SHROPSHIRE SHEEP  
Registered POLAND-CHINA PIGS

**NOW OFFERS FOR SALE**



**HEREFORD CATTLE**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

**SHROPSHIRE SHEEP**—Eucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

**POLAND-CHINA HOGS**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

**M. BRONZE TURKEYS**—Toms, \$4. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

**MUSCOOVY DUCKS**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

**BARREO PLYMOUTH ROCKS.**

**ROUEN GESE.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

WILLIAM L., Jr., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.

# St. Albans School, Radford, Virginia.



This school is beautifully located on a sunny headland, above the banks of the New River, in the famous Blue Grass Region of Virginia. Ideal spot for health and sanitation. Prepare your boy for the university or business by sending him here.

PROF. W. H. RANDOLPH, Headmaster, would like to mail you a catalogue containing the "Plan of St. Albans School"

up on the clothes-horse to drip. The next day squeeze it well and put it into a kettle, sprinkling four ounces of white mustard seed, four ounces of black mustard seed, six ounces of turmeric, four ounces of celery seed, three-quarters of a pound of ground mustard between the layers. Dissolve eight pounds of sugar in two gallons of best vinegar and pour it over the mixture; boil until the vinegar begins to thicken. This makes about four gallons and is the very best pickle in the world.

**RIPE CANTALOUPE JAM.**—This was an experiment one summer when we had more melons than we could use and very little other fruit, and it proved such a success we always make it, whether we have a quantity of other fruit or not. The melons must be really ripe. Peel them and chop into small pieces and put them on and boil until mushy. Then add three fourths of a pound of sugar to each pound of the fruit; season a ten pound lot with four pieces of white ginger, one dozen cloves and three sticks of cinnamon. Boil until clear and put into glass jars.

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**BERKSHIRE BOAR** ready for service, long body, short stout legs, well quartered & correctly marked, price **\$20.00** Will also take orders for pigs ready for September shipment

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### "The Oaks" Herd.

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2 Registered SHORTHORN COWS,  
2 Registered MORGAN COLTS, and a few good yearling SHROPSHIRE RAMS.

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This burns so easily that you must stir it all the time after adding the sugar. Crush the ginger.

**CHEAP SPONGE CAKE.**—Six eggs, beaten separately, very light; to the yolks add three cups of sugar; beat again; then add one cup of cold water. Sift four cups of flour twice with two teaspoons of baking-powder. Put the flour and whites of eggs in alternately and stir as little as possible. Flavor with nutmeg and bake in thin jelly-cake pans, or in cards in the biscuit pans. This is good with a sauce.

CARAVEN.

#### TOPPING THE MARKET.

Cattle fed on shredded corn stover have repeatedly topped the live stock market in price. The great nutritive properties of shredded corn stover make it an ideal stock food, easily accessible to all farmers.

The size and price of huskers and shredders, until recently, made it impossible for the small growers to secure a machine for the preparation of corn fodder. The advent of the Deering Two-Roll Husker and Shredder, which meets the wants of the individual farmer, placed it within the means of the small grower to enjoy all the benefits of shredded corn stover. The Deering Four-Roll Husker and Shredder is a strong, reliable machine designed especially for the large grower or a club of farmers.

The scientific construction of the Deering shredder head makes the shredded stover produced by Deering machines especially wholesome and nutritious. Deering shredded corn stover is famous for its quality. It makes fat cattle.

#### HIS IDEA OF A PRAYER.

Harold, the 5-year-old son of the Presbyterian minister of Dayton, Ky., was being prepared for bed. He had spent a very active day at coasting, and was weary and very sleepy.

"Now, Harold, kneel down by mamma and say your little prayer."

"But, mamma—" half asleep, with his head on her shoulder.

"Be mamma's good boy, now," coaxingly. "Thank God for all His goodness to you."

But Harold was asleep.

His mamma gently aroused him. "Harold, don't be naughty. Be a good boy, now, and thank Jesus for the nice home you have, the warm clothing and fire to keep you warm and a mamma and papa to love you. Think of the poor little boys who are hungry and cold to-night, no mamma to love them, no warm bed to go to, and—"

"But, mamma," interrupted the sleepy boy, roused to a protest, "I think them's th' fellers that ort to do the prayin'."—*Will M. Hundley, in August Lippincott's.*

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## ARMOUR'S BLOOD MEAL Cures Scours In Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

**PREVENTS** weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

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Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

We Are Still in the Business....

### "HILL TOP" Stock at Shadwell, Va.

Having changed our residence, we brought with us and have for sale a choice lot of HILL TOP stock.

**Jersey Cattle, Southdown and Shropshire Sheep, Berkshire Hogs and B. B. R. Game Chickens.**

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship by September 1st. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

**H. A. S. HAMILTON & SONS, Shadwell, Va.**

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**Rams, Windmills, Gasoline Engines**  
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For uniform drilling of grains, any kind and any amount per acre for grain and sod sowing and even distribution of lumpy, damp or dry fertilizers, nothing equals the

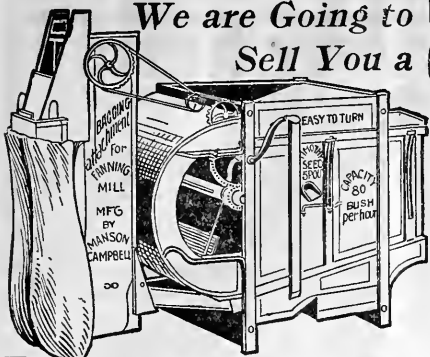
**SPANGLER Low-Down Drill**

for grain and fertilizer. Positive force feed fertilizer, grain and grass seed. Drills any depth, perfect regulation, low steel or wood frame, high wheels with broad tires. Easy to fill and operate. Light draft. Investigate before buying. Write for free catalogue. SPANGLER MFG. CO. 501 QUEEN STREET, YORK, PA.

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FULLY WARRANTED.



**We are Going to Sell You a CHATHAM FANNING MILL**  
**On 60 Days' Approval**



to convince you of its superiority over any fanning mill you ever heard of. If that isn't long enough time we will take your **Three Years Note.** **WE KNOW** what the **Chatham** will do for you, how much money it will make, how much it will save you, how strong it is, how easily it runs and the perfect work it accomplishes. It will **clean and grade** your seed grain, will enable you to sell your clean grain at the top price, will save the timely seed from the yearly crop of grain, save the screenings for feed for your stock. The **Chatham** will clean and grade any kind of seed or grain. The new bagging attachment saves the work of one man. We have already sold **OVER** one hundred thousand (100,000) of them in every part of the U. S. and Canada, and are not going to stop until we place one in the hands of every farmer, stock raiser and seedsmen in North America. We want you to send us your name and address. We will then send you the most instructive book, free,

**"How to Make Dollars Out of Wind."**

It tells ways of making easy money that you never thought of. We will also outline our **THREE YEARS' Plan** of selling you a **Chatham**. It will surprise you by its liberality and convince you that we believe in our mill. It gives you a chance to let the mill pay you before you pay us for the mill.

Here are some of the things others have done with the help of the **Chatham Fanning Mill**:

Fred Dietz, Ransomville, N. Y., got \$108 cash for timothy seed out of his wheat, and didn't know there was any there.

O. E. Perkins, Hallspork, N. Y., got \$50 more for 100 bushels of wheat than his neighbor did. Perkins used the **Chatham**; neighbor didn't.

D. M. Bethune, Bethune, S. C., obtains \$1 extra on every 100 pounds of rice by using the **Chatham**.

G. Woodring, St. Charles, O., secured \$15 worth of grass seed from cleaning up the refuse in barn floors and mangers.

Read this letter from the Superintendent of the High Shoals Manufacturing Company.

Now write us and get that free book and our proposition to make you money. Address

**M. CAMPBELL FANNING MILL CO., Ltd.,** Manufacturers of the Chatham Fanning Mill **116 Wesson Avenue, Detroit, Mich.**

OFFICE OF  
**HIGH SHOALS MANUFACTURING COMPANY,**  
 MANUFACTURERS OF  
**YARNS, SHIRTINGS, CHECKS, STRIPES, ETC.**  
 WHOLESALE AND RETAIL DEPT.  
 Talgott Hardware Co.,  
 Agents for Chatham Fanning Mills, High Shoals, S. C., May 25th, 1903  
 Athens, Ga.

Gentlemen:  
 The Chatham Fanning Mill bought of you is by far a more valuable machine than I first thought. As you know I did not get this machine until after I had begun to plant my cotton. When the Fanning Mill arrived, in order to test its merits, I fanned out a lot of the remainder of the seed of my cotton and to my surprise on looking over the farm I found that the seed fanned before planting came up a great deal better, in fact one would not believe that the Fanning Mill would make such a difference. In addition to the stand of cotton I saved at least one-third of the seed. I do not think that I can afford to do without this machine even at double the price I paid for it. I have had several of my neighbors to fan their seed and they all speak in the highest of terms as far as the results are concerned. I can only use it on cotton seed and fanning peas, and as stated above I would not think of doing without it at even twice the cost.  
 Yours respectfully,  
 A. J. Baxter, Supt.

Dist. to V. C.

**A NOVEL HAT.**

Rev. John Mathews, who was a pioneer Methodist preacher of Alabama, has been remembered for his strict views and many peculiarities.

His wife, who was more liberal in her ideas, was fond of dress, and once sold a bureau and with the money bought a new hat.

The following Sunday Brother Mathews, being disturbed at the beginning of his discourse by several of the congregation turning to see the late arrivals, said:

"Brethren and sisters, don't bother to look around any more. I'll tell you who comes in."

This he did, calling each one by name, much to the mortification of the tardy members. His wife was among the last, and when she walked down the aisle he said:

"Make way there for Sister Mathews. She is coming with a bureau on her head."—August Lippincott's.

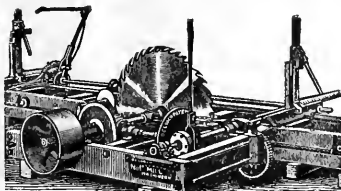
Mr. Nabor: I witnessed your husband's performance at the play last night, and I must say it was a great success; I never saw more natural acting.

Mrs. Tartar: Indeed! Personating Mephistopheles, I suppose.

**The DeLOACH Saw Mills are Sure Winners.**

Eight sizes, from Farmers' 4 h. p. up to 200 h. p.

If interested, write for large illustrated catalogue of DeLoach Patent Saw Mills to suit any power from 4 to 200 h. p. Shingle Mills, Planers, Edgers, Trimmers, Stave and Log Mills, Boilers, Corn and Flour Mills, Water Wheels, etc. To introduce our New Farmers' Saw Mill, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



We will deliver on cars at factory our No. 0 Pony Farmers' Saw Mill, with Duplex Dogs, Improved Head Blocks, and Ratchet Set Works, complete as shown in cut, except it has Carriage made in two 4 foot sections with Rope Drive instead of Rack and Pinion without Saw or Belt, for \$115.00 Spot Cash!

With 36" Solid Saw, \$127.50; 40", \$132.50; 44", \$140.00; 48", \$150.00.

With 56" Inserted Saw \$147.50; 40", \$152.50; 44", \$160.00; 48", \$170.00.

Best Rubber Belting, 4-ly, 6", 20 cents per foot; 8", 30 cents per foot, NET. No discount from these prices.

Our Warranty: This mill is warranted to be made in a workman-like manner, of first class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. Any one with ordinary intelligence can set and operate without the assistance of an experienced Sawyer; will easily cut 2,000 to 2,500 feet of first class board lumber per day with only 4 h. p.; 3,000 feet with 6 h. p.; 4,000 feet with 8 h. p.; is adapted to any kind or size power up to 15 h. p.

**DeLOACH MILL MANUFACTURING CO., Box 600 Atlanta, Georgia, U. S. A.**  
 The DeLoach is the only mill made that is shipped to all parts of the world. Over 10,000 in use.

When corresponding with our advertisers always mention the *Southern Planter*.

**DAVID AND GOLIATH.**

(A true and fair account, in common metre, of this single combat, by an Irish bard. Written by Gen'l Basil W. Duke.)

The brightest boy ould Jesse had  
Was David, youngest son,  
Ha was a bould and active lad,  
Well looked by ivery one.

Altho' he had to moind the sheep,  
To larn he was so sharp,  
Whin other boys wor' fast asleep  
He'd practice on the harp.

'Twould make the birds av hiven hide  
Their heads to hear him sing,  
He'd murder half the country side  
Wid pebbles and a sling.

And thin the soothin' ways he knew  
To capture young and old;  
The female sex—Och, Whillie!  
'Twas there wor' his best hold.

Whin David was some eighteen years  
Of age or thereabout,  
Betwene the haythen and Jundear  
A bloody war broke out.

His brothers 'listed for the war—  
Begorra! they wor' daisies;  
His father tuk a contract for  
To sell the army chases.

"David," the ould man said wan day,  
"You'd loike a little thramp,  
Jist load some chases on the dhray  
And take 'em down to camp."

He dhrove to camp and sought straight-  
way  
The commissary's tent;  
He got a voucher for his pay,  
Thin to his brothers went.

He found thin lookin' mighty blue  
And in a dhreadful fright;  
Retrate was what they wished to do  
And divil a bit to fight.

A big, black bully, tin foot tall,  
Was bluffin' all the Jews,  
And throops and staff and Gin'ral Saul  
Wor' quakin' in their shoes.

Goliath was the craythur's name,  
A howlin' Phillistine;  
His sword was loike the lightnin's  
flame,  
His staff was loike the pine.

He wore upon his back and breast  
Tin thousand pounds of brass;

**PURE BRED**

**Short Horn Calves**  
from fine Stock Also

**Yorkshire Pigs**  
of very Prolific Breed.

**JAS N. HOGE, Hamilton, Va**

22 Years  
the best  
WAGON  
MADE.

## THE FLORENCE FARM WAGON



is **FULLY GUARANTEED** to be the very best, strongest and lightest draft wagon for all farm purposes. Neat, handsome, substantially constructed from best grade seasoned timber, well ironed, it possesses every quality that makes it desirable. See the **FLORENCE** at our nearest agency. If there is no agency near, write us direct and we will send you free our illustrated Catalogue, our attractive periodical "The Florence Waggin' Tongue," and make you an offer to supply you with a **FLORENCE WAGON** on liberal terms and at a low price. Write today to Dept. C. **FLORENCE WAGON WORKS, Florence, Alabama.**

# LEE'S PREPARED LIME

## AGRICULTURAL LIME

The Old Reliable for **WHEAT, OATS, CLOVER** and **OTHER GRASSES**; has stood the test for **twenty-five years**, being composed principally of **Hydrate of Lime, Sulphate of Lime and Potash.**

## OUR SPECIAL WHEAT FERTILIZER.

We put this brand on the market only a few years ago, and have had very flattering results. The best farmers say that they get better **STAND** and **GROWTH** of **GRASS** and **CLOVER** from it than from other fertilizers. This we can confidently recommend for **CORN-LAND** or any other land of fair fertility.

## FRUIT TREES.

Maj G A Barksdale of Richmond, Va., has used our **PREPARED LIME** on his fruit trees, and says it has made wonderful improvement, both in the condition of the trees and quality of the fruit.

## PLAIN SHELL LIME

Constantly on hand at lowest prices.

## No. 1 WOOD-BURNT LIME

In car lots at lowest market price from kilns.

If you wish to **IMPROVE** your land, use a ton to four acres for **WHEAT** and **CLOVER**, or if you wish to seed it for other **GRASSES** where the land is in good condition, use the same quantity and it will give you a good **STAND** and **GROWTH** of **GRASS**. For reclaiming **POOR** land, where there is little or no **VEGETATION**, **COVER** naked places with litter from the barnyard or forest, using the same quantity and sow winter **OATS** and **CLOVER**.

SEND FOR CIRCULAR AND PRICES.

**A. S. LEE & SON,**  
102 S. 13th Street, Richmond, Virginia.

"MOORE" QUALITY

"MOORE" QUANTITY

# J. S. MOORE'S SONS,

Successors to D. O'SULLIVAN, and J. S. MOORE & SONS.

CORNER EIGHTEENTH & MAIN STREETS.

RICHMOND, VIRGINIA.

Wholesale and Retail Grocers, Feed and Liquor Dealers.

WE ARE THE LEADERS OF LOW PRICES.

Pride of Richmond Flour.....	\$4.35
No better can be gotten.	
Daisy Flour, which is a fine article .....	4.00
Mill Feed, Ship Stuff, sacked, per 100 .....	\$1.15
Brown Stuff, sacked, per 100.....	1.10
Country Meal (fine), sacked, per 100 .....	1.40
Coarse Meal, sacked, per 100.....	1.20
Cotton Seed Meal, sacked, per 100. .	1.40
Chop Food, sacked, per 100.....	1.25

We are the leaders in our line of goods. We are new in the retail business, but we know how to treat our customers, as we have been doing for years.

**SOAPS!** Now we have lots of Soaps. The brands are of such variety that it would be taking up your valuable time in putting the brands in rotation, but we will give you prices on our leading goods:

Moon Soap, 8-oz. bars, 100 to the box, per box .....	\$2.00
Hustler Soap, 120 to the box, 8-oz. bars, per box .....	2.25

**SALT.**

200 pound sack, per sack.....	80
100 pound sack, per sack.....	45
Ice Cream Salt, per sack.....	70
Rock Salt, for Cattle, per 100 lbs..	80

**CAKES.**

Nice Mixed Cakes, per box.....	63
--------------------------------	----

Ginger Snaps, per box.....	4
Cream Crackers, per box.....	6½
Soda Crackers, per box.....	4

**LARDS.**

Pure Leaf Lard, 50 lb. can, per lb..	10½
Compound Lard, per lb .....	9

**HERRINGS.**

We have a fish that will count 700 to the barrel..\$1.25	
Roe Herrings, per half barrel.....	2.75

**WHISKEY.**

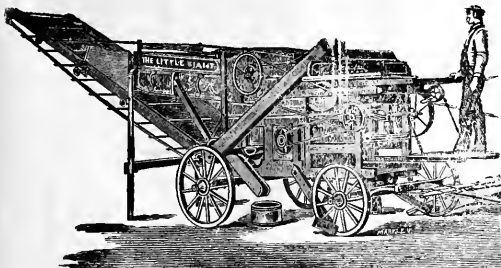
Old Capital, per gallon.....	\$1.50
Excelsior, per gallon .....	2.00
Keystone, per gallon .....	2.50
Crown, per gallon .....	3.00
N. C. Corn Whiskey, per gallon..	2.00
Gibson, per gallon .....	3.00
Apple Brandy, per gallon .....	2.25

Prices Subject to Market Fluctuations. Order Now.

Write for prices on anything in above line not quoted.

The Most popular Machines in use for Peanut Picking and Grain Threshing are the

## HEEBNER'S. LITTLE GIANT and PENNSYLVANIA



Machines, and they have splendid improvements for 1903. They are built in first-class manner, and are strong and durable. The price is within the reach of all. We guarantee them to do the work satisfactory. We will mail catalogue and testimonials, and quote prices on application.

RUBBER, LEATHER  
AND  
GANDY BELTING.

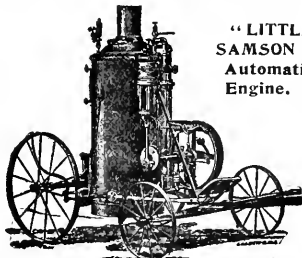
FRICK'S "ECLIPSE"  
ENGINES and BOILERS.

ERIE ENGINES and BOILERS.

THE CELEBRATED  
"CHASE" SAW MILLS

AND  
"DE LOACH" MACHINERY.

"LITTLE  
SAMSON"  
Automatic  
Engine.



This cut shows our 5 and 7 h. p. "Little Samson" Vertical, Automatic Engine, for running threshers, peanut pickers, cutting feed, sawing wood etc. Larger size also furnished.

STRATTON & BRAGG CO., 20-22 N. Sycamore St., Petersburg, Va.

The shine av him, completely dhressed,  
Would smash a lookin'-glass.

And ivery day the baste would shrut.  
Inflamed wid dhrink an' pride,  
And kept all Israel closely shut  
In lines well fortified.

"Come out," he'd bawl, "Come out av  
there,  
Beyant your dirty works;  
Come, ave ye dare, and fight me fair,  
Ye bloody Habrew Turks."

But ivery faithful Israelite  
Said, "Lave the biaggard be,  
Av course no dacint Jew can fight  
Wid such low trash as he."

This sort av thing was well and good,  
Till David jined the throop,  
Whin he the matter understood,  
Bedad, he raised a whoop.

"It is a burnin' sin and shame,"  
He said, "upon me word,  
To hear this haythen bound defame  
The chosen av the Lord."

"And sitch no other mon has felt  
A wish to tan his hide,  
I'll fight him for the champion's belt  
And fifty pounds a side."

The cor'pil av the guard, he tould  
The off'shur av the day  
What David said, and he made bould  
To minton it at tay.

The edge-du-kong was in that mess.  
And heard the whole discourse;  
So he—he couldn't do no less—  
Tould Gin'ral Saul, av course.

The Chafe of Staff tould the High  
Priest  
To send pre-emptuous orders  
For David to report in haste  
At Gin'ral Saul's headquarters.

But whin the son of Jesse kim  
And Saul beheld the lad,  
So young, so thinder loike and shlim,  
It made him tearin' mad.

"Oh, Houly Moses! look at that."  
Said Saul, "The boy's consate;  
How can it be that such a brat  
Can match that heavy weight?"

"Wid that blood suckin' giant thafe  
This baby cannot strbrive;  
The Philistine, it's my belafe,  
Would eat him up alive."

Thin David said, "My lord, it's thrue,  
This sames a rash intint,

## Uncle Sam says it's all right

Uncle Sam, in the person of ten of his government officials, is always in charge of every department of our distillery. During the entire process of distillation, after the whiskey is stored in barrels in our warehouses, during the seven years it remains there, from the very grain we buy to the whiskey you get, Uncle Sam is constantly on the watch. We dare not take a gallon of our own whiskey from our own warehouse unless he says it's all right. And when he does say so, that whiskey goes direct to you, with all its original strength, richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE, and saving the dealers' enormous profits. That's why HAYNER WHISKEY is the best for medicinal purposes. That's why it is preferred for other uses. That's why we have over a quarter of a million satisfied customers. That's why YOU should try it. Your money back if you're not satisfied.

**Direct from our distillery to YOU**  
Saves Dealers' Profits! Prevents Adulteration!

# HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

## 4 FULL \$3.20 EXPRESS QUARTS PREPAID

We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. Try it and if you don't find it all right and as good as you ever used or can buy from anybody else at any price, send it back at our expense, and your \$3.20 will be returned to you by next mail. Just think that offer over. How could it be fairer? If you are not perfectly satisfied, you are not out a cent. Better let us send you a trial order. If you don't want four quarts yourself, get a friend to join you. We ship in a plain sealed case, no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Uta. Wash. or Wyo. must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

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ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.  
153 DISTILLERY, TROY, O. ESTABLISHED 1866



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OF RICHMOND, VIRGINIA.

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Designated Depository of the United States, City of Richmond and Commonwealth of Virginia.

Being the Largest Depository for Banks between Baltimore and New Orleans, this Bank offers superior facilities for direct and quick collections

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President.

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Vice-President.

JOHN F. GLENN,  
Cashier.

WRITE FOR THIS SOME CATALOGUE MENTIONING ARTICLES.

LIGHTNING SCALERS  
COMPOUND READY ON ALL WOOD  
ON SCALERS. TIMBER SPECIFIC  
CATIONS. AND WORKING PLANS  
FURNISHED FREE  
EVERY SCALE GUARANTEED.

LIGHTNING-HAY PRESSES  
WILL BALE MORE HAY IN LESS TIME. MAKE SMOOTHER  
AND MORE COMPACT BAILS. AND ARE EASIER TO DRAWT  
THAN ANY OTHER PRESS  
GROSS WEIGHT  
GREATEST POWER WITH  
LEAST FUEL CONSUMPTION  
NO FOUNDATION.

1872 HILL ST. LOUIS, MO.



But while I weigh but nine stun' two,  
I'm full av divilmint.

"A lion and a bear kim down  
The mountain's rugged sides;  
I slew the bastes and went to town  
And thraded off their hides.

"And since for roarin' bastes like thim  
I've found I'm tough enough,  
I'm quite convinced that I can thrim  
This baggard haythen rough."

"Avick!" says Saul, "ye're full ave  
pluck,  
And wag your little chin  
Loike wan who ra'ly thrusts his luck  
And manes to thry and win.

"I'll give ye my best coat av mail—  
A new spring suit jist made—  
Tuck it a thrife in the tail,  
And pad the shoulder blade."

But David didn't understand  
The use av sich a thing,  
And only wanted in his hand  
His staff and thrusty sling.

Whin Goliath saw little David ap-  
proachin', after havin' heerd proclama-  
tion that a gra't champion was comin'  
out to fight him, musha, he laughed for  
to split his sides; and by reason av  
what passed bechune thim in the way  
av talk, I dhrap out av po'thry for a  
bit, bekase, whole poth'ry is moighty  
foine for sintimintal dalogue, it's no  
good at all for a ra'al sthrong, forst-

## EMPIRE DRILLS



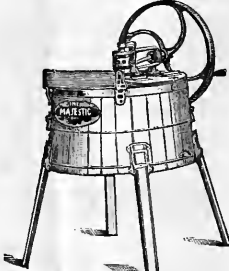
**ACCURATELY MEASURE  
ALL KINDS OF GRAIN  
WITHOUT CHANGE.**

That is, if you set the Empire Feed to sow any amount from 24 to 128 quarts per acre, it will sow exactly that amount of wheat, oats or any other small grain without further change. A good stand of grain is assured, when you sow with an Empire Drill.

Empire Grain Drills do not bunch, skip or choke. Made in all styles and sizes.

Write for Free Catalogues.

**EMPIRE DIVISION**  
AMERICAN SEEDING MACHINE COMPANY,  
25 Monroe Street, Springfield, Ohio.



A WASHING MACHINE is as great a necessity in the house as a wringer

## THE MAJESTIC ROTARY WASHER

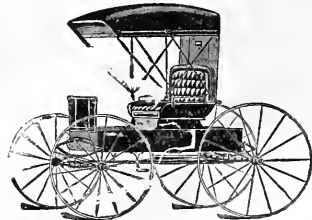
has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of wood-ware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

THE RICHMOND CEDAR WORKS, Richmond, Va.

# WAGONS and BUGGIES



MADE  
RIGHT HERE  
AT HOME  
BY



The BARBOUR BUGGY CO.,  
The HUGHES BUGGY CO.,  
The VIRGINIA WAGON CO.

*All of Virginia.*

These vehicles are guaranteed to be as good as can be bought elsewhere; material and workmanship unsurpassed; all sizes and styles, prices low. We can save you time, money and freight by purchasing our vehicles. Send for our illustrated catalogues. Drop in our warehouse and inspect our stock. Inquiries cheerfully answered.

AGENTS FOR DEERING MACHINES.  
RICHMOND BUGGY & WAGON CO., 1433 E. Main Street, RICHMOND, VA.  
J. T. DUNN, Manager.

class, breezy blaggardin' match.

"Oh, Jases!" said Goliath, wid the wather billin' out av his eyes for laughin', "what sort av thing is that? May the devil admire me!" he says, "iv I don't believe it's a monkey escaped from an organ grinder."

"Ye'll foind me a moighty bad thing to monkey wid," says David, "ye big thafe, wid a pot on your head loike a cupolo on a sthame fire engine, and your dirty black mouth loike the hole av a coal cellar."

"Ye little skinned pole-cat," says Goliath, beginnin' to grow mad, whin he diskivered that David's rhetoric was superior to his, "do ye think I'm a dog; that ye've got a stick to hate me wid?"

"Bedad," says David, "I wouldn't be afther doin' a dacent dog such injustice; but it's his dog mate I'm goin' to make av ye."

"Hear that!" says Goliath; "arrah. Now, tache your gran-mother to faad ducks!"

"Dhry up!" says David, "Bad seran to ye," he says. "Ye haven't the since av a catfish. By the light that shines, your bad grammar gives me a cramp in the stummick." Och, David had a

tounge in his head loike a Jews-harp.

"Tear an' onns!" says David, "I'll give the buzzards a picnic wid yer karkiss, and shure it 'ull make thim sick to ate ye."

"Ye're a liar," says Goliath.

"Ye're another," says David, "an' an' ophthalmic ould Cyclops to boot." Wid that Goliath lost his temper inoirdly. He pwauped the ground and kin at David wid his eyes shut, a-bellowin'—and that brings me back to me poth'ry:

Goliath poised his mighty spear,  
"Twas fifty feet in length,  
And unto David dhrawin' near  
He punched wid all his strength;

But David was surprisin' quick  
And sphry upon his pins;  
So, dodgin' nately, wid his shtick  
He whacked Goliath's shins.

Wid pain the gaint howled and grinned,  
And dhrapped both shield and lance  
To rub his leg the lick had skhinned:  
Thin David saw his chance.

Takin' a brick from out his scrip,  
He put it in his sling,

And, whirlin' it 'round head and hip,  
He let it dhrive full swing.

Right to the mark the darnick flies,  
As sthraight as to a hod;  
It smote the wretch betwene the eyes  
And stretched him on the sod.

Thin David, for to prove him dead,  
In sight av all beholders,  
Chopped off his unbelavin' head  
From his blasphemous sho'lders.

Whin the Phenaysian sailors sought  
Long since ould Erin's sstrand,  
A prince of David's blood they brought  
Who settled in the land;

From him the Irish race had birth,  
And that's why we delight in  
Beyant all other tribes on earth,  
The harp's swate sthrains and  
fightin'.

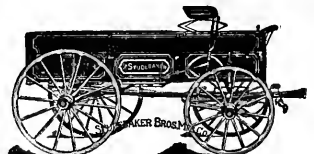
That this surmise is in nowise thin  
Can easily be shown,  
For sthick and harp have ever been  
As Erin's imblims known.

So let her inimies beware  
How they indolge their hate;  
Let England thremble lest she share  
Goliath's dhrateful fate.

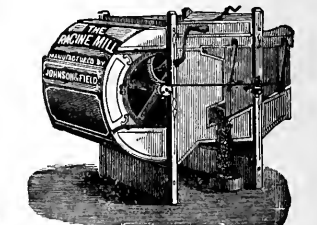
# Latest Improved FARM IMPLEMENTS.



Scientific Steel Corn Harvester.  
The best Harvester on earth, for standing corn  
Safety seats. Safety shafts.



Special prices given on Studebaker and  
Brown Wagons, Buggles and Carts.



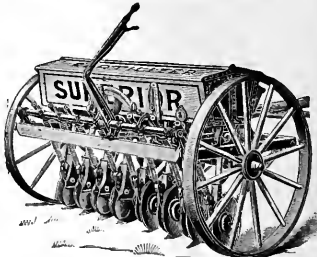
The Lyons Improved Fanning Mill.



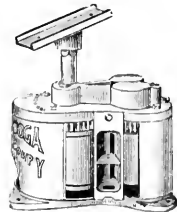
**ROSS . . . .**  
Fodder Cutters, Fodder  
Shredders, Cutters for all  
purposes, Corn Shellers,  
Grinding Mills, Horse  
Powers and Wood Saws.



Studebaker Buggles, all styles, Studebaker  
Carriages, Studebaker Carts, Stude-  
baker Runabouts.



Superior Grain Drills.  
Plain and Fertilizer Hoe and Disc  
Drills—All sizes.



Chattanooga  
Cane Mills  
and  
Evaporators.

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Steel Wind Mills.**

Superior Grain and Fertilizer  
Drills. Hoe and Disc.

TIGER Steel and Wood Self-Dump Rakes,  
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all sizes.

ELI BALING PRESSES.

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J. J. SUTTON, Secretary.

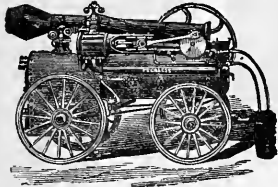
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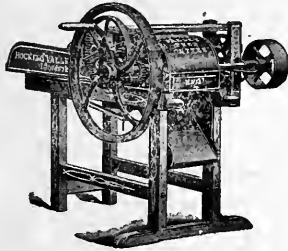
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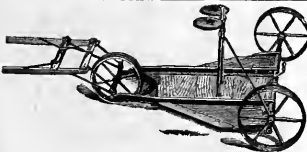
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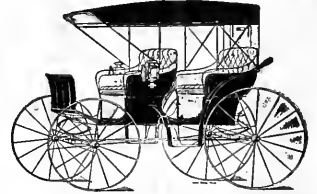
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## THE CLOCK STRUCK ONE.

The head of the family, with his beloved sweetheart and his favorite magazine, had settled back in the rocker for a quiet, comfortable evening.

On the other side of an intervening table was the miniature counterpart of himself, the wrinkling of whose 3-year-old forehead indicated that he was mentally wrestling with some perplexing problem. After a while he looked towards his comfort-loving parent and, with a hopeless inflection, asked:

"Pa?"

"Yes, son."

"Can the Lord make everything?"

"Yes, my boy."

"Every thing?"

"There is nothing, my son, that He cannot do?"

"Papa, could He make a clock that would strike less than one?"

"Now, Johnny, go right upstairs to your ma, and don't stop down here to annoy me when I'm reading."

Johnny went and wondered still.—*August Lippincott's.*

## SARAH'S GLOVES.

A family in the South had a coal-black cook named Sarah, whose husband was suddenly killed in a quarry accident. For the time being her grief was allayed by the preparations for an elaborate funeral, and on the day of this event, so dear to negroes who desire to show their importance, she appeared before her mistress in deepest black, but on her hands were a pair of white gloves, such as soldiers wear at dress parade and guard mount.

"Why, Aunty," exclaimed her mistress, "what made you get white gloves?"

Sarah drew herself up indignantly and said in the chilliest of tones, "Don't you suppose I wants dem nighgahs to see dat I'se got on gloves?"—*August Lippincott's.*

## FORGOT SOMETHING.

It was in a western hotel, and a girl of sweet sixteen had left the table, at which her parents were still seated, and had gone the entire length of the dining-room, when she paused in the doorway and her fresh young voice cut the air with the word—

"Maw!"

"Well?" replied her "maw," shrilly.

"I forgot my gum. Fetch it when you come upstairs. It's stuck under the table right underneath my plate. I'll want it for the matinee this afternoon, you know."—*August Lippincott's.*

## CREAM TO BURN.

Two little girls were engaged in an animated discussion as to the merits of their respective homes.

"Well, anyway," said one little maiden in a triumphant tone, "you may have more bedrooms than we

have, but we have more cream than you do. We have enough for our cereal every single morning."

"Pooh!" said the other, "that's nothing. We own a Jersey cow, and we get a whole cowful of cream twice every day."—*August Lippincott's.*

## A TUNNEL THAT HELPS TO DIG ITSELF.

In the new Simplon tunnel under the Alps, which will be by far the greatest tunnel in the world, having a length of fourteen miles, and which, it is now reported, will be completed in July, 1905, the quantity of water flowing out of the southern end, from the many veins encountered in the heart of the mountain, amounts to fifteen thousand gallons a minute, and furnishes sufficient power to compress the air by which the drills are worked, and to refrigerate the tunnel. The necessity of refrigeration may be judged from the fact that the heat in the deeper parts of the tunnel rises as high as one hundred and forty degrees Fahr. when not artificially reduced. Life would be impossible in the tunnel if a successful system of refrigeration had not been devised. When a continuous hole through the mountain has been made, the temperature can more easily be kept down.—*Youth's Companion.*

Mrs. Brown (nudging Mr. Brown, who snores with his mouth open)—William, you'd make less noise if you'd keep your mouth shut!

Mr. Brown (only half awake)—So'd you!—*Life.*

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**THE PLAN WAS SUCCESSFUL.**

There are many ways of fixing a misdemeanor upon the person who has committed it. It is commonly thought that lawyers, and not clergymen, are the men most competent for this practice, but the following story leaves one feeling that the honors may be equal:

"Last Sunday," said the clergyman to his congregation, "some one put a button in the collection basket. I won't mention names; I will merely say that only one individual in the congregation could have done so, and after the service I shall expect the same member to replace the button with a coin."

After church a well-to-do but close-fisted individual sought an interview with the clergyman in the vestry.

"I—er," he began, "must apologize, sir, for the er—button, which, I can assure you, was quite an accident. I happened to have the button in my coat pocket, together with a quarter, and took out the former by mistake. However, sir, here is the quarter."

"Thank you," said the clergyman, taking the quarter, and gravely handing him the button.

"By the way, sir," said the man, "I cannot understand how you could have known that it was I who er—committed the er—much-to-be-regretted mistake."

"I didn't know," replied the clergyman.

"Didn't know! But you said, sir, that only one individual in the congregation could have done it."

"Just so. You see, sir, it is scarcely possible that two individuals could have put one button in the basket; is it, not?" asked the clergyman, with a bland smile.

It was so much easier for the button contributor to say "good-day" than to answer this puzzling question that he made his bow at once.—*Western Christian Advocate.*

**SHORTAGE IN WOOL PRODUCTION.**

The following from the American Wool and Cotton Reporter seems to emphasize the value of opportunities at the present time for engaging in the wool and sheep business in the South:

"There will be an appreciable shortage \* \* \* The decrease is caused by the extensive winter losses on the ranges and elsewhere, due to the severe storms and by the extended slaughtering of sheep in a number of sections \* \* \* The president of the Montana Board of Sheep Commissioners estimates the winter losses in that State at 1,500,000 head, or about 10,000,000 pounds (of wool). Wyoming's losses are placed at 1,000,000 head, or about 7,500,000 pounds (of wool). The Utah clip may be 3,000,000 pounds short (indicating a loss of about 400,000 head). From Wash-

ington and Idaho there are reports of losses also."

If winter storms in the West, after decimating the flocks to the extent of 4,600,000 sheep, and curtailing the wool productions to the amount of 35,000,000 pounds, do not destroy the attractions of sheep husbandry in the colder sections there ought to be no trouble about making the business pay in the South, where these serious drawbacks do not exist.

No better demonstrations of the success of this business throughout the South are desired than those which are daily being brought to public attention, but the number of such examples should be vastly increased.

**MARK TWAIN'S MEMORY.**

I remember the day I was born. It was bitter cold. I came into the world without clothes. I was astonished. I spoke of it to my parents. They had no explanation when taken so suddenly, except the old excuse that it was customary. What was custom to me at that age? All you care then is how you look. I never felt so embarrassed in all my life.—*Mark Twain.*

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NOTE.—Whalebone is a richly colored bay horse of fine size, handsome and well formed. His disposition is perfect. He has sired Visitor, 2.26½, and other winners.

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## MEASURING CORN.

Two cubic feet of sound, dry corn in the ear will make a bushel shelled. Then to determine the number of bushels in the crib, multiply the length by the breadth, and the product by the height of the corn in the corn crib; divide the product by two, and the result will be the number of bushels of shelled corn in the crib. To measure corn in the husk, fill a barrel full—the larger the barrel the better (say one that would hold four bushels of apples). Husk the corn and weigh it. Allow 70 pounds of corn in the ear when it is dry, for a bushel of shelled corn. Then the unhusked corn may be measured in the barrel, keeping tally of the barrels; multiply the number of barrels by the amount of corn which the first barrel contained. We know of no accurate rule for determining the number of cubic feet necessary to contain a bushel of corn with husks on. Of course you could determine the number of cubic feet in the barrel, or you could use a box of a given number of cubic feet, fill it with unhusked corn, husk it, and divide by 70 to get the number of bushels of shelled corn. You would then have a unit for determining in the crib the number of bushels of shelled corn. This might

be quite as accurate as the other method.

## PERHAPS.

Bishop Potter is amusing his friends with an account of a recent visit he paid to a Sunday school class in New York, presided over by a staid young clergyman. The Bishop was asked to question the children, so that he might be edified by their knowledge of matters Biblical. As a starter, he said to a little girl whose face beamed with intelligence: "Who were the foolish virgins, my dear?" "Them as didn't get married!" was the prompt and emphatic answer.

Education's a good deal like eating—a fellow can't always tell which particular thing did him good, but he can usually tell which one did him harm. After a square meal of roast beef and vegetables, and mince pie and water-melons, you can't say just which ingredient is going into muscle, but you don't have to be very bright to figure out which one started the demand for pain-killer in your insides, or to guess next morning which one made you believe in a personal devil the night before. And so, while a fellow can't figure out to an ounce whether it's Latin or algebra or history or what

among the solids that is building him up in this place or that, he can go right along feeding them in and betting that they're not the things that turn his tongue fuzzy. It's down among the sweets, among his amusements and recreations, that he's going to find his stomach ache, and it's there that he wants to go slow and to pick and choose.

A solid ton of ice contains about 36 cubic feet. Multiply together the length, breadth and height of your ice house in feet (allowing for space occupied by sawdust), and divide the product by 36, and the result will be the number of tons capacity. Allowance for ice in bulk would be very variable, depending on the accuracy with which it is cut and piled. If it could be weighed beforehand in loads, like hay, a more exact result would be reached, but with some trouble. A leading ice company estimates a cubic foot of ice to weigh 56 pounds, providing it is all water ice. After the house is filled they measure up, and allow 45 cubic feet to the ton. Their ice is cut 22 by 32 inches, and a space of four inches is left on the long way. Shrinkage in the course of the season average 50 per cent. In a small house it might be 60 per cent.

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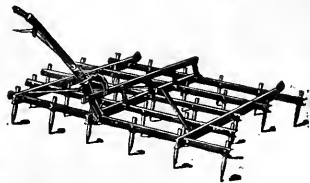
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Agriculture is the nursing mother of the Arts.--XENOPHON.  
Tillage and pasturage are the two breasts of the State.--SULLY.

---

64th Year.

Richmond, September, 1903.

No. 9.

---

## Farm Management.

### WORK FOR THE MONTH.

The month of August up to this time (20th) has been throughout the South below the normal in temperature, and showery. This continuance of abnormally cool weather has prevented the crops making that headway which they so much needed to bring them to a normal condition, and, as a consequence, they are all late, and much depends on the weather during this month as to whether large areas will fully mature before frost. This condition applies to the whole country, and affects other sections more seriously than the South. Here, whilst the whole growing season has been cool, it has not been too cool for crops to grow, though not with their accustomed vigor. Grass and pasture lands have done the best, and their condition is in marked contrast with what is usual at this season. There is abundant feed for all stock, and they should go into winter in fine condition.

As predicted in our notes last month, the winter wheat harvest is turning out distinctly unfavorably. The average yield per acre is now placed by the Government returns at 12 bushels per acre, as against 13 last year, with a total crop of 410,000,000 bushels. The prospect of the spring wheat crop is also disappointing, the condition being on August 1st, 77, as against 89 on August 1, 1902, and a ten year average of 80. The total wheat crop of the country will undoubtedly be much below that of last year, and as prospects in Europe are not much better than our own, the indications are that wheat will be in demand at better prices than now prevail, though these are

now on the average about 10 cents a bushel higher than a year ago.

The average condition of the corn crop on August 1st was 78, as against 86 on August 1, 1902, and a ten years' average of 84. The only section of the country where there is promise of something near an average yield of this crop is the South. Here our highland crops are distinctly promising—in fact, much above the average. Lowland crops, however, are disappointing. The land has been too wet ever since spring, and the stands are uneven and the crops badly worked. It is comforting, however, to know that the average condition and prospect is better than elsewhere. Should we have a late fall much even of the late planted crop bids fair to make a good yield.

The oat crop of the country is a disappointing one, and will be much below that of a year ago.

Tobacco has made better progress than the cool weather would have led one to expect, and bids fair to make a much better yield than at one time seemed possible. The quality, however, does not appear likely to be of the highest. The bright crop is now being cut and cured in North Carolina and the southern parts of this State, and the dark crop only needs warm weather to make it mature and ripen.

Cotton is still very late, the weather never having been such as to permit of its making up for the time lost in the spring. It will altogether depend upon the lateness of the fall as to what the outcome of the

crop will be. Picking has commenced in the Gulf States, and somewhat further north, but is nowhere, except in the extreme South, general. There is complaint from many places of injury to the crop by cold, rain and weevil.

The peanut crop does not promise to be an average one, as the continued wetness of the land has prevented weeds and grass from being kept down in many sections, and these are smothering the plants.

The apple crop of Virginia still continues decidedly promising, and is likely to be one of the largest ever harvested in the State. In other States the condition is not so high as here, though the average for the whole country is a fair one. There appears likely to be a large crop for shipment, but the demand is likely to be great, as the fruit crop in England is practically a failure, and on the Continent (European) the crop is not large.

The preparation of the land for and the seeding of winter oats should receive immediate attention. As the result of many experiments made in different sections of the South, it has been fully demonstrated that if winter oats are to do their best they should be seeded in September, and preferably in the first half of the month. We would again emphasize what we said in our last month's issue as to the preparation of the seed bed. The deeper and better worked the seed bed, the greater the probability of a good yield. More depends on this than on the fertilizer used or the quantity applied. If the land is well prepared, oats will find and utilize the plant food in it. They have a capacity to seize and appropriate plant food in a tougher and more unavailable condition than any of the other cereals. This arises from their producing an acid in their growth which has a powerful solvent effect on the plant food of the soil. Because of this fact, however, they should not, as is too often the case, be expected to produce a profitable yield on the poorest land on the farm. They will do better there than any other cereal, but they will do still better on better land, and will pay to have some fertilizer or farm-yard manure given them. Nothing helps the crop more and protects it better from winter killing than a top dressing of farm-yard manure, even though this should be only light. Where the land is poor, 300 pounds of acid phosphate per acre should be applied before seeding. The deeper the soil is broken, so that the winter rains can soak into it, and the greater the chance of avoiding winter killing from frost. This is mainly caused by the water being held

in the top soil and there freezing and then blowing out the soil when the thaw comes. Let the seed be well covered. They are better drilled three or four inches deep than sown broadcast, but if sown should be well harrowed or cultivated in. As the oat is a cold climate crop seed from a locality further north is likely to give a better yield than from the immediate locality or from southern points. Whilst the average yield of the crop here is only about twenty bushels to the acre, there is no reason whatever why three times that yield should not be made. We know many who are doing this. If intended only to be used for a hay crop, which is largely the purpose for which oats are grown in the South, it will pay to make the crop a heavier one, as the feed produced is so valuable as fodder. We were speaking with a subscriber a few weeks ago on the subject of feeds for milk production, and he said that his experience was that he got better results from feeding sheaf oats than from even cow pea hay.

Let the work of preparing the land for the wheat crop have attention. The sooner it is plowed and the work of cultivation begins the better will be the chance for a good yield of grain. The average yield of the wheat crop in the South is not what it ought to be by a long way. The yield this year in this State and North and South Carolina is estimated at only about five bushels to the acre, whilst the average over a series of years is short of twelve bushels. Such yields as these cannot be grown profitably, and that they are not what ought to be made and can be made is certainly true. We know farmers who make, over a series of years, an average of 25 bushels to the acre, and many who make in a good year 35 or 40 bushels to the acre. The secret of these yields is not so much extra fertilizing or naturally very fertile land, but good and perfect preparation of the soil before seeding and seeding as early as is safe to avoid the fly. It should always be remembered that the wheat crop must be cultivated before it is seeded. In this respect it differs from the corn and other hood crops. The most that can be done to help it forward after it has started to grow is to give it a harrowing in the spring, and even this is too often neglected. Hence the great importance of thoroughly plowing and working the land before seeding. A wheat seed bed should be firm in the subsurface, but still open enough to permit of the absorption of rain water and of the rising of the subsoil water, and with the surface three inches, fine and loose. Frequent use of the harrow and roller or plank drag will secure these conditions after the soil is once thoroughly and deeply plowed.

This will also ensure that the weed seeds in the soil shall have been destroyed by germinating and killing. Weeds and wheat never succeed well together. Let wheat alone occupy the land, it will easily utilize all the plant food and moisture without any help from a weed crop. A dressing of lime of from 25 to 50 bushels to the acre applied after the land is plowed and worked in during cultivation will be found a great help in producing the crop by rendering available the inert plant food, and especially the potash in the soil. Whilst wheat calls for all the elements of plant food in order to make successful growth, yet experiment have demonstrated that phosphoric acid is the controlling element, and it is therefore required in an available condition, and in abundance. A crop of 30 bushels to the acre, with the average weight of straw, calls for about 50 pounds of nitrogen, 25 pounds of phosphoric acid, and 25 pounds of potash. As crops rarely are able to utilize more than from 50 to 75 per cent. of the available plant food applied in a fertilizer, it will be seen how necessary it is if the best results are to be looked for to supply plant food liberally, unless the soil is already rich. Where a pea fallow or clover sod is turned down, these will supply nearly all the nitrogen needed, but the other elements must be supplied or be made available, if in the land, by the use of lime. In all heavy clay or loam lands in the South potash is generally in abundance for the needs of the wheat crop, but needs to be made available by lime. Phosphoric acid, however, must be supplied, and this can best be done by a mixture of acid phosphate and raw bone meal, say 200 pounds of acid phosphate and 150 pounds of raw bone meal to the acre. Where a pea fallow or clover sod is not turned down, then nitrogen should be supplied, and this can be best be done by supplementing that contained in the raw bone. with a top dressing of nitrate of soda in the spring after the crop has commenced to grow freely. Experiments have demonstrated that wheat accumulates most of the plant food needed for its successful growth during its early growth, and then utilizes this accumulated store during its later growth to perfect the ears and grain. This fact emphasizes the importance of having the seed bed in such a fine condition that the roots can lay hold of the plant food quickly when they first start to grow. If a pea fallow or clover sod is turned down this should be done very early, or the seed bed can never be got firm enough in the subsurface to ensure the best results. Wherever the pea crop is a heavy one, we would advise cutting it for hay, leaving a long stubble rather than turning it all under as a preparation for wheat. In experiments made at the Arkan-

sas Station, where cow peas, soy beans and beggarweed were sown on light land, the yield of the following wheat crop was increased 56 per cent. The plowing down of the stubble of these crops gave better results than when the whole crop was plowed down immediately before sowing the wheat. Wheat grown continuously on the same land for three years, and each crop preceded by a crop of cow peas, gave an increased yield of 46 per cent., as compared with breaking the wheat stubble and not sowing cow peas. Wheat sown on a cow pea stubble and fertilized with 400 pounds of a complete fertilizer, gave an increased yield of 64 and 78 per cent. second year over soil treated in the usual way. The seeding of the crop should not commence until after there has been frost to obviate damage from fly. Meanwhile, put in all the time that can be spared from other work in making a good seed bed. As to the variety to be sown. This is usually best settled by selecting a variety that has become acclimated to the section, and given good results there. Of course, it is desirable to test new varieties of which good reports come from near by States and sections, but this should be done in a small and experimental way until it is seen what variety so tested is likely to be satisfactory. The result of testings at numerous stations go to show that there is practically no difference in the yield of bearded or smooth wheats. In some sections one does best; in others, the other. What is of more importance than the variety is that the seed sown shall be plump, heavy grain, and free from blighted, shrivelled or small grains, and from all weed seeds. It will almost invariably pay to reclean all seed grain. Soaking the seed in a solution of formalin, 1 pound to 25 gallons of water, will destroy all smut germs in either wheat or oats. Soak for twenty minutes, then dry before sowing. From one to one and one-half bushels of seed per acre is usually sufficient. This depends largely on the fertility of the land.

All grass seeding not already done should receive attention and be completed as early this month as possible. In our last issue and in this will be found articles dealing with the subject to which we refer our readers.

Continue the work of seeding crimson clover and hairy vetch, as advised in our August issue. The more land that can be put into these crops the greater the area that will be improved for other crops next year. Seed always with a mixture of wheat, oats or rye, and more or less pasture will be secured in winter and spring, besides the improvement of the land.

An abundance of these crops to graze or cut in the spring will help materially in reducing the cost of carrying stock at a time when dry feed often becomes scarce.

Rape may yet be seeded for fall and spring feeding. Sow 3 or 4 pounds of seed per acre broadcast, or 2 to 3 pounds in drills two feet apart. This makes an excellent pasture for hogs, sheep and young cattle. It should be allowed to grow up a foot high before turning stock on to it, and not be grazed too closely, and will then start out again and make good grazing in the spring.

Turnips may still be sowed, though it is getting too late for them now to make a heavy crop. They will, however, make some feed, and will cover the land. In our August issue will be found full instruction on this crop.

The work of harvesting and saving the various forage crops should receive attention as they mature. Do not allow them to stand too long and mature their seed. They make the best feed when cut in bloom or when the seed is just forming. Cow peas should be cut when the first pods are filled and turning yellow. Of course, if seed is the object, and not long feed, then they must stand until it is sufficiently matured to cure without shrivelling. In our August issue we wrote fully on this subject.

The work of filling the silo should be attended to. As soon as the ears are well filled and passing out of the milk state the crop should be cut and packed away. Cut into 2-inch lengths, or, better still, shred the stalks and much waste will be saved. When filling do not be in too great a hurry. Cut during the morning and fill into the silo in the afternoon, or cut one day and fill the next. This allows the silage to compact better and get up the necessary heat to ensure good, sweet silage. The silo will also hold more filled in this way than when the work is rushed all the time.

When the teams are not otherwise engaged keep them at work plowing land intended to be cropped next year. This is the time of the year when land may be ploughed deep and some of the subsoil be brought to the surface. This will be weathered during the winter months, and its plant food brought into an available condition for supporting and feeding crops.

Have all stables, sheds and pens cleaned out, and give all buildings a good cleaning inside and out, and use lime wash freely inside and out, thus get rid of all vermin and foul smells. Lime wash is a powerful cleanser and purifier, and it is so cheap that every one can afford to use it freely. In this issue we publish again the receipt for making Government whitewash, which is almost as durable as paint, and will preserve the buildings to which it is applied. If we could only persuade Southern farmers to apply some paint to their houses and whitewash to their buildings they would add thousands of dollars to the value of their places in the eyes of purchasers, besides saving them from rot and decay. Before painting or whitewashing make necessary repairs. A few dollars spent in lumber and nails and a few hours labor will save hundreds of dollars, and add to the comfort of man and beast. Make home attractive and the children will not want to leave it.

### FARM-YARD MANURE.

Most farmers think that unless they are able to put a heavy dressing of farm-yard manure on to land that it is of little use, and because they are not able to do this on a large part of the farm, that the quantity of farm-yard manure made on the ordinary farm is practically of little help in maintaining the fertility of the farm. This, as we have several times pointed out, is an entirely erroneous view. The value of farm-yard manure as a promoter of fertility does not lie wholly in the amount of nitrogen, phosphoric acid and potash which is contained in it, nor even in the humus-making material that is present in the form of vegetable matter. Whilst these are each and all of them valuable factors in the manure, there is one other factor which probably is equally as valuable as the whole of the others combined, and which is usually entirely overlooked. This factor is the power possessed by even a small quantity of farm-yard manure to introduce into the land to which it is applied the microbes which set up the fermentative action of the soil and give to it the character of a live soil as distinguished from one in which this action is absent and which is practically dead and unresponsive to cultivation or the application of plant food in the form of mineral fertilizers. Every one who has been observant will have noticed that a piece of land to which even only a very slight coating of farm-yard manure has been applied will show the effect for a number of years much longer than would a similar piece of land to

which a much larger application of plant food in the form of commercial fertilizer had been applied. This is the result of the microbic action in the soil, induced by the farm-yard manure, and not of the plant food in the manure. These microbes dissolve and make available the inert plant food in the soil and this the vegetation on the land appropriates and thus grows with greater luxuriance. If you have only manure sufficient to give a light coating use it. It will often give a greater proportionate immediate return in the crop than will a heavy dressing. Of course, the time during which this return will continue will be less than would be that given by a heavier dressing, but the improvement in the land will be started earlier than if it waited for the heavier application, and this is what we most need in the South. To start the ball to rolling is often the most difficult part of the problem of improvement. Save and utilize every bit of manure. It is the true foundation of agricultural advancement to be supplemented with the mineral fertilizers, phosphoric acid and potash wherever possible. Keep a bag of acid phosphate in the barn and whenever you clean out the stables spread a light coating of this on the manure heap. It will prevent over-heating of the pile and consequent loss of nitrogen, and will add to the value of the manure by supplying the deficiency of phosphoric acid, characteristic of farm-yard manure. Kamit may be used in like manner to supply the deficiency in potash and preserve the manure from loss.

### GRASS SEEDING.

In our last issue we wrote somewhat fully on this subject, emphasizing the importance of seeding grass alone if the best results were to be looked for. We have received the following letter from a subscriber commenting on this article and our advice:

*Editor Southern Planter:*

As you truly say in your August *PLANTER*, you urge in season and out of season, the sowing of grass, and, furthermore, the sowing of grass without small grain. Of grass, there cannot be too much on a farm. As to the manner of getting it, permit me to give you our experience in following your advice:

We have followed it twice. This year we took the best land on the farm, prepared it very carefully, and sowed it heavily with a mixture of grasses. The weeds came up in such abundance that we have had to cut them down and the grass is quite spindling. On adjoining land, not quite so good, prepared in exactly the same manner, but sowed to spring oats

and grass, the grass is now considerably better than where the grass was sown alone; besides which, we have cut a fair lot of oats off the land—the weeds bothered us practically not at all.

As I have said, this is our second experience. It seems to me that one fatal objection to sowing grass alone—for the average farmer—is that it makes one extra ploughing. With the regular rotation—which, after trying all the book methods, we have come back to as far the best—one ploughing does for corn, oats or wheat and two crops of grass. On paper it is a mighty simple thing to plough the ground one extra time, but in economical farming it is a very different matter.

All the best farmers in Albemarle that I know put their grass in with small grain. I have tried the *PLANTER* method, but I shall not try it again.

KENNETH BROWN.

August 4, 1903.

This seems to call upon us to vindicate the position we take on this subject of grass seeding, which is one of the most vitally important for all farmers in the South. . . On our progress as a grass-growing section of the country mainly depends our future prosperity. We entirely concur in the following statement, made recently by a well-known writer and practical farmer:

“A study of the needs of soils in respect to fertility shows that heavy sods rotting in the ground are the factor most to be desired. In various ways they secure to the land the power to produce well when cropped. No one matter in American agriculture is of greater importance than improvement in the growth of grass and clover sods, and if the needed gain in this direction were secured our agricultural prosperity would not only be far greater, but it would be on a safer basis. Much land is drawing chiefly upon its stock of available fertility that has been accumulated for centuries, and much other land has already passed the point of profitable cropping. The ability to provide for itself a heavy sod is the true measure of value for the major part of our farming area. Consideration of the best methods of getting such growth is the most important matter before the farming public, because it vitally affects more people and more land than any other matter. Many who are really the most concerned do not realize the truth, the evidence being found in the carelessness shown in new seedings and in their absence, and in the increasing inability of much land to produce surely and well because the humus is exhausted.”

At the outset let us say that our advice to sow grass alone is based largely on our own personal experience in the matter. We have fully tested many times all the different ways of seeding grass, and un-

hesitatingly say that the finest stands we have ever made and the best crops we ever grew were from grass seeded alone. We are, however, not singular in this respect, for we have the support of many of the leading experimenters of this and other countries as to this method of seeding. At the Wisconsin Experiment Station and also at the New Jersey Station the results reached were conclusively in favor of seeding grass alone. Probably, however, the most conclusive testimony we can give in our support will be that of Mr. Clark, of Higganum, Conn., the most successful grass and hay producer in this, and probably any other, country. For many years he has carried on a series of experiments to demonstrate the possibility of producing heavy yields of hay on a piece of naturally poor, rocky land. We have at various times published reports of the results reached. In our issue for September, 1902, we published his report on the crop of that year. He therein stated that the total yield from 14 $\frac{1}{2}$  acres was 128,874 pounds of well cured hay. The exact cost per ton of the dry hay, including fertilizer (\$208 worth applied), cutting, curing and putting in the barn was \$4.95. The total yield of 7 acres of new seeded ground was 49,677 pounds, or an average of 7,778 pounds per acre, which is 212 pounds less than four tons to the acre nine months from the day of seeding, and that, under very unfavorable circumstances. This, he adds, is conclusive evidence to me that if we want to grow grass we had better sow grass seed, and if wheat, rye or other grain, or, in fact, any other crop, we had better sow them by themselves to achieve success, for it is certain that a proper grass stand cannot be obtained with any other crop. My grass crop this year confirms more fully, if possible, three things: First, that grass should always be sown by itself. Second, that timothy and red top in equal parts are correct proportions; and, third, that intense cultivation is absolutely necessary for success. We have just received Mr. Clark's report on his first hay crop for this year. In this he says: "Last year the first crop was 64 tons, 874 pounds of dry hay. This year the first crop, 55 tons, 729 pounds—nine tons less than last year, mainly due to three causes. First, lack of intense cultivation before seeding of six acres in September, 1901, on account of cloud-burst, which washed almost all the cultivated soil off the field ten days before seeding. Second, a two-months' drought in spring. Third, the fertilizer was spread six weeks without rain. These three cut the product down so that the average yield was but 7,840 pounds, a little less than four

tons per acre. The seven-eighth acre seeded now fourteen years, cutting twenty-six first and second crops before this year, a total production of twenty-seven crops: one seeding fourteen years, 111 tons, with the second crop now growing. Last year the two crops were eight and a half tons. This year they will exceed nine tons. The average per acre this year on this field, first crop, is 7 tons, 176 pounds, and on the five-eighths acre adjoining field, 7 tons, 80 pounds. Many suppose that six tons of hay or more to the acre means tall, coarse grass, but it is exactly the reverse. It means a dense growth of fine grass, 500 to 600 spears to the square foot, 40 to 45 inches in height, and will make six to seven tons to the acre. Every six inches in height of my grass containing 500 to 600 spears to the square foot will produce a ton of dry hay to the acre, and it will be as fine as silk. Intense cultivation and care are the only things that will make big crops of hay." We think we have now said enough to justify the position we have taken as to seeding grass alone. We will, however, add the testimony of a neighbor of our correspondent just received. "I seeded six acres last fall in mixed grasses *without any grain crop*, using about 500 pounds per acre of a mixture of equal parts of raw bone meal, 16 per cent. South Carolina bone (acid phosphate) and German Kainit. I averaged fully two and a half tons of hay per acre, cutting this about July 5th and 6th—certainly worth twice as much as any grain crop." This letter would seem to show that not all the good farmers in Albemarle sow grass seed with a grain crop, and when more of them realize what is possible when seeded alone still fewer will be found to follow the old practice. The mistake our correspondent made was in not following our advice fully. He seeded not alone, but with a *weed crop*, and we have repeatedly stated that grass, least of any crop, can successfully compete with the weeds. Weeds are an indigenous growth, and exemplify the law of the survival of the fittest under natural conditions. It is useless to expect an introduced crop to compete successfully with them, especially when the introduced crop is one of so small and tender a growth as grass seeds when first starting. The weeds must be eradicated before seeding grass or they will sooner or later eradicate the grass. And now one word in reply to the last paragraph but one in the letter: "It seems to me that one fatal objection to sowing grass alone for the average farmer is that it makes one extra ploughing. With the regular rotation—which, after trying all the book methods, we have come back to as far the

best—one ploughing does for corn, oats or wheat and two crops of grass. On paper it is a mighty simple thing to plough the ground one extra time, but in economical farming it is a very different matter." One of the great causes of the lack of productiveness on southern farms is that farmers will not plough and cultivate the land sufficiently. In England no farmer expects to produce a paying crop without ploughing always once, and more frequently twice, before seeding, in addition to working the soil repeatedly with the harrow and cultivator. We have frequently ploughed the land three times before getting such a seed-bed as we desired. Experiments made in this country have demonstrated that the same good results are here obtained by repeated ploughing and cultivation before seeding. It is the falsest economy to save on the cost of ploughing and cultivating. The comment of the wise man of old on charity is most appropriate to this work: "There is that scattereth and yet increaseth, and there is that withholdeth more than is meet, and it tendeth to poverty." The cost of ploughing an acre of land is so small that even the production of an extra bushel of wheat to the acre will almost pay for it, and we have known such an extra ploughing, with the necessary working to follow, to increase the crop ten bushels to the acre. Mr. Clark, in fitting his land to produce the great yields of hay we have mentioned, says that he moves every particle of the soil to the depth of six or eight inches at least thirty times, in this way reducing the whole body of the soil to the finest tilth and making every particle of the soil permeable by the finest roots and every bit of the plant food existing therein available for the support of the crop. To endeavor to raise four crops by one ploughing is "saving at the spigot and spending at the bung" with a vengeance. Until there is a disposition to plough four times for one crop, rather than once for four crops, we shall never see southern lands produce the crops they are capable of doing and farmers as prosperous as they ought to be.

### TURNIP RAISING.

*Editor Southern Planter:*

When practical, a clover or cow pea sod should precede turnips. Said crops, when seeded, should be liberally fertilized with potash and phosphoric acid, thus insuring a rank growth. At maturity entire crop should be turned down and so remain until it decomposes. Turning the roots and stubble of the clover or cow peas, as the case may be, will

not be sufficient to supply the nitrogen called for by turnips and to improve the land. They contain only about one-fifth of the nutrient properties of the plants, and consequently, where the improvement of the soil is the object sought, they fall short of the mark.

The preparation of the soil should be commenced a year or more in advance. The work would not then be crowded; everything would come in at the proper time. The clover or cow peas could be turned down after the first frost and so remain until early spring. The ground could then be planted to onions or potatoes; either crop would come off in ample time for turnips to follow.

(Wheat, oats, rye or vetches should be sown to prevent loss of nitrogen by leaching during winter—*Ed.*)

The New Jersey Experiment Station claims that an acre of crimson clover will contain \$30 worth of nitrogen. This nitrogen is drawn from the air, being virtually grown, and is, therefore, a clear gain. If we place the value of the nitrogen, that can be practically drawn from the air by an acre of clover or cow peas, at only \$15, this quantity will prove more than ample for the two succeeding crops without any direct application whatever. An ordinary application of potash and phosphoric acid may well precede the seeding of the turnips.

If potatoes follow the legume crop they should be dug soon after maturity and the tops permitted to cure about a week. Then often deep furrows a suitable distance apart for the drills, say, three feet, place the potato tops therein and ridge thereon. Then level the ridges and drill the turnip seed in the usual way.

I have often urged farmers to try at least their truck patches on the above plan. From two to three times the usual yield could easily be grown and the soil would also grow richer and richer.

But as a year or more is necessary for the above preparation, only a few farmers, comparatively speaking, are in shape to test the plan at the approaching seeding. I will, therefore, give directions, based on the old plan, that will make a further draw on the soil for humus (decayed vegetable matter), which is already generally deficient in this necessary element.

The soil should be well prepared. Then lay off in rows about three feet apart. Apply in the rows from 400 to 600 pounds per acre of a fertilizer containing 2 per cent. nitrogen, 5 per cent. actual potash and 7 per cent. available phosphoric acid.

The following materials may be mixed and used: Fifty to seventy-five pounds nitrate of soda, 40 to 60 pounds muriate of potash and 325 to 485 pounds acid phosphate. From 160 to 240 pounds of kainit may be used in lieu of the muriate of potash. The fertilizer should be well mixed with the soil, preferably a few weeks before seeding, but if there be not a sufficiency of time, a few days will answer. With the plow throw low ridges on the rows, flatten the ridges with a light harrow or roller, and sow the turnip seed with a drill and cover by rolling with a light roller.

The flat-rooted purple top varieties make the quickest growth, but the globe varieties root deeper, and where they are to remain in the ground all winter, are generally preferred. But for winter purposes it is usually best to properly store all varieties.

Rutabagas are more nutritious and are consequently better for stock purposes. If a rain fall soon after seeding, a rake should be passed lengthwise the drills.

Soon after the plants appear cultivation should be commenced and repeated several times at short intervals. When the plants attain three leaves thin to single plants, six to eight inches apart.

*Moore county, N. C.*

BRYAN TYSON.

### THE CHEAT OR CHESH PROBLEM.

The communications we have published on this subject have evidently aroused much interest, as we are in receipt of letters almost by every mail giving experience on the matter and theories accounting for the same. We select the following from the latest of these, and with this must close the discussion. Professor Massey, in his communication, so fully disposes of the absurdity of the supposed change as to leave in our opinion nothing further usefully to be said.—Ed.

*Editor Southern Planter:*

I have seen the discussions in the last two numbers of the *PLANTER* in regard to oats and wheat turning to cheat. I will give you my experience and observations. I have always believed that the change took place and will tell you of my experience with winter oats. A farmer in this county raised a crop of forty bushels to the acre and they weighed fifty pounds to the measured bushel. My brother and I thought we would try them. I went to his place, about twenty miles from here, got fifteen bushels and we sowed them. They came up and looked fine until in February there came a cold snap and all the top

growth turned yellow and died. Then there came a second growth from the same stools and we had a finer prospect than the first, for they seemed to have spread all over the ground; but when headed out I do not think my brother had five heads of oats in ten bushels of seeding. There were a few more in mine. We had them threshed and ground for feed. They weighed twenty-five pounds to the bushel. There was no cheat in the oats nor in the land before we sowed, nor has there been since. When that freeze came it killed the crown, but did not kill the roots, so they sent up a degenerated set of stalks, and, of course, the grain was the same as the stalks. When wheat is grazed by fowls the seed is mostly cheat. My opinion is, that the growth of wheat being tender it is killed and the roots send up another growth that is tougher and can stand more than the first.

GEORGE W. JOHNSON.

*Prince William county, Va.*

*Editor Southern Planter:*

I am not seeking any controversy on the chess question, but wish merely to give facts in my own experience, to show how easily one may fool himself.

In July, 1902, I ploughed three acres of wheat stubble and had it seeded to winter oats and clover September 15th, intending to use as pasture the following year. In 1903 the clover made such a fine growth that I concluded to mow it for hay, as the oats appeared to be nearly all gone. The oats had been purchased from a prominent seed house of Baltimore, but as I had a fair growth of rye I presumed they were somewhat mixed. I never saw the seed. The rye made a fine growth, followed by what proved to be chess. The rye headed and so did the chess, while the oats were only three or four inches high. I was disgusted, and should have turned in my cows, but I had no fence. If I had mowed then I should have had nothing but chess and rye, but as I did not want any such stuff as hay I let it alone until I could put a wire fence around the lot. In the meantime the oats began to grow and headed out at about thirty inches high, hiding the chess completely. When the oats were ready I cut for hay and got a nice lot, although mixed with over-ripe chess and rye. The wheat seeded on that lot was mixed with chess, and I had tried to clean it, but only removed a part, and the wheat crop had considerable chess seed in it.

Judging from appearances I should have been ready to affirm that the oats had turned to rye and chess if I had cut them early, and later that the stubble grew oats as a second crop. That appears to be what Mr. J. H. Ellis claims to have been the case in his article.

GEORGE H. SMITH.

*Northumberland county, Va.*



*Editor Southern Planter:*

You are certainly in for it, since the cheat transformationists have gotten hold of you. But seriously, what is the use of taking up the space of the *PLANTER* to try to convince the believers in this superstition that such a transformation is impossible. It comes up perennially in all the farm papers, and the men who have never made any accurate study of plant life jump to conclusions that warranted by the facts and are perfectly convinced that they are right, and no amount of argument will make them think otherwise. This old nonsense about wheat and oats turning to cheat, planting by the phase of the moon or the signs of the Zodiac, are persistent survivals of old superstitions and will continue so long as men are not educated in an accurate study of life in plants and animals. I have long since ceased to try to argue the transmutation people out of the notion, but now and then I am tempted to hit some one of these gentlemen. Mr. Ellis's letter, in your last number, is rather amusing. His neighbor sowed his winter oats in the spring to get them clear of weeds, cheat included, we suppose. Now, if oats will change to cheat, why do they not do so when sown in the spring? Simply because they do not get killed and let the hardy cheat take their place. Then Mr. Brockman sowed his clean seed in the fall and had a fine crop of cheat hay, and after the hay was cut a crop of oats. Where were the oats all the time that the cheat was making hay, and why did not they turn to cheat, too? It is very evident that the land was full of cheat seed—and that is all that was proven by that experiment.

Mr. Wright says that cheat is a hybrid. How is he so sure of that. *Bromus secalinus* is as well marked a species as any grass in existence. Now, it is perfectly easy to test the matter if the transmutation folks want to be convinced. Sow some absolutely clean oats—good, large and plump grains, for there are many who would mistake a seed of cheat for a shrivelled oat grain. Sow these in soil that has been perfectly sterilized from seeds of all sorts by heat. Now, abuse these plants in any way you please, by excess of water and excess of cold, and while they may be killed, they will never make a cheat plant. I will give \$5 for every cheat plant produced from a wheat or oat seed. Some years ago a farmer in Western North Carolina wrote to me that he had the positive proof that wheat would turn to cheat, and wanted to know if there was not a premium offered for it. I wrote that there was no premium and that I knew that he was mistaken. A lawyer friend in the same neighborhood wrote to me that he thought I had been rather curt with my correspondent, and that he knew that he had the positive proof that wheat turned to cheat. I asked him

to send the proof. Soon after that a package came to me, and on opening it I found a large and healthy plant of cheat grass with decayed wheat grains attached to the tips of the rootlets. I wrote to my lawyer friend that if he did not study evidence closer than that in court he would get badly left often, for the sample he offered as proof that wheat turned to cheat was, on the contrary, positive evidence that it does not. The roots of the cheat had simply found the decaying wheat grains in the soil and were feeding on them. Had the cheat plant grown from the wheat the grains would not have been at the feeding tips, but right up where the roots started from. It is just such evidence as this that convinces the untrained observer that a thing is a fact when it is an utter impossibility. If cheat is a hybrid, what are its parents? It takes more than one parent to make a hybrid, and, as a rule, true hybrids are sterile and fail to reproduce from seed. Crossing of plants takes place through the flowers, and not by any transmutation in the soil. If you sow clean seed in land that has not cheat seed in it, you will never find a cheat plant in your wheat or oats. I had a spot of wheat frozen down last spring after growth began to get tender. Now, said a cheat man, you will have cheat when that spot starts again. No, said I, if the wheat is not entirely killed it will grow up again, and if killed there will be no cheat, for there is no cheat in this soil and none was sown last fall. It sprouted from the roots and was clean and pure at harvest, and not a sign of cheat. Now I am satisfied that it is perfectly useless for you or me, Mr. Editor, to try to convince these gentlemen of their error, and I shall not waste any more time with it.

W. F. MASSEY.

*Editor Southern Planter:*

For several years I have thought like several of your correspondents in your August issue—"that oats turned to cheat." I am now satisfied that all were mistaken. My neighbor, Mr. T. B. Wright, who I see, has sent you a head of chess, asking what it was, had a field sown with winter gray oats. Some time during the month of May I said to him: Why don't you cut that cheat down, it will make hay, and if you let it get too ripe the stalks are so hard it will be worthless. He replied: I have a pretty fair crop of oats over there; they don't show yet, but they are in there. And he was right. I passed the place every day, and in the course of a few weeks the oats outgrew the cheat and he made a fine crop. His explanation was that the cheat and oats were sown together. The seed of the cheat being smaller, are not noticeable in the oats at the time of sowing, but they are there. My own experience was similar to his. I had a field sown with winter oats

and clover for my hogs. There looked to be so few oats that I turned my hogs in sooner than I intended. They ate the clover for the first ten days, and then, as in the case of Mr. Wright, the oats began to show up. I noticed last year that some farmer in Albemarle had cut a crop of cheat which was succeeded by a crop of oats. I could not understand it at the time. But the cheat being earlier was cut, and the oats being there too had time to head out and make a crop. I note, too, one of your correspondents notes a similar case. What do you think of my explanation?

C. F. DAY.

*Isle of Wight county, Va.*

This is the true explanation of all these cheat stories.—ED.

### CURING FORAGE CROPS—CHEAT.

*Editor Southern Planter:*

J. P. McDowell, of Halifax county, Va., asks "How to cure peavines." I once cured a heavy crop of sorghum hay by putting ventilators in each stack. Make ventilators by placing three rails together at top, set the bottom ends about three feet apart: nail a few strips on each side to hold it together. This makes the ventilator. Now give access to the air from the outside by laying two rails side by side about a foot apart. Lay two or three small pieces of timber on these two rails; then lay another rail on top. Let this air shaft extend from the center of the ventilators to the outside of the stack. Put one of these air chambers on each side of the site of the stack. Build the stack clear around and over the top of the ventilator.

You advise "Subscriber" in July PLANTER that neither oats nor wheat, nor any grain, will turn to cheat. But if you will sow gray winter oats successively for a few years, in the fall of the year, you will have a fine crop of cheat. This is a well established fact here in Southwest Virginia, where they are largely raised. It is well known here that this evil can be averted by sowing the crop once in every few years in the spring of the year, and thus renew the seed. I know this is contrary to the books and science, but it is a fact that any farmer can demonstrate for himself.

H. B. ROBERTS.

*Washington county, Va.*

### JOHNSON GRASS.

A writer in the *Breeders' Gazette* suggests that hairy vetch seeded in Johnson grass would greatly improve the quality of the hay, and also make the

field capable of yielding much pasturage during the winter and spring months. The stalks of Johnson grass would hold up the vetch during the summer and add largely to the yield of hay, whilst it would each year reseed itself, and thus keep up the crop. As the vetch grows all winter and makes excellent spring grazing before Johnson grass is ready for stock it would materially lengthen the period when grazing would be practicable.

### BERMUDA GRASS.

*Editor Southern Planter:*

I read on page 504 of your valuable journal an inquiry about setting a field in Bermuda grass and seeding with wheat at the same time. I live in Central Arkansas, and am familiar with the agricultural interests of the State. Bermuda grass is becoming quite popular in this region of country for both grazing and haying purposes. To do its best growing this grass requires hot sunshine. My experience and observation teaches me that every farmer would do well to observe the rule that one crop at a time on the same field is a sound principle to go on, and therefore I would not attempt to sow wheat with Bermuda. The best plan to set a field in Bermuda grass is to thoroughly prepare the soil by plowing deep and pulverizing perfectly. If to be propagated from roots (which is best and cheapest here), chop the roots, or separate into small bunches, start your turning plow on the ready prepared ground, as if breaking broadcast, then drop a small portion of the roots in the furrow about 18 inches apart. The next furrow covers it. Follow this plan over the field to be set. When the plowing and planting is done in this way harrow lightly to smooth the surface. Do this in February or March. In three months you will have a sod that you cannot graze out. We consider one acre of Bermuda sod worth one hundred dollars in gold. It means fat, healthy, vigorous stock. Remember, that this is a fast age, and things, to insure success, must be done well, so that they will bring the quickest returns.

C. H. GREGORY.

*Arkansas.*

### LEGUMINOUS BACTERIA.

We hear that the Department of Agriculture at Washington has succeeded in cultivating the bacteria necessary to the successful growth of the leguminous crops, and that they will shortly be prepared to supply the same to farmers for inoculating the soil.

Those who contemplate growing alfalfa should apply to the Department for the alfalfa bacteria, and follow the instructions for its use before seeding the land.

### 1903 TOBACCO CROP ON THE HOME STRETCH.

Ninety to one hundred days is usually the life of the tobacco plant on the hill or in the field. Planted in May or June, it is now on the home stretch. We advise curing sun or air cured a red color. Late cuttings are apt to cure dark green. To prevent this cooping or bulking until yellowed before hanging is advised. Beware of mould. To prevent this, airtight wood stoves, with heat enough to create a circulation of air during soft, hot weather should be used. Tobacco intended for shipment in the leaf for export for Austria, Italy, etc., should be cured red or light brown color, fired with open fires. For English strips cure a dark brown color, with open fires. Don't forget that curing and handling is the biggest half to be done.

L. B. VAUGHAN & Co.

Richmond, Va.

### SEEDING GRASS ONLY.

Editor Southern Planter:

I was induced by your perpetual drilling machine—the best farmer's paper in the South—to sow a piece of north land last September, early part, to timothy, clover and orchard grass, without any grain; tried to get other grass, but could secure at the time only the three kinds. This piece of north land had never done me any good in the effort to get a stand of grass and crop of wheat the same season; both would always freeze out. I placed the orchard grass seed in with fertilizer (200 pounds S. C. Bone to the acre), and sowed a peck of timothy and peck of clover through seed sower, and two bushels orchard grass seed, to the acre. Results: a good crop of hay the following summer, instead of the old experience of neither wheat nor grass. I cut the hay about the first of this month, and now that north bank looks better than any meadow land. I thank you for drilling me until I caught the right step.

THOMAS S. WHITE.

Rockbridge Co., Va.

The best means for destroying Cabbage worms is air-slaked lime and common fine salt. Mix three-fourths air-slaked lime and one-fourth salt. Sprinkle this mixture over the heads as soon as worms appear.

### ENQUIRERS' COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

#### Hogs Ailing.

I have eighteen Poland China hogs that have knots the size of peas, or larger, all over their bodies. Some of them seem as well as usual otherwise, and others are real sick, with but little appetite and lay around in the shade. The eyes of these are closed and very sore, lids much swollen and full of knots that look like pus and scabs; when scraped off the flesh beneath is white and raw and bleeds. They are in a pasture, part woods and part apple orchard, with a fine stand of orchard grass and clover. Have fed them no grain since spring. They are in fair order and seemed in good condition until thus affected. They have lice on them. Their watering place is a small spring where the water bubbles out of the surface of the field and they frequently make a wallowing hole of it.

Please tell me what the disease is and what to do for it.

APPRECIATIVE SUBSCRIBER.

Amherst county, Va.

The hogs are probably suffering from what is known in some places as "measles," an eruptive disease like measles in the human race. What they need is a laxative, sloppy food, in which mix a spoonful of flowers of sulphur for each hog three or four times a week. If constipated, give them in the slop a half pint of linseed oil for each hog. The feeding of the sulphur will most likely cause the lice to drop off, as it has a powerful action on the pores of the skin, which is offensive to lice. If the lice do not drop off, a little kerosene oil rubbed or poured on the backs of the hogs will soon get rid of them.—Ed.

#### Cow Peas and Weevil—Pollinizer for Strawberry—Crimson Clover Seed.

1. Some time ago I read in an old farm paper that by planting cow peas after July 1st the peas from that crop would not be infested with weevil. Will you please tell me if it is so?

2. Is the Jessie strawberry early enough to fertilize the Warfield?

3. What would be a fair yield of crimson clover seed to acre?

J. D. GITCHELL.

Albemarle county, Va.

1. We believe weevil will infest cow-pea seed whenever the crop is sown as if sown in time to mature the seed the weevil moth will be laying its eggs during the period of growth and maturity, and the plants will become infested.

2. The Jessie is one of the earliest blooming strawberries known, and will fertilize the Warfield.

3. Crimson clover will yield anywhere from ten to twenty-five bushels of seed to the acre, according to the crop and the season for pollenization.—Ed.

### Sowing Clover with Wheat.

I have about twenty acres (partly low ground) that is a stiff sand or a mixture with clay, with a good clay subsoil that I wish to sow in wheat this fall. I have been thinking of sowing clover with the wheat for a hay crop after the wheat is cut off. Could I do this? If so, how much clover to the acre and what variety? Do you think I could sow a crop with the wheat that would do as well as the clover?

Moore county, N. C. GEORGE E. BROWDER.

Yes. You can sow red clover with the wheat, but our advice, often given, is to sow grass and clover without a grain crop if you want certainly to succeed in getting a stand of the clover or grass. Of course, clover sown with wheat will frequently succeed in making a stand, but this is very often killed out by the sun when the wheat is cut off. If a strong growth is made and the wheat is thin, the clover may resist the heat and make a good crop. You can sow no other crop with the wheat. Sow about ten pounds of red clover seed per acre.—Ed.

### Sick Turkeys.

I shall be so glad if you will give me, through the columns of September PLANTER a remedy for worms in turkeys. The droppings of my grown turkeys are filled with live, short (from one-eighth to one-quarter inch long) white worms. And out of a flock of more than a hundred young turkeys I have but forty-five left. They get droopy and sleepy, their heads turn very dark and their droppings are frequent and yellow. Some die in a short time, while others linger one and two weeks, becoming very weak and emaciated.

I killed and cut open three of them. All their viscera seemed in a normal condition, except the gall on the liver, which was filled with a clear white—instead of green—fluid. It was clear, like water. The small intestines were literally full of very long, flat, jointed white worms. Both young and old have several times expelled these worms during the night while on their roosts. This caused me to examine particularly for them. They seem, many of them, to be a yard, and even three yards, long. Some of the sick ones, though so emaciated and weak, have fine appetites.

I examined the blind fork of intestines for symptoms of black-head, but so far as my judgment goes

it was normal, though perhaps I am not experienced enough to judge.

The turkeys have free range of a large farm upon which wheat, oats, tobacco and red clover are raised; have grit in abundance and pure running water; and, I think, are free from vermin, at least I dust them with Instant Louse Killer and sprayed their house with a mixture of whitewash, kerosene and carbolic acid. Have used every cholera remedy I know, but still they die.

I shall be so glad of some remedy or preventative of black-head, cholera and worms from you or any of your readers. Even should my whole flock be dead before you can answer this it may help some one else and help me another year. My turkeys are thorough-bred Bronze from eggs of prize-winning hens and gobblers of an unusually large and healthy strain of this breed. Upto three weeks ago they were hearty and growing rapidly; are 12 and 14 weeks old—an age that is usually considered safe. I have regularly given them Hess' Poultry Panacea.

Anherst Co., Va.

ANXIETY.

We regret to say that we cannot give you any definite advice as to the disease affecting your turkeys. We can find nothing to help us in our books, and although we have had long practical experience in the raising of turkeys we have never had any such trouble. We believe the worms are at the root of the trouble and should use means to get rid of these. Amongst the vermifuges useful for this purpose are male fern and arca nut, which you can get from the drugstores; also turpentine. We would mix some turpentine in soft food and give each turkey a good dose in the shape of a big pill. If they will not eat it, let them have empty crops when this is fed and give no other food for twelve hours. The worms reduce the vitality of the birds and they die from weakness, we think.—Ed.

### Unhealthy Cattle—"Hollow Tail."

I wish to know how to treat unhealthy cattle. I have a lot of young cattle which do not thrive, although they run in a good grass pasture every day and are penned in stalls at night. The person who attends to the stock thinks the cattle are afflicted with what he calls the "hollow tail." Now, if there really is any such disease I would be pleased to know what to do for it.

CLIFTON WARD.

Sampson county, N. C.

It is impossible for us to tell you what to give your cattle without something more definite as to the nature of the disease from which they are suffering. It is absolutely certain that they are not suffering from "hollow tail," for there is no such disease. Neither "hollow tail" nor "hollow horn" ever make

cattle sick or are known to any veterinarian as diseases affecting stock. They exist only in the imagination of ignorant people, who have no knowledge of the anatomy of a cow or of the diseases affecting stock. Possibly your stock, if you are in a tick section, are suffering from a mild attack of the tick or Texas fever; but this is only a supposition, as we have nothing before us to warrant the statement, beyond the fact that you say they are young cattle and are all affected. All young cattle in a tick section suffer some time before they are 2 years old from a mild form of tick or Texas fever, and thereby acquire a partial immunity from the severe form of the disease. If this were not so we should have no cattle left in those sections. Those attacked with the disease when older nearly all die within a few days. If farmers would only follow the advice we have so often given as to ridding their farms of ticks none of this loss need be incurred. Wherever there are ticks (the Texas-fever tick) there will be Texas fever and loss. Where there are no ticks there is no fever.—Ed.

### Cassava.

I enclose clipping from a recent *Saturday Evening Post* relative to the "cassava" or tapioca plant. I would be glad if you would tell me something more definite about this as a suitable plant for cultivation in this State.

GEORGE S. BAKER, JR.

Franklin county, N. C.

Cassava is of no use to you. It is a tropical product, and its growth is stopped by a light frost, or even by continued cool weather. It only grows in a climate free from frost for at least eight months. The only part of this country where it can be grown is Florida and a narrow strip of land along the gulf coast from Florida westward to Texas.—Ed.

### Salsify—Celery Seed.

1. Can salsify be planted in the fall to make a crop for the following year—that is, planted in fall of 1903 to make crop for winter of 1904-1905? Isn't there danger of its going to seed? If it can be grown so, what time should it be sown? Please answer in September PLANTER.

2. How old are celery seed before they lose their vitality?

WILLIAM DANIEL.

Prince Edward county, Va.

1. You cannot grow salsify in the way suggested. The best way to grow salsify in this climate is to sow the seed in July and it will then grow right along to maturity instead of coming to a stand in the hot months, as it does when sown in the spring.

2. Celery seed does not lose its vitality very quickly, but we can find no record of tests giving the longest period within which its germinating powers continue. Even the new seed is slow of germination under unfavorable conditions.—Ed.

### Plant for Name.

I have noticed a kind of clover (I think it is clover, but don't know what kind) that has come up in little patches. It is now dead and seems to grow only once a year. The plant is about fifteen inches high. I send you a little seed along in this letter for you to examine and make a reply in the September number of the PLANTER. I would like to know if it is good for anything, or if any one raises it.

JOE M. CHRISTENSEN.

This seed is that of *trifolium arvense*, in some sections called rabbit-foot clover or mouse-ear clover. It is usually regarded as a weed, but is of some value as an improver of land and stock will eat it. Much more valuable clovers can be grown with the same trouble and cost.—Ed.

### Preparation for Alfalfa.

Will you please advise me on the following: I have a narrow strip of ridge land on my farm which I would like to get down in alfalfa. This tract is gray loam with clay subsoil. My idea is to sow this down in Canada peas this winter, cut peas for hay, then put down in cow peas, pick peas and turn under the vines. Then sow again in Canada peas, harvest them and plough land and work all summer to kill weeds, as you advise, previous to sowing alfalfa in the fall.

Can I dispose of Canada pea hay to advantage? About how much is it worth on the farm? Must I plough deep for Canada peas, and are the vines exceptionally hard to cure?

Do you think the rotation I propose all right? If not, please advise me what you think better?

This farm has been worked on the tenant system, and the above-mentioned land, while it was at one time in tolerably good order, will at present not produce more than ten or fifteen bushels of wheat after a crop of tobacco. Of course, this is tenant's farming, with no extra ploughing or fertilizing. I believe that with thorough ploughing and subsoiling and a coating of lime this same land would produce about twenty or twenty-five bushels of wheat.

Campbell county, Va.

A SUBSCRIBER.

The course proposed will be a right one to follow to get up the land. Use some acid phosphate on the Canada pea and cow-pea crops, say, 300 pounds to the acre. Put the Canada peas in deep, say, four or five inches cover and then sow half a bushel of oats

and harrow in. These will help to hold up the peas and make them easier to cure. The crop is no more difficult to cure than other vine crops. We do not know that there is a market for this crop, as so little of it is grown here. Where it is largely grown in the North it sells for as much as clover. It is a most nutritious hay rich in protein.—Ed.

### Saving Horse Manure.

I desire to get some information in regard to horse stable manure. My farm is about a mile from town and I keep four, and sometimes five, horses in town, and as the manure is dropped it is each morning put in a large pile. It stays in this pile sometimes for a month and sometimes more, depending upon the time of year. Sometimes there is no crop just ready for it and it has to stay until there is. I notice that after it has been in this heap for a few days it will begin to smoke, and when it is hauled out has the appearance of white mould in it, and, to all appearances, does not prove nearly so beneficial to the crops as does that that is dropped in the farm stables and not moved until ready to go on the land. Now, what I want to know is, is there anything that can be done to this manure in the heap to preserve its fertilizing properties? If there is, I will very much appreciate your advice in the matter.

W. D. GRIMES.

Beaufort county, N. C.

In order to preserve the fertilizing value of horse manure when stored in a heap it should be sprinkled with acid phosphate or kainit each day when removed from the stable. This will prevent over-heating, which causes the white mouldy condition, known as "fire-fanged." Manure when it has got into this condition is of little value as a fertilizer. If acid phosphate or kainit is not at hand the heap should be watered frequently. The addition of acid phosphate or kainit greatly improves the fertilizing value of the manure, as it lacks both phosphoric acid and potash in its natural condition to balance the ammonia (nitrogen) in its composition.—Ed.

### Storing Cabbage.

Will some of your readers who have had experience give in the next issue of the *PLANTER* the best method of keeping cabbage for winter use? Also state best time for cutting.

JOHN STABLES.

Dinwiddie county, Va.

The New York truckers save their cabbage crops for the winter markets by ploughing a single furrow from six to eight inches deep in which they place the cabbage, heads down, as closely as they can be set. They then turn a furrow over the heads from each side. The heads should be fully grown when put

away. A better plan is to make a pie, or heap, of the cabbage in an orchard or grove where there is some natural protection. Commence against a fence with a southern or eastern exposure. Pack the fence tight with a liberal use of straw or corn stalks, or both; against this set the cabbages as grown in the field upright, but with a little slope, and place close together. When the row is formed as long as desired place another row above these, letting the stalks come between the heads of the first row so that the heads of the second row come on the heads of the first. Add as many rows as needed in the same way. Then cover the whole with fresh fallen leaves and straw to the depth of five or six inches and put a little soil on these to keep the leaves from blowing away. Waste hay or short straw can be used in place of the leaves. The smaller undeveloped heads should be put in the bottom rows, as they will continue to increase in size during the winter. Cabbage should never be put away when wet or frozen. Better store a week too early than a week too late.—Ed.

### Alfalfa—Land Plaster.

I notice in one of your articles on alfalfa in August number that you recommend top dressing with barn-yard manure, and in another article in the same paper you say that alfalfa is easily injured by wet vegetable matter lying upon the plants. Now, I wish to ask:

1. If there is danger of injuring alfalfa by top dressing it with manure containing much undecayed bedding, such as straw, chaff, sawdust, etc., applied in winter?

2. Does plaster applied to clover in the spring correct the acidity in the soil, or has it a contrary effect, owing to the large proportion of sulphuric acid that it contains?

3. Is plaster as beneficial to alfalfa as it is to red clover?

4. How long will alfalfa bacteria remain in the soil after the breaking up of alfalfa land?

5. Are the nodules produced on alfalfa roots by alfalfa bacteria as large as those produced on pea-vine roots by pea bacteria?

A. B.

Tennessee.

1. The manure applied as a top dressing to alfalfa should be well rotted and then no damage, but great good, will be done. Anything likely to hold water in quantity on the crowns of the plants is liable to cause rotting and loss of the stand.

2. Plaster (sulphate of lime) will not have the same effect upon a clover crop in correcting the acidity of the soil as lime in the form of a carbonate as in ordinary limestone or in oyster-shell lime. In

an experiment made by Professor Massey he dressed two adjoining fields of clover each with the same money value of carbonate of lime and plaster. They both made a good growth, but the effect of the freshly-slacked carbonate of lime was decidedly marked over that of the plaster.

3. Yes. In our opinion, however, freshly-slacked lime (carbonate of lime) is more effective on both crops than plaster. Plaster never makes a return commensurate with its cost, unless there is plenty of potash in the soil. It is claimed for it that it helps clover and the grasses by absorbing and holding moisture, and there may be something in this idea, as it undoubtedly has a strong affinity for moisture, but we regard it as infinitely less valuable as an improver of crops and the condition of the soil than freshly-slacked limestone or shell lime.

4. We are unable to say. We should not expect them to persist long in the absence of the plant, of which they are the specific microbe.

5. No. They are like those on red clover—very small, but numerous.—Ed.

### Alfalfa—Mulching Potatoes.

1. When is the proper time to sow alfalfa?

2. On page 448 it is advised to mulch potatoes. Should they be cultivated and then mulched? How deep should the mulch be?

*Surry county, Va.* NEW SUBSCRIBER.

1. Sow alfalfa in August and September in your section; in April and May in the west of the State.

2. Yes. Mulch four or six inches deep.—Ed.

### Ring-Bone—Fleas.

Will you, or some of the readers of the PLANTER, tell me if there is any remedy or cure for ring-bone? I have a fine saddle horse that went lame last winter in his right fore foot. We thought for a while it might be the shoe, but have found out since that it is ring-bone forming on his foot. I have heard that there is no cure, but would like to hear what you have to say on the subject.

I would also like to know if there is any way to get rid of fleas. I never saw such a quantity as we have this year, and all of my neighbors make the same complaint. They are all over the house—from garret to cellar. There is no rest for them, day or night.

*Wythe county, Va.*

SUBSCRIBER.

With a case of ring-bone so long established as this one appears to have been there is little hope of successful treatment. If taken in hand when first forming, vigorous treatment by blistering and the firing-iron sometimes arrests the disease. Firing might be

tried. If this does not give relief nothing will. The disease is usually regarded as an hereditary one, and, therefore, no horse affected with it should be used for breeding purposes. The lameness caused may be much relieved by proper shoeing. If the horse steps on the toe of the foot first high caulk should be used on the heel and vice versa if he steps on the heel first.

Tobacco dust has been suggested as a repellent of fleas from houses. Tarred paper used on the walls is also said to be effective in keeping them out of houses. They are a difficult problem to solve wherever animals are kept about a house.—Ed.

### Melilotus Alba.

I enclose a sprig and seed from a rank-growing plant that I take to be the *melilotus alba*, mentioned in your last July number, page 444.

I know of no one cultivating it, but have heard that it is not only a great improver of the soil, but that it is splendid forage for all kinds of stock. I notice, though, that your article states "it is not generally liked by stock."

I would be glad to know what experience has been had with it in Virginia, and especially whether it is difficult to be gotten rid of. J. S. D.

*Campbell county, Va.*

The specimen reached us in such a condition that we are not able to say positively that it is melilotus, but probably this is so. We are not aware that this plant has anywhere in Virginia been grown as a crop. It flourishes here in many sections as a weed, but our information from many parties is that stock do not eat it when they can get anything else. It is, no doubt, an improver of the land, and for that purpose has, we understand, been grown in some of the States further South.—Ed.

### Sod for Chickens—Milk Fever.

Please tell me the best mixture of grass for a chicken lot, soil a red, stiff clay hill. How would red clover and orchard grass do for grazing hens and a sod of Kentucky bluegrass and white clover do for young chicks? I want a good sod and a pasture for hens—something that would be conducive toward laying. How would it do to sow turnip seed with orchard grass and clover, or would mustard be better? Are those pungent herbs, like mustard and pepper grass, valuable as egg producers?

I forgot to say that the two chicken lots I wish to sod are set in young fruit trees, and while I want something for the hens do not wish to injure the trees.

What is the Schmidt treatment which is said to be a sure cure for cows with milk fever?

*Amherst county, Va.* AMHERST SUBSCRIBER.

A young orchard should not be put down into per-

manent grass if the best interest of the trees is to be considered. The orchard should be seeded down with crimson clover in July, and this should remain during winter and then be ploughed down in the spring and the orchard be kept worked until July and then be seeded again with the clover. It might, after the second year, be put into grass for a couple of years without injury. A mixture of orchard grass, tall meadow oat grass, red top and meadow fescue should be sowed and two or three pounds of red clover be seeded per acre with the grass. The best pasture for hens is a clover pasture, as clover is rich in protein, which is needed for egg production. Mustard and pepper grass are of no value as feeds. A little red pepper mixed in the feed in winter is good for them.

The Schmidt treatment for milk fever is the injection of iodide of potassium into the udder by way of the teats. It has been found to be remarkably successful in practice.—Ed.

### Hogs with Toothache—Milking Cows.

1. I write to ask whether or not there is any such thing as hogs having the toothache? I had a sow to give birth to nine pigs on the 29th of May, and at the time of birth, or a few days afterwards, I noticed something like sores on the little fellows. I at once got some creolin and began work on them. I have five out of the litter, and all but one apparently have done well. Thinking for a time it was due to the attack of the disease, I paid no further attention, until a few days ago I picked the one up that seemed to be stunted, and found on examination two teeth covered with a black coating, or what is termed black (tooth) teeth. Will it be well to pull them?

2. I would like also to get some information on the question as to how long a cow should be milked, and the use of her milk before calving? I have handled cows for a number of years, and in a good number of cases I did not know just when the cows would calf, and used the milk up to the very day without noticing any difference. I understand a cow should be rested for at least two weeks. But according to an argument held by an experienced farmer, he claims that even while the cow is pregnant her milk is not fit for use, as her whole system is out of order. I saw nothing to sustain him in saying so. Yet I would like information on the subject, as there possibly are others who think as this man. You remember in this case the milk is not fit for use from time of pregnancy.

O. J. R. HOLCOMBE.

Raleigh, N. C.

1. It is generally understood that all animals suffer, like man, from toothache, but whether pigs are more subject to it than others we do not know. The

so-called disease of "Black tooth" in pigs is like "Hollow horn" and "Hollow tail" in cattle, a myth unknown to the veterinarian. If the teeth turn black it is a *result* of disease elsewhere, and not a *cause* of it. The pulling of the teeth will not cure the disease. Probably what the pig ails is some disease of the digestive system. Give some sulphur in the food to cool the animal and purify the blood.

2. A cow should be milked until within six weeks of calving again if her character as a persistent milk yielder is to be made or maintained. It is ridiculous to maintain that a cow's milk should never be used when the cow is pregnant. If this rule were acted upon then no cow could be kept profitably. A milk cow to be a profitable cow should bring a calf every year, and should yield milk ten months out of the twelve, and even then to make a profit on the cost of her keep should give at least an average of over 5,000 pounds of milk in the year. Many of the best cows give nearly twice this weight of milk in the year, and some exceptional ones have given three times that weight. The milk is perfectly wholesome and good even if used right up to the time of the cow calving again, but a cow milked through in this way never makes so good a return as if given a month or two of rest before each calving, and will age and break down sooner than one periodically rested. There are, however, many good cows that milk through from calving to calving again, but in our own practice we always insisted upon a month or two of rest just before calving, and found the results warranted this. The only time when a cow's milk is not good to use is immediately after calving. For the first three or four days after calving she will give milk of a thick custard-like character. This is called "*colostrum*," and is caused by the breaking down of the fat globules in the udder. This milk is valuable for the calf, being nature's remedy for cleaning out the bowels, but is not good for man, though it is often used for custard making.—Ed.

### Damages for Service by Scrub Bull.

A has a bunch of registered heifers in his field. B's Scrub bull gets in with them, and nine months from the date four of A's heifers have calves. Can A recover damages from B, and if so, on what ground?

J. L. H.

Albemarle Co., Va.

Yes. We are of opinion that he can recover on the ground of the loss sustained by the production of scrub calves instead of pure bred ones. This point has been raised and decided, we think, in the West. We will try to find particulars of the case.—Ed.



## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The harvesting, storing and shipping of the products of the truck patches, garden and orchard should receive constant attention as the crops mature. Do not allow fruit to remain on the trees until it drops from over-ripeness, nor roots to remain in the ground long after they have matured. In both cases the products will be injured. In handling the products, whether for storage or shipment, see that no damaged or specked fruit or roots are put away for winter use or shipped. Let all these be carefully culled out and be used or fed to stock at once. If they go into storage they will only set up rotting in the sound products, and thus cause disappointment when opened for use, and if shipped, they will materially injure the price received. All fruit and root crops pass through a "sweat" or heating after they are gathered. They should not be stored until after this has subsided. Put them into small piles in a dry shed, or if the quantity is too large for this, put up in piles in the field or orchard and cover with straw and boards to keep out rain until the "sweat" is over. Then resort and store or ship. Fruit keeps best stored in a dry, airy room on slatted shelves or in ventilated bins or boxes. Roots, except sweet potatoes, are best stored in a cool, dry cellar, or in piles made in the field. These piles should be made on high, dry land, and be so placed as that all water falling on them will at once drain away. Cover with straw to the depth of six inches, and then with soil. Sweet potatoes should be stored in a house specially built for their storage, or in a dry, frost-proof cellar, where the temperature can be kept at an equable one of about 40 degrees at all times by means of ventilation in warm weather, and by a stove in hard frost. In these cellars or houses they should be stored in slatted boxes, and when first put in the temperature should be raised to 60 or 70 degrees to cause them quickly to sweat and then to dry off the moisture rapidly. Onions should be pulled as they mature and be left in the field until the tops are dried, and then the tops be cut off and the bulbs be stored in a cool, dry room on slatted shelves.

Prepare the land for and sow the seed of the winter cabbage crop. The plants should be raised so that they will be ready for setting out in November. The Early Jersey Wakefield is the best variety for this crop.

Land should be got ready for the planting out of fall cabbages and broccoli, and the plants be set out as soon as possible. These will make good heads in the late fall.

Sow the seed of kale and spinach where the crop is to mature. The land should be well worked, but not be made over rich, as this has a tendency to make the plants too tender to stand the winter.

Potato onion sets should be planted during this month. Put them in rows 18 inches apart, so as to allow room for working, and set the bulbs 6 or 8 inches apart.

Lettuce seed may be sown this month for plants to set out in the following months in beds and in cold frames for the winter and early spring crop.

Clean up and burn all trash and waste where crops have been harvested, and thus get rid of insect and fungoid pests.

Land not needed for other crops should be worked and sown with crimson clover or vetches to conserve and add to its fertility.

### APPLE DISEASES.

*Editor Southern Planter:*

I note in your issue of August, that "W. M." asks questions concerning the nomenclature of certain fungi. While I have not seen the publication to which he refers, I presume he has quoted the names given correctly. If so, the Latin names used do not apply to the disease for which the treatment is recommended. The name, "*Schlerotinia fructigena*," as used, could have no reference whatever to the disease of apples mentioned, but possibly may refer to the brown rot of peach and other stone fruits. Naturally, I am unable to say what the author had in mind when using this term.

The name "*Denticium fusicladium*" doubtless refers to the common apple scab. If so, the Latin name for this fungus commonly used, is "*Fusicladium dendriticum*." This disease of the apple is so well known that it hardly needs description, as the scab, and the consequent cracking of the fruit, which result from it, are known to every orchardist. The fruit never rots from the attack of this fungus.

The Brown rot, to which reference is made in this article as occurring upon the apple, may possibly be the "Bitter rot." The description of the appearance of the sori, or diseased spots on the fruit, leads one to believe that the writer had this trouble in mind. Most orchardists are quite familiar with the appearance of "Bitter rot" on the fruit, and know that the little pustules in which the spores are borne occur in concentric rings around the point where the attack first began. The Bitter rot can best be treated by the careful use of Bordeaux mixture, after the manner we have recommended in our bulletins. See Bulletin 100. The spray recommended in this article would be a very drastic treatment, and far more expensive than is necessary. Our recommendations of two pounds copper sulphate to twenty-five gallons of water will be equally as effective in destroying the winter stages of these fungi and much cheaper and safer to apply to the plants.

W. M. is certainly right in saying that many fungous attacks are placed to the credit of seasonal conditions. My experience leads me to say that careful spraying of our orchards with right substances, at the proper time, will help remarkably in making them fruitful. Climatic conditions certainly play an important part, but our unseen foes play a still greater part in the unfruitfulness of our orchards.

WM. B. ALWOOD, *Mycologist.*

*Experiment Station, Blacksburg, Va.*

## THE PRESENT AND FUTURE OF STRAWBERRY GROWING IN NORTH CAROLINA.

The possibilities of strawberry growing in Eastern North Carolina far surpasses those of any other part of the United States, if not of the world. These possibilities are the result of natural conditions and are eternal. When Nature's hand dug the Atlantic's bed and piled up parallel thereto the great Appalachian chain the work was begun. When by wave action and attrition she bordered this belt with a liberal fringe of flat alluvial soil and threw forward on its northward swing the warmth-bearing current of the Gulf stream, her part of the work was complete. She had not only made the ideal soil for the strawberry, which revels in humus, but she had by placing the sea on one hand and at just the right interval the mountains, made severe drought—especially at the season when this fruit, which is 95 per cent. water, ripens—practically impossible.

When a little later, geologically speaking, civilized man—which, after all, means eating man—came and huddled in cities to the northward, and wrought himself up into such a rush and stew that his feverish blood must necessarily be acid cooled, opportunity

was ripe for such parts of this region as has facilities of transportation.

Although this favored strawberry and general trucking belt extends in varying width from Norfolk down through North Carolina and far to the southward, undoubtedly the most suitable part of it for growing the strawberry on a vast commercial scale lies in this State. The reason for this is that this fruit ripens here at just the time when the weather at the North grows spring-like enough to create an immense demand for it, but still too early to meet with serious competition from other sources of supply. Either an earlier or later ripening season would not be near so good. Florida ripens berries a great deal earlier, but the demand is then limited, and if the millions of quarts of berries which we raise were thrown on the market at that season they simply could not be sold at all, and we should have to cut down our supply to fit the moderate demand.

As it is, we may safely grow all the good berries that we can pick and ship in proper condition. The comparative narrowness of the trucking belt will forever prevent the great glut of strawberries, even now so often occurring in the West. And the mountains will doubtless always remain barrier sufficient to prevent an influx of enough western berries to glut our ever-growing eastern market.

The West can grow more berries to the acre than we can, provided drought neither destroys the plants the summer before nor the berries during fruiting time. But through most of the strawberry regions of the West drought is a foe ever to be reckoned with.

Even under the most favorable weather conditions the western growers are far less favorably situated than ours of North Carolina. The region is so broad, ripening and throwing on the market so many berries at the same time, that prices are, and must forever, as a rule, remain, lower than with us. It might be argued that the increase and growth of large cities in the West would gradually equalize supply and demand there, as has been the case here. But here the sea is a great factor. As long as trans-Atlantic commerce lasts—not to speak of the manner of gadding the earth—just so long will the seaport cities outgrow and outbuy those inland. The result of these conditions, I repeat, must ever be to make strawberry growing and trucking generally more profitable in the East than in the West.

But enough as to possibilities. It is good to know their extent so that we may not fail in enterprise and energy to avail ourselves of them. It is none the less essential that we know the danger and drawbacks in order that we may, if possible, avoid them.

This danger, while two-fold, seems to arise largely from the same source. There is a deterioration of quality through carelessness in cultivating the plants and in picking and handling the crop; and a serious

curtailment of the crop through disease and the ravages of weevil and insect pests. As above stated, these troubles arise largely from the same source—from over-cropping and the lack of rotation.

Over-cropping, the growing of a larger acreage than is justified by the quantity of land at one's disposal, necessarily prevents rotation, which is more essential with the strawberry than perhaps any crop that grows. A man begins by putting, say, one-tenth of his land suitable for strawberries in that crop. He clears \$100, \$200, or perhaps a great deal more, an acre. He rapidly increases his acreage with more or less success till either all of his available land is in strawberries, or so near all of it that rotation is impossible. Consequently the same lots or fields are kept in strawberries year after year, or perhaps ploughed up and given one improving crop of cow peas or some kind of soiling or summer crop and then hurried back into strawberries again.

In a few years there comes a change. The plants lose their old-time color and vigor. The berries, despite better cultivation and manuring than ever, won't "size up." It is harder to get them picked, because picking is more tedious.

Not all his big plans and air castles can refute the stern logic of facts, or of checks, which are the same thing. For every year his checks, his returns, grow smaller per acre. He blames the weather the railroads, the commission men, the trusts, the amendment—everything but the right thing.

The truth is that his land has, to use a slangy, but expressive term, simply "berried out," or become "berry sick," and its owner, unless he can change his methods radically, is on the high road to bankruptcy.

One evil begets another evil. His unrotated fields and feeble plants become an inviting harbor of all pests and diseases. Thus the two evils have practically the same source. And it is hard to exaggerate in words the insidious power for harm of either of these evils.

The glib paradox that half is more than the whole, becomes a fact when applied to strawberry acreage. Better in the long run one acre properly rotated than two, three, nay, than five, kept to dwindle on soil that protests in so many ways against such unwisdom. And with proper rotation would come naturally many better things—smaller acreage, better cultivation, better manuring, better picking, better packing and better profits. The diseases and insect pests that attack the strawberry plants have not yet proven quite as harmful as those the general fruit grower has to contend with, though in the aphid and the weevil we see evils which will be great or small in proportion to the intelligence and perseverance with which they are met and combated.

Owing to the nature of the strawberry plant it is hard to successfully combat either disease or pests

on it. It grows so low, amid clods and trash, that spraying cannot be as thorough and effective as with fruit trees, whose every leaf and limb can be covered bottom and top. Mr. Sherman, our zealous and efficient State Entomologist, can be safely relied on to lend all possible aid to the growers in their battle with pests. He will at the same time inform them of the difficulties to which I have alluded.

Twenty-eight years' experience in strawberry growing has convinced me that these pests and diseases, like the devil, can best be fought with fire. Burn them up. But how burn pests and diseases and spare plants? It can be done, and we find the material right at hand, and at just the proper time to do it. As soon as the crop is gathered mow the plants as closely as possible. Let the mowed plants dry for a day or two. Then on a dry, breezy day loosen up the straw mulch and set fire to the field along its windward side. It will burn quickly over, leaving the field as clean as a floor. Not a vestige of trash or plant will be left. Diseases, pests and weed must then be at least largely destroyed.

In a few days a clean growth of vivid green foliage will appear, and in a week or two it will be hard to tell that fire ever swept over the field. I have never known a plant killed by the burning, though with an excessively heavy mulch and a very still day it might be possible to do harm, but it is most unlikely.

Cultivation should, of course, begin as soon as the burning is done. If spraying is to be done it would probably be best to begin with the stub immediately after the burning.

Burning cannot, of course, eradicate the aphid or root louse. Proper and timely care can destroy them by digging up and burning the infested plants (which are apt to be only a few at first), and by a long rotation of that field in other crops. Of course, every care must be used to prevent bringing in disease or pests on plants obtained elsewhere.

Lack of time has prevented my dwelling on modes of culture and manuring in this paper. I thought it best to devote the time I had to what I considered more vital questions. I will add that no field should be kept in berries for more than two years in succession and that it should be rotated for not less than three years in cow peas or some trucking crop. Of course, cow peas would be best, and by saving both the peas and the vines for forage, the land can be made to yield a profit on peas.

Vance county, N. C. O. W. BLACKNALL.

## SPRAYING PLUMS IN VIRGINIA.

### Notes on Varieties.

The production of plums is yearly becoming more important in this State. All of the natives and many varieties of the Japanese group are quite hardy and productive in this climate, while varieties of

the *Domestica* class succeed well when protected from fungous diseases. In the Station orchard leaf diseases (chiefly *Cylindrosporium padi*) and the brown rot (*Sclerotinia fructigena*) are so common and difficult to control on the *Domestica* varieties that unless thorough and persistent spraying is practiced the trees soon succumb to these troubles. Certain hardy varieties like Lombard are able to survive despite the presence of disease, but all of the best table varieties are much weakened and finally destroyed unless most carefully sprayed. Yet even when the most thorough spraying is practiced it seems next to impossible to control the brown rot so as to secure a crop of fruit in the unfavorable seasons.

It has been a common practice in the Station orchards to commence spraying for these diseases very early in the season. We first give a winter treatment with bluestone solution made by using two pounds bluestone to fifty gallons of water. This is applied during the dormant season and is followed by an application of Bordeaux mixture (4-5-50) about the time the buds begin to swell. The above treatments are supplemented by later sprayings with Bordeaux mixture, the number of applications depending upon weather conditions. Ordinarily we spray five or six times, including the above applications. This course of treatment has been adopted here after considerable experience and observation. In order to determine more definitely the limits of necessary treatment for these diseases, certain modifications were made in treating a number of trees during the season of 1901. The season of 1901 was especially favorable to the growth of fungous parasites, and the applications were consequently extended beyond our usual custom. One tree each of Imperial, Lombard and Reine Claude were given only the first two treatments mentioned above—viz., with bluestone on March 13th, and Bordeaux mixture on April 27th. One tree each of Imperial and Lombard were given the first two applications, skipped at the third and fourth applications, but sprayed May 24th, June 7th, July 17th and August 1st with Bordeaux mixture. One tree each of the above varieties were given eight consecutive applications, beginning with the bluestone, while still dormant, and ending with the treatment of August 1st.

But slight difference was shown between the trees that did not receive the third and fourth treatment and those that were given the full number of applications. The results are more marked in case of the trees that were neglected after the third and fourth applications. Especially is this true with respect to conditions of the foliage and general vigor of the tree. While Lombard was able to carry its foliage well into the fall under this condition of neglect, the two unsprayed Imperials, one receiving two applications and the other four, suffered greatly

from leaf diseases and dropped their foliage quite early. At the very end of the growing season, the last week in September, the four trees (unsprayed) of Imperial attempted to put out new foliage, thus further accentuating their weakened condition. The Reine Claude, which received only two applications, suffered greatly also, and was quite bare of foliage before the close of the summer, while the sprayed tree carried a dense foliage late in the season. The untreated trees of the three varieties bore a fair crop of fruit, which was almost as free from brown rot as that of the sprayed trees, but on account of loss of foliage it failed to mature, never reaching over two-thirds normal size, and later shrivelled to such an extent as to render it entirely worthless.

All of the trees which received only the two first applications, with the exception of Lombard, dropped their foliage three to six weeks in advance of the sprayed trees. Furthermore, they made but little wood growth, and failed to mature a crop of bloom buds for the following year. The results the following spring were quite striking; even the Lombards, which received but two applications, and had thus far apparently suffered but little from lack of treatment, showed quite plainly that they were weaker than the other trees. The treated trees of this variety, although carrying a light crop of bloom, set a fair crop of fruit, while the trees which did not receive the later applications were without bloom and fruit.

The season of 1902 was not so favorable as the preceding one to the development of fungous disease, and none of the varieties were sprayed more than the usual number of times. The second and fourth trees of Imperial, first and fourth of Lombard, and the second tree of Reine Claude were again left unsprayed. The results are that both unsprayed Imperials were greatly injured by this neglect, one being practically dead this spring (1903), while the neglected Reine Claude is so much weakened that it will not likely recover. The Lombards do not appear to be greatly injured. All of the sprayed trees of these varieties are in good condition at this time.

It is thus clearly demonstrated by this simple experiment that summer spraying is necessary in this locality in order to protect the foliage on the plum trees of this class.

Spraying for brown rot should begin early in the season and continue until the fruit is quite mature. The bloom, leaves, and often the twigs, are badly attacked by the fungous early in the spring before the fruit is far enough advanced to show the trouble.

#### SUMMARY.

1. Varieties of plums of the *Domestica* class suffer greatly in this locality from attack of brown rot, and are also seriously injured by various leaf diseases.
2. To control brown rot it is necessary to begin

spraying early, else the crop is often destroyed in the blooming stage. The first application should be made during the dormant season. This may consist of bluestone solution or Bordeaux mixture.

3. If the brown rot is to be held in check, it is necessary to spray with Bordeaux mixture at intervals during the entire growing season. The number of applications necessary will depend upon weather conditions.

4. If rot is prevalent when fruit is near maturity, spraying at this time checks the disease to a marked degree. It is also advisable to pick and remove from orchard all diseased fruit.

5. Late spraying is especially advantageous in the control of the leaf diseases, and is necessary with *Domestica* plums if a healthy foliage is to be maintained to the end of the growth period.

#### NOTES ON VARIETIES OF DOMESTICA PLUMS.

*Agen* (*Prune of.*)—This is an old and well-known variety of European origin. The tree is a rather weak grower, although apparently quite hardy. A fair bearer. Season late; ripens latter part of August and first of September. Fruit medium in size, purplish color; flesh greenish, meaty, though tender, and of very good quality. This is one of the best varieties of the prune group that we have tested here. It is seldom attacked by brown rot. Recommended for home use.

*Bovay*.—This well-known variety originated in Belgium. It has not proved profitable on our soil. The tree is fairly vigorous in growth, but lacks hardiness. None of the trees have been productive. Fruit small, but of good quality; quite subject to brown rot. Season late; ripens September 1st. Not recommended for general planting.

*Bradshaw*.—This variety is of American origin. The tree proves to be a rather slow grower and is not altogether hardy, but is fairly productive. Fruit of large size, purple color and quite showy, excellent quality, but subject to rot. Season medium early; ripens last of July. This is one of the very best of our amateur plums, and is highly prized both for eating out of hand and for culinary uses. Strongly recommended for planting in the home orchard, but needs extra care. It is grown to a considerable extent for market in certain favored localities.

*Bunker Hill*.—The origin of this variety is unknown to us. The tree is upright in growth, fairly vigorous and quite hardy; bears good crops of fruit. Season late; ripens last of August. The fruit is a small blue plum, resembling the damsons very closely, but is considerably larger and has flesh of a different character. We recommend this variety as a culinary plum for home use.

*Engelbert, Prince*.—This old variety originated in Belgium. The tree is a rather weak grower and only moderately productive. Fruit below medium

size; flesh meaty, firm and of excellent quality. Season medium; ripens August 1st to 15th. Not recommended for general planting.

*Genii*.—This variety originated in New York State. The tree is a vigorous grower and is quite hardy. Fruit of large size, blue in color, and of good quality. Usually a heavy bearer. This year (1903), when nearly all of the *Domestica* were killed in the bud, *Genii* was uninjured and is now loaded with fruit. Ripens August 15th. We consider this the best general purpose blue plum of the *Domestica* type. Highly recommended for general planting; not very subject to rot.

*German Prune*.—Originated in Germany. Tree a fair grower and hardy, but lacks productiveness; does not equal *Agen* in bearing, but it is a stronger grower. Fruit of fair quality for its class. Season late; ripens September 1st. Nothing to specially commend it.

*Golden Drop, Coe*.—A well-known variety originating in England. The tree is a rather slow grower and lacks in hardiness; trees are quite productive, though the fruit rots badly. Fruit large size, golden yellow, quite showy, and of fairly good quality. Ripens August 15th. This variety is not recommended for general planting.

*Grand Duke*.—Originated in Europe. This is one of the finest desert plums of the *Domestica* class. Tree only moderately vigorous, though hardy; upright in habit and fairly productive. Fruit large size, blue in color, with tender, buttery flesh. Quality excellent. Subject to rot. Season late. Highly recommended for home planting, but needs extra care.

*Imperial Gage*.—Though a strong grower and fairly hardy, this variety has proved itself worthless on our soil. Fruit small and of inferior quality. Season late. Not recommended.

*Italian Prune (Fellenberg)*.—Originated in Europe. This variety is moderately vigorous in growth and is hardy, but seldom fruits abundantly. The fruit is of fine quality for its group. Season late. Second best variety of the prune group tested here.

*Lombard*.—This plum originated in New York. The tree is moderately vigorous in growth, quite hardy, and uniformly a heavy bearer. Fruit medium size, but only fair in quality; rots badly. Season August 15th to 20th. Though this is a very hardy plum and bears neglect much better than many others, it lacks the quality for either an amateur or commercial plum.

*McLaughlin*.—This variety originated in Maine, and is one of the finest desert plums belonging to the green gage group of *Domestica*. However, the tree has never borne more than a light crop here, and, moreover, the fruit often rots badly. Fruit large, roundish, with meaty, tender flesh of excellent flavor. Season early. A good variety for amateur planting.

*Naples*.—This variety is of European origin. The tree is an upright in habit and a vigorous grower. Seems to be quite hardy, also productive. Fruit is below medium size, but is of fine quality, especially for culinary purposes, also good for eating out of hand. This is one of the best varieties for canning. Season medium late. Recommended for general planting.

*Pond*.—Origin, England. Tree an upright and rapid grower; fruit of large size and fine quality for desert purposes, but this variety is a light bearer, and the fruit is so subject to rot that we cannot recommend it even for home planting. Season medium late. It has proved an utter failure with us.

*Quackenbos*.—This is a well-known variety of New York origin. The tree is vigorous, though not a very strong grower, and appears to be hardy; not a heavy bearer. Fruit is of good size and fair quality, but is quite subject to rot. Season late. We do not recommend this variety.

*Reine Claude*.—This old variety is of European origin, and is so widely planted and well known that it needs no description. It is the standard for canning. Fruit below medium size, yellow in color; tender, meaty flesh, of excellent flavor. Uniformly a good bearer. Season late. Succeeds well with us. More subject to brown rot than Yellow Egg.

*Shropshire Damson*.—This variety originated in England. The tree is vigorous and hardy and uniformly a heavy bearer. Fruit rather large, compared with other damsons, and of excellent quality for culinary use. The best of the damsons. Season very late. Recommended for general planting.

*Washington*.—Of New York origin. Tree a good grower and apparently hardy, but has never borne a heavy crop. General type of tree and fruit resembling that of McLaughlin, but fruit is of superior quality for dessert. A large showy plum, flesh tender, melting and of fine flavor. Season medium early. This plum has value for amateur use, but is too shy a bearer for general planting; probably superior to McLaughlin for amateur work. Quite subject to brown rot.

*White Damson*.—This variety has only been grown here since spring of 1900, and has not yet fruited. The trees are good growers and apparently quite hardy.

*Yellow Egg*.—A well-known variety of European origin. Trees vigorous and quite hardy; a good bearer. Does not rot as badly as many of the Domesticas, though none of the varieties are free from this trouble. Fruit above medium, meaty and tender flesh, of good quality. Season medium; ripens August 1st. Though this is not equal in quality to many of the fine dessert plums, yet it is one of the best all-around varieties we have tested. For enli-

nary use and canning, we know of nothing better. Highly recommended for general planting.

#### LIST OF VARIETIES RECOMMENDED.

*Medium Early*.—Bradshaw and Washington.

*Mid-Season*.—Yellow Egg.

*Medium Late*.—Genii and Naples.

*Late*.—Agen, Prune of; Grand Duke, Shropshire and Reine Claude.

WILLIAM B. ALWOOD, *Horticulturist*.

H. L. PRICE, *Assistant Horticulturist*.

#### VIRGINIA STATE HORTICULTURAL SOCIETY.

The next annual meeting of the Virginia State Horticultural Society will be held at Pulaski City, Va., on Wednesday, December 2d, and following day, when, in addition to papers on topics of interest to fruit growers and discussions, there will be an exhibit of fruits, vegetables, flowers and seeds. Diplomas will be given by the Society to the best in each class, to which will be added any premiums that may be offered by individuals or firms, of which due notice will be given. These competitions will be limited to members of the Society, of which the membership fee is \$1. Further particulars as to arrangements for special railroad and hotel rates, etc., will be published next month, or may be obtained from Walter Whately, Secretary and Treasurer, Crozet, Albemarle county, Va.

WALTER WHATELY,  
*Secretary and Treasurer.*

#### Weevil in Beans and Peas.

Will you please tell me how I can protect dry beans and peas from weevils?

*Cumberland Co., N. C.* MRS. G. A. WILRATH.

Put them in a tight box or bin, and place a saucer on the top of the seed and fill it with carbon bisulphide and shut the lid. The fumes from the carbon, which are heavier than air, will descend through the grain and kill everything living therein. Leave closed for 12 hours, and then air. Have no lights about as the carbon bisulphide is very explosive. You can buy the drug at the drug stores. Millers use this to kill weevil and insects in the mills and elevators.—ED.

#### Grass Seed Mixture.

What grasses should I seed with clover to make a better pasture the balance of the summer after the clover has been cut and the sod to be ploughed the following winter?

*Northumberland Co., Va.*

SUBSCRIBER.

Sow orchard grass, tall meadow oat grass, red top and meadow fescue.—ED.

## Live Stock and Dairy.

### MEAT PRODUCTION IN THE SOUTH.

*Editor Southern Planter:*

No one will argue for a moment that we ought not grow all the meat consumed in the southern section of this great country. Meat being the most expensive article used in the feeding of our nation, is there any reason that could be brought forward to prove that we southern farmers should be content as *croppers* only, when the great possibilities of live stock husbandry may be ours for the taking. The only question is, can we grow this millions of dollars worth of meat and in the production of it make for ourselves and our children pleasant, happy homes and surround them with the comforts of life to a greater or less degree? I answer, most emphatically, we can, and at the same time make of our beautiful Southland a land of plenty, covered with green fertile valleys and grass-covered hills, instead of barren hills, galls and washes, as is the state of altogether too much of it at present.

My firm belief is that nowhere in America to-day are there such possibilities as present themselves to us right here in the South Atlantic Coast States. Now, what are some of the reasons why we are not more extensively engaged in this very remunerative and pleasant branch of farm husbandry? I believe that one of the main reasons is that we have been content in the past to allow some one else to do our thinking for us. To the tenant system we are indebted also for much of our barren land. I find very few of the tenant farmers have any desire further than to supply—with the least expenditure of labor—their bare wants. Lack of ambition is, I believe, the greatest calamity that can befall mankind. Ambition moves the world; and it is just as necessary in the farming business as in any other branch of industry. We have been told that we cannot grow grass in this section. I will answer that if we had expended one half the time and money trying to grow grass that we have spent in trying to destroy it we would have grass in plenty. Grass is the first essential in the production of beef, pork or mutton, as pasture is the cheapest and most practical method of feeding all kinds of stock during the spring and fall months. During the dry period of summer the pastures should be supplemented with green food of some kind, corn silage preferred. As winter comes on the stock should be housed in dry, com-

fortable quarters and provided with liberal quantities of all kinds of nourishing food, of which this section can produce an abundance.

After we have the feed, the next thing to be considered is the type of animal we should procure to work up this good feed into profitable meat.

Upon examination we will find the same general conformation in the more profitable individuals of all the meat-producing breeds. The broad, clean-cut head; prominent, bright eye; short nose, wide nostril; short, broad back; full in the heart, well sprung rib, broad hind quarter; deep, thick twists, and, over all, a good, mellow hide. These qualities are what go to make up the profitable meat-producing animal of the twentieth century. We now come to by far the most important factor in the production of high class meat—that is, *the eye of the master*. The Scotch have a saying that “the eye of the master is half the beast,” and it is more than true.

In no business with which the writer is familiar does the master mind behind the business count for so much as in the business of producing high class meat. The thousand and one things that he must know, and must be able to make other people know, makes the head of a first-class live stock business no lazy man's job. A book might be written upon the subject of “What a live stock farmer ought to know,” and still the half would not have been told. Any way, the average farmer won't have to go away from home to find work for his brains.

A few thoughts along the line of general care of stock and I will leave this subject. In the first place, never feed good feed to mean animals, better sell it. Secondly, don't feed mean feed to good stock. Feed good feed to good animals, and feed plenty of it. Don't think for a moment that good blood will take the place of feed, it will not. Our best breeds were brought to their present state of excellence by selection and feed through many generations. And bear in mind that a breed will deteriorate much faster under poor treatment than it will improve with the best of attention.

Every stock farm should be provided with silos, as corn silage is the cheapest carbonaceous food that can be produced. Never feed lie or ticks on any kind of feed, good or bad. Kill all sorts of parasites by dipping or washing the animals. Be friendly with your animals, talk to them, scratch the pigs' back when you feed him. That fine bull loves to

have his tail scratched. Pat the lambs on the head. Some people don't get well enough acquainted with their animals to tell one from the other. They will never make the most successful stockmen. The first-class stockman must be able to see the image of his ideal animal whichever way he may look. Have an idea and work to it.

A. L. FRENCH.

*Rockingham Co., N. C.*

We would suggest to our correspondent that he does not sufficiently emphasize the value of the numerous forage crops of which we can grow a greater variety than any other section of the country as adjuncts to the pasture. Whilst we are getting the grass pastures do not let us wait and lose time. We can carry beef stock all the summer on forage crops and improve them every day whilst doing so. Cow peas, soy beans, sorghum, teocinte, alfalfa and the clovers can be raised so as to provide feed all the time, whilst the corn is growing for the silo for winter feed.—Ed.

## KEEPING PURE BRED CATTLE IN THE SOUTH.

*Editor Southern Planter:*

I wish to give my experience along the line of pure bred cattle feeding, not that it may fill up your valuable paper, but for the especial benefit of all Southern planters, who contemplate cattle raising. This is my third year with imported cattle, and here is what I have to say: If you have never engaged in the raising of improved cattle, don't; echo says don't, until you first have each and every animal from which you wish to begin thoroughly inoculated, for if this important factor is overlooked and ticks get among your herd, just so sure will the last one of your cattle take the Texas fever, and not only get sick, but will die in spite of all the doctors and veterinarians in the world.

Three years ago, out of a bunch of shorthorn grades of one dozen, I lost eight of the number. When I found that the fever was among them they commenced to die by twos and threes per day. The next fall I purchased as fine a looking shorthorn bull of an Ohio party as I thought the earth held, at a cost of \$150, and in less than two months he died of this same tick fever. In January, 1902, I purchased of the same party shorthorn bull No. 2, and of another party a fine-looking Devon bull. In less than six months both these bulls were attacked by tick fever, and both succumbed to the same. Determined not to give up in spite of this discouragement, I last Septem-

ber (1902) visited the Angus herd of Messrs. Wm. M. Watkins & Sons, of Randolph, Va., and there purchased of them a young bull at the price of \$100, and a little later purchased of these same people a three-year-old cow, that dropped in April, 1903, a heifer calf not akin to the young bull. On this same visit I purchased by letter, of W. S. Foster, Esq., of Blacksburg, Va., a fine Red Poll young bull, and all three of these cattle reached me about the same time, in November. To say I was proud of my stock seems to be putting it in too mild a form. In January, 1903, our State Veterinarian came out and inoculated the Red Poll and Angus bull, and in March he inoculated them the second and last time. The Angus cow being heavy in calf the veterinarian did not advise her inoculation. All went well until turning them to pasture first of May. The cow and bulls commenced to have ticks upon them, but they stood up so well I had about flattered myself that even the Angus cow would pull the season through as well as the bulls. This was all of no avail, for on the 27th day of June we noticed, for the first time, that she showed sickness, and refused to eat, and I telegraphed the veterinarian of the cow's sickness, but he had other engagements, and could not come, but sent word as to treatment, and on July 1st she, too, "handed in her cheeks." Inoculation has saved the bulls, and they are both now as fine looking specimens of health and growth as any cattle North or West. They have been all summer and are now literally loaded with ticks. The Angus bull, my herdsman said last evening, had more ticks upon him than any cow he ever saw. These bulls are now as fully tick proof as if born in the tickiest portion of any tick country in the world. They are open to inspection. Yes: I would be glad for any and every one who wishes to know if the pure bred cattle business can be made a success in a tick district, to come and see these bulls. The little motherless Angus heifer, while she has not, under the circumstances, made the desired progress, yet is growing some, and we feel now that her safety as to being raised to cowhood is assured. My experience as to tick fever has cost me not less than \$1,500. Your readers get this much worth for the reading.

*Halifax Co., N. C.*

C. A. WILLIAMS.

If only Southern farmers would take note of what we have written on this subject of Texas fever in the past few years they could save themselves these expensive experiments.—Ed.

When corresponding with advertisers, kindly mention the *Southern Planter*.





### MANOR HERCULES.

Filston Farm, at Glencoe, near Baltimore, met a severe loss in the death of their champion young boar, Manor Hercules, which they were importing from England on the White Star ship, Cevic. Manor Hercules was bought from the Danesfield estate, at Marlow, and had made a triumphant tour of the English shows during the summer, winding up by winning the championship of the Royal on June 22d. Mr. Colin Campbell writes from England that not for many years had the Royal shown so fine a type as this young boar.

Manor Hercules died from the effects of the sea voyage the day before reaching port. He was sired by Links Essau out of Floradon Baroness, and had he lived to be shown in this country, as he would have been had he reached here safely, there is little doubt that he would have repeated his English successes. Manor Hercules would have been a notable addition to the Filston herd, which includes already such famous imported prize winners as Manor Faithful, Her Majesty, and many other Berkshires of distinguished lineage.

### WHAT CONSTITUTES A PERFECT BERKSHIRE.

*Editor Southern Planter:*

Short in the legs, back broad, straight and evenly fleshed, ribs well developed, rump and twist good, hams well down to hock, breast and neck full, no creases in neck or sides; ears clean, full and of small size, standing erect and well placed; face broad and dished, wide between the eyes and ears; nose short

and meaty; hair fine and thin, though many prefer heavy coats, slightly arched back, that will never come down, four white feet, a blaze in the face, and white tip at end of tail, a gentle disposition. The Englishman wants a stocky, five to six hundred pound boar, and "rangy" five to seven hundred pound sows, but pig fashions may have changed there of late.

*Rockbridge Co., Va.*

T. W. S. WHITE.

### FEEDING HOGS.

Whey, skim milk and buttermilk are of great value as part of the ration for fattening swine. There is practically no difference in the feeding value of skim milk or buttermilk when each is fed in prime condition. They produce rapid and economical gains and a fine quality of bacon. The average of many experiments show that 475 pounds of skim milk are equal in feeding value to 100 pounds corn meal.

Pigs will maintain their weight on pasture without making any appreciable gain, if a half ration of grain is fed. This grain will be utilized entirely in increasing weight. The best pasture plant for pigs is alfalfa, where it will grow, while red clover, white clover, blue grass and rape are good pastures in about the order named. A pasture to be satisfactory for swine must be short and tender. Experiments show that one acre of rape or other suitable pasture is equivalent to 2,600 pounds grain when fed the pigs.

At odd times give the farm a general cleaning up, and burn litter, or use it for mulching shrubby and fruit that need protection.

## The Poultry Yard.

### KILLING HAWKS.

*Editor Southern Planter:*

Will you please allow me space in your valuable paper to suggest to all farmers who are bothered by hawks to try my plan?

Buy a steel trap that when set has no spring extending beyond clamps, so that when the hawk lights he will be sure to spring it. These can be had at any good country store, or at any hardware house. Take the trap and nail it on a pole through a hole that will be found convenient for the purpose. The pole should be about fifteen feet long, and be erected in a secluded place, a meadow is generally best, not too near the house, with the trap firmly nailed on end of pole. The traps should always be kept greased, so as to be sure to spring at a slight touch.

Early in February, 1902, I erected a pole in a secluded low field on my father's place. I caught a large hawk the first day the trap was set. I continued to catch them, and a little later on I set another trap in a small meadow, and on these two traps I have caught forty hawks.

I would strongly advise all farmers who are troubled with hawks to try this method of destroying them. Besides saving much money in hens and chickens, many counties in the State pay bounty for the scalps of hawks. The traps generally cost about twenty cents each.

JOSEPH J. TABB.

Gloucester Co., Va.

### GAPES IN CHICKENS.

*Editor Southern Planter:*

The belief I find is generally accepted that gapes are caused by vermin or by being kept on grounds where chickens infected with gapes have been previously cooped. My experience fails utterly to substantiate either of these theories. I find that they come from breeding from chickens infected with the gap bacilli, or, in other words, they are inherited from the parent bird. This is proven to my entire satisfaction since coming to my present home, in the month of May, 1903. I brought with me my chickens from my former place of residence, and among which I had never had a single case of gapes. They were all pure bred White Wonders and Buff Leghorns; had none of any color except white and buff. A friend kindly sent us a grey hen and a newly hatched brood, for which I was very thankful, but which has proven to be a very costly gift. Gapes soon appeared in this flock of chickens, most of them

survived, and I had them used on our table, but that grey hen, much to my regret, was kept over another season, and most of her progeny (easily told by the color) had gapes, and now we have them regularly (but not as yet to much extent) amongst our chickens. This settles to my entire satisfaction the cause of gapes, and leaves but one practical way for their eradication—that is, to dispose of your present flock and replenish from one that is not troubled with this disease. Since my experience above stated, I remember on one occasion my parents disposed of their whole flock because they had gapes, and started anew with birds that had not been troubled in this way.

Fauquier Co., Va.

R.

### VERMIN PROOF ROOSTS.

*Editor Southern Planter:*

My plan for making the roosts for my poultry to avoid having them annoyed with mites or lice is as follows: I have all supports for roosts, and the roosts themselves, of dressed lumber; no holes or cracks in them where mites can hide or breed, then swing the supports for roosts to roof by wires, so that they will not touch the house anywhere. Lay the roosts on these supports and keep them in place by nails driven each side of them, so they can be readily removed if desired. I have been using roosts thus constructed for the last twenty years, and have never been troubled with mites or lice in my hen house during the whole time, and, in fact, very little with any kind of vermin. The roosts should be painted occasionally with coal oil, in which a small quantity of Lee's Lice Killer should be used, to keep down the larger vermin.

R.

Fauquier Co., Va.

### KILLING HAWKS.

*Editor Southern Planter:*

I notice in your issue of August a request for information about killing hawks with strychnine. I think if H. Denhurst will try my plan he will get rid of the hawks, and not hurt his hens. I have always found it satisfactory. Get from a drug store some fluid extract of nux vomica, and wet the feathers on the top of the heads. I have not used it on full grown hens, but always save my chickens in that way. For little chickens pour some of the extract into a little dish, just dip in the finger and touch the chickens just back of the top of the head. Of course, more would be needed for a hen.

Surry Co., Va.

MRS. S. MATTHEWS.

## The Horse.

### NOTES.

Richmond's third annual Horse Show promises to be a grand affair, and Secretary W. O. Warthen and his associates are enthused over the bright prospect ahead. The show will take place during the week of October 12th to 17th, and details are fast being completed for the greatest event of the kind ever seen in this southern country. Last fall the big amphitheatre at Reservoir Park, where the show was held, was taxed to provide accommodations, but now with increased facilities the management hope to handle with ease the largely increased attendance that is expected. Already every box has been taken and a large number of the best seats have been sold, which is ample evidence of the great popularity of the Richmond Horse Show. The Marine Band, with its fifty players from Washington, will furnish music. Concerts will be given daily by this splendid band from 11 A. M. to 1 P. M., when the horses will be paraded, and this of itself will prove one of the most popular features of the show. Performances will begin at 8:30 each night throughout the week, while in addition a matinee will be given on Saturday afternoon. Over \$8,000 will be offered in premiums, and it is safe to predict that the greatest lot of horses ever exhibited in the South will compete for the rich prizes to be distributed in the different classes.

The following gentlemen, who are widely known and regarded as experts in that line, will serve as judges: Charles P. Williams, of Stonington, Conn.; Marian Story, New York; Edward Browning, Philadelphia; John R. Valentine, Bryn Mawr, Pa.; Tompkins McIlvaine, New York; Charles Wheeler, Philadelphia; Sidney W. Stillwell, Rutland, Vt.; John Kerr Branch, Richmond.

The grounds and track of the Roanoke Fair Association, at Roanoke, Va., have been gotten in shape, and necessary buildings are in course of erection for an exhibition there this fall. October 21st to 23d, inclusive, are the dates selected. The leading features include an agricultural and stock exhibit, combined with races for harness horses and runners. The grounds of the association are attractive in appearance and located right near town, being easily reached by electric cars and otherwise, while the half-mile track has been constructed with great care and is looked upon as both safe and fast. Leading citizens and business men are backing the enterprise and are confident of a successful issue.

The list of officers follows: President, James P. Woods; Vice-President, Ed. L. Stone; Treasurer, Robert H. Angell; Secretary, W. L. Andrews. Board

of Directors—J. Allen Watts, S. S. Brooks, Louis Scholz, H. N. Dyer, Henry Scholz, Arthur L. Seibert, W. C. Stephenson, S. H. Heironimus, J. H. Wingate, John Rose, S. Simon, S. P. Seifert, H. E. Jones and Frank Read.

With handsomely fitted up offices on Broadway, New York, and as manager of a big mercantile concern, James F. Scott, who figured prominently in the horse world for some years, is again riding on the wave of prosperity after various ups and downs. He was widely known during 1894 and 1895 as managing partner of the firm of Holt & Scott, Graham, N. C. owners of the famous pacer, John R. Gentry, with M. E. McHenry as trainer and driver; later as the head of Knowlton Farm, home of Ashland Wilkes, Lexington, Ky., and afterwards as manager of Griswold Lodge Farm, Great Barrington, Mass. Mr. Scott has his residence in New York, but the old homestead at Franklinton, N. C., is kept up and late improvements include a big barn for the horses.

The richly-bred 2-year-old colt, Pelby, by Allerton, 2:09 1-4, dam Bon Mot, by Baron Wilkes, was recently purchased of John Donovan, St. Joseph, Mo., and after being developed it is the intention to place him in the stud at Franklinton, along with a choice band of breed mares.

Mr. Harry C. Beattie, of the Bloomingdale Farm, this city, has sold to General William T. Townes the well-known mare, Amulet, a chestnut, foaled 1888 by King Bolt, dam Feliptic, imp. Eclipse, second dam the famous Nina, by Boston. General Townes is associated with the American Tobacco Company, with headquarters in New York, but his stud of thoroughbreds is kept near Charlottesville, Va., where Amulet joins the richly-bred band of brood mares. General Townes has been leisurely collecting his stud for several years past, and each season has mated his mares with prominent sires in Kentucky and Virginia.

The big bay stallion, Russell Rex, by Mambrino Russell, dam Fay Boyd, by Aleyone, owned by E. C. Leach, Newport News, Va., after closing his stud season, was placed in training and is being raced through the Maryland and Virginia circuit of fairs and race meeting. In his work he trotted trials close to 2:20 and could show quarters at a faster rate of speed. Though a mastodon in size, being 16:3 in height, and weighing close to 1,400 pounds, this son of Mambrino Russell is of symmetrical proportions,

and one of the handsomest stallions that ever scored for the word in a race. Russell Rex figured as a blue ribbon winner in the roadster class at the Richmond Horse Show, both in 1901 and 1902. He was bred by ex-Postmaster A. H. Lindsay, of Portsmouth, Va., who owned the dam, Fay Boyd, a daughter of Aleyone and Annie Boyd, by Belmont.

Secretary B. F. Toy, of the Hampton Roads Driving Park Association, Newport News, Va., has issued the speed programme of a one-day race meeting to be held there on September 7th, when purses will be offered for trotters, pacers and runners. The classes for harness horses include a free-for-all trot and pace—one for 3-minute trotters and another for 2:30 trotters. The monthly and semi-monthly matinees and race meetings of the Hampton Roads Driving Park Association have furnished good sport and entertainment for Newport News and Hampton people this season. The forthcoming meeting is fixed to take place on Labor Day—a general holiday—and the attendance is likely to be large.

Mr. Harry C. Beattie, owner, breeder, horse show patron and also widely known as Master of hounds of the Deep Run Hunt Club, and vice-president of the Richmond Horse Show Association, has a big stable of hunters, jumpers and high-stepping harness horses quartered at Bloomingdale Farm. The prize-winning high jumper, Buck, a chestnut son of Rover, by Abdel Kader, is probably the best known member of the collection: but there are some younger horses likely to gain distinction with age and experience in the show ring. The latter division includes Blizzard, a 4-year-old son of the "iron horse," Blitzen, who is highly regarded by Mr. Beattie. Buck, Blizzard and one or two others in the Beattie stable were winners at the Atlantic City Horse Show.

One of the handsomest 3-year-olds in Virginia is the bay colt by the saddle stallion, Shadeland Denmark, out of Goldie H., thoroughbred daughter of Milner and Vrenetta, by Voltiger, bred and owned by Mr. William Townes, who has a fine old homestead near Cuscowilla, in Mecklenburg county. Goldie M., the dam of this colt, has been owned by Mr. Townes for some years past. She is a large, handsome bay mare, full 16 hands high and her produce take after her. At different times the daughter of Milner has been mated with the thoroughbred sires, imp. The Jacobite; Garrick, the son of Lexington; Pardon, Eric and Dan Spanker. Goldie M. was formerly in the stud of the late Judge Robert W. Hughes.

The bay mare, Faustena, thoroughbred daughter

of Eolus and War Lass, by War Dance, formerly owned by William Rueger, has been purchased by him from W. K. Mathews for use as a brood mare. By the trotting sire, Robert Ransom, Mr. Rueger owns a couple of nice young mares out of Faustena, and he has bred the daughter of Eolus to Langlane, thoroughbred son of Longstreet, by Longfellow. Longlane is in the stud of Edmund Winston, Hanover Courthouse, Va., and his dam was Highland Lassie, by imported Highlander, second dam Algeria, by Abdel Kader, and third dam the famous Nina, by Boston. Algeria was bred by the late Major Thomas Doswell, Bullfield stud, Hanover county, where Nina passed most of her life and dropped her long list of progeny.

James A. Graham, who, until recently, owned Gould Hill Farm, near Hanover Courthouse, Va., and while there bred such good ones as Virginia Jim, 2:12 1-2, and others, was here during the past week on a flying trip from the West. Mr. Graham had Leewood, the sire of Virginia Jim, and some choicebred brood mares at Gould Hill, but disposed of them a few years ago. He has now, however, re-entered the horse business and has a big stable of trotters and pacers in training at Monmouth, Ill. During his residence in Virginia Mr. Graham made numbers of friends who will wish him all success in the new venture. He is a practical horseman, and with it, one of the best informed students of blood lines and pedigrees in the country.

The Virginia-bred trotter, Ida Gray, bay mare, foaled 1897, by Bursar, 2:17 1-4, dam Maud, by Walker Morrill, made a good showing at Brighton Beach, N. Y., during the recent trotting meeting there by winning the second heat of the 2:18 trot and reducing her record from 2:19 1-4 to 2:13 1-4. In the summary Baron Dillon stood for first money and Ida Gray came second. She was bred by Smith Walters, of Onancock. Bursar, the dead son of Stranger, who sired Ida Gray, was not only richly bred, but a trotter and race horse as well. He left a number of his get on the Eastern Shore of Virginia, and his blood is likely to breed on for succeeding generations.

Captain Edward R. Baird, whose farm is near Occupacia, Essex county, Va., has some promising young horses, owned and bred by himself, and sired by Judge Morrow, thoroughbred son of Vagabond and Moonlight.

Captain Baird's collection includes a pair of young geldings, full brothers, 4 and 5, by Judge Morrow, dam a trotting mare that he thinks highly of, and later may have them fitted up for the show ring.

BROAD ROCK.

## Miscellaneous.

### CLIMATIC FACTS, FIGURES AND FEATURES RELATING TO THE MIDDLE ATLANTIC SEABOARD.

*Editor Southern Planter:*

The one warm day for the summer of 1903 was 96, on July 3d. The warmest day in August so far (18th instant) is 90. July gave us only four inches of rain, but it was nicely distributed throughout the month in eight showers. Rain fell on the 4th, 6th, 7th, 13th, 14th, 20th, 23d, and 31st: seven days being the longest time between showers. With a heavy dew at night, and four inches of rain well distributed, we manage to get along very well, although the average rainfall for July for the past thirty-three years has been 5.87 inches.

The greatest rainfall for July ever recorded was 10.69 inches, in 1889; the least ever recorded was 2.02 inches, in 1878. The average temperature for July, 1903, was 79, which is exactly the average for July for past thirty-three years.

The rainfall for first half of August is a little less than three inches. The average rainfall for August for past thirty-three years has been 5.82 inches. The greatest rainfall for August was in 1875, when 10.37 inches fell; the smallest rainfall for August was 1.74 inches.

The average rainfall for July and August combined for past thirty-three years has been 11.69 inches per year, and the average number of rains for the two months twenty. Just think of nearly twelve inches of rain falling in twenty showers during sixty days in midsummer, averaging one shower for each three days.

More rain falls in July and August (two months) than in December, January and February (three months). That is the kind of a rainfall to have—have it when you need it, and can use it to best advantage.

The average rainfall for December for the past thirty-three years is 3.45 inches; for January, 3.32 inches, and for February, 3.80 inches, which equals 10.57 inches for the three winter months, and this is 1.12 inches less than for the two months of July and August.

Plenty of these facts, figures and features are furnished by the Government, showing the advantages of a mild climate and a liberal and well distributed rainfall.

Think of timothy hay selling here at twenty-one

dollars per ton retail, and clover at seventeen dollars per ton, and such good soil as we have, and such good growing weather for hay. It is a fact, that hay is quoted in our markets to-day (18th August) as follows:

No. 1 Timothy, \$20 to \$21 per ton.

No. 1 Mixed, \$19 per ton.

No. 2 Mixed, \$18 per ton.

Clover, \$17 per ton.

And thousands of acres of good hay lands here lying idle. This condition of things pleads strongly for immigration. The soil here, climate here, markets here, but the hay men are not here.

The market gardeners are here as good as can be found anywhere, but the all-round farmer is not here. "The all-wool-and-yard-wide-hay-seeded and horny handed" stock and hay farmer is not here. Therefore our surplus money goes to the West and Northwest for hay, pork, beef, butter, cheese, etc., which soil products should all be made right here in Eastern Virginia, near the sea. Right here on this Middle Atlantic seaboard.

One would think, that with the facts, figures and features furnished by our Boards of Trade, always before our people, showing our great purchases of the ordinary farm staples from the far West, in connection with our surplus lands lying idle, and with the splendid advice and instruction given them, in each and every issue of the *PLANTER*, one would think our people would, could, or should, wake up to the necessity of doing something besides plodding along in the peanut and tobacco ruts, made by their grandfathers. But we fear they are "wedded to their idols"—peanuts and tobacco.

We'll have to "let them alone" and turn hopefully to the East, North and West for general farmers to utilize our good lands lying idle, and raise thereon the crops we now purchase outside the State.

Norfolk, Va.

A. JEFFERS.

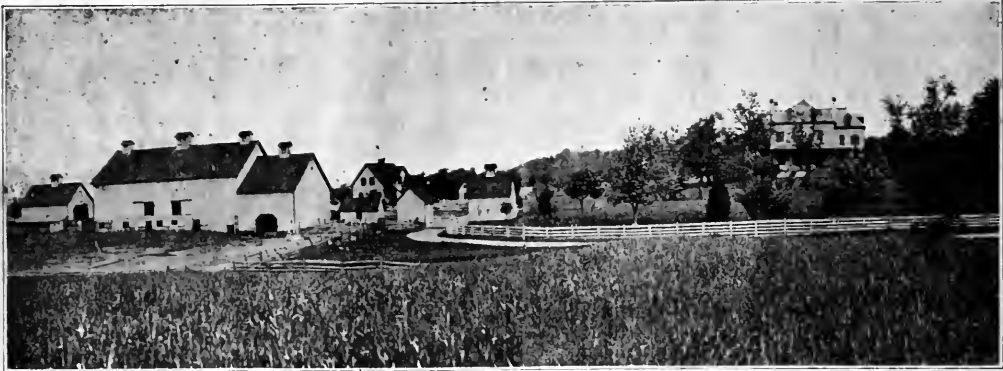
### NO HAWKS.

*Editor Southern Planter:*

To kill all the hawks, take one or two broods of chickens and mix strychnine with enough grease to stick and grease the tops of the heads of the chickens, and a little on the top of the back of the neck. Turn these out and let the hawks catch them. Keep the rest of hens and chickens up one or two days. There will be no more trouble with hawks.

Campbell Co., Va.

W. H. MATTOX.



### VIRGINIA FARMS.

#### *Editor Southern Planter:*

Having been a reader of your journal for a number of years, I have been impressed with the fact that very little has ever been written to the *PLANTER* from this section of Virginia, and from the nature of the enquiries I have had for farms in answer to my advertisement in your journal, and the multiplicity of questions asked, I am going to ask the privilege of replying to a great many of these questions by giving a short description of Fairfax county in the *PLANTER*. If one will consult the map, it will be seen that Fairfax county is one of the border counties, lying along the south side of the Potomac river, and very near the District of Columbia. It has a population of about 20,000, and enjoys the comfort of being out of debt, consequently has a low rate of taxation, about \$1.10 on the \$100. It has a great variety of soils, adapted to all kinds and classes of farming, such as trucking, fruit and berries. General farming, hogs, cattle and horses and dairying.

Drainville and Centreville districts lie in the northern edge of the county, and join Loudoun county. The soil of these districts is generally a chocolate clay and loam, and has a stiff clay sub-soil, and generally underlaid with a kind of rotten limestone; it is exactly the same class of soil found in Montgomery and Frederick counties, Md., and cannot be excelled for corn, wheat, oats and timothy and clover. A great many of the farmers here average 75 bushels of corn per acre and two tons of hay. As a rule, the farmers who work are prosperous, and have nice homes. Good homes can be bought here ranging in prices from \$12.50 to \$50 per acre, and the elevation is from four to five hundred feet above the sea level.

I am asked why the same class of land is so much cheaper in Virginia than it is in Maryland. This is

true, and is due to the fact that while the natural quality of the soil is about the same, the Maryland land has been farmed better, and is in a higher state of improvement as a whole. The Maryland side of the Potomac river has enjoyed advantages of the city markets that the Virginia side did not. It has only been a few years since the bridge across the river from the Virginia side into Washington was made a free bridge, and it was during the last session of Congress that the electric car lines were granted the right to cross this bridge from Virginia into Washington; now we have three (3) separate corporations building and operating electric roads in Fairfax county, and we hope by this fall to see these roads all crossing the bridge into the city, so you can see that under these circumstances Virginia lands have not been so much in demand as they should have been, considering their proximity to the city. Before the civil war the Virginia lands here were owned in large estates, say from 500 to 1,500 acres in an estate, and worked by slaves, and when the war was ended some of these large estates were left without labor or money to operate them, and if any of the sons of these large freeholders were fortunate enough to return from the war, they had not been taught and had no practical experience in farming, and the result was these large estates (which, as a rule, had been stripped of everything by the armies of both sides) were left to grow up in timber, or to be farmed by renters, and being situated so near a good market, naturally these tenants hauled all grain, hay, etc., to market, and thereby robbed the land of its living, by not feeding it at home. After this condition of affairs had lasted for fifteen to twenty years men from North and other sections of the country came here and bought land cheap, and began improving it by the method of dairying and stock raising, and these improved lands will equal any in the State in the production of grain and hay, and I believe I speak correctly when I say that Fairfax and Loudoun counties are to-day pro-

ducing more milk, beef, pork and horses than any other two counties in the State of the same size. During the year beginning June 2d, 1902, and ending June 15, 1903, the records of the clerk's office show that 485 deeds were recorded for the transfer of real estate in Fairfax county, and a majority of the purchasers are from other counties in the State, such as Wythe, Pulaski, Tazewell, Highland, Rockbridge, Augusta, Rockingham, Page, Clarke and Loudoun counties. Farmers are selling their lands in these counties for good prices, and coming here and buying equally as productive lands for less money, and getting the advantages of better prices for their produce, and with the probability of a rapid advance in the value of these lands each year. We enjoy the best of railroad accommodation; the Bluemont division of the Southern Railroad gives us ten local passenger trains a day, and in the very near future we expect to be hauling a great deal of our farm products into Washington and Baltimore on the electric railroads. Our county highways are nearly all level, and usually good, and under our new road law, and the "good roads spirit," among our people, we expect soon to have them very greatly improved. When one travels over this section and sees the miles of trenches and breastworks dug and cast up by those who wore the "blue and gray," it serves to teach us (who were too young to participate in those battles) something of the enormity of the struggle, and we can give thanks to the God of our fathers that our country is at peace, and that the children of the North and the South are living here together in peace and unity, hoping that the awfulness of that struggle may never be repeated.

With this I hand you a picture of a Fairfax farm buildings, which, I trust, will serve to make an impression upon some of your readers, as to what Fairfax has. This farm has 300 acres of highly improved land, and will harvest this year something like two tons of hay per acre on seventy acres. Pastures 40 cows and 10 horses, 75 acres in corn and 20 acres in wheat. Our wheat crop is not well filled this year, but corn promises to be fine. I have had several inquiries as to the best method of applying lime. I will give the experience of some of the best of our farmers on this subject next month.

Fauquier Co., Va.

W. E. MILLER.

### PIGS ON RAPE.

On the experimental farm, in one instance, says the *Farmer's Advocate* of London, Ont., six pigs were pastured from August 14th till snow of 1900 on three-sixteenths of an acre of rape. To produce 100 pounds of pork only 269 pounds of meal was required in addition to the rape. The average amount of meal required for 100 pounds of pork is 425 pounds. The use of rape, therefore, saved 156 pounds of meal on

each 100 pounds of pork produced, or about 1,210 pounds of meal saved by three-sixteenths of an acre of rape. All pig weights mentioned are live weight. Many other lots have been fed similarly with similar results. In 1902 sixty pigs were fed on an acre and a half. In addition to the rape pasture about 500 pounds of meal was required for each pig from weaning time to an average of 185 pounds live weight in October or November.

### VIRGINIA AS A HOME.

*Editor Southern Planter:*

Nothing has tended so much to the hindrance of Virginia progress, since her new dispensation or emancipation, than outside misconception of her social status and the diversity of the topography from the breaking of the ocean waves to the crests of the Alleghany mountains. Many English and Northern men have stepped on the trains at Virginia depots who, if they had been content with a quiet, economical country home, and a safe investment in interest-bearing securities, would have left a posterity attached to the soil. The whole, or the greater part of the trouble was that they would farm; would farm under conditions in which the man to the manor born saw failure before himself, then what hope for the greenhorn—a hope vanished with his capital. He thought he could succeed where all else failed. Of course there are exceptions, alas how few! to prove the rule.

Had Virginia been allowed to explain, or rather had the newcomer been open to receive explanation, she would have pointed out the suitability of her Tidewater districts for trucking; of the Piedmont for fruit, and the Valley and mountains at its back for grazing—i. e., the pre-eminence of each of the sections for those prominent enterprises—Pulaski wishes to wager on the weight of a lamb—but will it bet on the size of a fish or water melon? Not but that lambs, melons and fish for that matter can be raised all over Virginia, still to excel they have their sectional partialities. Possibilities are one thing, but well recognized accreditments are safer ground.

Piedmont Virginia is becoming known as pre-eminently a home for those who insist upon as favorable a climate as can be all round got in the Northern Hemisphere of this orb; desire cultured society, and whilst interesting themselves in a country home, look upon farming as an occupation, though not one to be allowed to grow into an anxiety. There are no politics such as drive multi-millionaires to seek peace in Europe; they being in Virginia reduced to mere family squabbles. The lavish and the economic can each comply with their tastes, enjoying the peaceful-

ness of a well-ordered community without its cut and dried feeling, seeing that Virginia offers a field for the pleasure of metamorphosing.

Those who wish to invest in the soil, and are willing and able to hold the plow and milk the cow, will find a much more congenial state of circumstances than twenty-five or thirty years ago in the mixed agriculture districts. White labor is predominating, so there is a congeniality which was lacking. Traditions draw a smile, and if the new comer is wise in his generation he will give more heed to future prospect than expectation founded on past results; for insects, crossing oceans, continents and investigating islands, it would be strange indeed if they shunned the bright lands of fair Virginia. So he who reaps must not only, these times, sow, but fight, if not against the aggrieved savage or wild beast, against the more insidious enemy, with consolation, however, that the whole army of agricultural martyrs are in the fight.

The best and truest point to get a view of modern Virginia is not from statistics, but at local horse shows, where a well dressed, orderly, largely predominating Anglo-Saxon crowd, drawing its support directly from the soil, and not yet thickened by manufacture, is to be encountered. Why, Virginia's quite a pretty country, with its red rolling hills in their many tints, exclaimed an English lady, I expected to find America agriculturally a network of ugly, flat sections, but Virginia farms would make lovely parks.

W. M.

*Albemarle Co., Va.*

### THE POLAND CHINA HOG.

*Editor Southern Planter:*

There are so few genuine Poland China hogs in the South that the Southern farmer has never been really awakened to his merit as a money maker. The Poland China is undoubtedly the easiest hog to fatten that we have, and consequently the most profitable. In the West they have long since earned for themselves the title of mortgage lifter, and wherever else properly bred and cared for have proven their right to this title. They are good for lard, and equally as good for bacon. To those who have thoroughly tested the bacon of the different breeds of pure bred swine, the fact must be evident that the bacon of the Poland China hog is excelled by none. The Poland China has no superior as a grazer, and at the same time he is quiet; not restless and roughish like some. His general appearance indicates docility. His ears flap, and do not stand erect like those of a jackass, ever on the lookout for a hole to get through

or low places to get over. The Poland China's whole disposition seems to be bent on finding something to eat, and then a place to lie down, snooze and make money for his owner. In my opinion, the South need never hope to furnish its own meat and lard supply until more attention is given to this great breed of swine. If properly bred and cared for it will do for the Southern farmer what it has done for the Western farmer—that is, raise his mortgages and make him contented with his calling; for where there is a big profit there is generally contentment.

*Albemarle Co., Va.*

X. Y. Z.

### COMBINATION AUCTION SALE.

FOR THE DISTRIBUTION OF BREEDING AND OTHER CLASSES OF ANIMALS.

*Editor Southern Planter:*

It is recognized by all breeders of live stock that in order to produce good animals we must use only good sires of the proper type and bred in proper lines. At certain seasons of the year the breeder and farmer is on the lookout for the pure bred stock for breeding purposes, and naturally prefers to buy in a market where he has a large and varied choice without huckstering, the seller also benefitting by getting the full value of his animals as determined by public competition. The combination sale we held July 30th we hope to follow up periodically, and though we looked for no great success at starting, yet at the recent sale nine months' Polled Angus Bulls made up to \$90, 2 months' Berkshire pigs to \$9, and Hampshire Down rams from \$25 for two shear sheep to \$7.50 for lambs. We had calls for Herefords and Shropshires, which, on account of the heat of the weather, though entered, were not on hand.

*Orange Co., Va.*

MACON & Co.

We should like to see more of these public sales in the various sections of the South. They would help farmers and stock breeders.—ED.

### GOVERNMENT WHITEWASH.

Slack half a bushel of good, fresh lime in boiling water, keeping it covered during the process. Strain it and add a peck of salt dissolved in water, three pounds of ground rice boiled to a thin paste, half a pound of powdered Spanish whiting and a pound of clear glue dissolved in warm water. Mix these well together, and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and put on as hot as possible. This wash is nearly as durable as paint on wood or stone in the open air.





We are Going to  
Sell You a **CHATHAM FANNING MILL**  
On 60 Days' Approval

to convince you of its superiority over any fanning mill you ever heard of. If that isn't long enough time we will take you **Three Years Note**. **WE KNOW** what the Chatham will do for you, how much money it will make, how much it will save you, how strong it is, how easily it runs and the perfect work it accomplishes. It will clean and grade your seed grain, will enable you to sell your clean grain at the top price, will save the timothy seed from the yearly crop of grain, save the screenings for feed for your stock. **The Chatham** will clean and grade any kind of seed or grain. The new bagging attachment saves the work of one man. We have already sold **OVER** one hundred thousand (100,000) of them in every part of the U. S. and Canada, and are not going to stop until we place one in the hands of every farmer, stock raiser and seedman in North America. We want you to send us your name and address. We will then send you the most instructive book, free,

"How to Make Dollars Out of Wind."

It tells ways of making easy money that you never thought of. We will also outline our **THREE YEARS' Plan** of selling you a Chatham. It will surprise you by its liberality and convince you that we believe in our mill. It gives you a chance to let the mill pay you before you pay us for the mill.

Here are some of the things others have done with the help of the **Chatham Fanning Mill**:

Fred Dietz, Ransomville, N. Y., got \$108 cash for timothy seed out of his wheat, and didn't know there was any there.

O. E. Perkins, Hallsport, N. Y., got \$50 more for 100 bushels of wheat than his neighbor did. Fortine used the Chatham; neighbor didn't.

D. M. Bethune, Bethune, S. C., obtains \$1 extra on every 100 pounds of rice by using the Chatham.

G. Woodring, So. Charleston, O., secured \$15 worth of grass seed from cleaning up the refuse in barn doors and mangers.

Read the letter from the Superintendent of the High Shoals Manufacturing Company.

**Now write us and get that free book and our proposition to make you money.** Address

**M. CAMPBELL FANNING MILL CO., Ltd.,** Manufacturers of the Chatham Fanning Mill 116 Wesson Avenue, Detroit, Mich.

OFFICE OF  
**"HIGH SHOALS MANUFACTURING COMPANY,"**  
MADE IN AMERICA BY

YARNS, SHIRTINGS, CHECKS, STRIPES, ETC.

WHOLESALE AND EXPORT DEPOT,  
CHATHAM, GA.

Telegraph Headquarters Co.,  
Agents for Chatham Fanning Mills, *High Shoals, Ga.*, May 25th, 1903  
Athens, Ga..

Gentlemen:

The Chatham Fanning Mill bought of you is by far a more valuable machine than I first thought. As you know I did not get this machine until after I had begun to plant my cotton. When the Fanning Mill arrived, in order to test its merits, I fanned out a lot of the remainder of the seed of my cotton and to my surprise on looking over the firm I found that the seed damaged before planting came up a great deal better. In fact one would not believe that the Fanning Mill would make such a difference. In addition to the stand of cotton I saved at least one-third of the seed. I do not think that I can afford to do without this machine even at double the price I paid for it. I have had several of my neighbors to fan their seed and they all speak in the highest of terms as to how they can see at present. I have only used it on cotton seed and fanning peas, and as stated above I would not think of doing without it at even twice the cost.

Yours respectfully,  
Diet. to V. G.

A. J. Baxter, Supt.

A CHERFUL VIEW.

Two men who had been sitting together in the seat near the door of a railway car became engaged in an animated controversy, and their loud voices attracted the attention of all the other passengers. Suddenly one of them rose, and said, "Ladies and gentlemen, I appeal to you to decide a disputed point. My friend here insists that not more than three people out of every five believe they have souls. I take a more cheerful view of humanity than that. Will all of you who believe you have souls raise your right hands?"

Every hand went up.

"Thank you," he said, with a smile. Keep them up just a minute. Now will all of you who believe in a hereafter raise your left hands also?"

"Thank you," he said. "Now, while all of you have your hands raised," he continued, drawing a pair of revolvers, and leveling them, "my friend here will relieve you of whatever valuable articles you may have."—Implement Trade Journal.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

SUNNY HOME HERD OF

**ABERDEEN-ANGUS CATTLE.**

Baron Rosebo, 57666, by the great Gay Blackbird, dam by Eulisses Eric, 2d prize yearling at Columbian Exposition, 1893, heads the herd. Pedigree means only the tracing of good or bad qualities through several generations. The animals comprising this herd are direct descendants of the greatest prize-winners of the breed for the past twenty-five years. Does this mean anything to you, who are in need of an animal of this the **GREAT-EST BEEF BREED?** If so, come and see the best lot of calves we ever bred, or write.

**A. L. FRENCH, Proprietor, R. F. D. 2, Byrdville, Va.**

(Note change of P. O. address),

Depot and shipping point, Fitzgerald, N. C., on D. & W. R'y, 24 miles southwest of Danville, Va.

VIRGINIA DIVISION.

**Farmers Mutual Benefit Association**

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address,

**CHAS. N. FRIEND, General Agent,  
CHESTER, VIRGINIA.**

MENTION THIS JOURNAL.

**SWEET POTATOES.**

A pamphlet, "Cultivation and Storage of Sweet Potatoes," gives, as is believed, a more practical plan for keeping potatoes than any other that has heretofore been placed before the people. Important and valuable information that is not contained in any other known publication is here given. Potatoes can thus easily be kept in good condition 12 months or longer. The pamphlet is worth, even to life-long potato growers, much more than the price asked.

A. F. Funderburg, Dudley, S. C., in speaking of this pamphlet, says: "I would not take ten times its cost for it."

The pamphlet has been introduced into 19 States and 3 Territories. The plans are simple and easily understood. They can be made available for old style potato houses, or for new ones, specially built, preferably the latter. Order now. Do not delay.

Price, 50 cents, postpaid. Address  
BRYAN TYSON,  
Carthage, N. C.

I have a few copies of a formula for excluding moth from beehives that will be sent, as long as they last, without charge, to those who request it.

B. T.

**THE WORLD'S BEST JERSEYS.**

*Best of Cows in Illinois in Training for World's Fair Dairy Test.*

The most valuable herd of Jersey cattle ever assembled at any one point may be seen on a model farm at Jerseyville, Jersey county, Ill. The worth of this herd can only be approximated, for the cattle are not for sale. An offer of \$15,000 for a single member was promptly declined, and not an animal would bring less than \$500 if placed on the market to-day.

The cows are the property of individual members of the American Jersey Cattle Club, and they are assembled because they are the best qualified to make up a herd that will represent the Jersey breed in the great dairy demonstration arranged for the World's Fair at St. Louis in 1904 by F. D. Coburn, Chief of Live Stock.

Unequaled care and attention is being given these cattle. No athlete trained for an event requiring the development of strength, endurance and skill ever received more attention than is being bestowed on these full-blood Jerseys. When the Louisiana Purchase Exposition opens its gates on April 30th next year the herd will have been in constant training for a full year, and will be in the pink of condition.

Twenty-five cows will participate in the test at the World's Fair, and fifteen cows are held in reserve, to be substituted should occasion require. Great caution and judgment was exercised in the selection of these candidates. The committee was free to select from any of the 250,000 registered Jerseys in America, and the animals

**ARMOUR'S BLOOD MEAL** Cures Sores in Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhoea of all animals.

**PREVENTS** weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

**A Potent Food for Work Horses, Dairy Cows, Poultry.** Write us for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

**THE ARMOUR FERTILIZER WORKS,**

Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

**Reg. HOLSTEIN-FRIESIAN**

CATTLE of the Netherland, De Kol, Clothilde, Pieterje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

**Reg. BERKSHIRES** From noted strains, Imported Headlight, Lord Highclere and Sunrise.

**DORSET SHEEP****B. PLYMOUTH ROCK CHICKENS,**

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

**WE OFFER** a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young Berkshire boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

**M. B. ROWE & CO.,** - Fredericksburg, Va

**NOW IS THE TIME to buy HOLSTEINS from the Ury Farm Herd.**

Ury Alwina Count Paul De Kol; De Kol 2nd Butter Boy 3rd No. 2, and Lord Harford De Kol head our herd. You know their official backing. There is nothing better. 15 bull calves at bargain prices. Their dams are of the De Kol, Auggie, Netherland, Pieterje and Clothilde strains and are of the producing kind. The best bulls are sold young; also a few cows and heifers. Choice ENGLISH BERKSHIRE pigs of the best strains. Before buying, correspond with or visit

**THOS. FASSITT & SONS, Sylmar, Md.**

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



thus come from all sections of the United States.

The owners of the cattle are prosperous and they and the Jersey Club to which they belong determined to spare no expense in making a perfect showing. The cows selected from widely separated points, some coming from Maine and some from Oregon, some from the North and others from the South, could not give satisfactory results until they were accustomed to the St. Louis climate, so a point near St. Louis was desired for assembling the herd, and as A. C. Auten, of Evanston, Ill., a member of the Club, tendered the use, gratuitously, of his 400-acre farm on the outskirts of Jerseyville, his proposition was accepted.

This farm, 40 miles from St. Louis, and one of the best in Illinois, has been pronounced ideal for the purpose, and there the work of getting the Jerseys in condition is going forward.

C. T. Graves, of Maitland, Mo., a well-known breeder of Jersey cattle, and an expert on all points pertaining to the dairy, was selected to take charge of operations, and with his family he moved to Jerseyville early in 1903 and began the interesting work. It was planned to construct on Mr. Auten's farm a model dairy and accessories, and under Mr. Graves' personal directions this has been done.

First he designed a cow stable, which was completed early in July, and it is probable that not another barn in the world is as complete in every respect as this. It is a square with stable wings on the north and west. The north wing has stalls for 24 cows, and the west wing has stalls for 12 cows and six roomy box stalls.

The barn and stables are marvels of convenience and cleanliness. An electric plant, in a separate building, furnishes light and power. The numerous windows are perfectly screened, and electric fans, numerous placed, keep the air in constant motion. There are no unpleasant odors, and the stalls extend the full length of the wings. The cows are so placed that their heads are at the rows of windows, and the air they breathe is always pure and fresh from the fragrant fields. The floors are all concrete. Between the rows of cows, at their rear, is a granitoid passage way, affording the cows' caretakers plenty of room to work at feeding and milking time.

The mangers are also of concrete, and are different from anything ever before designed. The walls slope toward the cow's head, and while the tendency is for the animals to push the food away from her, the sloping walls bring it right back. A gate is at the cow's head. It is so arranged that it may be put forward or back so as to fit the cow's length, and keep her rear hoofs on the edge of the floor of the stall, adjoining which is a gutter. A chain at the back passes under the hollow of the cow's rear legs, preventing her from stepping into the gutter, which slopes toward the centre.

## HIGH GRADE ABERDEEN ANGUS HEIFERS

in Calf and Registered Bulls.

I expect to make another trip to the great X. I. T. Ranch in the Pan Handle of Texas about November 1st, and will purchase heifers for those who wish them by the car load. A personal acquaintance extending over a period of more than ten years with the superintendent of this great ranch, places me in position to purchase cattle to great advantage; in fact, few men in the North and West can buy females at all. I brought 155 2 yr. old heifers to North Carolina last fall, they have given the best of satisfaction—90 per cent. of them raising fine, lusty calves as fine formed, as pure bred and not a non-breeder in the lot. The cattle are very HIGH GRADE, pure bred bulls only having been used on this 3,000,000 acre ranch for 14 years. The heifers have never been fed or sheltered, will weigh about 800 lbs., hearty and strong—all black and hornless, as near alike as so many peas. Steer calves from this ranch have been selling at \$20 and \$21 each, in lots of from 100 to 5,000 for several years.

Here is an opportunity for the cattle men of the South to secure cows that are so much sought after in the great cattle markets. The heifers will cost \$30 each at the ranch, and about \$7 each will land them at your station. My commission is \$1 per head and expenses, (expense very little) for personally selecting, shipping, caring for and feeding cattle enroute.

TERMS: calf at time I start for ranch. 30 cows constitute a car load. Interested parties can see some of these cattle at the farms of Mr. L. Banks, Holt Graham, N. C., or at our farms at Fitzgerald, N. C.

Send me your orders, will have to get my order within four weeks. Write

A. L. FRENCH, Fitzgerald, N. C., or R. F. D. 2, Byrdville, Va.

## POLAND- CHINAS.



GRAY'S BIG CHIEF, 57077.

I have a limited number of pigs by my fine boars Gray's Big Chief, 57077; and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young boars and sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address

J. B. GRAY, Fredericksburg, Va.



## BERKSHIRES.

Mr. H. F. Stratton of Erin, Houston Co., Tenn., writes me on Aug. 15th 1903:

"The little pig just received is a beauty. I am delighted with him—wouldn't take twice twenty dollars for him. He is thoroughly patrician. I expect great things

from him at the head of my herd of Royal Berkshires."

So send to Thos. S. White for patrician pigs rather than buy pibleians for a little less, do not be "penny wise and pound foolish," and especially in thoroughbreds. I have had 13 sows to farrow in past few days with over 20 more nearly due, order promptly for fall shipments, I never have enough to go round.

Short Horn (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

When corresponding with our advertisers always mention the  
Southern Planter.

On the Jersey farm there is a creamery, and many other conveniences, all of which will be duplicated, or improved upon, when the World's Fair stables are erected for the final test.

In all former tests at international expositions the stables have not been open to the public. At St. Louis a 10-foot promenade extends around the barn, and the visitor may see every cow and may observe the feeding and milking. A screen protects the animals, behind which no one save the attendants can go.

Every ounce of food and water given each cow will be carefully weighed and a record kept.

A huge silo will be built adjoining the stables. A field of 20 acres of corn is now growing near Clayton, and this will be stored in the great silo for food next summer. Alfalfa will also be brought from Colorado.

All feeding and milking will be done in the stable. The milk will be turned over to the Dairy Department, and in a model dairy in the Palace of Agriculture it will be converted into butter and cheese and a careful record of each cow's participation in the test will be kept.

With the herd will be Flying Fox, the famous Jersey bull owned by Thos. W. Lawson, of Boston. Mr. Lawson recently refused an offer of \$15,000 for the bull.

Among the prominent Jersey cattle breeders who have made entries are C. I. Hood, of Lowell, Mass., and Geo. Vanderbilt, of Biltmore, N. C.

#### VOUCHED FOR HER.

In a certain mountain town lived a little boy of four, who was very much frightened at the thought of a bear—in fact, it was the only animal or thing he was afraid of—and his mother in trying to keep him from running into the street and playing in the irrigating ditches, and wandering away to a little unkept park, told him he must not go, for there were bears there. This frightened William, and the following day he sat on the doorstep in a very quiet and thoughtful mood. When asked by the village clergyman, who was passing by, why he did not go out and play, William replied, "I must not go out of the gate, for there are bears in the roads and down in the park." The minister laughingly replied, "No, there's no bears anywhere around," but William insisted that there were, as his mamma had told him that there were. The minister said, "Let's go in and ask mamma about it," and mamma had to acknowledge that she had simply told William that to keep him from running away from home. When alone with the little boy the mother said, "William, mamma is sorry that she told you a story about the bears, and I guess we had better ask God to forgive her," whereupon William said, "Mamma, you had better let me ask God, for maybe He wouldn't believe you."—Eva Pierce Finch, in September Lippincott's.

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CHAMPION PRINCE RUPERT No. 79,539, .... at head of herd. ....

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Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.

**FOR SALE**—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos. old. Call and make your own selection. Prices right.

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"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

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NASONS,  
VA.  
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**STOCK FARM"**  
Registered SHROPSHIRE SHEEP  
Registered POLAND-CHINA PIGS

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**HEREFORD CATTLE.**—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

**SHROPSHIRE SHEEP.**—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

**POLAND-CHINA HOGS.**—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

**M. BRONZE TURKEYS.**—Toms, \$1. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

**MUSCOVY DUCKS.**—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

**BARRLED PLYMOUTH ROCKS.**

**ROUEN GEES.**—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

**WILLIAM L. Jr., No. 21038, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.**

**DIVIDED IN TASTE.**

One morning, as Judge C., of N. Co., Va., was starting for the town, he was approached by one of his negroes, who, with more or less confusion, asked:

"Massa, when yo' goes to do Co'-House will yo' git me a license? 'Tis gwine to be mar'ed."

"Married, are you, Sam? All right," called the Judge as he hastily drove off. Arrived at the court-house, he spent a very busy day, and it was not until he was preparing to leave that he remembered Sam's license and realized that he had not been told the name of the bride-elect.

"The old idiot, he never told me who he wants to carry, but, of course, it's Lucinda; he's always making eyes at her." So saying he returned to the court-house and had the license made out in the names of Sam and Lucinda. Sam was the first to greet him upon his return with the inquiry:

"Git my license, Massa?"

"Yes, Sam, you old fool. You didn't tell me who you want to marry, but I remembered how you're always hanging around courting Lucinda and got the license in her name."

"Laws, Massa!" exclaimed Sam, "taint Lucindy, it's Kyarline. What's I gwine ter do, Massa?"

"Well," said the Judge, "the only thing will be for me to get another license to-morrow."

"Massa," said Sam, "did yo' pay any'ting fur dem license?"

"Yes, Sam, a dollar and seventy-five cents."

"Will another license cos' any'ting?" asked Sam.

"Yes, Sam, a dollar and seventy-five cents more," replied the Judge.

After scratching his woolly pate for a few minutes Sam replied:

"Well, Massa, I done axed Kyarline an' she sed 'Yase, but fo' de Laws, dere ain't no dollar an' seventy-five cents' difference in dem two niggers, so I'll jus' take Lucindy.'"—Prudence Baxter, in September Lippincott's.

The artist wrote from New York to the farmer with whom he spent the summer: "I have sold for \$150 that picture I painted of your cow."

"Think of it, Maria," the good man said to his wife as he read the letter. "Why, I'd have sold the cow herself for \$75!"

"What did you let that little fellow call you a liar for?"

"Oh, I never fight a smaller man than myself. There's no glory in licking him—and there's always the possibility that I might get licked."

Judge: Then, sir, when you were being assaulted, why did you not call for an officer?

Witness: Call a policeman, your honor? Wasn't I assaulted sufficiently as it was?

Mention the *Southern Planter* when corresponding with advertisers.

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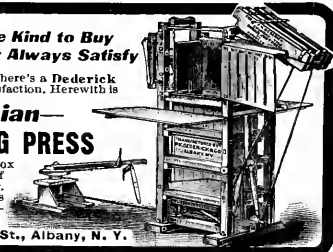
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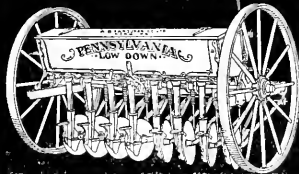
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### THE PHILOSOPHY OF FELIX G. PRYME.

In order to be popular, forget to say a good deal.

The way to make a man forget a favor is to do him one.

Boomerangs and evil thoughts act in a similar fashion.

A big heart usually goes with a big body, but a big head rarely does.

Wisdom is always conceded to a rich man until he loses his riches.

Do not emphasize your own virtues by enlarging on the failings of others.

The most depressing humidity is that caused by the tears of a woman.

A genius is a man who refuses to believe in the impossibilities of other people.

A safe way to judge a man is to ascertain just what friends he doesn't make.

No marriage ceremony has ever been gone through without a hitch—of bride and groom.

Some men who take a post-graduate course are, in the long run, glad to become letter carriers.

The claims to wisdom of owls and a multitude of men rest upon their looks, and nothing more.

The heartache of many a widow has been tempered by the reflection that she looks her best in black.

To get rid of a bore, ask him to repeat his longest and favorite story twice. Even he cannot stand that.

A fool is generally a person who detects your faults while you are in the act of calling attention to his own.

The grievance of not a few women against their husbands is that the latter give them no ground for grievances.

The success of an amateur gardener often depends upon the number and the appetites of his neighbor's chickens.

Only a smart man can conceal from a woman the fact that he isn't as smart as he would wish her think he is.

If we could draw checks as easily as we draw unkind inferences, automobiles would be as common as sparrows.

One of the curious things about a man who wants to borrow money from you to-day is his eager determination to repay it to-morrow.

There are three stakes in the existence of the average man when he is of particular interest to his community—viz., at his birth, marriage and funeral.—Success.

#### TAIL OF A TWISTED TALE.

A man once owned a balky mule  
That blandishments resisted.  
And, losing patience, he grabbed hold  
Upon his tail and twisted.  
Whereupon the mule looked back on  
him

In mild, reproving sorrow,  
And if the sad remains come down,  
His funeral's to-morrow.

**FOR SALE**—Pure-bred **Beagle** pup of the finest hunting strain. Will be ready for hunting this fall. C. T. SMITH, Croxton, Caroline Co., Va.

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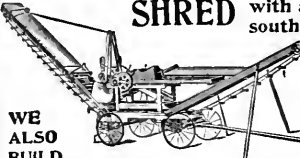
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CHARLES B. RYAN,  
Gen. Pass. Agt., Portsmouth, Va.

**NOTHING TO SUGGEST.**

My Uncle Hi's mind has an equable poise,  
Through seasons of drought and of raining;  
"In worry," he says, "we lose sight of our joys,  
And we spend too much time in complaining.  
If the Lord, in His wisdom, sends blessing or blight,  
I'll take what He sees fit to proffer,  
For I'm firm in the faith that He's runnin' things right,  
An' I have no suggestions to offer.

"To the Lord, when it travail, no dolorous plea  
I make, for my creed's not so narrow  
As to think for a moment He'll lose sight of me,  
When He notes e'en the fall of the sparrow.  
He is there on His throne, an' so just is His rule,  
Alike to the saint and the scoffer,  
I sit here at home jes' a-takin' things cool,  
An' I have no suggestions to offer.

"It's a mighty good world that we live in to-day,  
For the good's all the time growin' better,  
An'," my Uncle Hi adds, in his comical way,  
"It satisfies me to the letter!  
So I jes' keep t' work in the shadow an' shine,  
Bit by bit addin' gold t' my coffer,  
For the world's hein' steered by a Hand that's divine,  
An' I have no suggestions to offer."  
—Roy Farrell Greene, in September Success.

**THE APPLE CROP.**

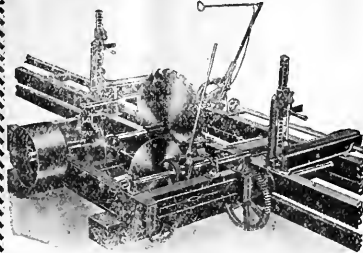
At the recent National Apple Growers' Convention, Niagara Falls, N. Y., a statistical report covering all the apple-growing States and Canada was issued. The apple crop for 1902 was estimated at 47,625,000 barrels, and the crop for 1903 at 54,614,000 barrels. The crop in Canada last year was estimated at 16,120,000 barrels, and for 1903 at 13,300,000 barrels.

How was the scenery where you spent your vacation?  
"The most expensive I ever gazed at."

"What did your old uncle leave?"  
"A lot of disgusted relatives and a jubilant young widow we'd never heard of before."

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News-Leader, Richmond, Va.	3 00	3 00	3 00

### TRI-WEEKLY.

The World (thrice-a-week), N. Y.	1 00	1 25	1 25
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### WEEKLIES.

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## DOMESTIC ECONOMY.

To remove ink spots from gingham, wet the spots with milk and cover them with common salt. Let stand some hours, then rinse in several waters.

To clean a kettle in which onions or other rank vegetables have been cooked, rub with a cloth dipped in hot, strong soda water, then wash in soapy water.

A good way to fix your beeswax: Place between two pieces of paper and keep it near at hand, so that when the starch sticks you can readily rub the iron over it.

When making mince pies, the fat that rises to the top of the liquid in which the meat was hollied may be skimmed off and utilized to good advantage in the place of suet.

A few drops of oil of lavender poured into a glass of very hot water will purify the air in a room almost instantly from cooking odors, and is especially refreshing in a sick room.

To clean decanters, get some old pieces of blotting paper and soap them well, roll the bits up small, and put about twenty little pieces into the bottle to be cleaned, then half fill the decanter with warm water. Let it stand five minutes, and then shake well for another five minutes. Rinse with cold water and set it to drain; when dry it will be beautifully clear and bright.

Clothespins need washing occasionally to keep them in good condition. It is a good plan to put them in the holler after the clothes have been taken out. After they have had a good wash they should be thoroughly rinsed in clean water.

To grind old scissors at home, saw the blade on the neck of a glass bottle, as if you were trying to saw that part off. In a short time the scissors will be quite sharp.

Pour a little vinegar upon the stove when you are cooking onions, turnip or cabbage, and it will immediately change the disagreeable odor. Cloves will do the same.

Poultry should never be cooked until twelve or fourteen hours after killing.

## WHY SHE ENJOYED IT.

"I like to go to church," announced Dottie, aged five, "because they sing nice hymns about flowers and insects and things to eat, and the man in the night gown talks about birds."

"Why, Dottie," said her mother, "I don't think there are any hymns about insects and things to eat."

"There is so," insisted Dottie. "Last Sunday we sang a hearty hymn about 'Bringing in the Cheese,' and to-day we sang one what began, 'Just as I am without one flea,' and when we got through the man talked about a hawk and two pigeons."

Subsequent inquiry revealed the fact that the text had been, "Why halt ye between two opinions?"—September Lippincott's.

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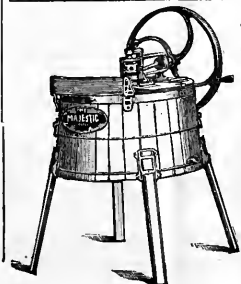
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J. T. DUNN, Manager.

## FOR SALE.

The well bred stallion Whalebone, 7872, by Abdallah Wilkes, a successful son of the famous progenitor of speed and race horse quality, George Wilkes, 2:22; dam Mollie O., by Abdallah, 15, sire of Goldsmith Maid, 2:14; second dam Kate, by Pilot, Jr., sire of dams of Maud S., 2:08 $\frac{3}{4}$ ; Nutwood, 2:18 $\frac{3}{4}$ , the renowned sire, and others of pronounced fame.

In color Whalebone is the richest shade of dark mahogany bay, while well formed and handsome, and in harness there are few horses in the land able either to outshow him or to exhibit more airiness and style. With temper and disposition that are perfect, he is a road and pleasure horse of rare excellence, never shies or pulls, and is afraid of nothing—in fact, is safe for a lady to drive. He was foaled 1883, but does not look his age by a decade, being well preserved and a horse of extraordinary vigor. The Wilkes family excels all others in point of longevity, potency, and, it may be said, popularity, too, as cited in Red Wilkes, aged 29; Jay Bird, aged 25; and Baron Wilkes, aged 21. The former served 40 mares this season, Jay Bird 75, and Baron Wilkes 45. In order to make a quick sale, I am offering Whalebone for \$175, probably less than half his value, and a sum which he can, in proper hands, just about double this fall in service fees. He is a sure foal getter, and sires uniformly good looking colts that develop into large, handsome horses, the kind greatly in demand. Address

W. J. CARTER, P. O. Box 929, Richmond, Va.

A. C. SINTON, President,

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J. J. SUTTON, Secretary,



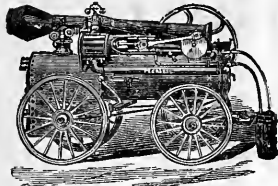
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# THE WATT PLOW CO.,

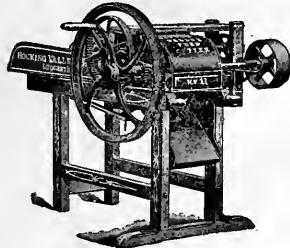
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15th & Franklin and 14th & Main Sts., Richmond, Va.

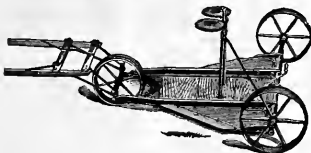
## Agricultural Implements, Machinery, Vehicles and Harness.



PEERLESS ENGINE.



HOCKING VALLEY FEED CUTTER.



DAIN CORN CUTTER.



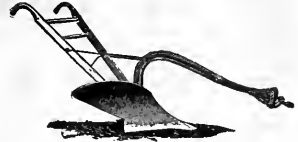
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SECTIONS OF WIRE FENCE.



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A full stock always on hand, and prompt shipments guaranteed. South Bend, Dixie and Farmer's Friend Plows and repairs. The Hancock Rotary Disc Plow, warranted to go in the ground where all others fall.

Hocking Valley Feed Cutters, Cyclone Shredders, Smalley Feed Cutters, Dain Corn Cutters. Equal to any made. Staver Buckeye Feed Mill and Horse Power Combined. Star Sweep Mill. Either grinds corn on cob or shelled.

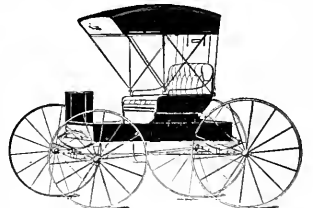
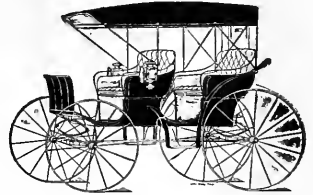
Whitman All-Steel, full circle Hay Presses. George Ertel Company's full circle Hay Presses. Rapid Fire Horse Power Hay Press, for one horse, a good, cheap press. Will put up from 150 to 200 bales a day. The well known Minnich Brand Baling Presses.

Hocking Valley Wine and Cider Mills. Hard wood rollers. The best mill made.

Hocking Valley Corn Shellers, for hand or power. Smalley Electric Pole and Wood Saws, for steam or horse power. Peerless Engines and Saw Mills always in stock. Several good second-hand Engines and other second-hand machinery for sale. "Pittsburgh Perfect" fencing, electrically welded. See cuts showing weld. Barb Wire, Plain Galvanized Wire, Baling Wire and Bale Ties. Continental Disc Harrows, Buffalo and Lean Splke Harrows.

The celebrated Columbus, Ohio, Buggies, Carriages, Runabouts, and Traps, Farm Wagons and Delivery Wagons, a complete stock.

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The SOUTHERN PLANTER, Richmond, Va.

HIS CHOICE.

It is told of the late Senator Matt Carpenter that one day while chatting with friends in a committee room the conversation turned on the relative merits of religious sects. Nearly every member of the party belonged to some church, and there had been an animated discussion, Senator Carpenter pacing up and down, listening intently enough, but saying not a word.

"What church do you belong to, Carpenter?" asked one.

"I don't belong to any."

"Why don't you join one?"

"I don't want to. None exactly suits my views."

"What one would you join if you were to feel forced to a choice?"

"The Catholic, by all means?"

"And why the Catholic?"

"Because they have a purgatory, and that's a motion for a new trial."—The Omaha Bee.

When the new puppies were discovered to be blind Teddy was very unhappy. His auntie assured him that God would open their eyes in due time. When bedtime came Teddy was heard

adding a petition to his prayers:

"Dear God, do please hurry up and finish those puppies!"—September Lipincott's.

# The HESSLER

ROUND, STRONG, DURABLE.

No Flip-Flap Contrivances.

You can scrape the mail out with your mittens on.

A square box is bothersome.

Our box is the best and cheapest, fully up to the government's requirements.

DISCOUNT IN DOZEN LOTS.

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MANUFACTURER AND DEALER IN

**THE CALL-WATT CO.,** MANFRED CALL, Gen'l Manager.  
Implements, Machinery and Vehicles.

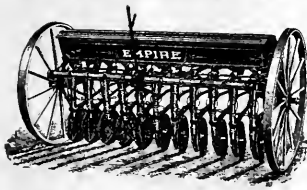
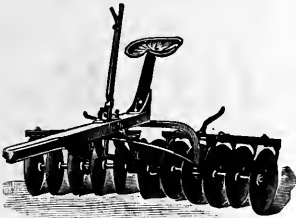
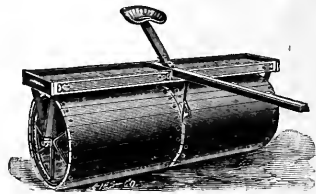
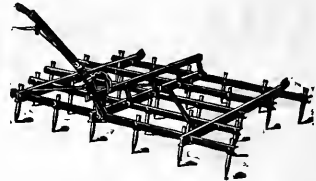
THE DEERE AND PITTS DISC HARROWS, STEEL SHANKS, DUST PROOF BEARING BOXES, FLEXIBLE GANGS, allowing inner ends to rise and fall independently.

ALL STEEL LEVER HARROWS.

Made up of sections of 25 teeth each.

THE EMPIRE DRILL, Disc or Hoe sows all kinds of grain, corn, peas, beans and fertilizers in most approved manner. Is equipped with the celebrated Empire Grain Feed and Mark's Fertilizer Force Feed.

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THE IMPERIAL ONE-HORSE WAGONS. Steel Axle and Thimble Skein. Built of best material and fully guaranteed.

THE MOLINE WAGON. Light Running and Durable. Guaranteed to be made of first class air dried timber. Handsomely finished, and has features not found in any other.

PLOWS and PLOW REPAIRS of all kinds. We make plows for all purposes and sell them on their merits. FED AND ENSILAGE CUTTERS, CORN SHELLERS, ENGINES, SAW MILLS, CORN AND COB MILLS, ETC., ETC.

We solicit inquiries for anything desired.

13 So. Fifteenth Street,  
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**RICHMOND, VA. THE CALL-WATT CO.**



FULL CIRCLE HORSE POWER PRESSES. HAND AND STEAM POWER. RAPID IN OPERATION, SIMPLE, STRONG, AND LOW IN PRICE.

Guaranteed to give satisfaction.

**BUTTER STORY WITH A MORAL.**

A few days ago two farmers came to town and both brought butter for sale. One of the farmers had his product pressed into neat, compact, half-pound packages, and he readily sold it at 25 cents a pound. He told the Herald man that he could not meet the demand for his butter. The other had his butter in a bucket, and it looked soft and watery. After tramping around town from place to place trying to sell he gave up in disgust and said it was no use to bring butter to town to sell, as nobody would buy it. This little relation of facts carries with it a moral. Can you not guess what that moral is?—Palestine Herald.

**TRUTH COMES OUT.**

"Are you blind by nature?" asked the charitably-inclined citizen.  
 "No, sir," candidly replied the beggar; "I'm blind by profession."—Chicago Daily News.

The onion is a homely plant,  
 And rank as most that grows,  
 And yet it beats to mix with soup  
 The lily or the rose.

**The Chesapeake & Ohio Railway**

Extending from Cincinnati and Louisville, and

**THROUGH ITS CONNECTIONS....**

- THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;
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- THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

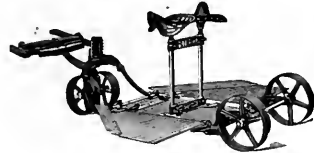
**FORMS THE MOST DIRECT** And from Five to Twelve Hours the Quickest **ROUTE.**

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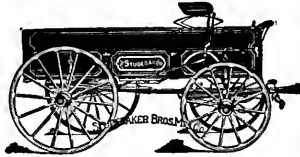
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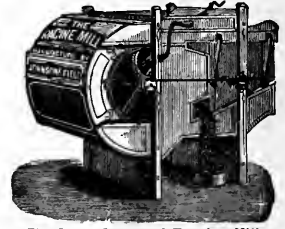


Scientific Steel Corn Harvester.

The best Harvester on earth, for standing corn  
 Safety seats. Safety shafts.



Special prices given on Studebaker and Brown Wagons, Buggies and Carts.



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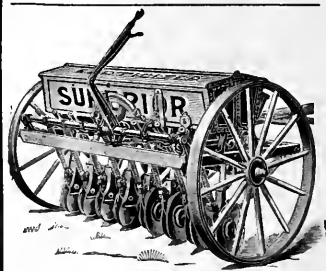


**ROSS....**

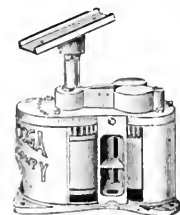
Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



Studebaker Bugles, all styles, Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.



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## ... Grocers, Feed and Liquor Dealers ...

WE CAN SAVE YOU MONEY.

Read carefully below our low prices on best Groceries, Feed and Liquors.

### SPECIAL ATTENTION GIVEN TO OUT OF TOWN ORDERS.

Granulated Sugar, per lb.....	5	Fresh Mixed Cakes, per lb.....	8	CHOICE WINES AND LIQUORS.	
Light Brown Sugar, per lb.....	4½	6 bars Colgate's Octagon Soap....	25	Moore's Crown, fine, per gal.....	\$3.00
Lion Coffee, per lb.....	9	7 bars Octagon Shape Soap, 10-oz.	25	Moore's Exceelsior, fine, per gal....	2.00
Arbuckle's Coffee, per lb.....	9½	cakes for.....	25	Moore's Keystone, 3 years old, per	
Best Green Tea, per lb.....	75	10 bars Moon Soap, 8-ounce cakes.	25	gal. ....	2.50
Choice Green Tea, per lb.....	60	12 bars Hustler Soap, 8-oz cakes..	25	Moore's Old Capital, 2 years old,	
Good Green Tea, per lb.....	40 & 50	Small California Hams, per lb....	9½	per gal. ....	1.50
Black Tea, Best, per lb.....	50	Good Salmon, can, 9c.; 3 cans....	25	Pure Va. Apple Brandy, gallon....	3.00
Good Black Tea, per lb.....	40	Large Mackerel, each.....	10	Maryland Apple Brandy, gallon..	2.25
Fair Black Tea, per lb.....	25	Large cans Good Tomatoes, can...	8	Imported Sherry Wine, gallon ..	3.00
Best Rice, per lb.....	8	Large cans Best Tomatoes, can....	9	Good Gin, per gallon.....	2.00
Good Rice, per lb.....	5	2 lb. cans Best Tomatoes, can....	6	Best Gin, gallon.....	2.50
Pure Leaf Lard, per lb.....	10	Large Juicy Lemons, dozen.....	12	Best N. C. Corn Whiskey, per gal.	2.00
Good Leaf Lard, per lb.....	9	Green Coffee, per lb., 9c.; 3 lbs....	25	Best Catawba, per gallon.....	45
Cooked Sliced Ham, per lb.....	12½	Quart Mason Jars of Light Syrup.	10	Blackberry Wine, per gallon....	45
Good Salt Pork, per lb.....	7	½ gallon Can Light Syrup.....	20	Good Port or Sherry Wine, gallon.	1.00
Choice Salt Pork, per lb.....	9	1 gallon can Light Syrup.....	40	New England Rum, per gallon....	2.00
Best Salt Pork, per lb.....	10	½ bbl. Clipped Herrings.....	2.75	7 year old Pure Rye, 1896, Good	
Best Potted Ham and Tongue, can.	4	200 pound sack salt, per sack....	85	Hyspire Brand, per gallon.....	3.50
½ lb. can Chipped Beef.....	30	100 pound sack salt, per sack....	45	Duffy's Malt Whiskey, per bottle,	
New N. C. Cut Herrings, dozen,		Best Full Cream Cheese, per lb..	15	80c.; per dozen .....	9.00
10c., or, per bbl.....	1.25	Lump Starch, per lb.....	4	O'Grady's Malt Whiskey, per bottle,	
New N. C. Roe Herrings, dozen,		Best Water Ground Meal, per peck,	75	80c.; per dozen.....	9.00
18c., or, per bbl.....	2.75½	20c.; per bushel.....		McDermott's Malt Whiskey, per	
Our Pride of Richmond Flour, best		Best Ship Stuff, per 100.....	1.10	bottle, 80c.; per dozen.....	9.00
patent, per bbl.....	4.50	Best Bran or Brown Stuff, per 100.	1.00	Pure Scotch Whiskey, User Brand,	
Our Daisy Flour, good patent, per		Best Mixed Oats, per bushel.....	45	per quart .....	1.15
bbl.....	4.25	Porto Rico Molasses, per gallon..	35	Pure Fulcher Mountain Whiskey,	
Our Excelsior Flour, good family,		New Orleans Molasses, per gallon.	50	per quart .....	1.15
per bbl.....	3.75	Good Dark Molasses, per gallon..	20	Pure Savage Mountain Whiskey,	
Fresh Soda Crackers, per lb.....	5	3 plugs of any 10c. Tobacco per 25c.,		4 years old, very fine, gallon....	3.00
Ginger Snaps, per lb.....	5	such as Peach, Plum, Grape, Reynold's			
		Sun Cured and other brands.			

Jug and bottle orders given special attention.

We have everything in the Grocery, Liquor and Feed line, and can furnish anything not quoted at lowest market price. Prices on Staple Groceries and Feed subject to market changes.

SEND US YOUR ORDERS.

## SENSIBLENESS.

I was in a hardware store a few days ago, and a hustling German farmer entered. The proprietor shook hands with him, and asked about the prospects of his crop. Among other things he asked how he was getting along with his haying.

"My hay is all in der barn und stack," replied the farmer.

"Well," said the proprietor, "you are lucky—one of the luckiest men in this section. More than half the farmers had hay down when the storm came on yesterday. There will be lots of damaged hay around here. Many that didn't get caught by the storm of last week got caught yesterday. Yes, sir; you are a lucky man." He then stepped out to speak to a customer.

The farmer turned to a clerk, and with a grimace said: "He say dot I am lucky. Dere was no luck about it—it was just blam sensibleness! I vent afder dot hay, und I got it. Does he tink dot I was so foolish as to cut grass ven it was looking like rain all about? I cut ven it look like fair velder, und den I go afder dot hay like a steam engine, und ged it. Den he say dot I was lucky! Ha, ha!"

Sure enough, it was merely plain "sensibleness." For some time the weather has been squally. Some farmers watched the indications closely, and when it was plain that we would have at least two or three days of fair wea-

ther, they "went after the hay like steam engines," and got it up in splendid shape. They had everything ready and oiled, and when the time to "go after it" came, they went. The other fellows cut when they got ready, hoping that the weather would be fair, and they have a lot of damaged hay on hand. There is lots of luck in "plain sensibleness," as well as in going after a thing like a steam engine.

## WHAT HE MIGHT HAVE DONE.

"See here, young man," said the minister, "you never paid me that fee for marrying you."

"You're mighty lucky I haven't sued you for damages."—From Tit-Bits.

A passenger on a train, being greatly irritated by the voices of a grove of children in the same coach, scowled on the woman by whom they were accompanied and exclaimed: "What is this—a family or a picnic?" "These are all mine," replied the woman, severely, "and it is no picnic!"

Question—If it takes a farmer two weeks to dig a barrel of apples, how long will it take a mosquito to crawl through a barrel of molasses? Answer—There is no place like home.

Little Willie from the city watched the cows lying placidly in the barn lot, and said: "Uncle John, you must have to pay a lot of money for chewing gum for your cows."—Colman's Rural World.

What's the difference between Niagara Falls, an automobile and a ham sandwich? Niagara Falls is run by water power, and an automobile is run by gasoline. But what about the ham sandwich? There's where you bite.

Boarder—"Here's an account in the paper of a man who married four women in one day." Mrs. De Hash—"Why, the horrible brute! Who was he?" Boarder—"Rev. Mr. Longcoat, the preacher. Married four couples, see?"

## Do You Ship Apples?

If so, let us call your attention to the California and Oregon apple boxes, the coming packages for nice apples, particularly for foreign shipments. SOUTHSIDE M'F'G. CO., PETERSBURG, VA.

## —FOR SALE—

Fine young Jack, sure foal getter, and his colts are good ones. Will be priced right to party meaning business.

Address,

**WHITNEY B. DAVIE,**

WHITNEY STOCK FARM, RICHMOND, VA.

## —FOR SALE—

Featherbone, a richly coated dark bay or brown colt, foaled May 27, 1902. Sired by Whalebone, 7872, dam Alcylene, 2:27½, trisl, 2:19½, by Alcylene, 2:27; second dam Bessie Oliver, by Kearsarge, the son of Volunteer and famous Clara, dam of Dexter, 2:17½, and Dictator; third dam Jessie, by Volunteer, and back of that the golden blood of Mambriño Chief. This colt is inbred to George Wilkes, his sire and dam being grandson and granddaughter, respectively, of that world famous progenitor of race horse quality and speed. Alcylene got McKinney, 2:11½, the great sire of race winners that sold for \$25,000 in 1902, and nearly paid for himself that season in stud fees. This colt is high class individually, and partakes of the beauty of form and finish so often seen in his family. Price, \$125, which is far less than his real value. Address

**W. J. CARTER,**

P. O. BOX 929, RICHMOND, VA.

Pedigrees traced and tabulated. Catalogues compiled and circulars prepared. Special attention given registration matters pertaining to thoroughbreds and trotting horses

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Representing the . . . .

THE TIMES-DISPATCH, Richmond, Va.

SOUTHERN PLANTER, Richmond, Va.

SPORTS OF THE TIMES, New York.

KENTUCKY STOCK FARM, Lexington, Ky.

BREEDER AND SPORTSMAN, San Francisco, Cal.

## WHALEBONE, 7872.

Sired by Abdallah Wilkes, son of George Wilkes, 2.22. dam Maggie O., by Abdallah, 15, sire of Goldsmith Maid, 2.14; second dam Viley Filly, by Pilot, Jr., sire of dam of Maud S., 2.08½.

NOTE.—Whalebone is a richly colored bay horse of fine size, handsome and well formed. His disposition is perfect. He has sired Visitor, 2.26½, and other winners.

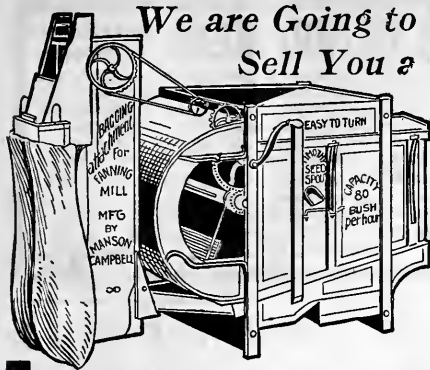
**FEE, \$15, with usual return privilege.**

Address

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## We are Going to Sell You a CHATHAM FANNING MILL

### On 60 Days' Approval

to convince you of its superiority over any fanning mill you ever heard of. If that isn't long enough time we will take your **Three Years Note**. **WE KNOW** what the Chatham will do for you, how much money it will make, how much it will save you, how strong it is, how easily it runs and the perfect work it accomplishes. It will clean and grade your seed grain, will enable you to sell your clean grain at the top price, will save the timothy seed from the yearly crop of grain, save the screenings for feed for your stock. The Chatham will clean and grade any kind of seed or grain. The new bagging attachment saves the work of one man. We have already sold **OVER** one hundred thousand (100,000) of them in every part of the U. S. and Canada, and are not going to stop until we place one in the hands of every farmer, stock raiser and seedsman in North America. We want you to send us your name and address. We will then send you the most instructive book, free,

**"How to Make Dollars Out of Wind."**

It tells ways of making easy money that you never thought of. We will also outline our **THREE YEARS' Plan** of selling you a Chatham. It will surprise you by its liberality and convince you that we believe in our mill. It gives you a chance to let the mill pay you before you pay us for the mill.

Here are some of the things others have done with the help of the **Chatham Fanning Mill**:

Fred Dietz, Ransomville, N. Y., got \$108 cash for timothy seed out of his wheat, seed didn't know there was any there.

O. E. Perkins, Halleport, N. Y., got \$50 more for 1000 bushels of wheat than his neighbor did. Perkins used the Chatham; neighbor didn't.

D. M. Bethune, Bethune, S. C., obtains \$1 extra on every 100 pounds of rice by using the Chatham.

G. Woodring, So. Charleston, O., secured \$151 worth of grass seed from cleaning up the refuse in barn floors and mangers.

Read this letter from the Superintendent of the High Shoals Manufacturing Company.

**Now write us and get that free book and our proposition to make you money. Address**

**M. CAMPBELL FANNING MILL CO., Ltd.,** Manufacturers of the Chatham Fanning Mill **116 Wesson Avenue, Detroit, Mich.**

OFFICE OF

**High Shoals MANUFACTURING COMPANY,**

MADE IN THE UNITED STATES

**YARNS, SHIRTINGS, CHECKS, STRIPES, ETC.**

WESSON AND EXHIBIT BUILDING

Telzaga Hardware Co., Agents for Chatham Fanning Mills, *High Shoals, Ga.*, May 25th, 1903  
Athens, Ga.

Gentlemen:

The Chatham Fanning Mill bought of you is by far a more valuable machine than I first thought. As you know I did not get this machine until after I had begun to plant my cotton. When the Fanning Mill arrived, in order to test its merits, I fanned out a lot of the remainder of the seed of my cotton and to my surprise on looking over the form I found that the seed cleaned before planting came up a great deal better. In fact one would not have believed that the Fanning Mill would make such a difference. In addition to the stand of cotton I saved at least one-third of the seed. I do not think that I can afford to do without this machine even at double the price I paid for it. I have had several of my neighbors to fan their seed and they all speak in the highest of terms as to how they can see at present. I have only used it on cotton seed and fanning peas, and as stated above I would not think of doing without it at even twice the cost.

Diet. to V. G.

Yours respectfully,  
A. J. Baxter, Supt.

### A CHERFUL VIEW.

Two men who had been sitting together in the seat near the door of a railway car became engaged in an animated controversy, and their loud voices attracted the attention of all the other passengers. Suddenly one of them rose, and said, "Ladies and gentlemen, I appeal to you to decide a disputed point. My friend here insists that not more than three people out of every five believe they have souls. I take a more cheerful view of humanity than that. Will all of you who believe you have souls raise your right hands?"

Every hand went up. "Thank you," he said, with a smile. Keep them up just a minute. Now will all of you who believe in a here-after raise your left hands also?"

"Thank you," he said. "Now, while all of you have your hands raised," he continued, drawing a pair of revolvers, and leveling them, "my friend here will relieve you of whatever valuable articles you may have."—Implement Trade Journal.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

### SUNNY HOME HERD OF

## ABERDEEN-ANGUS CATTLE.

Baron Roscoff, 57666, by the great Gay Blackbird, dam by Eulalie Eric, 2d prize yearling at Columbian Exposition, 1893, heads the herd. Pedigree means only the tracing of good or bad qualities through several generations. The animals comprising this herd are direct descendants of the greatest prize-winners of the breed for the past twenty-five years. Does this mean anything to you, who are in need of an animal of this GREAT-EST BEEF BREED? If so, come and see the best lot of calves we ever bred, or write.

**A. L. FRENCH, Proprietor, R. F. D. 2, Byrdville, Va.**

(Note change of P. O. address),

Depot and shipping point, Fitzgerald, N. C., on D. & W. R'y, 24 miles southwest of Danville, Va.

### VIRGINIA DIVISION.

## Farmers Mutual Benefit Association

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address,

**CHAS. N. FRIEND, General Agent,**

MENTION THIS JOURNAL.

**CHESTER, VIRGINIA.**

## SWEET POTATOES.

A pamphlet, "Cultivation and Storage of Sweet Potatoes," gives, as is believed, a more practical plan for keeping potatoes than any other that has heretofore been placed before the people. Important and valuable information that is not contained in any other known publication is here given. Potatoes can thus easily be kept in good condition 12 months or longer. The pamphlet is worth, even to life-long potato growers, much more than the price asked.

A. F. Funderburg, Dudley, S. C., in speaking of this pamphlet, says: "I would not take ten times its cost for it."

The pamphlet has been introduced into 19 States and 3 Territories. The plans are simple and easily understood. They can be made available for old style potato houses, or for new ones, specially built, preferably the latter. Order now. Do not delay.

Price, 50 cents, postpaid. Address  
BRYAN TYSON,  
Carthage, N. C.

I have a few copies of a formula for excluding moth from beehives that will be sent, as long as they last, without charge, to those who request it.

B. T.

## THE WORLD'S BEST JERSEYS.

*Best of Cows in Illinois in Training for World's Fair Dairy Test.*

The most valuable herd of Jersey cattle ever assembled at any one point may be seen on a model farm at Jerseyville, Jersey county, Ill. The worth of this herd can only be approximated, for the cattle are not for sale. An offer of \$15,000 for a single member was promptly declined, and not an animal would bring less than \$500 if placed on the market to-day.

The cows are the property of individual members of the American Jersey Cattle Club, and they are assembled because they are the best qualified to make up a herd that will represent the Jersey breed in the great dairy demonstration arranged for the World's Fair at St. Louis in 1904 by F. D. Coburn, Chief of Live Stock.

Unequalled care and attention is being given these cattle. No athlete trained for an event requiring the development of strength, endurance and skill ever received more attention than is being bestowed on these full-blood Jerseys. When the Louisiana Purchase Exposition opens its gates on April 50th next year the herd will have been in constant training for a full year, and will be in the pink of condition.

Twenty-five cows will participate in the test at the World's Fair, and fifteen cows are held in reserve, to be substituted should occasion require. Great caution and judgment was exercised in the selection of these candidates. The committee was free to select from any of the 250,000 registered Jerseys in America, and the animals

## ARMOUR'S BLOOD MEAL Cures Scours In Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

**PREVENTS** weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

**A Potent Food for Work Horses, Dairy Cows, Poultry.**

Write us for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

**THE ARMOUR FERTILIZER WORKS,**  
Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.

### —DORSET SHEEP—

## B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

**WE OFFER** a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young Berkshire boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

**M. B. ROWE & CO.,** - Fredericksburg, Va

## NOW IS THE TIME TO BUY HOLSTEINS from the Ury Farm Herd.

Ury Alwina Count Paul De Kol; De Kol 2nd Butter Boy 3rd No. 2, and Lord Harford De Kol head our herd. You know their official backing. There is nothing better. 15 bull calves at bargain prices. Their dams are of the De Kol, Angde, Netherland, Pietertje and Clothilde strains and are of the producing kind. The best bulls are sold young; also a few cows and heifers. Choice ENGLISH BERKSHIRE pigs of the best strains. Before buying, correspond with or visit

THOS. PASSITT & SONS, Sylmar, Md.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Pigs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



thus come from all sections of the United States.

The owners of the cattle are prosperous and they and the Jersey Club to which they belong determined to spare no expense in making a perfect showing. The cows selected from widely separated points, some coming from Maine and some from Oregon, some from the North and others from the South, could not give satisfactory results until they were accustomed to the St. Louis climate, so a point near St. Louis was desired for assembling the herd, and as A. C. Auten, of Evanston, Ill., a member of the Club, tendered the use, gratuitously, of his 400-acre farm on the outskirts of Jerseyville, his proposition was accepted.

This farm, 40 miles from St. Louis, and one of the best in Illinois, has been pronounced ideal for the purpose, and there the work of getting the Jerseys in condition is going forward.

C. T. Graves, of Maitland, Mo., a well-known breeder of Jersey cattle, and an expert on all points pertaining to the dairy, was selected to take charge of operations, and with his family he moved to Jerseyville early in 1903 and began the interesting work. It was planned to construct on Mr. Auten's farm a model dairy and accessories, and under Mr. Graves' personal directions this has been done.

First he designed a cow stable, which was completed early in July, and it is probable that not another barn in the world is as complete in every respect as this. It is a square with stable wings on the north and west. The north wing has stalls for 24 cows, and the west wing has stalls for 12 cows and six roomy box stalls.

The barn and stables are marvels of convenience and cleanliness. An electric plant, in a separate building, furnishes light and power. The numerous windows are perfectly screened, and electric fans, numerous placed, keep the air in constant motion. There are no unpleasant odors, and the stalls extend the full length of the wings. The cows are so placed that their heads are at the rows of windows, and the air they breathe is always pure and fresh from the fragrant fields. The floors are all concrete. Between the rows of cows, at their rear, is a grantoid passage way, affording the cows' caretakers plenty of room to work at feeding and milking time.

The mangers are also of concrete, and are different from anything ever before designed. The walls slope toward the cow's head, and while the tendency is for the animals to push the food away from her, the sloping walls bring it right back. A gate is at the cow's head. It is so arranged that it may be put forward or kept so as to fit the cow's length, and keep her rear hoofs on the edge of the floor of the stall, adjoining which is a gutter. A chain at the back passes under the hollow of the cow's rear legs, preventing her from stepping into the gutter, which slopes toward the centre.

## HIGH GRADE ABERDEEN ANGUS HEIFERS

in Calf and Registered Bulls.

I expect to make another trip to the great X. I T. Ranch in the Pan Handle of Texas about November 1st, and will purchase heifers for those who wish them by the car load. A personal acquaintance extending over a period of more than ten years with the superintendent of this great ranch, places me in position to purchase cattle to great advantage; in fact, few men in the North and West can buy females at all. I brought 155 2 yr. old heifers to North Carolina last fall, they have given the best of satisfaction—90 per cent. of them raising fine, lusty calves as fine formed, as pure bred and not a non-breeder in the lot. The cattle are very HIGH GRADE, pure bred bulls only having been used on this 3,000,000 acre ranch for 14 years. The heifers have never been fed or sheltered, will weigh about 800 lbs., hearty and strong—all black and hornless, as near alike as so many peas. Steer calves from this ranch have been selling at \$20 and \$21 each, in lots of from 100 to 5 000 for several years.

Here is an opportunity for the cattle men of the South to secure cows that are so much sought after in the great cattle markets. The heifers will cost \$30 each at the ranch, and about \$7 each will land them at your station. My commission is \$1 per head and expenses, (expense very little) for personally selecting, shipping, caring for and feeding cattle enroute.

TERMS: cash at time I start for ranch. 30 cows constitute a car load. Interested parties can see some of these cattle at the farms of Mr. L. Banks, Holt Graham, N. C., or at our farms at Fitzgerald, N. C.

Send me your orders, will have to get my order within four weeks. Write

A. L. FRENCH, Fitzgerald, N. C., or R. F. D. 2, Byrdville, Va.

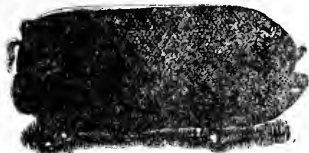
## POLAND- CHINAS.



GRAY'S BIG CHIEF, 57077.

I have a limited number of pigs by my fine boars Gray's Big Chief, 57077; and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young boars and sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address

J. B. GRAY, Fredericksburg, Va.



## BERKSHIRES.

Mr H. F. Stratton of Erin, Houston Co., Tenn., writes me on Aug. 15th 1903: "The little pig just received is a beauty. I am delighted with him—wouldn't take twice twenty dollars for him. He is thoroughly patrician. I expect great things from him at the head of my herd of Royal Berkshires."

So send to Thos. S. White for patrician pigs rather than buy pubejians for a little less, do not be "penny wise and pound foolish," and especially in thoroughbreds. I have had 13 sows to farrow in past few days with over 20 more nearly due, order promptly for fair shipments, I never have enough to go round.

Short Horn (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

When corresponding with our advertisers always mention the  
Southern Planter.

On the Jersey farm there is a creamery, and many other conveniences, all of which will be duplicated, or improved upon, when the World's Fair stables are erected for the final test.

In all former tests at international exhibitions the stables have not been open to the public. At St. Louis a 10-foot promenade extends around the barn, and the visitor may see every cow and may observe the feeding and milking. A screen protects the animals, behind which no one save the attendants can go.

Every ounce of food and water given each cow will be carefully weighed and a record kept.

A huge silo will be built adjoining the stables. A field of 20 acres of corn is now growing near Clayton, and this will be stored in the great silo for food next summer. Alfalfa will also be brought from Colorado.

All feeding and milking will be done in the stable. The milk will be turned over to the Dairy Department, and in a model dairy in the Palace of Agriculture it will be converted into butter and cheese and a careful record of each cow's participation in the test will be kept.

With the herd will be Flying Fox, the famous Jersey bull owned by Thos. W. Lawson, of Boston. Mr. Lawson recently refused an offer of \$15,000 for the bull.

Among the prominent Jersey cattle breeders who have made entries are C. I. Hood, of Lowell, Mass., and Geo. Vanderbilt, of Biltmore, N. C.

#### VOUCHED FOR HER.

In a certain mountain town lived a little boy of four, who was very much frightened at the thought of a bear—in fact, it was the only animal or thing he was afraid of—and his mother in trying to keep him from running into the street and playing in the irrigating ditches, and wandering away to a little unkept park, told him he must not go, for there were bears there. This frightened William, and the following day he sat on the doorstep in a very quiet and thoughtful mood. When asked by the village clergyman, who was passing by, why he did not go out and play, William replied, "I must not go out of the gate, for there are bears in the roads and down in the park." The minister laughingly replied, "No, there's no bears anywhere around," but William insisted that there were, as his mamma had told him that there were. The minister said, "Let's go in and ask mamma about it," and mamma had to acknowledge that she had simply told William that to keep him from running away from home. When alone with the little boy the mother said, "William, mamma is sorry that she told you a story about the bears, and I guess we had better ask God to forgive her," whereupon William said, "Mamma, you had better let me ask God, for maybe He wouldn't believe you."—Eva Pierce Finch, in September Lippincott's.

## HEREFORDS

CHAMPION PRINCE  
RUPERT No. 79,539,  
... at head of herd....

A Few High Class Bulls and Calves For Sale.

Write me  
before buying  
elsewhere.

EDWARD G. BUTLER,  
"ANNEFIELD FARMS,"  
BRIGGS, - VIRGINIA.

Send for  
illustration of  
Prince Rupert.

## Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.

FOR SALE—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos old. Call and make your own selection Prices right.

MURRAY BOOCOCK, Owner, Keswick, Va.

Bacon Hall Farm.

## Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.  
MOTTO—Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.

**C. C. TALIAFERRO,**  
NASONS,  
VA.  
1903

•

**"MOUNT SHARON"**  
Registered HEREFORD CATTLE  
Registered SHROPSHIRE SHEEP  
Registered POLAND-CHINA PIGS

**Reg. and Grade HEREFORD CATTLE  
BRONZE TURKEYS & MUSCOVY DUCKS**

**NOW OFFERS FOR SALE**



HEREFORD CATTLE.—Calves, entitled to registration, \$75 to \$100. Grade Calves by "Sir Edward" \$25 to \$40.

SHROPSHIRE SHEEP.—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

POLAND-CHINA HOGS.—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

M. BRONZE TURKEYS.—Toms, \$3. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

MUSCOVY DUCKS.—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

BARRED PLYMOUTH ROCKS.

ROUEN GESE.—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

WILLIAM L., Jr., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.

**DIVIDED IN TASTE.**

One morning, as Judge C., of N. Co., Va., was starting for the town, he was approached by one of his negroes, who, with more or less confusion, asked:

"Massa, when yo' goes to de Cot'-House will yo' git me a license? I's gwine to be mar'ed."

"Married, are you, Sam? All right," called the Judge as he hastily drove off. Arrived at the court-house, he spent a very busy day, and it was not until he was preparing to leave that he remembered Sam's license and realized that he had not been told the name of the bride-elect.

"The old idiot, he never told me who he wants to carry, but, of course, it's Lucinda; he's always making eyes at her." So saying he returned to the court-house and had the license made out in the names of Sam and Lucinda. Sam was the first to greet him upon his return with the inquiry:

"Git my license, Massa?"

"Yes, Sam, you old fool. You didn't tell me who you want to marry, but I remembered how you're always hanging around courting Lucinda and got the license in her name."

"Laws, Massa!" exclaimed Sam, "taint Lucindy, it's Kyarline. What's I gwine ter do, Massa?"

"Well," said the Judge, "the only thing will be for me to get another license to-morrow."

"Massa," said Sam, "did yo' pay anyt'ing fur dem license?"

"Yes, Sam, a dollar and seventy-five cents."

"Will another license cos' anyt'ing?" asked Sam.

"Yes, Sam, a dollar and seventy-five cents more," replied the Judge.

After scratching his woolly pate for a few minutes Sam replied:

"Well, Massa, I done axed Kyarline an' she sed 'Yase,' but fo' de Lawd, dere ain't no dollar an' seventy-five cents' difference in dem two niggers, so I'll jus' take Lucindy."—Prudence Baxter, in September Lippincott's.

The artist wrote from New York to the farmer with whom he spent the summer: "I have sold for \$150 that picture I painted of your cow."

"Think of it, Maria," the good man said to his wife as he read the letter. "Why, I'd have sold the cow herself for \$75!"

"What did you let that little fellow call you a liar for?"

"Oh, I never fight a smaller man than myself. There's no glory in licking him—and there's always the possibility that I might get licked."

Judge: Then, sir, when you were being assaulted, why did you not call for an officer?

Witness: Call a policeman, your honor? Wasn't I assaulted sufficiently as it was?

Mention the *Southern Planter* when corresponding with advertisers.

**ROSEMONT HEREFORDS.**



HEADED BY THE FAMOUS **ACROBAT 68460,**

Assisted by MARQUIS OF SALISBURY 16th 138894, the best son of imp. Salisbury. Correspondence solicited. Visitors welcome.

C. E. CLAPP, Berryville, Clarke Co., Va.

**JOHN S. FUNK, GLEN FARM.**

—IMPORTER AND BREEDER OF—



Poland-China Hogs.

**Polled Durham Cattle,**  
Shropshire Sheep,  
Southdown Sheep,  
Berkshire Hogs.



All carefully bred regardless of cost.

SINGER'S GLEN, VA.

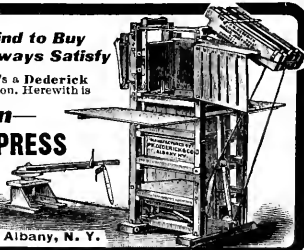
**DEREDICK'S** *The Kind to Buy They Always Satisfy*

No matter what your baling needs may be, there's a Dederick Baling Press to meet them to the utmost satisfaction. Herewith is

**Dederick's Columbian—THE LATEST BOX BALING PRESS**

made, which has many advantages no other box press possesses. In construction, adaptation of power, economy and utility, it is a wonder. For full detailed description, price, etc., of this and many others, send for our free catalogue—it will save you money—Send to-day.

P. K. DEDERICK'S SONS, 76 Tivoli St., Albany, N. Y.



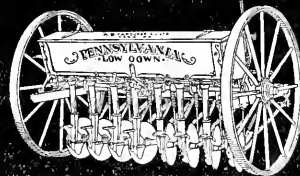
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Farmers who have used the

**Improved Low Down Pennsylvania Force Feed Fertilizer Grain Drill**

will use no other kind. The general verdict is that it is the *best machine on the farm*. Made in various sizes with either hoe or disc. We will send you FREE a special book telling all about it and what it has done to make better paying crops. Address them to all conditions. Address

A. B. FARQUHAR CO., Ltd., York, Pa.



**IT STANDS FOR BIG CROPS.**

For uniform drilling of grains, any kind and any amount per acre for grass seed sowing and even distribution of lumpy, damp or dry fertilizers, nothing equals the

**SPANGLER Low-Down Grain and Fertilizer**

Positive force feed for fertilizer, grain and grass seed. Drills any depth, perfect regulation, low speed or wood frame, high draft. Investigate before buying. Write for free catalogue. SPANGLER MFG. CO., 501 QUEEN STREET, YORK, PA.



Prof. JOHN SPENCER, Veterinarian, Virginia Agricultural Experiment Station, says:

**Chloro-Naphtholeum Dip**

"Insures the Destructions of Mites. Outbreaks which have come under our notice have been thoroughly stamped out by dipping in a 2 percent solution of Chloro Naphtholeum Dip." If you've tried it you know how good it is, if you haven't, try it now. One Gallon sent prepaid upon receipt of \$1.50, money order or check. Booklet free. It can make money for you. F. V. GUNN & CO., Richmond, Va., Agts. Va. & N. C. ● The WEST DISINFECTING CO., Inc., Mfrs.

### THE PHILOSOPHY OF FELIX G. PRYME.

In order to be popular, forget to say a good deal.

The way to make a man forget a favor is to do him one.

Boomerangs and evil thoughts act in a similar fashion.

A big heart usually goes with a big body, but a big head rarely does.

Wisdom is always conceded to a rich man until he loses his riches.

Do not emphasize your own virtues by enlarging on the failings of others.

The most depressing humidity is that caused by the tears of a woman.

A genius is a man who refuses to believe in the impossibilities of other people.

A safe way to judge a man is to ascertain just what friends he doesn't make.

No marriage ceremony has ever been gone through without a hitch—of bride and groom.

Some men who take a post-graduate course are, in the long run, glad to become letter carriers.

The claims to wisdom of owls and a multitude of men rest upon their looks, and nothing more.

The heartache of many a widow has been tempered by the reflection that she looks her best in black.

To get rid of a bore, ask him to repeat his longest and favorite story twice. Even he cannot stand that.

A fool is generally a person who detects your faults while you are in the act of calling attention to his own.

The grievance of not a few women against their husbands is that the latter give them no ground for grievances.

The success of an amateur gardener often depends upon the number and the appetites of his neighbor's chickens.

Only a smart man can conceal from a woman the fact that he isn't as smart as he would wish her think he is.

If we could draw checks as easily as we draw unkind inferences, automobiles would be as common as sparrows.

One of the curious things about a man who wants to borrow money from you to-day is his eager determination to repay it to-morrow.

There are three stages in the existence of the average man when he is of particular interest to his community—viz., at his birth, marriage and funeral.

--Success.

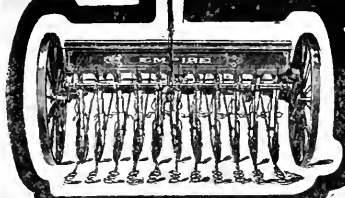
#### TAIL OF A TWISTED TALE.

A man once owned a balky mule  
That blandishments resisted.  
And, losing patience, he grabbed hold  
Upon his tail and twisted.  
Whereupon the mule looked back on  
him

In mild, reproving sorrow,  
And if the sad remains come down,  
His funeral's to-morrow.

**FOR SALE**—Pure-bred **Beagle pup** of the finest hunting strain. Will be ready for hunting this fall. C. T. SMITH, Croxon, Caroline Co., Va.

## EMPIRE DRILLS



**ACCURATELY MEASURE  
ALL KINDS OF GRAIN  
WITHOUT CHANGE.**

That is, if you set the Empire Feed to sow any amount from 24 to 123 quarts per acre, it will sow exactly that amount of wheat, oats or any other small grain without further change. A good stand of grain is assured, when you sow with an Empire Drill.

Empire Grain Drills do not bunch, skip or choke. Made in all styles and sizes.

Write for Free Catalogues.

**EMPIRE DIVISION**  
AMERICAN SEEDING MACHINE COMPANY,  
25 Monroe Street, Springfield, Ohio.

## SLIP SHUCK



**WE  
ALSO  
BUILD**

**SHRED** with a machine built especially for southern trade. Built for the purpose. The only machine of the kind. Shreds fine, does not husk. Price two-thirds that of huskers. A ton of Keystone fodder is worth a ton of the best hay.

the largest line of Huskers and Shredders of any manufacturer, also a full line of Horse Powers, Jacks, Corn Shellers, Hay Balers, Mowers, Seeders, Rakes, Loaders and Disc Harrows.

Send for Catalogue and Prices.

**ESTABLISHED 50 YEARS.**

**THE KEYSTONE CO.**  
STERLING, ILL.

## THE SEABOARD AIR LINE RAILWAY

OFFERS  
PROFITABLE  
INVESTMENTS

THE MANUFACTURER,  
THE STOCK RAISER,  
THE DAIRYMAN,  
THE FRUIT GROWER,  
THE TRUCKER.

TO

**WHERE YOUR LABOR IS NOT IN VAIN.**

Would a country where work can be carried on the entire year and where large profits can be realized interest you?

The SEABOARD Air Line Railway traverses six Southern States and a region of this character. One two cent stamp will bring handsome illustrated literature descriptive of the section.

J. B. WHITE,

Gen. Industrial Agt., Portsmouth, Va.

EDW. W. COST,

Traffic Mgr.

CHARLES B. RYAN,

Gen. Pass. Agt., Portsmouth, Va.

NOTHING TO SUGGEST.

My Uncle Hi's mind has an equable poise,  
 Through seasons of drought and of raining;  
 "In worry," he says, "we lose sight of our joys,  
 And we spend too much time in complaining.  
 If the Lord, in His wisdom, sends blessing or blight,  
 I'll take what He sees fit to proffer,  
 For I'm firm in the faith that He's runnin' things right.  
 An' I have no suggestions to offer.

"To the Lord, when it travail, no dolorous plea  
 I make, for my creed's not so narrow  
 As to think for a moment He'll lose sight of me,  
 When He notes e'en the fall of the sparrow.  
 He is there on His throne, an' so just is His rule,  
 Alike to the saint and the scoffer,  
 I sit here at home jes' a-takin' things cool,  
 An' I have no suggestions to offer.

"It's a mighty good world that we live in to-day,  
 For the good's all the time growin' better,  
 An'," my Uncle Hi adds, in his comical way,  
 "It satisfies me to the letter!  
 So I jes' keep t' work in the shadow an' shine,  
 Bit by bit addin' gold t' my coffer,  
 For the world's bein' steered by a Hand that's divine,  
 An' I have no suggestions to offer."  
 —Roy Farrell Greene, in September Success.

THE APPLE CROP.

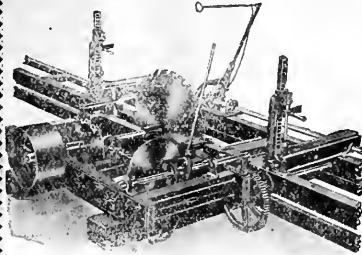
At the recent National Apple Growers' Convention, Niagara Falls, N. Y., a statistical report covering all the apple-growing States and Canada was issued. The apple crop for 1902 was estimated at 47,625,000 barrels, and the crop for 1903 at 51,614,000 barrels. The crop in Canada last year was estimated at 16,120,000 barrels, and for 1903 at 13,300,000 barrels.

How was the scenery where you spent your vacation?  
 "The most expensive I ever gazed at."

"What did your old uncle leave?"  
 "A lot of disgusted relatives and a jubilant young widow we'd never heard of before."

# Saw Mills For The Whole World! Big Ones and Little Ones!

All sizes from 4 H. P. Farmers' Mill that cuts 3,000 feet a day, up to the biggest that's made.  
 OVER 10,000 DELOACH PATENT SAW MILLS IN USE.



## Our Large Catalog No. 66

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	Price. With Alone. Planter.	
Times-Dispatch, Richmond, Va.	\$5 00	\$5 00
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### TRI-WEEKLY.

The World (thrice-a-week), N. Y.	1 00	1 25
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We sell strictly reliable **FIELD AND GARDEN SEEDS** of every variety at Lowest Market rates, included in which are **RAGLAND'S PEDIGREE TOBACCO SEEDS.**

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CALIFORNIA PRIVET, for Hedging.

WRITE FOR CATALOGUE.

AGENTS WANTED.

**FRANKLIN DAVIS NURSERY CO.,** Baltimore, Md.



**DOMESTIC ECONOMY.**

To remove ink spots from gingham, wet the spots with milk and cover them with common salt. Let stand some hours, then rinse in several waters.

To clean a kettle in which onions or other rank vegetables have been cooked, rub with a cloth dipped in hot, strong soda water, then wash in soapy water.

A good way to fix your beeswax: Place between two pieces of paper and keep it near at hand, so that when the starch sticks you can readily rub the iron over it.

When making mince pies, the fat that rises to the top of the liquid in which the meat was boiled may be skimmed off and utilized to good advantage in the place of suet.

A few drops of oil of lavender poured into a glass of very hot water will purify the air in a room almost instantly from cooking odors, and is especially refreshing in a sick room.

To clean decanters, get some old pieces of blotting paper and soap them well, roll the bits up small, and put about twenty little pieces into the bottle to be cleaned, then half fill the decanter with warm water. Let it stand five minutes, and then shake well for another five minutes. Rinse with cold water and set it to drain; when dry it will be beautifully clear and bright.

Clothespins need washing occasionally to keep them in good condition. It is a good plan to put them in the boiler after the clothes have been taken out. After they have had a good wash they should be thoroughly rinsed in clean water.

To grind old scissors at home, saw the blade on the neck of a glass bottle, as if you were trying to saw that part off. In a short time the scissors will be quite sharp.

Pour a little vinegar upon the stove when you are cooking onions, turnip or cabbage, and it will immediately change the disagreeable odor. Cloves will do the same.

Poultry should never be cooked until twelve or fourteen hours after killing.

**WHY SHE ENJOYED IT.**

"I like to go to church," announced Dottie, aged five, "because they sing nice hymns about flowers and insects and things to eat, and the man in the night gown talks about birds."

"Why, Dottie," said her mother, "I don't think there are any hymns about insects and things to eat."

"There is so," insisted Dottie. "Last Sunday we sang a beauty hymn about 'Bringing in the Cheese,' and to-day we sang one what began, 'Just as I am without one flea,' and when we got through the man talked about a hawk and two pigeons."

Subsequent inquiry revealed the fact that the text had been, "Why halt ye between two opinions?"—September Lippincott's.

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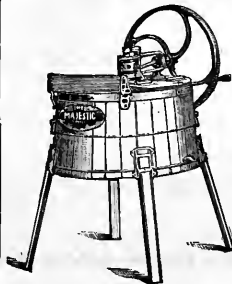
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In color Whalebone is the richest shade of dark mahogany bay, while well formed and handsome, and in harness there are few horses in the land able either to outshow him or to exhibit more airiness and style. With temper and disposition that are perfect, he is a road and pleasure horse of rare excellence, never shies or pulls, and is afraid of nothing—in fact, is safe for a lady to drive. He was foaled 1883, but does not look his age by a decade, being well preserved and a horse of extraordinary vigor. The Wilkes family excels all others in point of longevity, potency, and, it may be said, popularity, too, as cited in Red Wilkes, aged 29; Jay Bird, aged 25; and Baron Wilkes, aged 21. The former served 40 mares this season, Jay Bird 75, and Baron Wilkes 45. In order to make a quick sale, I am offering Whalebone for \$175, probably less than half his value, and a sum which he can, in proper hands, just about double this fall in service fees. He is a sure foal getter, and sires uniformly good looking colts that develop into large, handsome horses, the kind greatly in demand. Address

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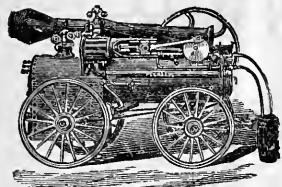
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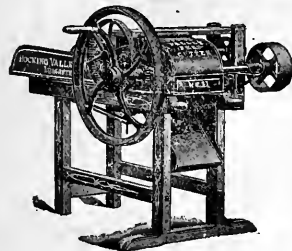
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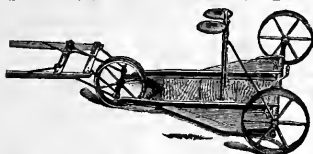
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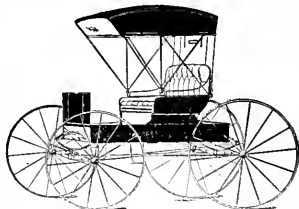
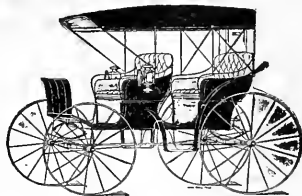
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**HIS CHOICE.**

It is told of the late Senator Matt Carpenter that one day while chatting with friends in a committee room the conversation turned on the relative merits of religious sects. Nearly every member of the party belonged to some church, and there had been an animated discussion, Senator Carpenter pacing up and down, listening intently enough, but saying not a word.

"What church do you belong to, Carpenter?" asked one.

"I don't belong to any."

"Why don't you join one?"

"I don't want to. None exactly suits my views."

"What one would you join if you were to feel forced to a choice?"

"The Catholic, by all means?"

"And why the Catholic?"

"Because they have a purgatory, and that's a motion for a new trial."—The Omaha Bee.

When the new puppies were discovered to be blind Teddy was very unhappy. His auntie assured him that God would open their eyes in due time. When bedtime came Teddy was heard

adding a petition to his prayers:

"Dear God, do please hurry up and finish those puppies!"—September Lippincott's.

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No Flip-Flap Contrivances.  
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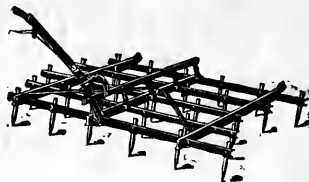
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THE DEERE AND PITTS DISC HARROWS, STEEL SHANKS, DUST PROOF BEARING BOXES, FLEXIBLE GANGS, allowing inner ends to rise and fall independently.

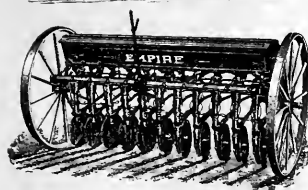
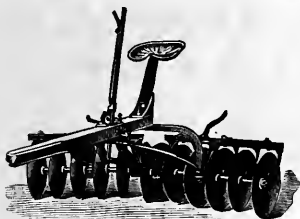


ALL STEEL LEVER HARROWS.

Made up of sections of 25 teeth each.

THE EMPIRE DRILL, Disc or Hoe sows all kinds of grain, corn, peas, beans and fertilizers in most approved manner. Is equipped with the celebrated Empire Grain Feed and Mark's Fertilizer Force Feed.

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**RICHMOND, VA. THE CALL-WATT CO.**

**BUTTER STORY WITH A MORAL.**

A few days ago two farmers came to town and both brought butter for sale. One of the farmers had his product pressed into neat, compact, half-pound packages, and he readily sold it at 25 cents a pound. He told the Herald man that he could not meet the demand for his butter. The other had his butter in a bucket, and it looked soft and watery. After tramping around town from place to place trying to sell he gave up in disgust and said it was no use to bring butter to town to sell, as nobody would buy it. This little relation of facts carries with it a moral. Can you not guess what that moral is?—*Palestine Herald.*

**TRUTH COMES OUT.**

"Are you blind by nature?" asked the charitably-inclined citizen.

"No, sir," candidly replied the beggar; "I'm blind by profession."—*Chicago Daily News.*

The onion is a homely plant,  
And rank as most that grows,  
And yet it beats to mix with soup  
The lily or the rose.

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Extending from Cincinnati and Louisville, and  
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THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis,  
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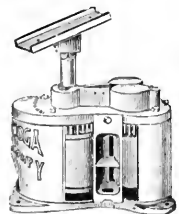
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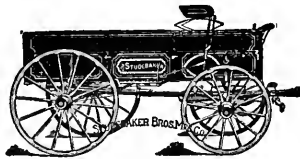
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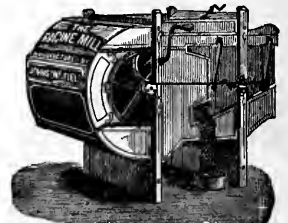
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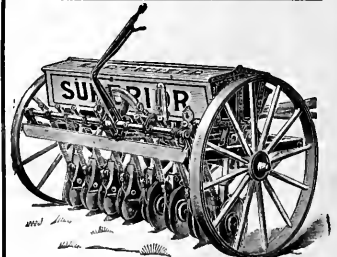
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Light Brown Sugar, per lb.....	4½
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Best Green Tea, per lb.....	75
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Good Green Tea, per lb.....	40 & 50
Black Tea, Best, per lb.....	50
Good Black Tea, per lb.....	40
Fair Black Tea, per lb.....	25
Best Rice, per lb.....	8
Good Rice, per lb.....	5
Pure Leaf Lard, per lb.....	10
Good Leaf Lard, per lb.....	9
Cooked Sliced Ham, per lb.....	12½
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Best Potted Ham and Tongue, can.	4
½ lb. can Chipped Beef.....	10
New N. C. Cut Herrings, dozen,	
10c., or, per bbl.....	1.25
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18c., or, per bbl.....	2.75½
Our Pride of Richmond Flour, best	
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Fresh Soda Crackers, per lb.....	5
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6 bars Colgate's Octagon Soap....	25
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cakes for.....	25
10 bars Moon Soap, 8-ounce cakes.	25
12 bars Hustler Soap, 8-oz cakes..	25
Small California Hams, per lb....	9½
Good Salmon, can, 9c.; 3 cans....	25
Large Mackerel, each.....	10
Large cans Good Tomatoes, can..	8
Large cans Best Tomatoes, can....	9
2 lb. cans Best Tomatoes, can....	6
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Green Coffee, per lb., 9c.; 3 lbs....	25
Quart Mason Jars of Light Syrup.	
½ gallon Can Light Syrup.....	20
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200 pound sack salt, per sack....	85
100 pound sack salt, per sack.....	45
Best Full Cream Cheese, per lb..	15
Lump Starch, per lb.....	4
Best Water Ground Meal, per peck,	
20c.; per bushel.....	75
Best Ship Stuff, per 100.....	1.10
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Porto Rico Molasses, per gallon..	35
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Good Dark Molasses, per gallon..	20
3 plugs of any 10c. Tobacco for 25c.,	
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## SENSIBLENESS.

I was in a hardware store a few days ago, and a hustling German farmer entered. The proprietor snook hands with him, and asked about the prospects of his crop. Among other things he asked how he was getting along with his haying.

"My hay is all in der barn and stack," replied the farmer.

"Well," said the proprietor, "you are lucky—one of the luckiest men in this section. More than half the farmers had hay down when the storm came on yesterday. There will be lots of damaged hay around here. Many that didn't get caught by the storm of last week got caught yesterday. Yes, sir; you are a lucky man." He then stepped out to speak to a customer.

The farmer turned to a clerk, and with a grimace said: "He say dot I am lucky. Dere vas no luck about it—it vas just blam sensibleness! I vent affer dot hay, und I got it. Does he tink dot I vas so foolish as to cut grass ven it was looking like rain all about? I cut ven it look like fair velder, und den I go affer dot hay like a steam engine, und ged it. Den he say dot I vas lucky! Ha, ha!"

Sure enough, it was merely plain "sensibleness." For some time the weather has been squally. Some farmers watched the indications closely, and when it was plain that we would have at least two or three days of fair wea-

ther, they "went after the hay like steam engines," and got it up in splendid shape. They had everything ready and oiled, and when the time to "go after it" came, they went. The other fellows cut when they got ready, hoping that the weather would be fair, and they have a lot of damaged hay on hand. There is lots of luck in "plain sensibleness," as well as in going after a thing like a steam engine.

## WHAT HE MIGHT HAVE DONE.

"See here, young man," said the minister, "you never paid me that fee for marrying you."

"You're mighty lucky I haven't sued you for damages."—From Tit-Bits.

A passenger on a train, being greatly irritated by the voices of a drove of children in the same coach, scowled on the woman by whom they were accompanied and exclaimed: "What is this—a family or a picnic?" "These are all mine," replied the woman, severely, "and it is no picnic!"

Question—If it takes a farmer two weeks to dig a barrel of apples, how long will it take a mosquito to crawl through a barrel of molasses? Answer—There is no place like home.

Little Willie from the city watched the cows lying placidly in the barn lot, and said: "Uncle John, you must have to pay a lot of money for chewing gum for your cows."—Colman's Rural World.

What's the difference between Niagara Falls, an automobile and a ham sandwich? Niagara Falls is run by water power, and an automobile is run by gasoline. But what about the ham sandwich? There's where you bite.

Boarder—"Here's an account in the paper of a man who married four women in one day." Mrs. De Hash—"Why, the horrible brute! Who was he?" Boarder—"Rev. Mr. Longcoat, the preacher. Married four couples, see?"

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## WHALEBONE, 7872.

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Tillage and pasturage are the two breasts of the State.--SULLY.

64th Year.

Richmond, October, 1903.

No. 10.

## Farm Management.

### WORK FOR THE MONTH.

The month of September up to this time (20th) has been very like the preceding ones of the summer, cooler than normal and showery, though not quite so far from the normal as August, there having been about a week of really typical September weather, warm, clear and with nights dewy, but not too cold. This has helped crops to maturity, and corn and tobacco are being cut all over the State and the adjoining ones. Further South the crops are mostly harvested except cotton, and this is being picked in all the States growing it. The first bale of Virginia cotton was marketed in Petersburg about the 17th of September. Cow peas are being cut for hay, and second crops of clover and grass are being cut, and excellent yields are being secured. The corn crop of the South, except upon the river low grounds, is probably one of the best ever made, certainly this is so in Virginia. On the low grounds whilst there are some good crops, yet the majority are not up to the highest average. The land was too wet and cold at planting time, and good stands were not secured, and the weather has during all the growing season been too showery to permit of as frequent cultivation as should have been given. We know of many crops that have not had more than one working, and in which the weeds are nearly as tall as the corn. This will cut down the yield considerably. A good deal of the crop is also late, and should we have early frost will suffer some injury. In this respect, however, we are much better off than the Western States, where the crop is also late, and already in many places much injured by frost. A gentleman from Dakota, a

farmer in that State, called upon us a few days ago, and in the course of conversation said that he had crossed the whole corn belt in the course of his journey to this State, and that no where in the course of that long journey of 1,500 miles had he seen a corn crop so good as in Virginia. He was astonished with the crops he saw here. Not only was this the case with the corn crop, but with the cow pea and other fodder crops. He went to see Mr. Bellwood's crops at Drewry's Bluff, Va., and saw them cutting cow peas and millet for hay. He said that he never saw as much feed cut off an acre of land anywhere in the West as was being cut there, and this was not an exceptional field, but only one of many containing scores of acres equally good. Notwithstanding an abnormal season, the South is going to have "hog and hominy" in abundance for all, and more feed for live stock than probably ever before. This is largely to be accounted for in the greater attention given to the growing of forage crops. These are now staple crops, and are the indications of the greater attention given to live stock breeding and feeding in the South. This means that our people are becoming "farmers" and not "planters," and that greater prosperity is to be their lot in the near future.

The conclusion of spring wheat harvesting in the Northwest has been marked by disastrous weather, and our prediction as to the shortage in the wheat crop is being fulfilled. The crop of winter and spring wheat together is going to be more than one hundred million bushels less than that of last year, and as the wheat crop of the world is also likely to be

a short one, we see no reason to alter our opinion that wheat will see a material advance in price; indeed, it is already worth from 10 to 15 cents more per bushel than it was a year ago. Corn is also likely, in our opinion, to be worth more money, as the Western crop is a late one, and certain to be much of it immature when frost strikes it. The oat crop is very greatly below that of last year in quantity, and much of it is badly damaged. This will help to enhance the value of corn, as these two great feeding crops are used interchangeably. Whenever either crop is short the other always advances in price, and when both are short, as will be the case this year, they both advance.

The average condition of the tobacco crop is in advance of the condition for several years, but we are afraid from what we hear that the quality is not likely to be of the best. There is pretty general complaint that the quality is coarse, and that there will be difficulty in securing a nice cure. We would urge that care be taken in this work, and that of grading the leaf when cured. For the best tobacco, notwithstanding what is being said as to the action of the trusts in depressing prices, we believe there will be a fair price paid, but it will largely depend upon the handling of the crop in curing and grading as to what each individual grower will obtain. We believe it is going to pay growers to do some of the work of the rehandlers for themselves this year. Whatever may be the outcome of the sales, one thing seems to be certain, that tobacco growers will need to organize themselves in order successfully to cope with the trusts. This should not be a difficult matter, and we trust that growers will devote some of their time during the winter to this work, so that the next crop to be planted shall be only such an one as can be marketed with profit to the growers. There are plenty of other crops which can be grown at a profit until the trusts are made to understand that they must be prepared to give such prices for the product as will pay the growers or the crop will not be grown.

Cotton is being picked all over the cotton belt, and is likely, if the weather continues open, to make a better yield than at one time seemed possible. The price is still high, and the indications are for this to be maintained. Stocks are low and the demand good.

Sweet potatoes are making a good yield. The second crop of Irish potatoes is not going to be up to the average, as much of the seed rotted from the excessive rains at planting time. It will pay to give attention

to this crop, as the Irish potato crop of the country is very seriously affected with blight, and will not be likely to be large or to keep well.

The work of sowing the wheat and oat crops should receive immediate attention. It is already late to sow winter oats, but where the land is well prepared and the seed drilled so as to get good cover, they may yet be seeded upon well drained, sound land. Wheat should not be seeded until we have had frost, so as to avoid damage from the fly. In the mean time, let all the work possible be done on the land to make the seed bed a perfect one. More depends upon this than upon the quantity or quality of the fertilizer used. Have the under surface soil compact and the top two or three inches as fine as possible. To secure this condition of soil the roller and the harrow should be kept going. Where wheat is to follow corn, the corn should be cut as soon as possible, and either be got off the land or be set up in shocks as far apart in the rows as possible. Corn land that was deeply plowed in the spring and has been kept well and frequently cultivated during the growth of the crop may be seeded to wheat without being plowed again if the surface four or five inches is well broken with the disc harrow or a cultivator, and then brought into a fine condition with the roller and harrow. We have known quite as good crops to be made in this way as by re-plowing the land. In our last issue we wrote fully on the seeding of the wheat crop, and to that issue we refer our readers. One point to which we did not then advert we now press on the attention of readers. See to it that provision is made by furrows for taking off surface water as quickly as possible. Wheat cannot succeed when standing in water. It must have dry feet in winter or it will fail to make a crop.

The showery summer we have had has made the growth of weeds very heavy. These should be got under ground as soon as possible in order that they may add to the vegetable matter in the soil. The ground is now cool, and there will be no danger of souring the land by turning down these crops, and they will greatly improve the condition of the land, especially if it is at the same time subsoiled and deeply broken. All other green crops not required for feed may also be now safely plowed down, but wherever the growth is heavy enough to make hay unless the land badly needs the vegetable matter we would cut the crop, leaving a long stubble, and cure for hay before plowing. We have never had any liking for burying in the soil a crop which has cost money and labor to produce, unless the most impera-

time need existed for such a course. We prefer to take its feed value out first and then bury the residue. After the crops of weeds and forage have been plowed down, give a top dressing of lime, 50 bushels to the acre, and harrow in lightly, and then seed with rye up to the end of November, and a preparation will have been made for a summer crop which will tell a tale in the harvest.

Continue the seeding of vetches and wheat and rye. Hairy Vetch should be got in at once. English or Winter Vetch may be sown until the middle of November. It is too late to sow crimson clover with a certainty of a stand, though we have known many a good crop raised sown in October. We would seed a few pounds per acre with wheat, rye or oats, or a mixture of the three grains. Much of the clover will probably live over the winter protected by these grains, and will add to the value of the feed and also improve the land. Seed the vetches with a mixture of small grain, say 25 pounds of vetch seed with three-quarters of a bushel of wheat, oats and rye mixed per acre, and if a pound or two of Dwarf Essex Rape be added per acre it will improve the pasturage. We have had a number of our subscribers to tell us that this mixture has given them the best spring pasture of anything they ever tried.

Let all the forage crops be cut and cured as soon as possible. The nights are now too cold for them to make much further growth, and the difficulty of curing them increases day by day. They will now require much more care to get them into a condition to be put into the barn than earlier in the season, but their value as feed will warrant this care being given them. Cut when free from dew or rain, and let them lie for 24 hours, then rake up into windrow and put up into small cocks. Let these stand for a day or two and then open out and sun, and put into larger cocks. Repeat this until the crop is ready for the barn. This will give a hay full of nutriment, and which will be eaten with relish by stock.

Cut up the corn crop at the root and set up in shocks to cure. Much of the corn this year is yet very full of nature, and it will not be safe to put it into large shocks. Have these smaller shocks well set up and tie them round the top with binder twine, so that they may stand well and cure. When dry pull the corn and have the fodder run through the shredder and packed in the barn. If you have not a shredder, let the fodder be carried to the barn or be stacked up under cover, if possible; or, if not, then be

made into stacks and be covered with straw to keep out the wet. Do not leave the fodder to waste in the field. It has cost money and labor to produce it, and is worth much as feed. Farming is not so profitable a business that you can afford to waste nearly one-half of the value of the corn crop.

Irish and sweet potatoes should be dug before the frost cuts the tops. Dig only in dry weather, and do not let the tubers lie longer on the ground in the sun than just sufficient to dry off the adhering soil. In this issue in our Garden Notes will be found advice as to storing sweet potatoes. Irish potatoes may be stored either in a frost proof cellar or in pit or piles in the field. Do not put too many in one heap. Fifty bushels is enough to put in one pile. Make the piles on high dry ground, and cover at first with only some straw and a few boards to keep out the rain. After the potatoes have gone through the sweat, say in a week or ten days, cover with more dry straw and put soil on this sufficiently thick to keep out frost.

Sugar beets and mangold wurtzel beets should be pulled before frost and be stored in a frost proof cellar or shed, or in heaps well covered with straw and soil.

See that all barns, stables, sheds and pens are thoroughly cleaned out and lime washed, and have all doors, windows and roofs repaired, so that when stock are put into the buildings they will be warm and comfortable. They cannot make the best use of the feed given them unless they are comfortable. It is a very extravagant way to use feed to warm buildings and barn yards with it. Make these warm by excluding drafts and rain, and the stock will then use the feed to make flesh and growth.

### THE LEGUMINOUS CROPS AS IMPROVERS OF LAND.

For years we have been iterating and reiterating the advice to grow the various leguminous crops, such as cow peas, crimson and red clover, vetches, soy beans and velvet beans, for feed or as improvers of land, and to a very considerable extent this advice has been followed throughout the South, but there are yet thousands of farmers who do not use them or only use them to a very limited extent. These men are standing in their own light and throwing away the greatest opportunity ever given to them in any calling. In a recent visit to the farm of Mr. Bellwood, at Drewry's Bluff, Va., we were more than ever impressed with the truth

of this assertion. When Mr. Bellwood purchased his farm of over 1,000 acres about twelve or fifteen years ago it was a typical example of a run down farm. It had been cropped and cropped by renters and others until nearly all except the low grounds was almost too poor even to sprout peas. Shallow plowing, the want of a system of rotation, and the failure to grow recuperating crops, or to keep stock and apply the manure made to the land, was the cause of this condition. Naturally the land is good. All it needed was good management and farming to make it as it is now, one of the most fertile farms in the South. Mr. Bellwood and his sons set about to give it this, and the result is now seen. We doubt whether there is in the United States a farm upon which heavier crops are grown than are now the rule every year on this place. This wonderfully improved condition has been altogether brought about by a good system of rotation, the constant growing of the leguminous crops, and the keeping of a heavy head of live stock. Every year several hundred bushels of cow peas are sown, and vetches, soy beans and velvet beans are grown in large quantity. Not an ounce of commercial fertilizer has ever been used on the place. Each year crops of wheat averaging from 25 to 35 bushels to the acre, and corn running all the way from 50 bushels on the high land to 125 bushels on the low grounds to the acre, and hundreds of tons of timothy and cow peas and millet mixed hay, which latter crop makes as high as two or three tons to the acre, are made. We saw crops of this hay being cut, which we are satisfied would make nearly three tons to the acre. On all the poorer high land it has been and is the rule to grow two leguminous crops between the crops of wheat and corn, and these are now in almost every case cut for hay, leaving a heavy stubble to plow down. The only exception to this rule is when velvet beans are grown. These are always grown solely for a recuperating crop, and are plowed down during the winter. The experience of Mr. Bellwood is that velvet beans are the most valuable when used in this way. The growth is so heavy and the vines are so long and tangled that it is a most difficult matter to handle them for hay, and he finds that stock do not care to eat them when any other feed is in sight. As a recuperating crop they make a more permanent improvement of the land than any other legume, and put so much vegetable matter into the soil that it is placed in the finest condition possible for the growth of any other crop. Upon one large field of upland we saw a crop of corn which will certainly yield 50 bushels to the acre where a few years ago not nubbins would have been made, and the whole im-

provement has been made by the use of these leguminous crops. Every year hundreds of tons of hay, timothy and mixed is sold in addition to the wheat and large part of the corn. Where the manure from the stock has been used there is now growing a crop of silage corn, which looks like making 15 tons to the acre at least, and this was a few years ago a poor field, which would scarcely grow weeds. The silo at the farm is the largest we have seen. It is built of concrete, and will hold nearly 500 tons of silage. This large quantity is made every year and fed to the cattle with pea and millet hay. The silo corn is well eared, and the silage is therefore rich, and with the pea and millet hay makes nearly a balanced ration, which makes milk in quantity at a small cost, which milk is shipped to Richmond every day and brings in a constant income. This is profitable farming as practically the only outgo is for labor. Why cannot hundreds of other farmers go and do likewise. They may not all be able to make milk production a feature, but they can make beef with the same feed, and beef will pay made in this way.

#### LIME AS AN IMPROVER OF LAND.

In this issue will be found an enquiry as to the advisability of applying lime to land and as to its effect on crop production. This is only one of numerous similar enquiries which come to us during the year. In some cases the enquirers ask as to using it on light land, in others as to its effect on heavy land. We have deferred replying to many of these enquirers through our columns until this season of the year in order that we might bring the subject before our readers at a time when it is strictly in order for farmers to undertake the work of applying the lime. As readers of our columns are aware, we have for many years held strongly to the opinion that nearly all land in the South requires lime if the best results are to be obtained. We have been confirmed in this view in every case where our advice has been followed which has been reported to us. This view as to the necessity for the use of lime upon nearly all land is now being strongly enforced by experiments, which have been and are being made at a number of the Experiment Stations in different parts of the country. In the past it has been largely held that the use of lime could only be justified where the land was covered with a strong growth of vegetable matter, or where the soil itself was filled with tough vegetable fibre, which required to be broken down by the caustic action of lime. Now it is being recognized by authorities that this is only one of the conditions under which

lime may be successfully used, and that its action is equally beneficial on most land even though little or no vegetable matter is on or in the soil. It has also been thought in the past that lime could not be profitably used in connection with phosphatic fertilizers, but now experiments have conclusively shown that its action in connection with these is most marked and beneficial. Lime is many sided in its effects on land. It acts both physically, mechanically and directly and indirectly as a fertilizer. Applied to light land, it makes it more cohesive and retentive of moisture and fertility. Heavy land it lightens and makes more porous, disintegrating the cohesive soil and rendering it permeable by the fine roots of the plants and checking baking and running together. It corrects acidity in the soil, and much land not thought to be acid is found upon chemical examination to be much too acid for the best growth of crops. There are very few crops which flourish in an acid soil. This is perhaps not so much because of the acidity of the soil, but because in such soils the microbes upon which largely depends the fertility of land cannot there live and work. More especially is this the case where the leguminous crops like clover and cow peas refuse to grow. These crops, upon which so largely depends the quick recuperation of wasted and infertile land, and the maintenance of fertility in all lands are almost wholly dependent upon microbial life in the soil for their vigorous growth. Where this is absent they cannot flourish, and wherever the soil is at all acid the microbes cannot live and the legumes fail and the farmer's cheapest source of fertility is lost to him. Lime again acts as a powerful solvent of inert fertility in the soil. Both potash and phosphoric acid existing in the soil in forms incapable of supporting plant life are rendered available to plants by the action of lime, and especially is this the case with potash. Probably all the different forms of lime compounds are more or less useful when applied to land, but in the form of a carbonate, in which it is found in the limestone of our mountains and in the oyster shell it is undoubtedly the most efficient. Formerly it was thought that to secure good results it should be applied in heavy dressings. Frequently five tons to the acre was applied. It is now found that it is equally and probably more effective applied in less quantity and at more frequent intervals. One ton to the acre applied at intervals of four or five years will be found effective of great improvement on most lands. It may be applied in conjunction with other fertilizers, except those like barn yard manure, especially rich in nitrogen. Where it is applied in connection with nitrogenous manures it will cause a

waste of the nitrogen. Where used in connection with nitrogenous manures it should be first applied and be thoroughly incorporated with the soil and then after an interval of ten or fifteen days the nitrogenous manure may be applied without risk of loss. It may be applied either in the form of ground limestone or as quick lime—that is, lime slacked with water after being burnt. Our experience, and experiments made at the Maryland Station confirm this experience, is that in the form of quick lime it is most effective. We always applied the burnt lime by putting it out on the land in small heaps, say about half a bushel at a place, setting these heaps on the plowed land near enough so that the lime when slacked could be spread with a shovel so as to cover the land half way to the heap on each side of the one being spread. These small heaps we then slacked with half a bucket of water, and after the heap had fallen to powder, which takes only a very short time, proceeded to spread at once, and then lightly harrowed in. In illustration of the effect which lime has in improving land recent experiment made by Dr. Hopkins, of the Illinois Experiment Station, in Southern Illinois, are most instructive. On the farm of a Mr. Hinkley in that section of the State, Dr. Hopkins found the land to be so acid that none of the legumes would grow on it. Mr. Hinkley applied lime in various quantities per acre. In one case he applied ten tons to the acre. His neighbors questioned his state of mind, and declared that nothing could grow in a lime kiln. But things did grow, and are now growing where this heavy application was made. He now grows alfalfa successfully on this land, and when phosphoric acid is also applied and the leguminous crop is followed by wheat or oats profitable crops are raised on land that before this treatment would not grow weeds. Under Dr. Hopkins' direction a number of other farmers in this same section of Illinois have applied lime to their lands and followed this with a leguminous crop, either cow peas or clover, and then with wheat or oats, to which phosphate was applied, and have made excellent grain crops where formerly these crops were practically a failure. The foundation of this success is the lime which makes possible the growth of the legume and then the phosphate supplies the special need of the grain crop in the way of mineral food, and the legume the nitrogen needed, and the result is a profitable crop and improved land. In a series of experiments conducted in Maryland the application of lime in three different forms, sulphate of lime (plaster), 370 pounds to the acre; quick lime (carbonate of lime) 2,000 pounds per acre, and shell marl, 8,000 pounds per acre, on

corn and wheat on a well drained loam soil showed all the applications to be quite beneficial, but the quick lime produced the greatest increase in yields. At the Rhode Island Experiment Station a series of experiments conducted for a period of four years in the use of lime in connection with different forms of phosphatic fertilizers showed very decided favorable results. The crops grown over the four years were corn, oats and hay. In 1894 one ton of lime was applied per acre to half the land. In that year the yield of corn on the cob on the plot on which no form of phosphate was applied, but which had been limed, was 2,613 pounds per acre. On the plot which had neither lime nor phosphate the yield was 1,893 per acre. On the *limed* plot, to which dissolved bone black was applied, the yield was 4,510 pounds of corn on the cob per acre. On the *unlimed* plot, to which dissolved bone black was applied, the yield was 3,698 pounds per acre. On the *limed* plot, to which acid phosphate was applied, the yield was 3,953 pounds of corn per acre. On the *unlimed* plot, to which acid phosphate was applied, the yield was 3,255 pounds per acre. For the years 1896 1899 inclusive, the hay crop on the *limed* plot, to which dissolved bone black was applied, amounted to 19,837 pounds per acre. On the *unlimed* plot, to which bone black had been applied, the yield was 9,820 pounds per acre. On the *limed* plot, to which dissolved bone had been applied, the yield was 19,281 pounds. On the *unlimed* plot with dissolved bone the yield was 8,564 pounds per acre. On the *limed* plot, to which acid phosphate was applied, the yield was 20,205 pounds per acre. On the *unlimed* plot with acid phosphate the yield was 8,951 pounds per acre. On the *limed* plot, to which pure ground bone meal was applied, the yield was 22,012 pounds per acre. On the *unlimed* plot with bone meal the yield was 11,855 pounds per acre. On the *limed* plot, to which no phosphoric acid in any form was applied the yield was 15,737 pounds per acre. On the *unlimed* plot, to which no phosphoric acid was applied, the yield was 2,547 pounds per acre. Note how uniformly an increase is shown wherever the lime was applied. We invite careful consideration of the foregoing facts. We are satisfied that those who use lime will realize profit from it. Those who use it in connection with acid phosphate or bone meal will realize still further profit. As a help to the production of a wheat crop we believe it will be found more advantageous than doubling the quantity of bone meal or acid phosphate, besides putting the land into a condition for growing clover or cow peas, which no other application can compare with.

## IMPROVED FARMING IN NORTH CAROLINA.

*Editor Southern Planter:*

I want your immediate advice along the line of crimson clover. I am told that as good a way to catch a stand as any is to sow the clover right among cow pea vines. How does this style strike you? I have some forty (40) acres sowed broadcast in cow peas, and most of them have a most luxuriant growth of vines. I am thinking of purchasing the clover seed at once and a good broadcast seeder, say "Cahoon's," and seed most of this pea vine bed to crimson clover. The land is in some places very sandy, and the whole is more or less sandy; just the right character for bright tobacco. I said bright tobacco, but ain't we poor fellows catching it in prices? Tell me, quick, how to manage as to the clover and land, would it do seeded on oat stubble, where there is a heavy growth of weeds and grass? The oats were no good, say half a crop. I intended putting this to peas, but tobacco prevented. Would it do as well sown among the weeds and grass, or would you advise the immediate fallowing of the green stuff, and then sow seed and harrow in? All I am after is the certainty of getting a stand of clover. I have no experience with clover. One more thing to ask, and please tell me all you can, and give me your very best advice. Most of my land is, as already stated, very sandy, and in some places rolling, all more or less subject to washes. I notice your advice about using lime. I think that is what my land most needs. We have put lots of manures and used lots of fertilizer. Tell me what character of lime, when to use it, how much, and if broadcast or in drill? I think drill better for my land. Don't you think so? Would lime not benefit any and all crops planted in sandy lands? I am twelve (12) miles from depot, and the draying of lime would be at least one-half of my expense. I am trying stock raising, so as to keep up fertility of my soil. I believe, though, that cow peas will beat all the stock in the world for this purpose, and to this end I am experimenting. Stock require too much feed and close attention, and eat their heads off each winter. Cannot you tell me something about red Polled cattle? I have two bulls, one a red Poll and the other an Angus. The Angus, I find, is a strictly beef animal, and my object will be to sell him to some person or other who wants beef stock. I like the calves of Red Polls, and what I want to know is, How does this breed compare with Jerseys or Holsteins as to milk and butter? Do they give about the same as Holsteins, and what about quality?

The foregoing letter received from a North Carolina farmer deals with so many matters of importance to farmers all over the South that we have published it in full as the text for an article dealing with the subject of improvement of land and live stock hus-

bandry. These two subjects lie at the root of all successful farming in the South. When Southern farmers realize this, as our correspondent evidently does, then they will cease to be "planters" dependent for a living on being able to sell one or two special crops like cotton and tobacco at profitable prices, and will become "farmers" with a variety of products for sale all through the year, the money from which can be largely kept at home and yet the fertility and crop producing capacity of their land be increased and the special sale crops like cotton and tobacco can be held until scarcity compels the manufacturer to give a fair price for them. At present even if the special crops are sold for good prices so much of the proceeds are required to be paid out for fertilizers that little is left wherewith to purchase home supplies and nothing for luxuries. In becoming "farmers" and not "planters," Southern land owners will make their supplies at home and can live in comfort even though the "tobacco trusts" and "cotton trusts" shall become more numerous and exacting. Then the farmers will be able to dictate the price of tobacco and cotton, and not the trust, and prosperity and contentment will be the lot of our country people. The first step in the way to this end is production of leguminous crops like cow peas, crimson clover and vetches upon the farm. These make humus in the soil and feed in the barn. They gather fertility from the atmosphere and fix it in the soil. They make possible big manure heaps, and these, after all, are the true Savings banks of the farm. To secure these results the crops must be successfully grown and fully utilized. This is the season of the year when the work of growing the clover and vetches should be started, and here at the very beginning many make their first blunder. Because they are told that leguminous crops are improving crops they at once assume that they will grow on poor land without any help. This is not so. All the legumes are large consumers of phosphoric acid and potash in their growth. Give them these mineral fertilizers and they will then secure the nitrogen, which they need, and more than they need from the air. In return for a supply of phosphoric acid and potash, where it is lacking in the soil, the legumes will fix nitrogen in the soil and make a heavy crop of vines and roots, which will supply humus to the soil. Where land has been deeply broken and well cultivated for the summer crop crimson clover and the vetches will make a good stand without reploting the land. The surface three or four inches should be broken with a disc harrow or cultivator, and the fertilizer and seed be then sowed and harrowed in, and if the land is dry-enough be rolled. Our correspon-

dent asks if clover seed can be successfully sowed in a growing crop of cow peas. Whilst we have known a good stand of clover to be thus secured we have known many a stand to be thus lost. Where the peas are a heavy crop it is a very risky business to sow clover in them. As they mature they will fall down and smother out the clover. Better mow the cow peas and make them into hay, and then break the pea stubble with a disc harrow or cultivator and sow the seed. To seed clover or any other crop in a standing crop of weeds as suggested by our correspondent is bad farming. Even though the clover should make a stand it must of necessity be a weedy crop, and therefore an undesirable one. Cut the weeds down before they seed, break the land and then seed the clover. Weeds are the great curse of most land in the South. They exhaust the fertility of the land and rob it of the moisture which it is so necessary here to conserve. No opportunity should be missed to lessen the weed crop. It is always an unprofitable one. The utilization of the leguminous crops is a matter of as great moment as their growth in the economy of the farm. Our correspondent suggests that simply using them as the medium to supply nitrogen and vegetable matter to the soil by turning them down is more profitable than to use them as feed for stock. In this we are unable to agree with him. To turn under a crop so rich in the element (protein) absolutely essential to the growth of live stock is wasting money. A good crop of cow peas or crimson clover or vetches will make two tons of hay to the acre, worth at the very least \$20 as feed. The full feed value of the crop can be taken out by live stock, and yet nearly the full manurial value can be returned to the land by the careful saving and application of the voidings of the stock. We grant that it may in some cases be wise economy to turn down a crop of cow peas, clover, or vetches, but only where land is so absolutely devoid of vegetable matter (humus) as to be almost incapable of making a crop. In every other case the feed value of the crop should be utilized by some animal. Our correspondent's remark that "cattle eat their heads off in winter" can only be true where the feed is given to miserable scrub animals not worth raising or feeding. Well bred animals of either the beef or milk or butter type can everywhere be fed to profit either directly or indirectly. Thousands of animals are fed some years in England where the profit secured is represented solely by the conversion of the crops of the farm into manure, which enhances the fertility of the land and makes possible the production of heavy yields of grain and other crops without the outlay of a cent in fertilizers. Surely here is a

profit worth considering. As a result of such a utilization of crops an average of 30 bushels of wheat to the acre is made in England as against an average of 12 bushels to the acre in this country. What is needed here is a better type of animals into which to feed the crops. With such stock and the nearness of the great markets of the North and East there can be no doubt but that live stock husbandry can be made profitable in the South, and every crop we grow made to produce a heavier yield and more profit. We believe firmly that with a larger growth and proper utilization of the leguminous and forage crops which we can so easily grow in the South, that one-half of the money spent in commercial fertilizers each year could be saved and yet heavier crops be produced. We know of farms in the South where not a dollar a year is paid out for commercial fertilizers, and yet where heavy crops are being made and a good profit being realized on the investment in the farm and stock. These farms are heavily stocked with animals of all kinds, and crops are specially grown to be fed to them in addition to the roughage from the small grain and corn crops.

With reference to our correspondent's enquiry as to the relative merits of the different breeds of cattle mentioned, we would say that the Angus is one of the best types of beef making stock, but is of no use for the dairy. The Red Poll is in our opinion the finest dual purpose cow in the world. She is good at the pail and good in the pen. She has done what no other breed of cows has ever done, taken first premium at the Fat Stock show for beef, and first premium at the Dairy Show as a milk and butter producer. She is the true general farmer's cow, ready to make either milk or beef profitably. Whilst she will not give as much milk per year as a good Holstein, nor as much butter per year as a good Jersey, she will give as much of either product as the average cow of these breeds, and will make beef when not milking quicker than either of them, and the beef will be worth much more per hundred than that from either a Holstein or a Jersey. In another article we deal with the subject of the liming of land.

### HAIRY VETCH.

When advising the seeding of this crop for an early spring grazing and hay crops we are frequently met with the objection that the seed is very costly, and some of it unreliable in germination. This is no doubt true where it has to be bought, but as we have frequently pointed out, there is no reason whatever why the seed should have to be bought. We can grow it

here as well as it can be grown in Europe, from whence the supply on the market largely comes. We have known an excellent crop of the seed to be grown in Chesterfield county, Va. The Department of Agriculture has conducted some experiments in the production of the seed in Maryland and Ohio, with the following results:

Great difficulty has been experienced in harvesting the seed when grown alone. It ripens very unevenly, and if left until most of the seed is mature it becomes matted on the ground and shells and moulds badly. It was found that by sowing with rye a sufficient support was furnished to keep it off the ground and allow it to be cut easily with a mowing machine. Rye seems best adapted as a supporting crop on account of the time of ripening and the stiff straw.

The best results were obtained with seeding from one-half to three-fourths bushels of vetch and one-half bushel of rye to the acre, sowing from the middle to the last of September.

The crop should be cut about the time the last pods are formed and the vines are getting dry. The cutting is done with an ordinary mowing machine, after which the vines and straw should be put in piles and allowed to dry. The threshing can be done with an ordinary grain threshing machine.

The four acres in Ohio yielded 13 bushels of vetch and 61 bushels of rye. In Maryland the storms knocked the rye down so it did not fill well, but the four acres yielded 18 bushels of vetch and 8 bushels of rye. Reports from Mississippi show a yield of from 5 to 7 bushels per acre in that State.

In many instances hairy vetch has been sown and proved a failure under ordinary cultivation. As it is adapted to a considerable variety of soils and a wide area, it is certain that the failure in most instances is due to the absence of the organism which produces the root tubercles and has the property of fixing the free nitrogen in the air, making it available for plant food. In sowing the areas referred to above the greater part was inoculated with the nitrifying organism, but a strip was left in each case on which none of the inoculating material was used. A vigorous growth of hairy vetch was obtained on the inoculated plots, while on the uninoculated plots in both cases the growth was very scanty and the ground almost bare. This shows the ability of the vetch to make a very satisfactory growth by means of the inoculation on ground where it proves an entire failure under ordinary cultivation.

Unless hairy vetch has already been grown successfully on a piece of ground, it should be inoculated to insure success. Inoculating material will be furnish-



ed by and all inquiries concerning it should be addressed to Bureau of Plant Industry, United States Department of Agriculture, Washington, D. C.

See that a piece of land is seeded with vetch and rye during this month, and thus make certain of an ample supply of seed for next year. It will grow on poorer land than crimson clover and makes an excellent green forage crop and good hay. It should be grown mixed with oats, wheat and rye to make the best yield of feed.

## ANOTHER EXPERIMENT IN CURING COW PEA HAY

*Editor Southern Planter:*

Thinking that making posts, digging holes for them, nailing on cross pieces, placing the hay in between, etc., was a tedious, slow, and expensive process in curing pea hay. I am trying this plan. I put an ordinary fence rail on four small forks, four and a half feet long, the two pairs of forks leaning a little toward each other, suspending a rail on each side by two wires over the rail sustained by the forks and resting against the forks about midway, then placing three tobacco sticks on each side, leaning them against the forks.

On this frame work I build a rick of the pea vines, not having the vines more than two or two and a half feet thick anywhere; the rick being eight or nine feet high will contain six or eight shocks. The ricks have had a severe test of rain intermittently for two days and a night. The hay is cool and drying out. That in shocks is hot and beginning to rot.

I believe I have found the way to cure pea vines, but I cannot yet cry Eureka, because the hay is not yet fully cured, but I write at once as some one else may wish to try this experiment before the season is over.

Brace the framework with an extra fork while you are building on it, after the rick is partly made remove the fork, and the rick will be firm and steady. Have the sides and ends of rick steep. I will let my ricks stand until hay can be safely housed.

Charlotte Co., Va.

H. C. RICE.

## NOTES ON THE SEPTEMBER ISSUE.

CHEAT—CASSAVA—LEGUMINOUS CROPS—HOLLOW HORN—HOLLOW TAIL.

*Editor Southern Planter:*

You have quite a symposium on the cheat question, and there is hardly any need for more on the subject. If Mr. Roberts, of Washington county, will sow clean

oats on land where there are no cheat seeds he will never have cheat in winter oats. The great difficulty is that farmers fail to recognize the cheat seeds in the oats, for they look exactly like shrivelled oats grains. If they are all blown out, and only heavy and plump oats sown, no cheat will grow unless the soil is already infested with it. Then it takes the freezing of winter that kills oats at times, to germinate the hardy cheat seeds, and when oats are sown in spring all the cheat that has germinated is killed by the plowing, and the result is clean oats. But these clean oats put back in the fall on land infested with cheat will soon be found full of cheat, not because the oats turned to cheat, but because the cheat seed were there, and had the proper conditions for their growth. Whatsoever a man soweth that also shall he reap is as true of cheat as of any other plant. Sow cheat seed and you will get cheat, never oats. Sow only oats in perfectly clean land and you will have oats, and never cheat. I have grown winter oats here, and had them killed down, but never a cheat plant put in an appearance, for the soil has no cheat seed in it, and only perfectly clean oats are sown. But all around the oats turn to cheat, because the cheat seed is there.

*Cassava.*—I have grown cassava here with success from cuttings planted in the early spring, and have made delicious puddings from the grated roots. We can, on the sandy soils in the eastern part of this State (North Carolina), grow cassava with perfect success. Even on the clay soil here I made an average of half a pound of starch per root. The chief difficulty is in keeping the cuttings over winter. They keep fairly well buried in sand in a warm cellar. The plant is well worth growing as an ornamental plant. Its leaves resemble the castor bean, as it belongs to the same family, but the plant is decidedly more handsome than the castor bean, being more dense in growth, and the leaf stalks being red, form a contrast to the green leaves. For the centre of a sub-tropical flower bed the cassava is a very pretty object.

*Hollow Horn and Hollow Tail.*—You have struck another old superstition like the cheat, and I expect that you will be getting letters from people who know that cattle have these so-called diseases. Did any one ever find a cow horn that was not hollow or a cow that does not have a soft, boneless place in her tail? Cattle ticks and hollow stomach are generally the cause of the sickness.

*Legume Forage.*—You are right in what you say to Mr. French. The great advantage we have in the feeding of beef cattle in the South is the great abundance of protein feeds that we can grow. Grass pastures are good, of course, but the South does not need

grass as much as she does legumes, and we can grow most of these to greater perfection than the Northern farmers can. Cow peas, soy beans, velvet beans, vetch, crimson clover, alfalfa, all furnish the costly protein and all can be grown in the South better than elsewhere. With plenty of legume hay we need grass only as permanent pasture, and in the Bermuda grass we have the finest of summer pastures in the country, and can afford to let the meadow grasses go while we produce better hay from plants that improve the soil they grow on.

W. F. MASSEY,

*Editor of Practical Farmer.*

### CLOVER SEEDING.

*Editor Southern Planter:*

There has been much complaint in recent years in our section of failure in securing a stand of clover. This year, however, the farmers have been more successful. Most of the failures were due to drouths generally in April and May, and sometimes in July and August. We can escape some of these if proper methods in seeding are practiced.

It is our rule here to sow with wheat, and when that plant is making its greatest demand on the soil for moisture, it does not take much of a dry spell in May to kill the young clover plant, if it was sown late. I rarely fail to get a stand in wheat. My practice is to watch for an opportunity in February, when the ground is nicely cracked by freezing and the surface is dry. I regard February 15th as the best time, so that the elements will bury all the seed before there is warmth enough to sprout it. Nature will then bring it up at the proper time and early. It then gets well rooted before spring drouth sets in, then, unless the drouth is very severe, it will pass through it unharmed. By this method of seeding I save much labor in covering it, as has to be done by those who sow late. I have never lost any young clover by freezing, though I have had wheat cut down in March when six inches high by a severe freeze.

This spring there was no favorable time for seeding in February until the last day, when the seeder was brought out and 32 acres was sown. This field produced 800 bushels of wheat and one of the finest stands of clover I have ever had. Have just finished mowing over the stubble and cutting down the rag weed, and will gather some clover seed on parts of the field.

The saving of labor in preparing the land but once and saving one year's time will prevent people taking your advice about sowing clover alone. I have practiced sowing clover alone in small patches for years, and I have never failed to get a stand. This year some seeded that way was cut for hay August 1st, it being 18 inches high. If my neighbor and friend, T. S.

White, had stepped over this way he would have seen your opinion reinforced by my experience.

In this connection may I say to those who imagine that other plants "turn to choss," if they will observe closely in their fall seeding they will see the little choss plant coming up ready to overtop most other crops in the spring. I sowed last fall two and a half acres of corn stubble land in orchard grass and clover. I saw the choss up in it in a few weeks, and when I cut the hay this spring it was nearly all choss. I cut it again August 1st, and it was all orchard grass and clover. It now stands 8 inches high, nice and clean.

T. M. WADE.

*Rockbridge Co., Va.*

Whilst early seeding of the clover seed on the wheat crop will materially help to secure a stand, yet our experience and observation has been that more of such stands are killed by the hot weather and a drouth after the cutting of the wheat than by spring drouths. The sudden exposure of the tender shaded clover plants to the full glare of the hot sun is most trying to them, and if followed by a dry period almost certainly fatal and especially so when the rag weed is allowed to grow and not mowed off. It sucks out the last vestige of moisture and the clover dies.—Ed.

### GOOD YIELDS OF WHEAT.

Threshing has been in progress on the Fort Hays Branch Experiment Station, Kansas, and some of the yields are very gratifying. There has been grown there this year 220 varieties of small grain, 105 being fall wheat. The seed grains of these were furnished by the Bureau of Plant Introduction of the Department of Agriculture, and were known to be promising. The surplus seed from these varieties is being sold to wheat growers all over the western part of the State, so that the benefit of the station will be felt immediately.

The following is a list of the varieties and yields that are considerably above the average:

Kansas, No. 4, Kharkov, a Russian winter wheat (bearded), 40.90 bushels per acre.

Kansas, No. 5, Beloglina, a Russian winter wheat (bearded), 32.24 bushels per acre.

Kansas, No. 6, Ulta, a Russian winter wheat (bearded), 36.35 bushels per acre.

Kansas, No. 7, Crimean, a Russian winter wheat (bearded), 40.61 bushels per acre.

Kansas, No. 8, Chirka, a Russian winter wheat (bald), 36.67 bushels per acre.

Kansas, No. 3, imported Turkey (bearded), 35.82 bushels per acre.

Kansas, No. 33, Kharkov (bearded), 35.28 bushels per acre.

Kansas, No. 35, Crimean importation (bearded), 36.94 bushels per acre.

Kansas, No. 37, Theiss (bearded), 40.97 bushels per acre.

*Fort Hays Branch Experiment Station, Hays, Kan.*

These varieties ought to be tested in the South. Possibly seed may be had for this purpose from the Department of Agriculture.—Ed.

## ENQUIRERS' COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

### Japan Clover.

Please state in your next issue if "Japan clover" planted in the fall (and what time) will do as well as if sown in the spring? Also, if sown in the mountains where a good deal of shade exists will it grow and make good grazing if thrown broadcast over the leaves?

A SUBSCRIBER.

*Albemarle county, Va.*

Japan clover should be sown in Spring. All through Piedmont, Middle and Southern Virginia Japan clover is found growing under the shade of trees where not too dense. It makes good grazing sown broadcast. There are hundreds of acres of it growing all through the South, where never a seed has been sown by man. Birds, animals and floods have carried the seeds and started the growth, and then it has spread uncared for and untended.—Ed.

### Hairy Vetch, Winter Vetch.

Which is best adapted to this section, English Winter Vetch or Hairy Winter Vetch? Will either do well sown after cow peas, and what time to sow? The soil is gray.

H. T. KIRKMAN.

*Guilford Co., N. C.*

Either will grow well in your section. The Hairy Vetch should be sown in September whilst the English Winter Vetch may be sown into November, but is better got in October. They will grow after cow peas. Sow either wheat or oats or a mixture of the two, which is better, with the Vetches. Half a bushel of the grain to the acre, with 25 pounds of Hairy Vetch or 1 bushel of English Vetch.—Ed.

### Lame Horse.

I have a mare about 12 years old, which has been lame in one of her fore feet for nearly eight months, probably caused by being overstrained. First she

became enlarged at the fetlock joints, also a soft, puffy swelling similar to wind galls, but cannot be rubbed away. At the same time she seemed to have pain in her shoulder, which, at times, becomes so severe that she can hardly walk. There also seems to be a wasting away of muscle on her shoulder blade, generally called sweeney. I have tried different remedies without yet having effected a cure.

SIMON ZIRKNITZER.

*Lunenburg Co., Va.*

This is one of those cases of sprain resulting in shoulder lameness, which are so common and yet so invariably difficult of treatment. The most successful remedy which can be used is *rest*. This may be supplemented by rubbing the joints and shoulder with belladonna or camphor liniment, and possibly blistering may be found of service.—Ed.

### Texas Fever Ticks.

Please give information how to rid farms of ticks which you say cause fever in cattle.

*Albemarle Co., Va.*

J. H. GRIFFITH.

Texas fever ticks can be gotten rid of from every farm in Virginia if only farmers would make the necessary effort. What is needed is to keep cattle, horses and mules off a pasture for part of the year. This pasture will then be free from ticks, and will remain free if no cattle infested with ticks are turned on to it. Northern cattle may then be put into it with certainty that they will not have the fever. Before any Southern cattle are turned into it they must be perfectly cleaned of all ticks. The best method of doing this is to use a mixture of one part kerosene oil to three parts of cotton seed oil. This should be rubbed on the cattle all over. Two or three greasings at intervals of a week or ten days apart will do the work effectually. The cattle should then be kept only on the cleaned pasture, and another pasture should be cleaned in the same way, until all the farm is clear of this Southern pest, which has cost the South millions of dollars. The State of Virginia can get rid of it and keep rid of it if the farmers so decide, and it will be worth thousands of dollars to them every year. See article in this issue.—Ed.

### Inoculating Cattle for Texas Fever.

Will you have Mr. C. A. Williams, of Halifax county, N. C., tell us how he inoculates his cattle, and what he uses to make his cattle tick proof?

*Lonoke Co., Ark.*

H. J. LEWIS.

Cattle are inoculated against Texas fever by drawing blood from a cow infected with the Texas fever germs, and after the same has been defibrinated injecting the liquid into the body of the animal to be

rendered immune. The operation requires a special inoculating outfit, consisting of a lancet, injection syringe, and measuring glass, so as to secure the proper quantity of fluid. It is usually done by a veterinarian, but there is no reason why a farmer should not learn to do it for himself. He could readily do so by seeing the operation performed at some Experiment Station. It is regularly done at most of the Southern Stations. The important point is to be certain that the animal from which the blood is taken is infected with the germs of the disease. She must have had the disease.—ED.

### Grafting.

In your next issue of the *PLANTER* I would thank you to give me directions for grafting fruit trees.

Southampton Co., Va. J. L. CAMP.

When the season for grafting is nearer at hand we will publish an article on this subject. At present all that can be done is to cut the scions as the wood becomes mature and to pack them away in a cool cellar, but where frost will not hurt them, in damp powdered moss or peat soil. These scions may be cut at any time during the late fall months or even in early spring. They should be carefully labelled with the name when cut, so that no mistake may be made when inserting the graft.—ED.

### Tall Meadow Oat Grass.

I have been a reader of your meritorious publication for several years, and have noticed that when giving a list of grass seeds, which you recommend for sowing, you almost invariably include tall meadow oat grass, though I have not noticed an article on its merits since I have been one of your readers. I have been sowing this grass since 1899, and find it worthy of more notice, and compared with orchard grass for hay. I would give the oat grass the preference, as it does not get hard and woody when allowed to get ripe like orchard grass does. I would like to know how the seed is gathered, as the price of seed goes up from year to year, and is now nearly double what it was in 1898. It falls from the plant as it ripens, and if gathered a little green is likely to spoil, and is hard to cure. I have tried stripping by hand, which is slow. Hope you can give some information on the subject, as at present price of seed it would be very profitable to save it, and it may interest many of your readers. J. H. THOMPSON.

Jefferson Co., W. Va.

Whilst we have not written any special article on the merits of tall meadow oat grass, we have shown our appreciation of its value by constantly recommending it to be sown. We know it to be one of the

most valuable hay grasses that can be sown, and it also makes an excellent addition to a pasture mixture. We believe that the seed is principally grown in the Middle States, and is, we presume, harvested in the same way as orchard grass. The machine is set to cut only the seed stalks of the grass, and the bottom is afterwards cut for hay. Dr. Phares, one of the best authorities on grasses, admits that the seed is rather difficult to save, as it begins to ripen six to ten days after blooming, and the top seeds ripen first, and at once begin to drop. He advises that as soon as the top seeds ripen sufficiently to drop the whole seed stalk be cut off and dried, when the seeds will all thresh out and be matured. Probably the Division of Agrostology of the Department of Agriculture, Washington, may be able to give you further information on the subject.—ED.

### Fall and Winter Plowing.

We have some light land that had wheat on it the past year, and we expect to put it in corn and potatoes next spring. Would it be of any advantage to plow this land in the fall? We also have some stiff upland that we expect to put in peas and beans. This land has been plowed rather shallow heretofore; we hope to plow it deeper this time. Should we plow it now or wait until spring? SUBSCRIBER.

Charles Co., Md.

We advise the plowing of all land in the fall and winter. It can then, with safety, be plowed deep; and thus the depth of soil be increased. The new soil turned up will be acted upon by the air and sun, and its plant food be made available. It is well when the plowing is done in the fall to seed with some winter cover crop like rye, winter oats or wheat, with crimson clover or vetches. This will conserve and add to the fertility. Fall and winter plowing greatly lessens the pressure of work in spring and land can often be plowed then, which could not be touched until too late in the spring for the best results in the crop.—ED.

### Smut on Corn—Grass for Name.

1. What causes smut on corn?
2. Will the smut hurt horses, cattle, sheep or hogs to eat it?
3. Enclosed find sample grass head that grows about here. Tell me the name and value of it, and can I secure it at the seed store?

Catawba Co., N. C.

A. C. EDWARDS.

Smut is caused by a fungus known by the name of *Ustilago zeae*. It is a fungus of a simple nature, and entirely distinct from the smuts of wheat, barley or oats. It is not like these, conveyed on the seed from

one crop to another, but is usually conveyed to the field and thence spreads to the crop in measure from the barn yard or in rich soil, which has been infected with smut spores from smutted ears or stalks thrown down on the ground. The spores are carried in the air, and these sources of infection grow quickly on touching a moist, tender place on the ear or stalk. The only way to prevent infection or check it is to carefully destroy with fire or bury deeply or scald with boiling water every piece of smutted corn or stalk.

2. Smut is not injurious to animals, indeed it has been found to be nutritious for cattle.

3. The grass sent is *Panicum proliferum*, a weedy annual grass of no particular value as forage. You could not buy the seed of seedsmen.—Ed.

### Feed for Young Pigs.

In the absence of milk, what feed do you consider best for young pigs seven or eight weeks old? Would you advise blood meal to produce high class pigs—prize winners?

*Dinwiddie Co., Va.*

SUBSCRIBER.

Ship stuff with a little fine bran mixed with it and a teaspoonful of blood meal added to each feed mixed in water or kitchen slops. A spoonful of fine bone meal added to the food once a week will also be found beneficial. Let the pigs also have some green food, clover or vetches, and some wood ashes to eat when they desire. These will help to keep their digestive organs and bowels right. We have had some good reports as to the use of blood meal for both pigs and calves.—Ed.

### Protecting Peas and Beans from Weevil.

I have some peas and soja beans that I failed to sow this season and wish to carry over for next spring's seeding. Is there any way I can treat them to prevent bugs eating them? If so, please give remedy through the columns of your paper.

*Pittsylvania Co., Va.*

FARMER.

Place the peas and beans in a tight bin or barrel with a close fitting lid. Procure a can of bisulphide of carbon from a drug store and fill a saucer with the liquid and place it on the top of the seed and close the lid. Leave for 24 hours, when the vapor from the drug will have sunk down through the seed and have killed every living thing in it. This should be repeated two or three times during the winter and spring, as the eggs of insects will hatch at intervals through this time. Be careful to keep all lights away from the carbon, as it is very explosive. The smell of the drug will pass off from the seed in a short time after exposure to the air, and it has no dele-

terious effect on grain of any kind. It is equally effective in destroying animal life of all kinds, therefore do not inhale more of the vapor than can be helped.—Ed.

### Cheese Making—Sick Hog.

1. Please inform me whether cheese can be manufactured on a small scale—that is to say, on a farm where about ten cows are kept. If so, what equipments are necessary? What knowledge is required to be able to operate a cheese factory with success; and can such knowledge be obtained in our agricultural institutions? If so, what time is required to gain such knowledge?

2. I also desire to know something regarding my hogs, with which I have some misfortune. I bought a pair of Berkshire pigs from one of your advertisers. They were very fine ones, but one had a severe cough, which I treated in different ways, but with no success, the one affected being a sow. When she had pigs, which were very fine, I noticed that some of the pigs were also affected. I tried giving spirits of turpentine in food, but with no effect. One died. We cut it open and found that the pig was all swelled inside, having lumps on the lungs. I would like to know the disease, and what would be the best cure.

GEORGE SEDIVY.

*Dinwiddie Co., Va.*

1. Yes; cheese can be made on a small scale on the farm. It was formerly all made in this way, but the cheese factory has now largely supplanted the small home industry. A better quality of cheese is made when larger quantities are handled and larger cheeses made. We believe there is a good opening for cheese factories in the South, as there is a considerable consumption of cheese, and it is all brought from the North. There was a factory operated in Orange county, Va., some years ago, and a good quality of cheese was made, for which a market was readily found, but it was destroyed by fire, and the business not resumed. The equipment required is not very costly either for home or factory work, and can be had from dairy utensil makers in the North. We would not advise the starting of home making, as the difficulty of finding a market for the small cheeses would be great. If the owners of 50 cows would combine together and start a small factory we believe it would be a profitable investment. A course in cheese making would require to be taken at some Northern or Northwestern Agricultural College, or a skilled cheese maker from one of these institutions would have to be engaged. There are several books published on cheese making, from which much could be learned, but a three months' course in a practical school would be best. Wisconsin Agricultural Col-

lege would be the best place to go to for this purpose, as they make the best cheese in that State.

2. The hog probably suffered from chronic bronchitis, which was transmitted to the pig which died and then developed into lung disease. Nitrate of potash in drachm doses given two or three times a week will often relieve this trouble. It is usually caused by exposure to cold drafts or from sleeping in dusty beds.—ED.

### Plowing Down Peas.

I planted peas in row in oat stubble as a preparation for cotton. They have fallen down so they cannot be saved for hay, and there is about a half stand of volunteer oats. Would it be better to plow down this fall or leave the oats for a winter cover? If the pea vines are left on top till spring will their nitrogen get into the soil or escape into the air. R.

*Lincoln Co., N. C.*

The best course to pursue in order to secure all the fertilizing value of the peas is to plow them down now and sow rye, wheat or winter oats on the land to conserve this fertility. If crimson clover or vetches were also sown with the grain this would not only conserve, but add to the fertility. If allowed to lie on the land all winter some of the nitrogen will be lost.—ED.

### Calves Dying.

Yesterday (September 14th) I visited my son, who is managing the farm and taking care of mansion formerly occupied by the late Mr. Calvin Jeffers, in Nottoway county, Va. His milch cows have been running, for several months, on a field of from thirty to forty acres, on part of which was wheat and the rest a very poor crop of oats this year. The oats were not worth cutting, and but few were cut. Three of the cows have a calf each with them. These calves have been confined through the day in the enclosure in which the house stands, and at night turned with the cows, with which they remain till morning, in a yard adjoining, in which there is nothing growing but very short grass. In the enclosure in which the calves have stayed through the day are a large variety of ornamental trees and shrubs, which they could eat of at will—for instance, spruce pine, oleander bush, cedars and a box hedge on each side of driveway. On Sunday morning one of the three calves was noticed with its head turned abruptly round, grinding its teeth, frothing at month, bellowing, staggering, falling, jumping up, and in thirty minutes from being first seized died. It was four months' old, in good condition, and always appeared perfectly healthy until this took place. Yesterday morning a second one died exactly in the same way

about the same time of morning and died after suffering about the same time. It was about two months old. In skinning them there was noticed an abnormal quantity of nearly black blood about head and neck. What can be the cause? I have been breeding cattle for half a century, but have never met with a case like this. ALFRED STABLES.

*Lunenburg Co., Va.*

We have very little doubt but that the calves died from poisoning from having eaten some of the ornamental shrubs in the yard. We believe that it is generally recognized that the oleander is poisonous to stock, and most of the ornamental evergreens are so. We have known many cattle to be poisoned by yew, laurestinus and laurel, and we believe also from box.—ED.

### Fertilizers for Tobacco, Tomatoes and Wheat.

Please give me the names of all ingredients to make fertilizer of the best kind for growing tobacco on poor land, and also the name of the best seed to sow for marketing purposes; and also the best kind of tomato to sow for canning, and what kind of fertilizer to use for them to make the best yield. Is there much profit on such crops? Also give me the name of the best fertilizers for growing wheat, as I made a failure on my crops.

*Northumberland Co., Va.*

T. L. ASHBURN.

If the writer of this enquiry will read THE PLANTER carefully he will find the question of the best fertilizer to use for these particular crops fully discussed previous to the time for planting the same each year. We do not undertake to recommend any particular make or brand of fertilizer, but tell what the particular crop calls for, and in what form this can be purchased. We have in the past two or three issues discussed the fertilizer required to grow wheat. Phosphoric acid is the element most needed, and this can be supplied by acid phosphate or bone meal, or preferably by a mixture of the two. Probably what the writer most needs is humus in his soil, and this he can get by sowing crimson clover and vetches now.—ED.

### Canada Peas—Crops for Hog Pastures—Rape.

1. What time should Canada field peas be planted here in Georgia?

2. Do they make as good hay as the common cow peas?

3. What time in the spring should they be cut for hay? I want to plant a succession of crops for hog pasture for winter and fall grazing. Expect to have about one hundred head of hogs and pigs.

4. What crops do you think would be best for me to plant?

## 1903. 5. When should rape be planted?

Thomas Co., Ga.

W. L. JENKINS.

1. Canada peas should be sowed in Georgia in December or January. Sow at the rate of  $1\frac{1}{2}$  bushels to the acre and cover 4 or 5 inches either by plowing them down or by drilling them, and then sow half a bushel of winter oats or wheat and harrow.

2. They make good hay when grown in this mixture, and also good grazing for hogs.

3. They should be cut or grazed before the warm weather sets in or they will be killed by mildew. They are a cold climate crop.

4. The best crops to sow for fall and winter grazing for hogs are cow peas, sorghum, corn, rape and artichokes.

5. Rape is a cold climate crop, and should be sown in Georgia in August or September for fall, winter and spring grazing or in February for spring grazing. Artichokes should be planted in March or April for the hogs in winter. They will root them out except when the land is hard frozen.—Ed.

### Hair on Horse's Tail.

Can you give me any remedy for thickening a horse's tail. I have a very handsome horse, but his tail is very thin. Any information along this line will be greatly appreciated.

G. P.

Marion Co., S. C.

We know of nothing better to make hair grow on an animal than to keep the bare or thin spot well greased with vaseline. Grooms in England, when we were a boy, used to mix gunpowder with grease and apply it to make hair grow. Whether this use of gunpowder added anything to the value of the grease we doubt.—Ed.

### Fertilizer Requirement of Crops.

A subscriber asks us to give in a general way the special requirements of different crops in the way of fertilizers:

Crops may be divided into the following groups, with their requirements:

Group A.—Wheat, barley, rye, oats, timothy. Require, first, nitrogen; next, phosphoric acid; last, potash.

Group B.—Corn, cotton. Require, first, phosphoric acid; next, potash; last, nitrogen.

Group C.—Peas, beans, clover, hay. Require, first, potash; next, phosphoric acid; last, nitrogen.

The foregoing may be taken as the theoretical requirement of the crops deduced from analysis of their constituents. In practice, this theoretic requirement

is often found not to be the best. This is largely caused by the nature and chemical constituent of the soils on which the crops are grown, and the availability of the plant food in the soil. On most Southern soils the controlling element in heavy yields of the cereal and leguminous crops is usually found to be phosphoric acid. For vegetables and tobacco the controlling elements, potash and nitrogen. The only true way in which to answer this question is to ask it of the soil. Test the different crops on soil of a like character with different combinations of fertilizing elements and with each element separately, and the answer given will be reliable for that soil.—Ed.

### Transplanting Trees.

Will you please publish in your next issue the best time for transplanting trees, such as "white oak," etc., and how large could they be transplanted so as to live?

SUBSCRIBER.

Sussex Co., Va.

All trees except evergreen trees can be successfully transplanted in the late fall or early spring. Evergreen trees should be transplanted in the late spring. It is never wise to endeavor to transplant large trees, as even if they live they never make good growth afterwards. We have seen trees from 6 to 9 inches in diameter in the trunk transplanted, but whilst many of them lived they did no more than live for many years. Smaller trees, say half the size, would have made better trees in a few years' time.—Ed.

### Hog Husbandry in the South.

1. I have a fine field of corn—worked out clean and level (though land is hilly), and have seeded rye (thin) and German clover on part of it. On balance I sowed wheat and oats thinly and German clover, and at one end I sowed about an acre or more of alfalfa (to stand if successful) twenty pounds of seed. I sowed black peas thinly over the whole piece, to afford shade during the fall after the corn is cut, and I thought they would improve the land, too. My object is to graze with pigs this winter (wrong for alfalfa, is it not?). Then I want to use the pigs on it so that I can get best results as to feed during the spring. Will I be able to let the grains mature and graze them off with hogs and then have time to sow a crop of peas? This is heavy land, and cannot be plowed except we have rain at that season, and there is a risk in that. Will the grain waste if kept for hogs. I suppose they should be put on it when in the milk state. I would thank you for information along this line. My land is good, and produces fine crops. I want to get best results possi-

ble from it. Then will it pay to risk a season for plowing and wait for the small grain, or turn under a green fallow in May and plant peas in drills? I have had no experience in feeding hogs on crops of small grain. They do well in the stubble some years as long as it lasts.

2. I have nearly finished following a nine acre lot of good, heavy land, about half of it was in wheat this year, after peas last year, the other half was in clover cut off this year; not a thick stand. Now, I want to use this field to best advantage in feeding hogs next season. Then shall I sow wheat and oats mixed (and rye, too?) and German clover or vetch? Is there anything better for fall feeding than peas with a sprinkling of corn grown all through it? Or will there be more profit in growing wheat on this land or oats, to be threshed and feed the grain either whole or ground? The land will bring fine crops of either, if fertilized with Charleston phosphate (and the oats do not winter kill, and not likely if drilled in early enough). Best results for hogs is what I want to reach.

3. I want to grow one hundred or more fine hogs annually, and how to use my land to produce the best results for these or a greater number if I can feed them is what I want to do, and I will appreciate an outline for the yearly course of breeding, care of pigs, homes and yards, arranged to feed well, shelter well, and save manure to be easily accessible with manure spreader, and crops and quantity of land required to obtain greatest results at least cost. I think you gave an article nearly a year ago from Breeder's Gazette or some other paper on this subject, but I cannot find it. It would be timely reading again. It was about a hog farm, where, I think, they raised about 200 hogs. I will thank you to refer me to it if you can cross it, and give what other information you can.

4. My corn grows very tall, stalks ranging 12 to 15 feet, and often more, and very large. It would make magnificent ensilage, but I have but few cattle to feed, and I need the grain for team and hogs. I would like very much to grow as fine ears as I do on stalks just half as high. Is there any variety of corn that grows big ears on low stalks? Is there any way of saving the corn and ensilaging the stalk? Dry fodder corn as large as mine represents immense labor to secure feed, only a very small part of which is eaten, and which is considered least valuable for lack of protein. My fodder is in my way, though I cut it up.

C. N. Stacy.

*Amelia Co., Va.*

1. The seedings of rye, wheat and oats and German clover and black peas will make good grazing for your hogs in the fall and spring. The alfalfa should not be grazed. It will not be wise to let the crops stand until the grain matures, but turn the hogs on when in the milk state or a little earlier, and the

greater part of the crop will then be eaten. If allowed to mature the grain the straw will not be eaten. As soon as the crop is fairly eaten down then plow down the residue and sow the peas.

2. We would sow this field with the mixed small grain and German clover and vetch, say 10 pounds clover, 10 pounds vetch and half a bushel of mixed grain, and one or two pounds of rape seed to the acre. This should give you good winter and spring grazing, and then follow with cow peas and corn or sorghum for late summer and fall feeding. We think you will get more feed and better results in the hogs in this way than to sow in wheat or oats and thresh and feed the grain.

3. The article referred to was published in the issue of December, 1902, page 698. It described a successful Illinois hog farm. Eighty acres were divided into four fields of 20 acres each, with a shed located in the centre so as to be accessible from all the fields. The crops grown were oats seeded with clover, clover pasture, soy beans and artichokes and corn. The oats were seeded after corn and sown with clover. Soy beans one part and artichokes on other part follow the clover, and these were followed by corn. Here we can improve on this rotation by using cow peas in the place of the clover, and crimson clover and vetches with oats, wheat and rye for winter and spring grazing in the place of the oats and red clover. Sorghum and corn can be planted in the place of the corn alone, and thus give better early fall feeding. The artichokes should be grown here, as they make the best of winter feed, which the hogs harvest for themselves. Rape also may be grown here for fall, winter and spring grazing. Sow in August and September for fall and winter grazing, and in March for spring grazing.

4. There is no way to prevent corn growing tall on good land in the South. Even if you get a dwarf Northern variety, it will in a couple of years shoot up until as tall as our Southern varieties. Our long growing season causes this. You can save the corn and make ensilage of the stalks and fodder if you will pull the corn as soon as it is glazed and dented, and then cut the stalks and run them through a cutter, or better, a shredder into the silo and wet them well with water as they are packed in the silo. Whilst not so good as silage made from corn grown specially for the silo and cut green, yet this fodder corn silage makes fair feed for stock if some grain be fed with it.—Ed.

When corresponding with advertisers, kindly mention the *Southern Planter*.



## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The gathering, storing and shipping of the apple crop will almost bring to a close the harvesting of the products of the garden and orchard for another year. It is lamentable to see with what a want of care this gathering and disposal of the apple crop is too often done in the South. Instead of carefully picking the fruit from the trees, the apples are too often shaken off or knocked off with poles, and thus so bruised and injured as to make them incapable of being kept for more than a very short time, and absolutely unfits them for shipping to market. Then when picked up from the ground they are, if intended to be sold, dumped into dirty barrels or boxes, or even into slatted crates or barrels and covered only with a piece of sacking, and thus shipped. No care is taken to keep varieties separate or to cull out bruised and diseased specimens. When they reach the market the commission merchant is at a loss what to do with them. No one wants such fruit, and the result is that the grower receives little or nothing for them. The fruit should be carefully picked and the sorts be kept separate, and all undersized, bruised and diseased fruit be kept at home and the large, good fruit, not needed for home use, be put into good, clean barrels and tightly packed and a good head be put on the barrel and pressed down so as to prevent shaking and bruising. Shipped in this way all fruit will find a buyer and at a fair price. There is a demand for apples in nearly every little town, and a large demand in every large city. Where only a few barrels are grown more than needed it will often pay to carry them to the nearest town put up in boxes holding a bushel each and neatly packed. In large cities there is also a demand for these small packages of fruit, and a much better average price could be made if this demand was catered to. There are thousands of people who can buy a bushel of apples who do not want a barrel. This neglect of the small home buyer is responsible for much loss on the products of the orchard and garden all over the country. The large commercial grower has not time to attend to this trade. He picks, packs and ships his fruit in the best manner possible, and then puts it on the wholesale markets of this country and Europe, and gets its full value. The small grower too often gets nothing or next to nothing for his, but this is largely his own fault. We would urge attention to this subject. There is money in it. Do not neglect to store away

a good supply of apples for home consumption. These keep best stored in a cool, dry room or cellar in slatted bins, not holding more than two or three bushels each, and these should be looked over every few weeks and the spotted fruit be picked out and used first. In this way a supply may be kept until the spring.

The late and second crop of Irish potatoes should be dug as soon as they become matured. The sooner they are dug after this period and the better they will keep when stored. Do not let them lay out in the sun after they are dug longer than necessary to dry them so that the soil will leave them clean. Sort as gathered, and store as directed on another page of this issue.

In this issue will be found advice as to digging and storing sweet potatoes.

Carrots, parsnips and salsify will keep safely in the ground where grown, unless the winter be a very severe one. To guard against loss from this, a part of the crop should be pulled and be stored in sand in a cool, frost proof cellar. Beets should be stored in the same way. Turnips will keep in piles out of doors protected with straw. These latter will, however, yet grow much larger; indeed, they will make more weight in November than, during any other period of their growth. Do not, therefore, disturb them until severe frost is passed.

Cabbage and lettuce seed may be sowed for plants to set out in early spring. Make the seed beds in a situation where they can be protected easily from severe weather in the winter by being covered with mats, leaves or straw.

Cabbages for the early crop may be set out at the end of the month. They should be got into the fields just soon enough to get hold of the land with their roots before severe weather sets in, but not soon enough to make growth or they will be very apt to be killed by frost, as the young growth is tender. Lay the rows out East and West and set the plants on the South sides of the rows, so that they will be somewhat shielded from the coldest winds and weather. Have the land deeply broken and finely prepared, and do not spare the manure or fertilizer. Cabbages are

gross feeders. Give plenty of phosphoric acid and potash now, and give the nitrogen in the spring when the plants start growing. From 300 to 500 pounds of acid phosphate and from 100 to 150 pounds of muriate of potash should be applied per acre.

Celery should be earthed up a little as it grows to prevent the plants from spreading out on the ground, but it is too early yet to earth it up to blanch it unless it has made good growth and is wanted for an early market. In putting earth to the plant hold the stalks together with one hand and pull the earth around with the other. This keeps the soil out of the heart of the plants. If allowed to get there the plants will canker and the stalks be spoiled.

In dry, warm, light land strawberry plants may be set out this month. If the land is in good fertility and fine order and care be taken in setting out the plants, and the plants be fine, strong ones, they will continue to grow almost as though they had not been moved, and will give a small crop next year. Land that has grown an Irish potato crop and been made rich for that purpose and been kept clean and worked makes an ideal place for this fall planted strawberry crop.

Land may commence to be got ready for the planting of orchard trees, but it is too early yet to set them out. Let the land be well and deeply plowed and be set out in such a way as that the rows of fruit trees can be kept in straight lines and at uniform distances and so as to utilize the space to the fullest advantage.

Clean up and burn all trash, leaves, prunings, weeds and waste in the garden, orchard and vineyard, and thus destroy all insect and fungous pests. Plow and seed all land not carrying any other crop in crimson clover, vetches, wheat, oats and rye. This will conserve fertility and make humus when turned down in spring.

### THE SCARCITY OF FRUIT IN EUROPE.

Additional evidence of the scarcity of fruit in Europe is furnished by a recent letter from Thomas Russell, fruit broker, Glasgow, to Mr. W. A. MacKinnon, Chief of the Fruit Division, Ottawa. Mr. Russell writes: "The apple crop in England, Ireland and Scotland is a very poor one, while on the continent there is also a very light crop. Pears and plums are also scarce in England. So far as Glasgow is concerned, we shall have to depend entirely on supplies of apples from America and Canada, and

altogether there is every prospect of a good demand for American and Canadian apples, as there is practically nothing else to come against them this season."—*Farmer's Advocate, Canada.*

### NOTICE TO APPLE GROWERS.

Richmond, Va., Sept. 21, 1903.

*Editor Southern Planter:*

Dear Sir,—As previously brought to your notice, upon the active co-operation of the fruit growers of the State must depend the success or failure, to a large extent, of Virginia's fruit exhibit at the St. Louis World's Fair, so I hope each individual grower will do all that he can to make this exhibit a success. It will be necessary to obtain at least fifty barrels of apples from each of the leading apple counties of the State to enable a continuous exhibit to be made in a creditable manner during the entire period of the Exposition, and if each grower will contribute a barrel or so of apples, each one will get equal individual advertisement and the burden will not bear heavily upon any. Please give me your active support at once, and follow instructions carefully, as I am already receiving apples that through improper selection and handling are valueless for exposition purposes.

#### DIRECTIONS.

Apples should be carefully picked with the stem left on, must be free from defacement by worms, black ends, scab, cloud or other skin diseases, should be of normal shape and well colored. Great care should be exercised in handling to prevent bruising, and to this end apples, pears, etc., should be picked direct from the tree and each individual apple wrapped in paper, for which purpose newspaper or ordinary wrapping paper will answer. Pack in boxes or barrels, whichever may be most convenient, but in any case use plenty of packing and wrapping material, as a less quantity well cared for is more desired than a large quantity in bad condition. Size must be secondary to the perfect condition of the fruit, as it matters not how large if the specimen has a black end, is scabby or bruised, it cannot be exhibited.

Pears, quinces and nuts, both wild and cultivated, are also desired.

Ship to George E. Murrell, Supt., care The Merchants Cold Storage Co., Richmond, Va., by express.

Yours very truly,

GEORGE E. MURRELL.

We invite the attention of apple growers to the above communication, and would earnestly urge that each individual grower should make it a matter of personal care and a point of honor in the interest of the State to select a barrel of his best fruit and ship

it to Mr. Murrell. If this is done, Virginia can make an exhibit of apples which will be the means of bringing thousands of dollars into the State each year.—Ed.

## THE VIRGINIA STATE HORTICULTURAL SOCIETY.

*Editor Southern Planter:*

I promised to send you particulars of arrangements for special railroad and hotel rates for the annual meeting of the Virginia State Horticultural Society, at Pulaski, on December 2d and 3d, but fear I cannot do so until your next issue, as I am still in correspondence with the railroads on the subject. We have met with most gratifying success from firms we have applied to to help us by offering premiums for the exhibits of fruits, vegetables, flowers and seeds. Several of our Virginia firms interested in supplying horticultural implements having shown their desire to encourage a fine exhibit by most liberal offers, among those who have done so are The Implement Co., Richmond, Va., a double hand press cider mill or an improved chilled plow; Hening & Nuckles, Richmond, Va., No. 5 one horse, swing handle Farmer's Friend plow; Watkins & Cottrell Co., of Richmond, Va., set of tools for pruning trees; W. T. Hood & Co., Old Dominion Nurseries, Richmond, Va., 200 apple, 100 peach, and \$10 worth either fruit or ornaments selected from catalogue; John A. Young, Greensboro, N. C., 50 winter apple trees, for the best seedling winter apple; Sydnor Pump and Well Co., Richmond, Va., bucket spray pump (Fig. 689 of their catalogue); T. W. Wood & Sons, Richmond, \$2.50 worth of garden seeds for the best exhibit of vegetables; Field Force Pump Co., of Elmira, N. Y., one "Empire King" spray pump, mounted on 50 gallon barrel, and fitted with extension rod, hose and nozzles—"to the farmer fruit grower who makes the best exhibit of winter apples gathered from sprayed trees"; Spramotor Co., London, Ont., Canada, any outfit the Society may select from catalogue, price of which does not exceed \$15. Party receiving same may exchange for any pump which is more elaborate by paying difference in cost. We have further offers of premiums which are not yet confirmed. The Society proposes to devote a session to discussion of the subject of advertising our State's resources, with a special view to encouraging an extensive exhibit of fruit for St. Louis Exposition. Governor Montague has expressed his interest in this feature, and promises to attend and give an address on the subject if it is possible to do so. Speakers will open subjects for discussion who are well known to the fruit growing industry both in Virginia and

other States. Our programme with particulars of the fruit exhibit will be published as soon as it is possible to have all the details collected in proper shape.

WALTER WHATELY,  
*Secretary and Treasurer.*

*Crozet, Albemarle Co., Va.*

## ORCHARD AND GARDEN NOTES.

*Editor Southern Planter:*

Recently I was invited to go with the owner through a large apple orchard. Several things in the orchard impressed me very much. Many of the trees on the lowest land were shedding the foliage from the serious effects of roestelia and phyllosticta fungus diseases. The apple crop on such trees is very apt to be short next season, since the vitality of the trees is being very much lowered. The owner had not followed the advice given in the *Spray Calendar* published in the *PLANTER* last spring. The trees on the higher ground were not so badly affected. This is what one might expect. Never plant trees on low, wet land. Those who select orchard land for tree planting this fall should be very careful to get well drained land. There was a large amount of "wormy" and decayed fruit under the trees on the ground. Hogs would have readily consumed this fruit with profit if allowed to do so, and thus would have prevented one source of spreading the codlin moth and bitter rot of the apple. A small herd of my own is doing well on apples and clover. Thousands of bushels of inferior fruit will go to waste this year in Virginia, which had far better been fed into pork.

The time has come when fruits and vegetables should be stored away for winter. Too frequently this work is done carelessly.

As I promised in the *PLANTER* last spring to discuss harvesting and storing of sweet potato, some of the results of my experiments with this crop will be given here.

An erroneous idea often prevails that frost should not kill the vines before digging. Sweet potatoes dug before or after frost made no difference in their keeping in my experience. There is only one test that I know of by which to tell when the crop is ready to harvest. If when a tuber is broken open it dries up with a white crust-like formation, the crop is ready; but if the broken surface continues to show a watery, greenish appearance, the crop is not ready to be harvested. If taken up then there is great danger of loss from soft rot. The ground should be

dry, the day should be clear and bright, and the tubers should be left to dry a few hours in the sun before gathering begins.

How to harvest the crop is quite important. One of the simplest and easiest ways I have found is to use a large turning plow with a rolling coulter on the beam, hitch two horses to the plow, let one walk on each side of the row, throw open a furrow on each side of the row six inches from the centre. This will cut the vines and throw the dirt away from the potato row. When the field is gone over in this way take off the rolling coulter and throw the potatoes out by running the plow under them.

In gathering, be careful not to bruise the tubers. The baskets or boxes should be lined with cloth. The first grade may be gathered by one party and the second by another. All cut or bruised tubers should go in the second grade, since soft rot is liable to start on these unless handled with extreme care.

The piles should be made very small until the crop cures. Examinations should be made each day for a week or ten days in search of all tubers which may have soft rot. When the tubers cure well all danger of soft rot is over. The crop may then be placed in a suitable potato house. Small quantities may be placed in clean, dry road sand and be kept in a warm place with ease all winter. Mice cannot go through sand to injure the tubers, which is a very important point to remember. Plenty of tubers should be put away for bedding out next season. Not enough of this most important vegetable (both for man and beast) is grown in Virginia. It can be grown on thin sandy soil, where the Irish potato fails.

We have just received from the Virginia Experiment Station bulletins number 5, 6, 7 and 8, on the various phases of cider making. These bulletins constitute, perhaps, the most exhaustive treatise on the subject in the English language. We are sorry the station did not put all four bulletins in one, like the same material was published in bulletin form by the United States Department of Agriculture. Numbers count for nothing. In this form some are apt to become misplaced or lost in the hands of the farmer. The bulletins are dated May, June, July and August, 1902, while the matter in all the bulletins is rather technical, but treat the various subjects also from a commercial standpoint. Now, we would like to see Prof. Alwood try his hand on one for the practical farmer, who has only one or two barrels to make. It could be numbered 9, September, 1903.

R. H. PRICE.

Montgomery Co., Va.

## THE GRASS-MULCH METHOD OF APPLE CULTURE.

Experiments in mulching show that a lack of a uniform supply of moisture is responsible for several orchard troubles, which have been attributed to other causes. It is evident, therefore, that in the management of an orchard the aim should be to conserve moisture and at the same time to grow a crop which shall add to the supply of vegetable fiber. The grass-mulch method seems, under certain conditions, to admirably meet the requirements as to vegetable fiber and soil moisture. It would be premature to attempt to say just what the limitations of the method are, but it appears to be widely applicable, and is especially advisable on hilly land—in fact, wherever cultivation is difficult—and on soil which washes and where grass can be made to grow.

To Mr. F. P. Vergon, of Delaware county, O., and to Mr. Grant Hitchings, of Onondago county, N. Y., is due the credit of demonstrating that apples may be successfully grown by this method. Both of these men have worked along essentially the same lines for about fourteen years.

Thus far the method has been unqualifiedly successful, and merits a description; moreover, considerable misconception concerning it has arisen, hence there is not only danger of some going wrong who may attempt it, but many who might adopt it to good advantages may fail to see any good reason for doing so.

Mr. Vergon planted his orchard in a field which had been a bluegrass pasture for about fifty years, and at about the same time Mr. Hitchings began planting a young orchard where an old one had stood in grass for about one hundred years. He has also planted an orchard in a field which had been in cultivation for the same length of time, but had been well cared for, and another in a wornout field. Both of these fields have been in grass from the time of planting. Both of these gentlemen dug large holes for the trees, and both mulched the newly-planted trees. Mr. Vergon made hay of the grass for a few years, but soon decided to take nothing from the orchard but apples. He has mulched the trees with the grass, and has also hauled in various kinds of material for the purpose. Mr. Hitchings mulches his trees until they get well established and then cuts the grass and lets it lie.

The trees in both Mr. Vergon's and Mr. Hitchings's orchards began bearing at an early age, and have given annual crops. It is especially noticeable that the trees are able to carry a crop of fruit and to form fruit-buds at the same time, while the fruit is well colored and hangs on remarkably well. Even in dry seasons there appears to be no bad effects from dry weather on the growth of the trees or upon the size of the fruit. The loss by dropping is insignifi-

cant. All of the results which are supposed to come from good tillage and cover-crops are found in these orchards in a marked degree.—*Professor W. J. Green, in Bulletin No. 137 of the Ohio Experiment Station.*

### GERMINATION OF SEEDS.

Following table indicates the length of time which seeds will germinate with profit:

	Years.
Asparagus	4
Beans	5
Beets	5
Cabbage	7
Carrot	5
Cauliflower	7
Celery	8
Corn	2
Cucumber	12
Lettuce	5
Egg plant	7
Melon	7
Onion	2
Peas	4
Parsnips	1
Pumpkin	7
Radish	3
Spinach	3
Squash	7
Tomato	5
Turnips	5

With melons, cucumbers and squashes the older seeds produce luxuriant growth of vine and earlier setting of fruit. All others decrease in vitality with years.

The following table shows the average time of germination from planting of the more common seeds:

	Days.
Beans	5 to 10
Beets	7 to 10
Cabbage	5 to 10
Carrot	12 to 20
Cauliflower	5 to 10
Celery	10 to 20
Corn	5 to 8
Cucumber	5 to 10
Endive	5 to 10
Lettuce	6 to 8
Onions	7 to 10
Parsnips	10 to 20
Peas	6 to 10
Pepper	10 to 14
Radish	3 to 6
Salsify	7 to 12
Tomato	6 to 12
Turnip	4 to 8

The table below gives generally the time from planting to full maturity:

	Days.
Beets	40 to 60
Cabbage	90 to 115
Carrot	90 to 110
Celery	150 to 160
Corn (sweet)	65 to 90
Cucumber	55 to 75
Lettuce	65 to 75
Watermelon	125 to 150
Muskmelon	125 to 150
Squash (winter)	120 to 150
Squash (summer)	90 to 100
Egg Plant	150 to 175
Onions	130 to 150
Parsley	90 to 120
Peas	40 to 90
Pepper	140 to 160
Radish	20 to 30
Spinach	60 to 80
Tomato	110 to 120
Turnip	60 to 75

GEO. H. C. WILLIAMS.

*District of Columbia.*

### FOREIGNERS WANT OUR APPLES.

The outlook for the export trade of American and Canadian apples is unusually bright.

Writing from Edinburgh, James Lindsay & Son say: "Fruit of every description is scarce here, especially apples, of which there are really next to none in Great Britain, and we are of the opinion the crop on the continent is less than they claim. But even though the continental crop turns out more apples than now anticipated, this will not materially interfere with shipments from America, as the quality of European fruit is so much inferior they can only be used for cooking purposes. Our opinion is that if shippers on your side continue to send a good grade of apples, there will be as many wanted here as last season." Henry Levy, fruit auctioneer of Covent Garden, London, reports high prices for fancy autumn apples, and believes Kieffer pears should do well this season, packed in half barrels.

A forceful reason for probable activities the coming six months is the unquestioned shortage of the European fruit crop. The yield of apples and practically all fruits in the United Kingdom is very short. On the continent, moderate to fair crops are reported. Yet the excessively high prices ruling there suggest that the amount available for market is small, after all. The European apple crop, as pointed out from time to time in *American Agriculturist*, is made up mostly of autumn fruit, which is largely out of the way by the time our hard winter varieties are ready for market.—*American Agriculturist.*

## Live Stock and Dairy.

### TEXAS OR TICK FEVER.

We are glad to know from letters we have received that our remarks in reply to inquiries published in our last issue have aroused attention amongst farmers to this subject. In truth, it is one of the most vital interest for all Southern farmers, and especially for farmers in Virginia, where there is no reason whatever why with proper attention and exertion this serious hindrance to the improvement and extension of our cattle industry should not be wholly removed. We have repeatedly stated, and we so state again with absolute confidence in our opinion, that the whole State of Virginia can be brought out of quarantine and hundreds of thousands of dollars be added to the value of our live stock every year by attention to this subject. North Carolina is moving ahead much faster in this direction than Virginia, and has already secured the exemption of several counties from quarantine. The removal of this hindrance to the free marketing of stock has added from one half to one cent per pound to the value of all stock shipped from those counties, a gain in one county alone of over \$6,000 for one year's shipments. What is being done in North Carolina can be more easily done in Virginia, as we are further north, and our winters help us more in getting rid of the ticks. Once get rid of these, and Texas fever, or it is commonly called, "Murrain," will cease to kill off our cattle. The way to get rid of the ticks is described in the following extract from instructions issued by Dr. Tait Butler, the State Veterinarian of North Carolina, under whose able guidance and careful work great progress has been made in that State:

#### HOW TO EXTERMINATE THE CATTLE TICK.

"Since it is only with a full knowledge of the habits of the cattle ticks and the manner in which they breed that the proper means for their destruction can be devised and understood, the following facts should be carefully considered:

1. The full-grown female ticks, after filling themselves with blood, drop off the cattle and crawl under leaves, grass or any other material with which the ground may be covered.

2. In two or three days these ticks begin laying eggs and lay from 1,500 to 2,500 during the next two weeks.

3. In real warm weather these eggs may hatch in three weeks, but the hatching may be greatly delayed or prevented entirely by cold weather.

4. The young ticks (seed ticks) although extremely

small, are active, and crawl up the weeds, grass or twigs and wait for cattle to come along and pick them up.

5. Since these young ticks are not able to live longer without food, unless a cow, horse or mule brushes its legs against the object upon which they are waiting, within four or five months they will starve to death.

6. From the time the young ticks get on cattle until they are full grown and ready to drop off is about four weeks, except in cold weather, when they frequently remain on much longer.

7. Neither old nor young ticks crawl far, and a fence with a rail or board on the ground will certainly stop them, but wire fences do not always afford protection.

8. Ticks do not go from one animal to another.

9. Eggs laid before the first of September will hatch the same fall, and unless the young ticks get on cattle, horses or mules they will die of cold or starvation before spring.

10. Eggs laid during the cold weather of late fall and winter do not hatch until the warm days of spring. It is, therefore, the eggs and not the ticks that are able to pass through the winters of the northern and western portions of this State.

With the foregoing facts in mind three methods of destroying the ticks at once suggest themselves:

1. Keep all cattle, horses and mules out of the tick-infested pastures, lanes and lots after September 1st, and all eggs previously laid will hatch before cold weather and the young ticks starve to death before spring.

2. Divide the pasture by a fence with a rail or board tight on the ground, and the first year keep all cattle, horses and mules out of one-half after September 1st. The second year put the cattle on the half left vacant the year previous, and also provide new lanes and lots on ground over which no cattle ran the year before.

3. If practicable, burn the pasture over thoroughly early in the spring. Mix sulphur with the salt given the cattle—one part of sulphur to three parts of salt. Begin not later than April 15th greasing the legs and under parts of all cattle, and repeat it once a week all summer. While greasing the cattle look carefully for any ticks that may have escaped the grease or attached themselves to the upper parts of the body, and if any are found, pick them off and burn. The grease may be one part kerosene and two parts any cheap sort convenient, such as cotton seed oil. If a little sulphur and tar be added the effect will be prolonged and increased. The grease prevents young ticks from getting on the cattle and kills those already

on by plugging the small openings in the body through which they breathe.

If the greasing and hand-picking be done thoroughly and no ticks allowed to drop in the pastures lanes or lots, for four or five months during the warm season, the effort will be successful.

Either of the first two methods, when they can be adopted, is always certain to exterminate the ticks; but the third is not applicable to large herds, and will fail unless it is carefully and thoroughly carried out."

We are in hopes that our State Board of Quarantine will take up this question, and we invite their attention to it, and ask that they secure authority from the Legislature for a vigorous campaign against the ticks, and that the farmers of the State will support them by urging upon the Legislature the appropriation of sufficient money to make the work effective. The co-operation of county authorities will be needed and the Legislature should authorize these to make the necessary expenditure to secure effective quarantine and cleansing of all tick infested cattle and pastures. The passage of a "no fence" law would materially reduce the cost of exterminating ticks and shorten the time required in doing the work. The State Veterinarian should also be authorized and required to inoculate all imported pure bred cattle on the request of the owners, and thus encourage the breeding of a better type of cattle.

### PREVENTION OF TEXAS OR TICK FEVER.

*Editor Southern Planter:*

I see that Mr. C. A. Williams, of Ringwood, N. C., after several trials and much loss, has discovered that by inoculation one may introduce pure bred cattle in the tick belt without much risk, and I am glad to learn it. You might mention in the next issue of the *PLANTER* that there is equally as safe and a much cheaper way to do it—viz., buy a calf not more than two months old, give him to a native cow, and after he has been in the tick country, say two months, let some ticks get on him. He will have the fever lightly, and then I think be immune. I bought a polled Durham calf last May just two months old from Messrs. Humbert Bros., who advertise in the *PLANTER*, and he has just gone through the fever to all appearances all right. THOS. S. NORFLEET.

*Person Co., N. C.*

Whilst there is no doubt that to proceed with a calf as directed by our correspondent will confer in some cases complete immunity against Texas fever, yet this is not so absolutely certain as to avoid the necessity for inoculation. The position as defined by veterinarians seems to be this. All calves at birth

have a high degree of immunity against the tick fever. This natural immunity is gradually lost as they become older. If when the calf is from 4 to 6 months old it becomes infested with ticks a mild attack of the disease is produced. This attack is usually so mild that it is not noticed at all, but it confers further immunity against the disease. Through repeated tick infestations and repeated mild attacks of the disease a complete immunity is gradually established against the disease. If the calf be inoculated between the ages of nine and fifteen months usually complete immunity against the disease will be established. The attacks of fever before the age of nine months are usually only so mild as not to confer complete immunity. The proper course to take when bringing in cattle to the tick belt is to bring in only calves not more than nine months old. These should be brought South in December, and be inoculated as soon as rested and then in February following be again inoculated and the animals will then be ready to go on the tick infested pastures in April with little fear of future attacks. Older animals are liable to have so severe an attack of the fever after inoculation as to occasion some loss, though this is not usually more than 5 per cent.—ED.

### HOLLOW HORN—HOLLOW TAIL.

*Editor Southern Planter:*

I am a subscriber and a great admirer of the *SOUTHERN PLANTER*. I heartily agree with you on the cheat question, but cannot on "Hollow tail" of cattle. You say there are no such diseases of cattle as "Hollow tail" and "Hollow horn." I have handled hundreds of cattle; have been feeding and caring for them from the time I was large enough, and we usually kept from 50 to 100 head, and if I ever saw one with Hollow horn I didn't know it, though I have had a few men to have cows they said had Hollow horn, and asked me for treatment. I always advised them to bring them to my farm, and I would cure it by dehorning them, which they did, and afterward told me it was a success, but as far as my own experience goes, if any of my cattle ever had Hollow horn I never knew it, and never believed there was such a disease.

But as to Hollow tail, I know that cattle have a disease of the tail, which always proves fatal unless treated, but do not know that a veterinarian would call it Hollow tail. The symptoms are failing appetite, falling off in flesh, hair standing on end, dreamy eyes, not caring to come for feed. On examination you will find the bone about an inch or two from end of tail gone or badly diseased. On taking a sharp knife and splitting the tail you will find little or no

blood, with the bone slick and slimy. For treatment simply split the tail to the bone as far as is diseased. Some say put salt and pepper in it and tie up. I never do anything but split the tail, and I have cured dozens of them. You can see a marked improvement in three days, and in a week they will be improving rapidly. Once I had a valuable lot of yearling steers which kept falling off until very thin. I could not split the tails without help, and had none, so with the steers running, I caught one by the tail and simply cut the tail off about four inches from the end, and he was all O. K. in a few days. I think, however, that nine-tenths of the so-called "Hollow horn" and "Hollow tail" is a lack of care and feed.

J. D. STODGHILL.

*Shelby Co., Ky.*

No veterinarian recognizes such a disease as "Hollow Tail." There may be some disease affecting cattle of which a diseased tail is a symptom, but it cannot be of a serious character, if simply cutting the tail end off will cure it. Boils on a man indicate a diseased condition of the blood. Poulticing and lancing them will cure the boils, but not the disease, which caused them. Our correspondent is no doubt right in his opinion that want of feed and care are really the true explanation of these so-called diseases. "Hollow stomach" would be a more accurate name for them.—ED.

#### RIGHT OF OWNER OF PURE BRED CATTLE TO RECOVER DAMAGES FROM OWNER OF SCRUB BULL.

*Editor Southern Planter:*

The inquiry of J. L. H., in the September issue of the *PLANTER*, has been answered by the Supreme Court of Iowa, in the case of Crawford vs. Williams, 48 Iowa, 247. In that case the court held the measure of damages to be the difference in value of plaintiff's cow for breeding purposes before and after meeting defendant's bull.

In deciding the above case the court uses the following language:

"The intelligent public spirit which employs itself in the improvement of stock ought to be encouraged and protected. It will be found impossible to maintain good breeds of stock if the owners of "scrub" male animals may permit them to run at large with impunity. Much skill and intelligence are requisite upon the part of stock breeders in selecting the most desirable crosses, so as to transmit the best qualities to the progeny. Each stock breeder has the right to make this selection for himself. If he is deprived of the right of making this selection he ought to be

fully compensated for the injury inflicted. The value of thoroughbred stock consists in the probability that the qualities of excellence will be transmitted to the offspring. It is evident that, to a breeder of fine stock a thoroughbred heifer, with a calf to a bull of impure blood, would be of less value than one with calf to a thoroughbred, or not with calf at all. The difference in value of the heifer for the purpose of breeding fine stock, before meeting defendant's bull and afterwards constitutes the proper measure of plaintiff's damages."

I have no doubt the Virginia court would follow the Iowa ruling in such cases.

*Marshalltown, Iowa.*

HENRY STONE.

#### FEEDING PIGS AT THE VERMONT STATION.

Sour skim milk has proved practically as good as sweet skim milk in fattening hogs at the Vermont Experiment Station. When there has been any difference at all it has been in favor of the sour milk. In seven years' experiments the value of skim milk for hogs has varied from 15 to 35 cents per 100 pounds and averaged 25 cents. In one experiment pigs on buttermilk gained a little faster and were somewhat more profitable than pigs fed skim milk. The buttermilk in this experiment had a feeding value of 24 cents per 100 pounds. Whey in one test had a feeding value of 11 cents per 100 pounds.

The best proportions of skim milk and corn meal to feed together have been studied in a number of experiments. The use of two ounces of corn meal to each quart of milk yielded pork at the least cost of food, but a more rapid gain was made when a greater proportion of corn meal was fed. In finishing off hogs more rapid and cheaper gains were made when 12 quarts of skim milk were fed in addition to all the corn meal the hogs would eat than when but six quarts were thus fed. The feeding of bulky or water foods was found to conduce to a larger growth of stomach and intestines, and hence greater shrinkage in dressing.

Corn meal in one experiment produced 11 per cent. better gains than wheat middlings with young growing pigs and 23 per cent. better than rice meal with hogs weighing about 140 pounds. The results of two experiments show more rapid gains on ground than on whole corn, the difference being about 10 per cent. The extra cost of hauling and grinding the grain it is thought would probably counterbalance this gain. Wetting corn meal resulted in more profitable gains than feeding it dry. The fertilizing value of the food fed in the various experiments has aver-



aged 56 per cent. of its market value. In nearly all the experiments profitable gains ceased to be made after the pigs had attained a weight of 180 pounds.—C. B. Smith, District of Columbia, in *Breeder's Gazette*.

### CATTLE FEEDING EXPERIMENTS AT TENNESSEE EXPERIMENT STATION.

At the present time a large per cent. of the cattle grown in the Middle South are sold in the autumn as long yearlings, because of the general belief that they cannot be profitably winter fed, and it was for the purpose of determining whether these cattle can be stall fed or whether they should be maintained as stockers through the winter to be finished on grass, or whether it would be more advisable for the farmer to sell them in the fall that the investigations, results of which are recorded below, were undertaken. The results presented only cover one year's work, and the following resume is published because it contains information which should be very useful to the farmers generally, as it warrants the conclusion that silage is a very valuable roughness if judiciously fed to beef cattle. It is proposed to repeat these experiments during the winters of 1903-'4'5, so that the average of three years' trials may be had, and then it would seem that final conclusions might be drawn from the work. During the past winter 32 head of cattle were divided into eight groups of four each and fed 150 days. Sixteen of these cattle received a moderate grain ration and were fed silage as a roughness, the object to finish them as nearly as possible for the spring market. The other sixteen were fed a limited grain ration along with different forms of roughness, the idea being to run them through the winter as cheaply as possible and finish them on grass the following spring and summer. Group 11, receiving silage, cotton seed meal and corn and cob meal, made an average gain of 2.40 pounds per day, or 1,442 pounds for the period. Group 12, receiving silage and cotton seed meal, gained 2.15 pounds per day, or 1,287 pounds for the period. Group 13, receiving silage, cotton seed meal, corn and cob meal and clover hay, gained 2.18 pounds per day, or 1,305 pounds for the period. Group 14, receiving silage, cotton seed meal and clover hay, gained 2.19 pounds per day, or 1,313 pounds for the whole period. The cotton seed meal and corn and cob meal were fed in the early part of the period in the ratio of 2 to 1, the proportions being reversed toward the close of the experiment. An average of about 10 pounds of meal were consumed at one time by group 12, the average ranging close to 10 pounds, though these animals were fed

at one time as much as 12 pounds per head per day. This is a little more than they could consume to the best advantage and it would have probably been better if not more than 10 pounds had been used at any time. These animals were in good condition, and, as the reader will observe, made an excellent gain throughout the period, which is the best answer to those who doubt the feeding value of cotton seed meal or who say it cannot be fed. The trouble is not so much with the cotton seed meal as with the method of feeding the same.—A. M. Soule, *Tennessee Experiment Station*.

### CORN ENSILAGE FOR STEERS.

During the past winter (October 10, 1902, to June 8, 1903,) the Kansas Experiment Station fed a lot of ten steers on corn ensilage, chopped alfalfa hay, and a grain mixture of equal parts ground corn and Kafir corn in comparison with another lot of twenty steers of the same average weight and quality fed exactly the same feed except ensilage. The results are shown by the following figures:

Lot.	No. of Steers.	Total gain pounds.	corn-grain 100 lbs. gain pounds.	Roughness consumed per 100 pounds gain.	
				Ensilage, pounds.	Chopped Alfalfa, pounds.
With Ensilage...	10	4468	715	471	327
Without Ensilage	20	8359	733		453

From the above figures it will be seen that for every 100 pounds of gain the 471 pounds of ensilage saved 18 pounds of grain and 156 pounds of alfalfa. At the market prices of these feeds (54 cents per cwt. for grain and 27½ cents per cwt. for alfalfa), the 471 pounds of ensilage made a saving of 52.62 cents.

The steers were shipped to Kansas City and sold at the stock yards June 23d, at the following prices:

Lot with Ensilage.....\$4.95 per cwt.

Lot without Ensilage..... 4.70 per cwt.

Here is a gain of 25 cents per cwt. in the selling price in favor of the ensilage steers. Adding this to the 52.62 cents already saved it makes the 471 pounds of ensilage worth 77.62 cents, or at the rate of \$3.29 per ton.

Making the above comparison on the basis of roughness alone, the 471 pounds of ensilage plus the 329 pounds of alfalfa in the ensilage lot is equivalent to the 485 pounds of alfalfa in the lot without ensilage. This shows that the 471 pounds of ensilage was equivalent to 156 pounds of alfalfa. At this rate, 3.02 tons of corn ensilage is equivalent to one ton of alfalfa hay.

When sold the ensilage lot were pronounced excellent cattle and fat enough for the ordinary trade.

D. H. ORIS.

*Manhattan, Kan.*

## The Poultry Yard.

### BUILDING A HEN HOUSE.

A subscriber asks us to give him advice as to building a hen house. It is rather a difficult matter to do this without knowing something of what is intended to be done—that is to say, whether it is simply desired to keep a few fowls for supplying the family needs, to keep a large number of fowls for supplying eggs for sale, or to run a regular poultry farm supplying eggs and chickens for market. Each different branch of work requires a special outfit to meet its special needs. We will, however, assume that what is needed is a house in which to keep a limited number of hens under ordinary farm conditions, permitting them to make their run over the farm, and thus not necessitating the provision of scratching sheds or enclosed runs. In providing such a house as we assume to be asked for, the first consideration should be the location. This should be, if possible, in a situation sheltered from the north, northeast and north-west winds, and on dry ground. The next point is the size required. To arrive at this allow a space of 10 square feet of floor for each fowl to be kept. Then let the height be 6 feet at the lowest part of the roof, rising sufficiently to give good fall to the rain, so as to have quickly a dry roof. The house may, if it complies with these requirements as to air space, be either square or longer than wide. We prefer to have it longer than wide, and to let this long side face to the South. This gives space for more more windows and thus enables the house to be kept warmer in winter with the aid of the sun and cooler in summer by substituting wire screens for the windows at that time. Let the sills be laid on brick or concrete foundations a foot or 18 inches in the ground, and rising to a foot above it, so as to keep out rats and other vermin. Weather board the outside and line inside first with building paper on the studding, and then with plain boards. Let the door be at one end of the house nearer to the side, rather than in the middle. In the south side place at least one, or better, two windows. Let these be fixed so that they can be opened. The roof may be either hipped or fall all one way, as suits the convenience of the builder or the materials to be used, and may be covered with either shingles or other roofing material. If shingled, the rafters should be first lined with building paper. Let the floor be the natural clay beaten down solid, and then well covered with loose fine dust. The roost poles should run lengthwise of the building at the back and have beneath them a sloping board to carry the droppings down to a trough, from which they can be

raked out with a hoe. The nest boxes should be placed in the front of the building under the window or windows, and be covered with a sloping board, say a foot above them. Let both nest boxes and roosts be so fixed as to be easily removed for cleaning. Have the house well limewashed before the hens are put in. Have one or two holes cut in the front of the building near the ground so that the hens can have access whilst the door of the house can be kept locked.

### PICKING A GOOD LAYER.

An old country poultryman makes the following suggestions as a help in selecting good layers:

There are certain individual characteristics, one of which is the shape of the bird. If a straight line be drawn from the back of the head to the toes, the hen which is likely to be a good layer will usually have the hinder half of her body largest, whilst a hen which may be suspected of being a poor layer will show more in the front; the reason being that a poor layer makes a better table bird, and has a larger, longer breast, whilst a good layer makes a poor table bird, and has a comparatively small breast, whilst the egg organs are more fully developed. Birds which are good layers are usually very active. They always look healthy, and in most cases their combs are usually fully developed, particularly if they belong to the long-combed varieties, which are reputed to be the best layers. A hen with a long comb may usually be regarded as a good layer, and if she is not there must be some special reason for the contrary.

### PLUCKING CHICKENS.

In getting chickens ready for market, nearly every one has experienced a difficulty in securing a uniform appearance of skin and a uniformly clean plucking. In many instances the trouble is due to the manner of scalding. Over-scalding invariably causes the yellow bloom of the skin to rub off. For best results the water for scalding should be just at the boiling point, but not actually boiling.

To scald the birds, immerse them in the water three or four times, and immediately after scalding remove the feathers, being careful not to break the skin. Poultry so treated should then be dipped in hot water for two or three seconds, and then placed in cold water for about twenty minutes. When the birds are to be packed in ice it is best to lower the temperature of their bodies by immersing in water of gradually lowering temperature down to freezing, when they will be ready to pack.

## The Horse.

### NOTES.

World's records, both among harness horses and runners, have fallen with amazing rapidity this season, and the doings of the present month may furnish further sensations still. Dan Patch, the brown pacing stallion, 6, by Joe Patchen, 2:01 $\frac{1}{4}$ , dam Zelica, by Wilkesberry, lowered the record for lateral gaited performers at Brighton Beach, N. Y., on August 19th to 1:59, thereby displacing Star Pointer, 1:59 $\frac{1}{4}$ , who was the first harness horse to reach the two minute mark. This performance was greeted with wide satisfaction, but when Lou Dillon, the chestnut mare, 6, by Sidney Dillon, dam Lou Milton, by Milton Medinn, displaced Creseus, 2:02 $\frac{1}{4}$ , with her mile in two minutes flat at Readville, Mass., on August 24th. Enthusiasm knew no bounds. But even now another champion is in sight in Major Delmar, the bay gelding, 6, by Delmar, dam Authoress, by Autograph, who trotted to a record of 2:00 $\frac{1}{4}$  at Syracuse, N. Y., on the 9th of September, and with favorable conditions is likely to beat two minutes before the season closes. Not only has Lou Dillon reached the two minute mark, but hooked to high wheel sulky at Cleveland, Ohio, on September 12th, she displaced the 2:08 $\frac{3}{4}$  of Maud S., made eighteen years ago, by trotting a mile in 2:05.

(Since our correspondent handed in the above, Prince Alert, the pacing hero of a hundred races and the champion of a score of half mile tracks, went against the world's pacing record of 1:59, held by Dan Patch, and beat it most decisively by clipping off two seconds, making the mile in 1:57 flat at the Empire City track in New York city.—Ed.)

Prospects were never brighter for the third annual exhibition of the Richmond Horse Show Association, the dates of which are October 13th-17th, when Richmond will be the Mecca at which many thousands from various sections will gather. There will be five exhibitions at night, and a matinee on Saturday afternoon. Over \$8,000 will be distributed in prizes, and many of the most noted show horses in the country will gather on the tan bark and be paraded before packed houses. Both president J. T. Anderson and Secretary W. O. Warthen have exerted themselves to the utmost to make the affair a success, and all signs seem to point to a show of the most brilliant description. The Marine Band of Washington, with fifty performers, will furnish music, and this will be an attraction of prime importance.

North Carolina's circuit of fairs and race meetings begins this month, and will furnish sport and pleasure galore for many thousand throughout the "Old

North State." The circuit begins on the 6th instant and lasts throughout the entire month. Dates have been assigned six places, and at each of them with favorable weather conditions prevailing a record breaking attendance may be confidently expected. The same dates were assigned Winston and Burlington, but these towns are so situated geographically that the conflict is likely to make no serious difference, while the same applies to Charlotte and Fayetteville. The oldest, best known and most important point in this circuit is, of course, Raleigh, where for generations past the fairs and race meetings of the North Carolina State Agricultural Society have been held, but the events fixed for other places along the line have assumed more or less importance, and each place has of itself a large following. The dates follow: Winston, October 6th, 7th, 8th and 9th; Burlington, October 6th, 7th, 8th and 9th; Greensboro, October 13th, 14th, 15th and 16th; Raleigh, October 20th, 21st, 22d, and 23d; Charlotte, October 27th, 28th, 29th and 30th; Fayetteville, October 27th, 28th, 29th and 30th.



The brown pacing mare, Skyland Girl, who was campaigned with success on Maryland, Virginia and North Carolina tracks for several seasons prior to the present one by George F. Dyer, who then trained at Winston and Greensboro, N. C., but later shifted operations to Roanoke and Lynchburg, Va., is in good form again this year, and made a new record of 2:15 $\frac{1}{4}$  in a winning race of four heats at Goshen, N. Y., last month. Skyland Girl was bred by the estate of the late W. H. Wilson, Cynthiana, Ky., but was foaled the property of the wealthy tobacconist, R. J. Reynolds, of Winston, N. C. She was sired by Simmons, a great son of George Wilkes, dam the once famous trotting mare, Mamie Woods, 2:20, by Woods' Hambletonian. Mamie Woods was purchased in Kentucky by Mr. Reynolds while carrying Skyland Girl in utero and after the latter was dropped the roan mare was bred to Baronet, 2:11 $\frac{1}{4}$ , and other sires of more or less note.



The bay mare Lady Olga, 5, 15:1, by Fesler, owned by Secretary L. S. Ricketts, of the Orange Horse Show Association, Orange, Va., was a frequent winner both at the Orange and Charlottesville Horse Shows. She was shown in the ladies' park saddle, the park saddle, and combined saddle and harness horse classes, and captured several blue ribbons.



One of the best bred and young stallions owned in North Carolina is the bay colt Agnel, three years old, in the stud of Ben. W. Southerland, of Mt. Olive.

This colt was bred by L. E. Tarlton, of Lexington, Ky., and sired by Guardsman, dam the great brood mare Zeta, dam of Miss Duke, 2:13, etc., by Red Wilkes. Agnel is of fine size and promises to make not only a trotter, but a speed horse as well. Mr. Southerland will have his show developed and later retire him to the stud, where he should prove a success and accomplish much toward improving the stock in the section to which he has been taken.



The well known Virginian, General William T. Townes, whose headquarters are with the American Tobacco Company, New York city, but who spends most of his leisure time at his stud farm, near Charlottesville, Va., has recently purchased the Bradford place, near Culpeper, Va., where he intends keeping his thoroughbred horses. For years past General Townes has been quietly collecting a band of brood mares, and now owns some of the choicest specimens in the State, which, during several seasons past, have been bred to sires of note in Kentucky and Virginia. A recent addition to the General's stud is the chestnut mare Amulet, purchased from Harry C. Beattie, of Richmond, Va. Amulet was sired by King Bolt, dam Ecliptic, by imp. Eclipse, and she out of the famous Nina, by Boston.



Captain R. F. Landon, who has a fine farm near Cobb's Creek, Mathews county, Va., is the largest breeder of trotters and pacers in his section. He owns a select band of brood mares, and for a couple of seasons past has bred to the good sire Letcher, 2:18 $\frac{3}{4}$ , by Director, 2:17 $\frac{3}{4}$ , the famous son of Dictator. Some of the choicest youngsters on the Landon farm are by Letcher. Among the well bred matrons in this stud is a mare by Pretender. Her first, second and third dams are producers, and right back of them comes the noted Waterwitch, dam of five in the list, by Pilot, Jr.



The Virginia bred trotter, Gold Bur, 2:13 $\frac{3}{4}$ , by Bursar, 2:17 $\frac{5}{8}$ , dam Bertie, dam of Lamp Girl, 2:09, by Signet, is highly thought of by his owner, W. H. Essery, of New York city, for whom he has shown a trial in 2:10 $\frac{1}{2}$  this season. Mr. Essery expects to campaign this handsome chestnut gelding in 1904, and looks for him to trot to a record of 2:10 or better.



Harry C. Beattie, vice-president of the Richmond Horse Show Association, M. F. H. of the Deep Run Hunt Club, and equally well known as owner, breeder and horse show exhibitor, has quite a stable of hunters, jumpers and high-stepping harness horses at Bloomingdale Farm. One of the best known members of the Bloomingdale stable is the chestnut gelding Buck, by Rover, the son of Abd El Kader. In the most select company this horse has been a winner

at Boston, New York, Philadelphia, Atlantic City, Richmond and other big shows. In the class for ladies' hunters at Richmond in 1901 this unsexed son of Rover captured the blue ribbon with Mrs. Allen Potts up and did some sensational work. Other members of this string that promise to develop into performers of real class are Blizzard, chestnut gelding, 4, by Blitzen, the "Iron Horse," a couple of unnamed geldings, both heavy weights, one being a chestnut, 6, by Abd El Kader, Jr., and the other a bay, 6, by Heimdal, dam by John Happy, and a toppy looking bay mare, 4, by Blitzen. The thoroughbred division includes North Anna, chestnut mare, 5, by Blitzen, dam Gloriana, by Bend Or, her full sister, an unnamed chestnut filly, 4, a chestnut colt, 2, by Blitzen, dam Amulet, by dam Bolt, and the bay colt. 2, full brother to North Anna.



A Virginia bred horse deserving of more than passing mention as a sire of hunters and jumpers is the chestnut stallion Abd El Kader, Jr., who was formerly known and raced under the name of Aeronaut, and sired by Abd El Kader, the thoroughbred son of imp. Australian. His dam was Nina, by Senator, second dam by Richmond, third dam by Bethune, thus making him probably three-quarters thoroughbred at least. Abd El Kader, Jr., was bred by Geo. Turner, of King William county, Va., and foaled 1882, hence the chestnut stallion has reached the sire and yellow, but is remarkably well preserved and yet vigorous. At four years old he passed to James R. Branch and Branch Cunningham, both of this city, and later to Fred. W. Scott, now of the banking house of Scott and Stringfellow. From Mr. Scott the son of Abd El Kader went to Edmund Ruffin, whose stud in Hanover county he ruled as premier for years. Since then the horse has been owned by N. J. Crull, of this city, from whom he passed to Thomas Winston, of Louisa county, and from him to his present owner, J. B. McComb and Brother, of the Glen Cove Farm, Somerset, Va. In his prime Abd El Kader, Jr., was a horse of remarkable beauty and finish, while he could take up weight and run fast both on the flat and across country. In the stud his work has been of a most satisfactory nature, because he has sired some of the best hunters and jumpers ever sent out from Virginia, and as he is still vigorous and likely to be for years yet, I look for others of this sort to spring from his loins. Meeting with James B. McComb, one of his owners, at Charlottesville, he informed me that Abd El Kader carried him through a stiff hunt in January last, and that the old stallion finished strong, certainly a remarkable exhibition of stamina and courage in a horse of his age, but the Abd El Kaders are a long lived tribe, and this scion of the family ably supports its claims to longevity.

BROAD ROCK.

## Miscellaneous.

### SELECTING SEED.

*Editor Southern Planter:*

The old maxim, "As the seed, so will the harvest be," is perhaps nowhere so clearly demonstrated as in farm crops. As a rule, farmers pay entirely too little attention to this, one of the most important steps in farm production.

Not one of us would think of breeding our animals without some particular object in view, and to obtain this object we would select with care, for breeding purposes, the animals which would likely reproduce the type we desired. We would consider the size, shape, symmetry of build, rate of growth, capacity for producing beef, milk or pork, as the case might be, and any other features we may wish to see reproduced. Then after breeding we would expect the offspring to represent that which we beheld in our mind's eye.

Now, what is true in raising animals, is also true in raising the ordinary farm crops. By carefully selecting the seed, keeping always in mind the type of plant and kernel which will give a large yield, we may greatly improve the quality and quantity of our crops. This fact is forcibly illustrated in the production of sugar from beets. The Germans have, by seed selection, increased the average yield of sugar from five per cent. to an average of eighteen per cent. At Kleinwanzleben, the great sugar beet seed plantation of Germany, the selection of beets for the production of seed receives the minutest attention. This selection begins in the field. The tops must conform to a certain type of development, then the beets themselves pass under the eye of an inspector, and those not perfect in size and shape are discarded. Those which come up to the standard in this selection are then taken to the laboratory and a core is withdrawn from each beet and analyzed. Again the ones which do not contain a certain per cent. of sugar are thrown out. Thus the seed are produced from absolutely perfect beets, and, consequently, the increase in yield of sugar is more than three times.

Any farmer in the State may, at almost no expense and very little inconvenience, bring his cereal crops to a high state of perfection.

Well selected seed from a crop on the farm will have the advantage of similar environment year after year. The soil, climate and treatment will be about the same, and then the farmer has the opportunity to adapt the type and quality to his special needs and

uses, besides the educational value of watching his crops and the pleasure of seeing the improvement from one year to the next cannot be estimated. Then every farmer will be his own seed grower, making a speciality of the strains best adapted to his own purposes.

In order to do this successfully, one must have in his mind a standard type of high quality, and plant no seed which does not come up to this standard.

Let us take, for example, corn, a very easy crop to improve both in yield and quality. The selection of seed should begin in the field. Here the general growth of stalk can be taken into consideration, height, size, amount of fodder, position of ear on stalk, or better, if there are two ears, and maturity. In other words, the plant must conform to your standard type of growth. After husking, the ears are subjected to a critical examination. First select a perfect ear as a type for comparison. This applies to the size, shape and color of ear and kernel; the arrangement, number and space between the rows; the indentation of the kernel; the filling out at butt and the tip; color and size of cob.

The cylindrical form of ear is preferable to the tapering, since the tapering, if it have much taper, results from the dropping of a row or more of kernels, and means, of course, a smaller proportion of corn to cob. The closer we keep to the cylindrical ear the greater the amount of corn the ear will carry.

The shape of kernel has much to do with the amount of grain a given size cob will carry. The preferable shape is the long or medium wedge. The circumference of the ear being two or three times the circumference of the cob, it is obvious that the wedge shaped kernel is the only kernel that will shell the maximum amount of corn.

Number of rows on the ear and the furrows between the rows should be taken into consideration in the selection of seed. A perfect ear of corn has not only a goodly number of rows made up of wedge shaped kernels of good length, but these rows, crowding the shank at the butt, should run parallel with the cob well to the tip, covering entirely the point of the cob. Ears containing short or imperfect rows, or which do not conform to the standard type, should be discarded.

By this steady method of improvement Illinois farmers have increased the average yield per acre of corn during the ten years between 1890 and 1900, 22.8 per cent. over the average yield between 1880

and 1890. In Indiana the increase in yield during the last decade over the preceding one was 12.8 per cent. per acre.

Why cannot Virginia farmers do as well, even better? Here corn has been given as an illustration, but the other crops grown on the farm can be improved just as well as corn. The time has come when labor and other conditions are such that it will pay us to attend to these important features of production.

MEADE FERGUSON.

*Experiment Station, Blacksburg, Va.*

## BULLETINS FROM THE VIRGINIA EXPERIMENT STATION.

*Editor Southern Planter:*

I have long believed that some of the bulletins issued by this Experiment Station might have been very much better, and consequently of more decided benefit to the Virginia farmer. Of course, the same might be said of bulletins from some other stations. While it is no desirable thing to be considered a critic, still a few friendly comments and suggestions on these bulletins in a State agricultural journal may not be out of place. After being in charge of some experiments at an experiment station for ten years, and writing eleven bulletins, I am familiar with many of the trials and difficulties with which an experimenter has often to contend. I am firmly convinced that one of the greatest difficulties the average Station officer has to encounter in the United States is that of trying to fill two offices and carry on experiments at the same time. Each line of work is widely different from the other, and it is almost impossible for one man to be a good college man and a good station man at the same time. I long to see the day when station work will be separated from college work, as far as possible, to be consistent with the organic law. When a college professor is crowded with teaching he sometimes feels forced to write an essay on some farm topic, publish it in pamphlet form, and call it bulletin No. 100. Almost any intelligent farmer could buy a book for \$1.00 and write fifty such so-called bulletins. Such bulletins injure experiment station influence. A few bulletins issued by the Virginia Experiment Station are wholly exempt from such criticism, and I am glad to note have given entire satisfaction.

I would like to see each bulletin issued be made as nearly complete on each subject as possible. The farmers will think more of them and take better care of them. *Numbers* count for nothing. Four good

bulletins a year are all a station should be expected to publish.

I notice Bulletin No. 132, dated January, 1902, which was written April 28, 1903. In other words, the idea might be conveyed to the farmer that the station was publishing bulletins more than a year before they were written. The value of that bulletin to the public is injured by dating it back in order to keep up with "monthly bulletins." I would like to see the excellent series of bulletins on "Orchard Studies" now being published in small pamphlet form, be put in one volume, and with a good paper binding. The farmer could easily file them away in his library then for "ready reference."

Bulletin No. 131 is a valuable number on "Remedial Measures Against San Jose Scale." All orchardists and nurserymen who desire information on this subject should send for this bulletin, and be prepared to fight this insect during the coming winter.

Bulletin No. 145 gives some results of experiments with forage plants. Among the number are tests of a few cow peas in reference to their yield. I would like to see the Agricultural Department broaden its work with leguminous plants, especially with reference to their value as improvers of much of the worn-out soil of the State. Include the various clovers, peas and beans. Make various tests with soil inoculation with the bacteria peculiar to each legume. Study the plants in reference to their habits, soils, yield, seedage, etc.

Bulletin No. 144 deals with stock and poultry powders, or condimental foods. This is a most timely subject for the Agricultural Department to take up, and the bulletin is interesting as far as it goes. I would like to see the station make some actual tests with these different foods to bring out their value or lack of value more forcibly before the public. The sale of these foods is increasing in the State.

Bulletin No. 121 is on steer feeding. Results of tests with hay, corn, corn meal, silage, cotton seed meal and bran are given; both singly and in combination. Two steers in each lot were fed. I would like also to see this work broadened. Would like to see at least four steers in each lot, and after the feeding tests have the animals slaughtered and the beef passed on by an expert. Some good illustrations would help the bulletin immensely.

The conclusions of this bulletin are interesting, and are here given:

1. A combination of foods, both grain and roughage, is best from every standpoint.

2. Ground corn better than whole corn after it has become hard.

3. A mixture of corn meal and bran gave greatest gain, and with least expense per pound.

4. Cotton seed meal was not, in these experiments, used with success, due, at least in part, to the fact that in former years the steers had not become accustomed to it.

5. Silage was a very economical addition to the roughage.

6. Stover gave bad showing when used without other roughage.

I may add that in this county steers are often wintered (frequently not economically) by feeding either hay or dry corn fodder, and letting the cattle have access to a blue grass sod. Sometimes whole corn and fodder are fed, and hogs gather up what is left by the cattle.

During last winter I fed ten steers on dry corn fodder for two months, and then fed good timothy hay for two months. The steers had access to a blue grass sod. I was surprised to note that they did better while eating the fodder. R. H. PRICE.

Montgomery Co., Va.

## MOTORS AND METHODS OF MOVING FARM PRODUCTS.

Editor Southern Planter:

The farmers of the United States, in different portions thereof, make use of five separate and distinct motors in transporting the products of the farm to market. Here they are—viz:

- Air,
- Tide,
- Horse,
- Steam,
- Electricity.

If there are other methods than the above, I shall be glad to hear of the same, and revise the list accordingly.

The *air* is used when produce is sent from farm to market in little sailing vessels. The *tide*, where the tidal current is used to float the farm produce down to a central point or market in boats built for that purpose. The *tide*, in this case, being the only motor used.

The *wind* and the *tide* are the cheapest motors in existence. The farmers of Eastern Virginia use both these motors extensively. They are the oldest motors in existence, because long before man was, the air and tide were both in existence.

Eastern Virginia is a network of "arms of the

sea"—salt water filled with fish and oysters, and on these "arms"—aggregating in length thousands of miles of water transportation, the little sailing vessels are used for fish, oysters, clams and crabs in their season, and for farm products the rest of the year.

The third motor in the list—the *horse*—is in general use throughout the United States. More than ninety-five per cent. of the farmers of the United States depend upon the horse to get their farm products to local markets.

At the local market, *steam*, the fourth power on the list, takes up the work, and the "long haul" to market is by steam railway. In other words, ninety-five per cent. of the farmers of the United States depend upon *horse* power and *steam* power to get their produce from producer to consumer.

Eastern Virginia farmers, while using the *wind* and *tide* as "motors," also use the *horse*; hauling millions of dollars' worth of soil products by horse power to market over at least eleven of the finest turnpikes (shell roads) in the world; said turnpikes centering in this harbor and penetrating all portions of the trucking belt of Eastern Virginia.

We may therefore say that nearly all the farmers use the horse and also steam power in moving their farm products to market; they use one or the other or both.

Then comes *electricity*, the fifth and crowning "motor" of the age. Only a few sections as yet are so favorably located as to be able to use the electric "motor" in sending their farm products to market.

Eastern Virginia is one section thus favored, and no less than nine electric lines of railway are pushing out into the "trucking belt" around this city in all directions.

So the Norfolk section is using all these motors—air, tide, horse, steam and electricity. Then, too, the Norfolk section has still another point in its favor. Steam is used in two ways to transport the soil products of Eastern Virginia to nearly ten million consumers—the *steamboat* and the *steam railway*.

The boats and railways are in healthy competition, which keeps freight rates down to a very reasonable and favorable point, favorable to the producer.

The freight rate here is lower than is enjoyed by the farmers of any other portion of the United States.

In the struggle for existence eventually to come, caused by over-production or under-consumption (either or both) the "fittest will survive." The sections best fitted by nature, having the best soil and climate, the cheapest access to the best and largest markets, will stand the strain and "continue to do business at the old stand."

"Motors" are important, especially important matters for the farmer. Roads and motors are important factors in the farming world. The "motors" are all right, but the roads of most sections can be greatly improved.

Norfolk, Va., August 17, 1903.

A. JEFFERS.

### SEED WHEAT.

*Editor Southern Planter:*

Every provident farmer has provided for clean wheat of the kind best adapted to his land. But as usual, careless farmers have not. The condition of their grain is not fit for seed, and barely will pass for "merchantable" on the market. Complaint is made by that class of the price of wheat. They fail to observe that their "filthy wheat" has in its measure about one-fifth per cent. of "vile stuff" unfit for bread, and hence are offered 20 per cent. less than the price of pure wheat. Now is the time to prevent a recurrence of that heavy loss on the crop of next harvest. Why continue this miserable folly, not to say insanity? While the business farmer is, with a pleasant face, receiving \$1 for his pure seed wheat; the drowsy fellow stands picking his finger nails demurely considering his "hard lot." He has neglected the truth: "Whatsoever a man soweth that shall he reap."

All the social combines will not help the sloven farmer. Associations have been formed to advantage, but they require everything to be of good quality and order, which is to be sold under their supervision. The careless or dishonest packer cannot enter the associations. Gentlemen, let us turn over a new leaf. Be good farmers or not at all. Do not disgrace the occupation. Elevate the standard.

Augusta Co., Va.

OLD MAN.

### COW PEAS IN TIDEWATER, VA.

*Editor Southern Planter:*

Recently a friend sent to our office two cow pea pods, one of which was *thirty-three inches* long, and contained twenty peas. He reported that he had had pods *thirty-six inches* long, just a yard long, or three feet in length.

Surely Virginia is great on the "legumes," or we may say "*long*" on pea pods. But what does nature mean anyhow in forming and developing a great long fine looking pod three feet or so in length, and then putting only twenty peas in it, when there is room enough for forty or more?

What does nature mean in creating a great big six foot, broad shouldered man, and omitting to fill him with good thoughts, words and deeds? Why does

nature allow, encourage or permit such a great big show, such a big blow and bluff and blarney just to cover and to hide or to develop a very few mean "measley" words, ideas, thoughts and deeds?

Why so much pod, why so few peas? We were surprised at a pea pod thirty-three inches long, but we were sadly disappointed at the small number of peas therein. It is always thus. The man with few ideas (peas) in his head (pod), but who dresses well, puts on style, and has plenty of cheek, is always over-estimated and apparently very highly appreciated, but when we come to shuck him we find too much of empty show, too much empty pod, and too few ideas (peas).

Nature starts out well with some, makes a great big show, a great big pod, and then fails to properly fill the pod with peas, the head with ideas.

Who can report a pea pod longer than three feet? Who can show a single pod with more than twenty peas in it? Who can tell us how to grow forty peas in a three foot pod instead of twenty? Who can make two blades of grass grow where but one grew before?

A. JEFFERS.

Norfolk, Va.

### FALL PLANTING OF IRISH POTATOES.

For several years past experiments have been made in the Eastern and Southern parts of this State and in the Eastern sections of North and South Carolina in planting Irish potatoes in late November and in December, and we have reports from a number of these which go to show that the crop can be successfully grown in this way if the sets are properly planted. As it is desirable to lessen the pressure of work in the spring by any means which can be successfully adopted, we describe the method followed in planting these potatoes, and suggest that growers in the sections named should give the plan a trial. Select a piece of dry, sandy loam land and lay off the rows three feet apart after breaking the land deep and working it fine. Run the plow twice in each row, thus throwing out the soil to a good depth. Scatter a good potato fertilizer in the bottom of the furrow and run the cultivator through it to mix it with the soil. Then drop the sets the usual distance apart and cover lightly with soil. On the top of the soil put a good covering of farm yard manure and plow onto this a furrow from each side, thus making a ridge over the sets. Early in the spring run a harrow over the rows to level down the ridges somewhat. If the potatoes should push through before danger of hard frost is past, plow a light furrow onto them as soon as they are seen.



# THE Southern Planter

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J. F. JACKSON,

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B. MORGAN SHEPHERD,  
BUSINESS MANAGER.

TERMS FOR ADVERTISING.

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THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, Va.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

ALWAYS GIVE THE NAME of the Post-Office to which your paper is sent. Your name cannot be found on our books unless this is done.

WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. Criticism of Articles, Suggestions How to Improve THE PLANTER, Descriptions of New Grains, Roots, or Vegetable not generally known, Particulars of Experiments tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

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## PUBLISHER'S NOTES.

### TO ADVERTISERS.

All advertisements and matter pertaining to advertising *must* reach us by the 25th of each month. Please bear this in mind.

### Advertisers' Experience.

A couple of our advertisers met in our office the other day and swelled our heads enormously about the great results they get from their advertising with us. Mr. W. G. Owens, a Duroc-Jersey and Poland China man, and Mr. J. T. Oliver, a Berkshire breeder, were the parties. The way Mr. Owens talked about just refusing \$45 for a Duroc sow, and the ease and rapidity with which Mr. Oliver disposes of his 3 and 4 weeks' old pigs for \$5, made us want to get back in the business in a hurry. Both of these gentlemen have fine stock, all pure bred, and we do not blame our readers for keeping them sold down so closely.

Along in the mails the same day came letters from Judge Matthews, of Big Stone Gap; Dr. French, of Washington, and E. M. Gillet & Son, of Glencoe, Md., all praising the SOUTHERN PLANTER as an advertising medium in the highest terms. The first says: "I received very good returns from my advertisement"; the second writes: "Your journal still leads all others I am using in producing results, and I can honestly recommend it as a tip-top advertising medium." Friend Gillet gives a list of recent sales and adds: "The SOUTHERN PLANTER has the credit of the Hereford sales."

Five such rattling good testimonials in one day is a record of which we are very proud. We take great pleasure in asking the attention of some "doubtful advertising Thomases" to this brief note.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## Wood's Seeds

### FOR FALL SOWING.

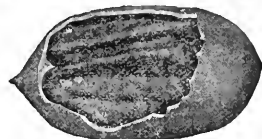
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**T. W. WOOD & SONS,**  
Seedsman, - Richmond, Va.



### "How to Grow Paper-Shell Pecans,"

FREE. Best varieties in U. S. True to variety. Clons cut from bearing trees by member of firm. Full descriptive Catalogue of ALL FRUIT trees, free

B. W. STONE & CO., Thomasville, Ga.

Virginia Polytechnic Institute  
STATE AGRICULTURAL AND MECHANICAL COLLEGE  
at Blacksburg, Va.,

### A SOUTHERN INSTITUTE OF TECHNOLOGY.

Forty-five instructors. Thoroughly equipped shops, laboratories and infirmary. Farm of four hundred acres. Steam heating and electric lights in dormitories. Degree courses in Agriculture, Horticulture, Civil, Mechanical and Electrical Engineering, Applied Chemistry and General Science. Shorter courses in Practical Agriculture and Practical Mechanics. Total cost of session of nine months, including tuition and other fees, board, washing, text-books, medical attendance, etc., about \$195. Cost to State students about \$165. Session began September 21, 1903. For catalogue and other information, apply to

J. M. McBRIDE, Ph. D., LL. D., President.

## Alfalfa Bacteria Infected Soil

Can be obtained from Ewell Farm Experimental Plot. A perfect stand three years of age, abundantly supplied with root nodules. Price \$1.00 per 2 bus. burlap bag, weight about 150 lbs., f. o. b. Ewell's Station, Tenn.

GEO. CAMPBELL BROWN,  
Spring Hill Tenn.

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## DEAFNESS CANNOT BE CURED

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give one hundred dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's atarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.  
Hall's Family Pills are the best.

## Liberal Subscription Offer.

To induce non-readers of the SOUTHERN PLANTER to become subscribers, we beg to announce that all new subscriptions received between this time and December 1st will be given the remaining numbers of this year free. In other words, 50 cents will pay for a subscription from now until December 31, 1904.

Our regular subscribers, upon whom we have called so many times, will confer a favor, which will be reciprocated at any time, if they will bring this offer to the notice of their friends who are not subscribers to the SOUTHERN PLANTER.

## WITH THE ADVERTISERS.

A. G. W. wants an industrious farm manager. His farm is in Chesterfield county.

The Davis E. Foutz Co., makers of Horse and Cattle Powders, starts the season's advertising with this number.

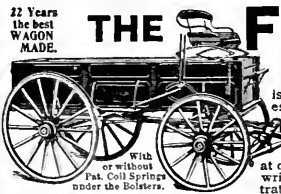
Some bargains in the standard breeds of poultry are offered by the Oakland Poultry Farm.

Red Poll Cattle are offered by Messrs. Pierson Bros. They have been breeding them for a number of years, and have good stock.

J. M. Garnett is offering some of his fine "Garnett Layers." Look up his ad.

Dr. Haas has something interesting to say to hog raisers in his ad. Look

22 Years  
the best  
WAGON  
MADE.



# THE FLORENCE FARM WAGON

is FULLY GUARANTEED to be the very best, strongest and lightest draft wagon for all farm purposes. Best, handsome, substantially constructed from best grade seasoned timber, well ironed, it possesses every quality that makes it desirable. See the FLORENCE at our nearest agency. If there is no agency near, write us direct and we will send you free our illustrated Catalogue, our attractive periodical "The Florence Waggin' Tongue," and make you an offer to supply you with a FLORENCE WAGON on liberal terms and at a low price.

Write today to Dept. C. FLORENCE WAGON WORKS, Florence, Alabama.

## LEE'S PREPARED AGRICULTURAL LIME

The Old Reliable for WHEAT, OATS, CLOVER and OTHER GRASSES; has stood the test for twenty-five years, being composed principally of Hydrate of Lime, Sulphate of Lime and Potash.

### OUR SPECIAL WHEAT FERTILIZER.

We put this brand on the market only a few years ago, and have had very flattering results. The best farmers say that they get better STAND and GROWTH of GRASS and CLOVER from it than from other fertilizers. This we can confidently recommend for CORN-LAND or any other land of fair fertility.

### FRUIT TREES.

Maj. G. A. Barksdale of Richmond, Va., has used our PREPARED LIME on his fruit trees, and says it has made wonderful improvement, both in the condition of the trees and quality of the fruit.

### PLAIN SHELL LIME

Constantly on hand at lowest prices.

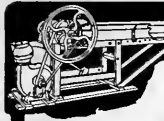
### No. 1 WOOD-BURNT LIME

In ear lots at lowest market price from kilns.

If you wish to IMPROVE your land, use a ton to four acres for WHEAT and CLOVER, or if you wish to seed it for other GRASSES where the land is in good condition, use the same quantity and it will give you a good STAND and GROWTH of GRASS. For reclaiming POOR land, where there is little or no VEGETATION, COVER naked places with litter from the barnyard or forest, using the same quantity, and sow winter OATS and CLOVER.

SEND FOR CIRCULAR AND PRICES.

A. S. LEE & SON,  
102 S. 13th Street, Richmond, Virginia.



**Freeman Ensilage Machinery**

represents the modern idea. Illustration shows typical cutter with blower attachment. It sizes, hand cutting to belt power, with capacity ranging from 5 to 24 tons per hour. Traveling force feed, reduces labor of feeding. Each machine easily and quickly fitted with shredder attachment.

Also make Wind Mills, Corn Shellers, Wood Saws, etc. Write for free catalogue No. 110.

**S. FREEMAN & SONS MFG. CO., Racine, Wis.**



**You Try It.**

It costs nothing. Returns at once except if this mill fails to grind shelled corn, ear corn, all grades, or mixed feed stuffs, easier, faster and better than any other.

**New Holland Mills**

are the practical, every day mills for every day wants. No other good mill at so low a price. Made in U.S.A. Adapted to any kind of power. Don't fail to get our free catalogue before buying.

**NEW HOLLAND MACHINE CO.,**  
Box 183, New Holland, Pa.



**HEBNER'S FEED CUTTERS.**

Feed all your fodder. By using Hebner's cutters with shredder attachment the whole of the nutritious stock is cut, crushed and shredded, and rendered edible. No waste. Admits and it readily and thrives. Shredder attachment costs \$2.00. The model ensilage cutter. Also make Tread Powers, Lever Powers, Little Giant and Patent Thrashers, Wood Saws, Feed Mills, etc. Catalog free.

**HEBNER & SONS, 25 Broad St., Lancaster, Pa.**

**MEAL OR FEED**

Finest meal for family use. For corn cracker and roller, corn cracker, all round food maker for every farm need.

**Monarch Mills**

attention or genuine imported French burr styles. Thousands in use. Meet every home or farm purpose. Sent in 30 days free trial.

Get Monarch catalog before buying.

**Sprout Waldron & Co**  
Box 202, Muncy, Pa.

**the "Weber Junior" Pumper**

Is all complete, ready to set up on pump. Equals 20 men in pumping water. Uses but little gasoline. Is shipped completely erected, all connections made. Easy starting, any one can operate it. Every one guaranteed. Other sizes \$10 to \$50 H. P. Send for catalog. Weber Gas & Gasoline Engines Co., Box 128 Kansas City, Mo.

**STOP THAT RATTLING, TIGHTEN YOUR OWN BUGGY TIRES.** No heating; does not mar the paint; any one can operate. Machine complete with 100 washers sent on receipt of \$2.00. Guaranteed to do the work. Your money back if not as represented. **RAPID TIRE TIGHTENER CO., Station F., Toledo, Ohio.**

it up and send for his free book, "Hog-ology."

Kitselman Bros., old advertisers, resume their advertising in this issue. Lots of our readers already know about their Fence Machine, which is sent out on trial.

A useful Cream Separator is offered by The Superior Fence Machine Co., Detroit.

Foxhall Farm wants to buy some Angora Goats. Take notice ye Angora men.

The Coiled Spring Fence Co. has a couple of ads. in this issue, to which we invite the attention of our readers.

The Folding Sawing Machine Co. offers a very handy and useful device in the shape of a folding hand saw. Look up their ad.

Stonehurst Fruit and Stock Farm has some nice registered Herefords for sale.

Sprout, Waldron & Co. are advertising their Feed Mills again this year. You can have one of these mills on 30 days free trial.

Anybody wanting some nice colts had better correspond with Mr. I. L. Amberg, who has an ad. in another column.

Squab raisers or those contemplating going into the business had better read the ad. of E. C. Johnson.

The Glen Rock Woolen Mills have a card in another column, which will surely interest numbers of our readers. Look it up.

African Geese can be had of Miss A. Worthington, Ivy, Va.

Milne Mfg. Co. are advertising their celebrated Hawkeye Stump Puller again this season.

"W." wants to buy a lot of young cattle from the quarantine district. He prefers Shorthorns or other good grades.

The New Holland Machine Co. is a new advertiser in this issue. This company has a good feed mill in which it would like to interest our readers.

Wertz Nursery makes its usual fall offering in this issue. Look up the ad.

H. D. Coleman wants to trade Newport News property for a farm.

The Continental Plant Co. is advertising strawberry plants and nursery stock.

Mr. J. F. Durette doubles his ad in this issue. Poland-Chinas and Shorthorns are his offering.

Mr. Murray Boocock, owner of the Castalia Herefords, wants to buy some registered Hereford heifers. See his ad.

Sydnor Pump & Well Co. has an attractive ad. in another column. If it's pumps you want, write this company. Strawberry plants are offered by Mr. John Lightfoot.

International Stock Food Co. has a large ad. on another page. Look it up and send for their handsome free stock book.



**Wise Man's Wagon.**

The men who had had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS** have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel hubs, steel bounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**



**ELECTRIC**



**WE LEAD THE WORLD**

We are the largest manufacturers of Grooved and Plain Tire Steel Farm Wagon Wheels in America. We guarantee our patent Grooved Tire Wheels to be the best made by anybody anywhere. Write us.

**HAVANA METAL WHEEL CO.**  
HAVANA, ILL.

**WE'LL PAY THE FREIGHT**

and send a Buggy Wheel, Steel Tire 60, \$7.25 With Rubber Tire, \$14.00, a mile wheel 5/8 to 4 in. tread, Top Bogie, \$28.75; Harrow, \$3.50. Write for catalogue. Learn how to buy vehicles and parts direct from Havana Metal Wheel Co., P. O. Box 1003, Cincinnati, O.


**THE IMPROVED SCREW STUMP PULLER**

Write for Prices.



**Chamberlin Mfg. Co., Olean, N. Y., U. S. A.**

**HERCULES STUMP PULLER**

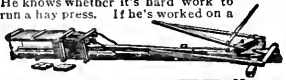


Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

**Hercules Mfg. Co., 413 17th St., Centerville, Iowa.**

### Just Ask the Horse.

He knows whether it's hard work to run a hay press. If he's worked on a



## RED RIPPER Hay Press

he will tell you that it is the lightest running press in the market. A lever gives the compression, and the power increases with the resistance but the horse does not know that. He knows that it is just as easy at the end of the stroke as it is at the beginning. The Red Ripper has an easy capacity 30 bales per hour. It is a low priced, in fact, the lowest priced hay press in the market, and as strong and simple it never gets out of repair. It can be loaded on a farm wagon. Our 24 page Catalogue No. 433 tells you more and contains many testimonials we have received from Red Ripper purchasers. Distribution points, Baltimore, Memphis, Cincinnati. Address **SIKES MFG. CO., Helena, Georgia.**



The man who intelligently buys baling machinery will investigate the features of economy and practical utility which have made

### Dederick's Baling Presses

world-famed. Our catalogue contains the latest and largest variety made. We want you to have a copy. After reading it your knowledge won't permit of mistake when you buy. We send it free. Write for a copy at once.

**F. K. DEDERICK'S SONS, 76 Trull St., Albany, N. Y.**

### The Hay Baler

which is in a class by itself.



"ELI" PRESSES bale fastest and best market. Easy for shipping and towing. Low cost. Many featured machines, complete of the world. Write for 20 catalogue.

**Collins Plow Co., 1195 Hampshire St., Quincy, Ill.**

## WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

**Loomis Machine Co., Tiffin, Ohio.**



### WARRINER'S CHAIN HANGING STANCHION.

CLEAN, SAFE, COMFORTABLE.

**MFG. BY W.B. CRUMB, Forestville, Tenn.**

### GET ALL THE CREAM,

—BY USING—

#### The SUPERIOR CREAM SEPARATOR.

Does not mix water with the milk. It is the best Separator made. A trial convinces, and every Separator is guaranteed. Write today for Catalogue to the SUPERIOR FENCE MACHINE CO., 291 Orande River Ave., Detroit, Michigan.

### MAGAZINES.


The Review of Reviews is the best magazine for any one to take who wants to keep posted on all that is going on the world over. The editor's review of the leading subjects occupying the attention of the master minds of the world and of all the current passing events is always well worth reading. In addition to this there are always a number of articles on matters occupying public attention in the leading countries of the world by those most qualified to deal with them from special knowledge or practical acquaintance with the subjects. What is being said in other magazines on all subjects of popular interest can also be found in this magazine.

The Cosmopolitan is one of the best of the cheaper magazines. It is most liberally illustrated with beautifully produced pictures.

The October Century has an attractive cover by Leyendecker of a mounted hunter and dogs, which gives a clue to the prevailing character of its contents, for it is a "sportsman's number," containing, with much other matter, a group of articles on field sports relating to France, Great Britain and America. The democratic tradition in France is represented by an article, "When the French President Goes Hunting," written and illustrated by Andre Castaigne. The aristocratic tradition is represented by Sterling Hellig's narrative, "With the Hounds of the Duchesse D'Uzes." J. M. Gleason, the artist, writes of "Two British Game Parks." Powerscourt in Ireland and Drummond Castle in Scotland, and supplies pictures of both. But the most practical and acceptable article to American sportsmen, will be a review of "Field Sports of To-Day," by Dwight W. Huntington, the well-known writer on this subject. Mr. Huntington is also an artist, as witness his illustrations for his own article, including four in color, one of which, "The New and the Old Type of Sportsman," is the frontispiece or the number. There are three striking full-page pictures of big game by Arthur Wardle, the English painter, and "The Wild Bird by a New Approach," by Francis H. Herrick, who shows how birds may be slyly shot by the camera without in any way injuring the bird. Three articles of much variety by officers of the United States government deal in a popular way with topics of solid interest. Gen. Greely writes of "The Signal Corps in War Time," which may be called a piece of secret history; Hon. W. R. Merriam, director of the last census, of "The Census of Foreign Countries," and Dr. L. O. Howard, entomologist of the Department of Agriculture, gives the first full account of the recent experiments which determined the relation between yellow fever and the mosquito, experiments involving much personal sacrifice on the part of those concerned.


### UNION LOCK POULTRY FENCING

HAS BEEN FULLY TESTED AND FOUND SUPERIOR TO ALL OTHERS.



Will fit uneven ground without cutting. Every part can be stretched perfectly. Made of high grade galvanized steel wire. All horizontal lines are cables, making it stronger. Has fine mesh at the bottom for small chicks. You also make extra heavy for gardens, lawns, etc. The largest poultry farms are using this fence—over 700 rods by Lakewood (N. J.) Farm Co. We pay freight from N. Y., Chicago, or San Francisco. Write for free catalog of Farm, Lawn and Poultry Fencing.

**CASE BROS., Box 340, Colchester, Conn.**



### PAGE

## 1,500 FEET OF WIRE

from the Page Fence that stopped the big runaway racing auto at the Zanerello, O., fair, was cut up into short pieces and carried away by spectators by the people who saw the tragic accident in which so many lives were so narrowly averted.

**PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**



### Genuine Spiral Spring Wire FENCES AND GATES


If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

**INTERNATIONAL FENCE AND F. CO., Columbus, Ohio.**



### LAWN FENCE

Many designs. Cheap as wire. Also gates. Catalogue free. Special Prices to Gentlemen and thorough. Address: **COLLETT SPRING FENCE CO., Box Q, Winchester, Ind.**



### SENT ON TRIAL

A Fence Machine that will make over 100 Styles of Fence and from 50 to 70 rods a day

### AT ACTUAL COST OF WIRE

Wholesale, Bulk, Strong, Pig and Electric-light. Write at Wholesale Prices. Catalogue Free. **Kitselman Bros. Box 165 Muncie, Ind.**

### FENCE! STRONGEST MADE

Built Strong, Built-Strong, Pig and Electric-light. Tight. Sold to the Farmer at Wholesale Price. Fully warranted. Catalogue Free. **COLLETT SPRING FENCE CO., Box 25 Winchester, Indiana, U. S. A.**

### 9 CORDS IN 10 HOURS

RUNS EASY No Hauls



SAVES POWER AND TUBES

weight only 41 lbs.

**BY ONE MAN, with the FOLDING SAWING MACHINE. It saves down trees. Folds like a pocket knife. Saws any kind of timber on any kind of ground. One man can saw MORE timber with it than 2 men in any other way, and do it EASIER. 200,000 in use. Send for FREE illustrated catalog, showing latest IMPROVED models and testimonials from thousands. First order receives agency. Address: **FOLDING SAWING MACHINE CO., 442-450 So. Jefferson St., CHICAGO, ILL.****

### A Steel Stanchion

beats anything you ever saw for tying cattle. Lighter, stronger, neater. Swings on chains. Note the way in which it hangs. Agents wanted. Write for special terms and prices. **Jas. Boyl, Mfr., Salem, O.**

Mention the Southern Planter when corresponding with advertisers.

## ELMWOOD NURSERIES.

## ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for BARR'S, PALMETTO, CONOVER.

## APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

## Splendid Assortment of Ornamental, Shade and Fruit Trees.

**EGGS** from B. P. Rocks, Light Brahmas, Brown Leg-horns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

**J. B. WATKINS & BRO.,** Hollisboro Va

## ..RELIABLE SEEDS..

For Fall Sowing.

*Crimson Clover, Vetches, Rape, Rye, Barley, Seed Oats, White Pearl and other Onion Sets, Cabbage, Lettuce, Radish and Turnip Seed and all varieties of Grain, Grass and Garden Seeds.*

Write us for prices.

**DIGGS & BEADLES, Seedsmen,**

1711 E. Franklin St., Richmond, Va.

## EMPORIA NURSERIES

Offer a line of Nursery Stock, mostly APPLE TREES, 4 to 5 feet, and PEACH TREES, 3 to 4 feet, at reduced prices to clear land. All Stock healthy and free from Crown Gall, Aphid, San Jose Scale, or any other disease, and WILL BE FUMIGATED BEFORE shipped.

Send for reduced price list. Good No. 1 Agents for 1904 wanted. C. S. LINDLEY, Prop., Emporia, Va.

Also agents for Universal and Gardner's Dust Sprayers; far ahead of any other and cost of power is very small. Send for price and description.

## ROOFING TIN

Iron and paper roofing, nails, builder's hardware, sash, doors, etc., carriage and wagon goods, paints and oils, cook and heating stoves, guns, pistols, rifles, "Robin Hood" loaded shells. Do you use any of the above? Write us.

**HARRIS HARDWARE CO.,** 409 E. Broad, Richmond, Va.

An account of Alonzo Clark Robinson of "The Destruction of Philæ" sets forth the damage apparently done to this great historical ruin by the construction of the great Nile dam; there is an entertaining article on "The New Woman in Turkey," by Anna Bowman Dodd, and a budget of read-aloudable "Anecdotes of Leschetizky," by his sister-in-law, the Comtesse Angele Potocka. The fiction includes "The Old Dragon," a "Pa Gladden" story by Elizabeth Cherry Waltz; "The Object Lesson," by Edith Elmer Wood; "The Way of the Engineers," a story of the upper Mississippi, by Willis Gibson; "Sandy McKiver, Hero," by Herbert D. Ward, and the conclusion of "The Yellow Van," Richard Whiteing's novel of English life. In the editorial department are plain-spoken words concerning the increase of lynching and other unfortunate national tendencies, and a discussion of "The Cant About 'Hard Work.'"

The novel in Lippincott's October number comes from Frederic Reddell's popular pen. Its title is "An Heir to Millions," and it deals with a fortune made in the California gold fields and inherited by a New York clerk with simple tastes. He begins in no very novel way to spend the money, but when he learns that it is his through trickery he shows his mettle by refusing to buy the silence of a rascal and stands ready to take the consequences. In his prosperity he has a little neglected his sweetheart of humbler days, but things come around her way in the end. "The Return," by Beulah Marie Dix, is a touching and powerful episode, with a thrilling psychological thread. From an author who has done excellent work in many magazines, this is unquestionably the best thing she has produced. Phoebe Lyle contributes "The Adventures of Amaryllis," a sweet romance of picturesque Charleston, where a straight-laced little New England school teacher goes to recuperate after sickness and has the time of her life. The name "George Jones" is so palpably ungenue that the reader feels more than a passing wonder as to the real author of the human little sketch called "The Day's Disdain." A racing story by Alfred Stoddard is called "The Lightweight Saddle Class," and contains love-interest as well as that of sport. Algernon Boyesen's original treatment of the divorce theme in his story, "The Prison House," arrests attention. A wife, having become fascinated by the leader of "new ethics," desires to leave her husband. His arguments prove vain, and he is inspired to suggest a test of the genuineness of the "leader's" views on platonic friendship. This works to perfection. But the tale must be read to be appreciated. With the servant question so much in evidence everywhere Karl Edwin Harriman's humorous sketch on the subject must make many friends. It is called "The Cook at Conley's." When Agnes Repplier talks on paper people are eager listeners. Her long residence abroad

## Peach and Apple Trees,

BONAVISTA NURSERIES, Greenwood, Va.

We offer a fine lot of choice trees for Fall and Spring planting

Our apple trees are the best—Wine Sap, Mammoth Black Twig, York Imperial and Albemarle Pippin, all perfect and well grown trees.

Our peach trees are the standard sorts, Stump, Elberta, Bileyeu's (Comet.) Wonderful Champion, Globe, Piquee's Late, Albright's Winter, Crawford E. & L., etc.

We send out none but good trees and have never had a complaint made by any purchaser of our stock. Order soon, especially Peach's, as good trees will be very scarce this season.

CHAS. F. HACKETT, Manager.

**1000 Per Cent.  
Profit in..**

**Wealth and Health**

In fresh, luscious, home grown  
**STRAWBERRIES**

allowed to ripen thoroughly on the vines. We sell the plants picked to carry fresh anywhere in the United States. Our 120 page manual (free to buyers) makes growing for pleasure or profit plain to all. Plant now. Also save half on

**FRUIT TREES**

by buying direct from us, saving agents' profits. Write for free Catalogue, mentioning this paper.

**CONTINENTAL PLANT CO.**  
KITTRELL, N. C.

## TREES! TREES!!

I offer a fine lot of whole root trees.

**Apples, Pears, Peaches, Cherries, Plums, Grape Vines, Raspberries, Etc.**

Save agent's commission by sending your orders to the nursery.

**CATALOGUE FREE.**

All Stock Inspected and Fumigated.

**WERTZ'S NURSERY, Salem, Va.**

## Strawberry Plants,

All grown in fresh rich ground, healthy, well-rooted plants that will please you; over 50 kinds to offer. Raspberry plants and Peach trees also; see us before you buy. Our stock has been thoroughly inspected and found free from any disease.

Address JOHN LIGHTFOOT,

Sherman Heights Tenn.



## PATENT YOUR IDEAS

\$100,000 offered for one invention; \$5,500 for another. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.

CHANDLEE & CHANDLEE, Patent Attorneys  
976 F Street, Washington, D. C.

## FINE FARM FOR SALE.

I offer for sale a fine farm located twelve miles from Fredericksburg, Va., on the R. F. & P. R. R., and about one mile from the station. Contains 250 acres; suitable for cattle raising, corn, wheat and tobacco. About 100 acres cultivated. Has a 10 room dwelling, large barn, two floors, small barn, cattle shed, tenant house, and other out-buildings. Farm well watered and enclosed with wire fencing. 100 acres in timber. Healthy location, magnificent view of surrounding country. Price, \$5,000, on easy terms. Address

JOHN P. SIMONSON,  
1124 S St., N. W., Washington, D. C.

## HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.  
C & O Main St. Depot Richmond, Va.

## TO HOMESEEKERS. "THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,  
G. P. A., Lands and Immigration,  
Roanoke, Va.

**BEARING APPLE ORCHARD in "Piedmont" Va.** Rich black loam, typical "pippin" land. Suitable Albemarle pippins, and other highest grade apples. 100 trees planted nine years; good crop this season. Cores like high mountain; but remarkably smooth; similar to adopted orchard work, and spraying. Wagons run all over. Large commercial orchards adjoining. Two bold mountain streams. Four miles from depot; good road. Privately two hours. Price reasonable; good soil; 4 room house; \$2,000; build cash. Very desirable. For details, address  
**SOUTHERN FARM AGENCY, Lynchburg, Va.**

WE HAVE A LARGE LIST OF  
**FRUIT, POULTRY AND TRUCK FARMS**  
Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also  
**GRAIN AND STOCK FARMS**  
From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.  
J. R. HOCKADAY, Manager.

**2 GOOD DAIRY FARMS,**  
Vicinity of Washington FOR SALE.  
Electric railway through one and near the other. For particulars, address  
L. E. WALT, 745 7th St., S. E.,  
Washington, D. C.

moves her to write about "The Tourist" in her notably keen and witty manner. She covers all nationalities in her comparisons and has evidently given much thought to her subject. The series of literary talks by George Moore, begun in the September number and entitled "Avowals," is continued this month. In speaking of Balzac, he says: "There is most vitality in a house described by Balzac than there is in many an English novel."

The October St. Nicholas really should be issued on a Saturday morning and not in the middle of the week, for the girl or boy who once takes it up will find it hard to lay aside the tempting magazine till every page is read. There is a frontispiece that is both pretty and clever. "A Musical Genius—the Pride of the Family." The leading story is just as good for girls as for boys, and is well worth reading aloud in the family. "That Deer," an exciting California story by Marian Warner Wildman. "Dandy Dash and How He Gave the Alarm." is the true story of a dog by Grace Weld Soper; and "Boxer and the Goslings" is another good dog tale. "Poh-Hlaik the Cave Boy," told by Chas. F. Lummis. is the thrilling story of a little New Mexican hero of five hundred years ago. In this number, too, Howard Pyle writes farewell to readers of "The Story of King Arthur and His Knights," which has been the strong fiction attraction of St. Nicholas the past year. "If so be," runs Mr. Pyle's farewell, "they may you think it is worth while to live a brave and true and virtuous life, doing good to those about you, and denying yourselves all those desires which would be ill for others and for yourselves for to yield to, then that which I have written heretofore has not been written amiss." But the October St. Nicholas has plenty of reading more substantial and equally entertaining. Rosalind Richards tells about "The Great Clock of Wells," nearly the oldest and certainly one of the most interesting clocks in existence. Of interest to grown-ups as well as to young readers is Joseph Henry Adams' account, illustrated by the author, of "A Trip through the New York Assay Office." W. T. Hornaday tells his remembrance of Chico, the largest chimpanzee ever seen on this side of the Atlantic; and the pictures are interesting, though necessarily ugly. "Counting" some of the simplest helps to correct counting, the most striking applications of machinery to the purpose, is the topic discussed by C. K. Weed. Annie Knifer's interesting account of "Queen Wilhelmina's Lessons" is written from particulars obtained by the author directly from one of the queen's former teachers.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## IF YOU WISH TO SELL —OR BUY— VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.  
R. B. CHAFFIN & CO., Inc.,  
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or other real estate, no matter where it is or what it is worth. Send description, state price, and learn my wonderfully successful plan. W. M. STRANDEE,  
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**FINE FARMS** In the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address  
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**VIRGINIA FARMS**  
\$3 PER ACRE AND UPWARDS.  
EASY PAYMENTS. CATALOGUE FREE.  
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FOR FARM OR TIMBER LAND, residence and business property in City of Newport News. H. D. COLEMAN,  
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"In the Green Fields of Virginia."  
Homes for ALL; Health for ALL; Happiness and Independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.  
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**VIRGINIA FARMS**  
All prices and sizes. Free list on application.  
WM B. PIZZINI CO., RICHMOND, VA.

SOUTHWESTERN VIRGINIA  
**BLUE GRASS FARMS and MINERAL LANDS.**  
Send for Free Real Estate Bulletin.  
Southwestern Va. Land Agency, Wytheville, Va.

**Go South.** For full particulars write  
A. JEFFERS,  
Norfolk, Va.

**WANTED—FOR SMALL FARM IN** Chesterfield County, an industrious man who understands farming, address A. G. W., P. O. Box 947, Richmond, Va.

**MARK YOUR STOCK.**  
.....USE THE.....  
**KENTUCKY ALUMINUM EAR LABEL**  
Made by F. H. JACKSON & Co., Winchester, Ky  
Write to them for free samples.

# FARMS FOR SALE!

## Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

## No. 4.

Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

## No. 10.

This farm contains 100 acres—40 acres in white oak, chestnut and pine; 60 acres in a high state of cultivation. In lots of from 8 to 12 acres in a field; well fenced. Especially adapted to fruit and wheat and clover. Has a nice 8-room house, two porches, new barn, double grainary, wagon drive and cow sheds. A good 4-room tenant house. Situated 2½ miles from station on main line of Southern railroad; 5 miles from county seat of Fairfax county. Price, \$20 per acre.

## No. 11.

Contains 315 acres in high state of improvement. Large frame dwelling, 10 rooms, 2 large cattle barns, and all necessary farm buildings in good repair. Land watered by spring branches. Situated in aristocratic neighborhood. Convenient to depot and to Washington market. Price, \$50 per acre.

## No. 15.

An excellent dairy farm of 144 acres situated in upper Fairfax county, 3 miles from railroad station; about 100 acres under cultivation, balance in white oak and hickory timber. This is a model, up-to-date dairy farm, with all necessary appliances and machinery for a first class dairy. The owner is now shipping about \$10 worth of milk and cream per day. Write for description and price.

W. E. MILLER,  
Herndon, Va.

## REPORTS.

U. S. Department of Agriculture, Washington, D. C. Farmers Bulletin No. 178. Insects Injurious in Cranberry Culture.

Illinois Experiment Station, Urbana, Ill. Bulletin 87. The Structure of the Corn Kernel and the Composition of its Different Parts.

Bulletin 88. Soil Treatment for Wheat in Rotations, with Special Reference to Southern Illinois Soils.

Iowa Experiment Station, Ames, Iowa. Bulletin 69. The Chicken Mite.

Bulletin 70. Some Weeds of Iowa.

Bulletin 71. The Keeping Quality of Butter.

Hatch Experiment Station, Amherst, Mass. Bulletin 91. Injuries to Shade Trees from Electricity.

Nebraska Experiment Station, Lincoln, Neb. Experiments in the Culture of the Sugar Beet.

Ohio Experiment Station, Wooster, O. The Maintenance of Fertility.

Rhode Island Experiment Station, Kingston, R. I. Bulletin 93. Commercial Fertilizers.

Virginia Weather Bureau, Richmond, Va. Report for August, 1903.

West Virginia Experiment Station, Morgantown, W. Va. Bulletin 86. Cranberries in West Virginia.

Bulletin 87. Greenhouses.

Imperial Department of Agriculture, West Indies Agricultural News, News, August 15th and 29th, 1903.

## CATALOGUES.

Peter Henderson & Co., 35 and 37 Cortlandt street, New York Autumn Catalogue.

Peter Henderson & Co., 35 and 37 Cortlandt street, New York. Agricultural Seeds for Fall Sowing.

Florida Nut Nurseries. J. T. Jones & Son, Proprs., Monticello, Fla.

John Lightfoot, Sherman Heights, Tenn., Catalogue of Strawberry and Raspberry Plants, etc.

## LIVE WILD GAME WANTED.

Dr. Cecil French is advertising in another column for all kinds of live wild game. He wants particularly wild turkeys, quail, pheasants, grey squirrels, bear cubs, deer, raccoons, foxes and the like. As the open game season is now upon us, our readers should be on the look out for some of the above, as Dr. French is ready to turn it into the coin of the realm for them.

## SALES AT BACON HALL.

Messrs. E. M. Gillet & Son write us as follows: "We take pleasure in reporting the following recent sales: Herefords, Mr. D. L. Flory, of Virginia, picked "Goodenough," a very good son of "Gold Standard," out of "Lovely."

Berkshires: Mr. S. H. Anderson, of Virginia, writes: "I am very much pleased with the 3 sows and 1 boar I got from you." Mr. W. P. Husband, of Maryland, bought 1 bred sow and gave me 2 orders. R. T. Owen, of Pennsylvania, got 1 boar pig. Satisfaction or no pay is the motto of "Bacon Hall."

If your lamp-chimneys break, say **MACBETH** to your grocer—loud!

He knows.

You need to know how to manage your lamps to have comfort with them at small cost. Better read my Index; I send it free.

MACBETH, Pittsburgh.

## FREE SAMPLE

OF "THE STORY OF MY LIFE AND WORK," By Booker T. Washington.



Send us your name and address. We want you to have a copy of this autobiography of the greatest living Negro for the purpose of introducing it in your community. It is a remarkable seller, big profit; agents are making from \$4 to \$10 per day. Will you introduce it by selling or getting us an agent? If so, send at once for a sample.

J. L. NICHOLS & CO.,

Atlanta, Ga.  
Selling Price \$1.00. 415 Austell Building.

## DO YOU OWN STOCK?

If so, do you know how to care for it when sick? Our Stock Book tells you all about animals and their diseases. Write for terms. Agents wanted everywhere. Most liberal terms. Outfit free.

B. M. ANDERSON & CO.,  
Box 533. - Richmond, Va.

## Cultivating Entomologist

307 A. Arsene Girault,  
"CARE ALLEGHANY ORCHARD CO.,"  
Paw Paw, W. Va.

Answering in detail, accompanying, where possible with specimens and explanatory notes; life-history a specialty; charges low. Not a bureau of information. Write at once and worry me.

NO SEWING OUR TISSUE REPAIRS FABRICS of all kinds; packages, 10c. with ZONEE PFG. CO., 2010 Cleveland, Ave., Phila.

## "Glen Rock" All Wool Clothing Direct from Mill.

Men's, Boys' and Children's Clothing at a saving of 50 per cent. We have the largest mill in the country selling clothing direct from the mill to the wearer and making the woollen from the raw wool under the same roof. Our goods are handsomely made of all w. ool and trimmed. The cloth is made from the selected wools. Every garment bears our label and is guaranteed for one year. If not wearing satisfactorily, may be returned and another will be sent free of all expense.

Our made-to-measure men's suits for \$3.50 per \$10.00 would cost \$16.00 to \$24 at your tailor's. Handsome line of Fall and Winter Overcoats at an equal saving.

**Hand-shrunk Collars,  
Hand-made Button Holes,  
Padded Shoulders.**

We sell either tailor-made or ready-made clothing. Men's all wool and worsted trousers \$2, \$2.50 and \$3; handsomely made and trimmed. We have the cheapest, strongest and best all wool boys' clothing. Also cloth by the yard or piece, and ladies' suitings and skirtsings. Write today for samples, etc.

**GLEN ROCK WOOLEN MILLS,  
Somerville, N. J.**

## HOW...

# MONEY GROWS

It is what you save and what your money earns, not what you earn, that makes wealth. Savings easy, but knowing how, when and where to safely invest your earnings and

## GET LARGE PROFITS From Small Investments

is the key to wealth. After all, money making is like horticulture—a matter of growth—Plant the seed at the proper time in good soil, and your harvest is certain. He who makes two stalks of corn to grow where but one grew before, increases his income by doubling his harvest. So a few dollars invested at the right time in a good, dividend-paying enterprise will bear fruit a hundred fold.

Send for Free Booklet, "Guide for Investors" which shows how to make an absolutely safe and profitable investment. It may save you a loss or

## MAKE YOUR FORTUNE

**STOCK GUARANTY & SURETY CO.,  
Dept. B. 1122 Market St., San Francisco, Cal.  
Agents Wanted in every city and town.**

**CABINET PHOTOS FREE.** Write for combination of one dozen copies from any picture. CRAMER NOVELTY CO., Greenwich, N. J.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

## SWEET POTATOES.

A pamphlet, "Cultivation and Storage of Sweet Potatoes," gives, as is believed, a more practical plan for keeping potatoes than any other that has heretofore been placed before the people. Important and valuable information that is not contained in any other known publication is here given. Potatoes can thus easily be kept in good condition 12 months or longer. The pamphlet is worth, even to life-long potato growers, much more than the price asked.

A. F. Funderburg, Dndley, S. C., in speaking of this pamphlet, says: "I would not take ten times its cost for it."

The pamphlet has been introduced into 19 States and 3 Territories. The plans are simple and easily understood. They can be made available for old style potato houses, or for new ones, specially built, preferably the latter. Order now. Do not delay.

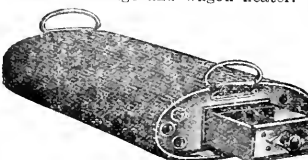
Price, 50 cents, postpaid. Address  
**BRYAN TYSON,  
Carthage, N. C.**

I have a few copies of a formula for excluding moth from beehives that will be sent, as long as they last, without charge, to those who request it.

B. T.

## LEHMAN HEATER.

One of the most striking advertisements in this issue is that of Messrs. Lehman Bros., setting forth the merits of their carriage and wagon heater.



The accompanying illustration will give you an excellent idea of this useful device. It is simple, neat, durable and very handy. Its makers claim that it will make a vehicle absolutely comfortable in the coldest weather; that it gives continuous heat for 15 hours at a cost of one-half cent per hour; that danger from fire is impossible; that it is unbreakable and will last a lifetime. The fact that 200 000 are now in use would seem to confirm the makers' claim. Refer to the ad. and send for catalogue.

## THE WARRINER STANCHION.

This patent chain hanging cattle stanchion is advertised in this issue by Mr. W. B. Crumb, of Forestville, Conn. From glancing through his catalogue we find that numbers of prominent dairymen and Agricultural Stations as well, sing its praises. Better send for the booklet, if interested, or send for it and you will probably get interested.

Mention the *Southern Planter* in writing.

## Full Sacks

of plump, rich grain are obtained by the use of a fertilizer containing not less than 6% actual

# Potash

For Wheat, Rye, Oats, and all other grains, Potash is most essential.

Write for our books, they are free to farmers.

**GERMAN  
KALI WORKS,  
33 NASSAU ST.,  
New York  
Atlanta Ga.  
Branch:  
22 1/2 So.  
Broad  
Street,  
Limaus  
Blg.**



## SAN JOSE SCALE and other insects can be controlled by using

**GOOD'S CAUSTIC POTASH  
WHALE OIL SOAP. No. 3.**

It also prevents Curl Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide. 50 lb. kegs, \$2.50; 100 lb. kegs \$4.50. Half barrels, 270 lbs., at 3 1/2 c. per lb.; barrels, 425 lbs., at 3 1/2 c. Large quantities, special rates. Send for circular.

**JAMES GOOD,  
939—41 N. Front St.,  
PHILADELPHIA, PA.**

# FRAZER

**Axle Grease** Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 boxes any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.

## "Feeds and Feeding"

Prof. Henry's Great Book for  
Farmers and Stockmen.

Delivered anywhere for \$2.00  
With the SOUTHERN PLANTER, .25

**THE  
KEELEY  
INSTITUTE  
GREENSBORO, N. C.**

For the treatment of THE LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion





### BLACKMAN'S MEDICATED SALT BRICK

The only guaranteed Tonic, Blood Purifier, Kidney and Liver Regulator and aid of Digestion for all stock. A sure hit on worms. Ticks cannot live. No dosing, no drenching, and no waste of feed. Your horse his own doctor. Endorsed by thousands. Special Offer of four bricks sent prepaid to any address on receipt of one dollar. Money refunded if not satisfied. For full descriptive circulars, testimonials, etc., address

Blackman Stock Remedy Co.

820 Highland Park, Chattanooga, Tenn.

Thirty-six years of continuous success. Just think what that means. Thirty-six long years in business, each year more successful than the previous one, with never a backward movement, always growing larger, ever increasing in popular favor. How many that were doing business 36 years ago are even in existence to-day? Very, very few. In this age of development and fierce competition, a concern must do business right, treats its customers right, and sell what is right, to even hold its own, much less advance. To do otherwise means that the concern of to-day is likely to be out of the running to-morrow. The grave-yard of business failures is full to overflowing. But thirty-six years of continuous success and still growing. Think of it! How has it been accomplished? In just one way. By selling absolutely pure whiskey, direct from our own distillery to the consumer, saving him the enormous profits of the dealers, and carrying out to the letter every statement or offer we make, thereby creating a confidence with our over a quarter of a million satisfied customers that cannot be broken. Read our offer elsewhere in this paper. The Hayner Distilling Company.

### IMPORTED "BRITISHER."

We are certainly very much obliged to Messrs. Giltner Bros., proprietors of the Kentucky Herefords, for a handsome lithograph of their splendid herd bull, Britisher, 14509C. It immediately found its way to our walls. This splendid bull is certainly entitled to be called the "Record Breaking Champion," as he was champion over all beef breeds in England, and also won the sweepstakes championship in Herefords at the International Show at Chicago in 1902. Look up this firm's ad. and send for a neat little catalogue.

### OUR NATIONAL SHAME.

It cannot be denied that of late the soberest-minded men among us have been filled with a solicitude amounting to anxiety in noting the momentum of certain dangerous tendencies in American life. The trend toward mob law in various sections of the country; the increased violence of the aggressions upon the right of workmen to labor unmolested; the revelations of public and private corruption, and especially of the buying and selling of legislation and franchises; the growth of the gambling mania among women as well as men; the vulgar rush for social prominence; the widespread system of "graft" and blackmail which has grown up in all classes in the haste to be rich—these familiar phenomena are crowding upon our attention, straining our optimism and shaming our national pride at the very time when we are called upon to exult in the commercial greatness of the country and its peculiar qualifications for redeeming the benighted regions of the world. —From an Editorial in the October entury.

## Horse Owners! Use

GOMBAULT'S



## Caustic Balm

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or injury. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

150 Jacks, Jennets and Mules.  
Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell 2 Percheron Stallions at close figures.

BAKER'S JACK FARM.  
Lawrence, Ind.

Knight & Jetton,  
Breeder of and Dealers in  
Jacks, Jennets, Stallions.  
Durham and Hereford  
YEARLINGS.  
Send stamp for Catalogue.  
Murfreesboro, Tenn.

Jacks, Jennets and Stallions  
FOR SALE. FINE JACKS A SPECIALTY. When writing state exactly what you want or come and see our stock.  
W. E. KNIGHT & CO.,  
Route 5, Nashville, Tenn.

A nice, smooth BLACK JACK for sale foaled in 1900; also pure bred Fox Hound Pups of the celebrated Maupin & Walker strain, apply to  
SNOW-HILL KENNELS, Woolsey, Va

## Sale or Exchange

2 BEAUTIFUL JACKS, for pure-bred Red Polled cattle, good draft or coach stallions. W. S. MOTT, Dixondale, Va.

## WANTED!

ALL KINDS OF  
LIVE WILD BIRDS and ANIMALS!  
Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Etc.  
CECIL FRENCH,  
718 Twelfth St. N. W., Washington

USE  
**FOUTZ'S  
HORSE  
AND  
CATTLE  
POWDER**

A medicine which makes sick animals well, the diseased whole, the weak strong and the thin fat. It will restore lost Appetite, expel Worms and cure Chronic Cough, Hoarseness, Influenza, Distemper, Hiccups, Indigestion, Constipation, Flatulency and all Stomach and Bowel trouble.

The finest of all animal conditioners and tonics and the only one which increases the coefficient of digestibility of protein.

Get the Genuine or  
get the Imitation  
5 PKGS. \$1.00  
12 PKGS. \$2.00  
Sold by All Dealers.

DAVID E. FOUTZ  
BALTIMORE, MD.

TRADE MARK

DEATH TO HEAVES  
Guaranteed

NEWTON'S Heave, Cough, Distemper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can. Dealers: Nutt or Rex, paid. Newton Heave Cure Co., Toledo, Ohio.

## PERCHERON COLTS.

I offer 3 pure bred last spring foals (2 stallions, 1 filly), sired by Brilliant Monarch, Jr. Wt. 1,800 pounds. Also

## POLAND CHINA

Pigs, both sexes, 5 mos. old, sired by a son of Chief Tecumseh 2d, and a grandson of Chief Perfection 2d. Both colts and pigs are choice stock and eligible to registry. Write me.

THOS. R. SMITH,  
Lincoln, Loudoun Co., Va.

## 8 HORSE COLTS

FOR SALE. 8 are 2 years old past; 5 are 1 year old past. All are sired by the fine registered saddle horses, OLD MAC and GENTRY D. As I am unprepared to handle them this year, will sell any 3 or the 8 at a prime bargain. Correspondence or visit solicited.

I. L. AMBERG, Fletcher, N. C.  
(12 miles below Asheville, Southern P. R.)

## FOR SALE.

Large English Berkshire Hogs,  
Barr'd Plymouth Rock Chickens

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. \$7 EGGS IN SEASON.  
JOHN P. FOSTER, Noerock, Ohio Co., Ky.

## Little Chicks

thrive when fed on our

### BABY CHICK FOOD.

A perfect balanced food. Send for free sample and our large illustrated catalog of **POULTRY SUPPLIES,**

**INCUBATORS, and BROODERS.**

**FANCIERS' SUPPLY CO.,**  
517-519 West Broad St.,  
Richmond, Va.

EVERYTHING FOR THE FANCIER.

## FINE TURKEYS. "BRED FOR BREEDERS."

Last year my Mammoth Bronze turkeys were very fine, but this year the best I ever saw. They are the S. B. Johnston stock, derived from prize winners. SPECIAL RATES to those sending money before Nov. 1st, and the most select birds to first orders. I also have a few very fine thoroughbred Barred Plymouth Rock cockerels for sale. Rates reasonable on all. Write for circulars.

**PIEDMONT POULTRY PLAC,**  
Miss E. Cattie Giles, Prop. - White's Depot, Va.

## BROWN LEGHORNS.

Young stock for sale in

Fall. Prices reasonable.

White Plymouth Rocks.

R. W. HAW, Jr., - - Centralia, Va.

## PIT GAMES:

Black Devils and Red Horses.

These cocks won 90 per cent of battles fought in 1901 and 1902 and have never lost a battle when gameness and cutting qualities could win. Choice lot of young and old stock for sale.

THOS. W. JARMAN, Yancey Mills, Va.

## 32 Varieties Best Poultry

in either old or young stock

Reduced price on eggs bal of season. Get my fine catalog, is free for stamp. Many breeding birds to offer. I can please you.

JNO. E. HEATWOLE, Harrisonburg, Va.

.... GARNETT'S LAYERS ....

S. C. Black Minorca's & S. C. White Leghorns of the Best Strain's Extant.

This is the month to order your cockerels have a nice lot for sale, \$1.00 each; no pullets for sale.

J. MILTON GARNETT, Mitchell's, Va.

## FIRST CLASS FOWLS

—FOR SALE, CHEAP.—

Barred, Buff and White Plymouth Rocks, White Wyandottes, Light Brahma, Buff and Partridge Cochins, Black Minorcas, Black Langshans, Brown and White Leghorns.

Now is the time to secure bargains.

OAKLAND FORTLICK FARM,

C. J. WARINER, Mgr., REFFIN, N. C.

With this issue the season's advertising of the familiar Monarch French Burr and Attrition Feed Mills starts. Old readers remember the advertisements from past seasons. These mills have found their way into the feed barns of many who read this paper. If there had been any note of dissatisfaction we should be sure to know it. These Monarch Mills are admirably adapted to the feeder's purposes. We have no hesitation in recommending them unreservedly. But an intending buyer need not buy on faith. Note the liberal time given to try before consummating the purchase. It shows the serene confidence the manufacturers have in their product. Catalogue with full description can be obtained by writing the manufacturers, Sprout, Waldron & Co., Box 202, Muncy, Pa.

## DISCONTENT WITH WORK.

That there is much discontent with work among the so-called middle class in America is due in large part to the pampering of children, to the supplying of their natural and artificial wants and to the sentimental idea that "their day of toil will come soon enough." In general, work is not a curse, but a blessing—a positive means of grace. One can hardly begin too early to impress upon children lessons of self-help by tasks appropriate to their age and forces, and to beget in them scorn of idleness and of dependence on others. To do this is to make them happy through the self-respect that comes with the realization of power, and thus to approximate Tennyson's goal of man: "Self-reverence, self-knowledge, self-control."—From an Editorial in the *October Century*.

## RAISE MORE MULES.

Baker's Jack Farm, which has long been advertising with us, sends us a little folder giving 20 reasons why farmers should raise more mules. We suggest that all interested parties send for it. Here are the first four:

I. They can be raised cheaper than any other stock.

II. Will go into the market sooner than horses.

III. They are marketable any time from weaning time (four months old) until incapacitated by old age.

IV. Are less liable to contract diseases than the horse.

## OLDEST CLOCK IN THE WORLD.

The great clock of Wells Cathedral, in Somersetshire, England, is very nearly the oldest and certainly one of the most interesting of clocks in existence. It was built in 1322, by Peter Lightfoot, one of the monks of Glastonbury Abbey, six miles from Wells, where it ran for 250 years, until the abbey was dissolved by Henry VIII, and its last abbot hanged over his own gateway. The clock was then removed to Wells, where it has been running ever since."—From "The Great Clock of Wells" in *October St. Nicholas*.

## White Wyandottes, Buff Leghorns, Bronze Turkeys.

I can supply a few trios of White Wyandotte Cockerels and Pullets. Immediate delivery. Fine layers.

Buff Leghorn Cockerels of extra fine laying strain ready for delivery in November.

Bronze Turkeys in pairs or trios. All at reasonable prices.

One U. S. Separator in perfect repair. Capacity 350 pounds milk per hour. Cost \$125. Price, \$50.

A. R. VENABLE, JR.,

Milnwood Dairy Farm.

P. O. Box 147, Farmville, Va.

## Barred and White

## PLYMOUTH ROCKS

Single and R. C. B. Leghorn, S. L. Wyandotte, Light Brahma and B. Minorca Cockerels for sale. \$1 per single bird; a trio for \$3.

J. B. JOHNSON, Clover Hill Farm,  
Manassas, Va.

## \$1.00 each during October only.

B. P. R. chicks bred from Hawkins, Thompson & Bradley Bros. prize winners.

Protection Duroc Jersey pigs and Perfection Poland-China pigs.  
Only the best is bred at "The Cedars." Fancier's stock, farmers prices.

THE CEDARS W. L. G. OWENS,  
P. and S. FARM. Middlethian, Va.

Genuine B. Plymouth Rock chickens; M. Bronze turkeys, Toulouse geese, Guineas, Pea fowls.

Eggs in season from chickens and turkeys.

Mrs. W. F. JACKSON, Olga P. O.,  
Amelia Co., Va.

## Barred Plymouth Rocks, EXCLUSIVELY...

FOR SALE; strong, healthy, vigorous farm-raised pullets—bred for laying.

WM. B. LEWIS, IRBY, Nottoway Co., Va.

## 300 White Leghorn

Pullets (¾ bred) wanted. Write me, stating how many you can sell and at what price. F. E. WILLIAMS, M. D.

Capron, Va.

## AFKIAN GEESSE.—Pure-bred African

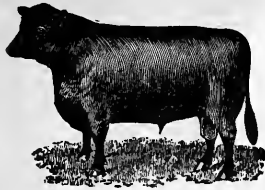
geese. A few pairs for sale, also Broken haired Bassett hound pups. Miss A. WORTHINGTON, Ivy Depot, Va.

## FOR SALE—Trlo Toulouse Geese;

1901 hatch, or will exchange for trio good M. Bronze Turkeys.

DAVID W. LEARY, Mattoax, Va.

## Market Toppers for Sale, Low.



Lot fine Reg. Angus bull calves, five to six mos., \$75.

Lot  $\frac{3}{4}$  grade Angus heifers coming 2 years. Safe in calf by Reg. Angus bull. Price, 6 $\frac{1}{2}$ c. per pound.

1 Bull Calf coming 4 mos., out of fine Hereford cow, by Reg. Angus bull. \$40

Lot  $\frac{1}{2}$  grade Angus heifers, coming 1 year. Price, 6c. per pound.

One 12 mos. old Reg. Angus heifer. \$100.

One first class black mare mule, 7 years old; wgt. 1,200. Very quick and active. \$150. Cheap at \$200.

One fine Dorset-Shropshire ram lamb, five mos., wgt. 75 pounds. \$8.

Pure white Plymouth Rock Cockerels, each \$1.

Pure Silver Lace Wyandotte Cockerels, each \$1.

W. M. WATKINS & SONS,  
Charlotte county, Randolph, Va.

## ANGUS BULL CALVES

SIRED BY THE

Champion Bull BARON IDA.

These calves are choice individuals.

ENGLISH SETTER PUPS.

Sire and dam prize winners.

WARREN RICE, Winchester, Va.

5 finely bred registered

## Aberdeen Angus Heifers

For sale at a bargain. 2 are 17 mos. old; 2 are 6 mos. old, and 1 is 8 mos. old.

C. F. & J. BUTTON,  
Walker's Ford, Va.

LAUREL HILL FARM.

Splendid Registered  
ANGUS BULL

Age 17 mos., thoroughly tick proof (immune), for sale. Price, \$250. Also a beautiful 5 mos. ANGUS HEIFER. No kin to bull, for \$50. Write for breeding, etc. C. A. WILLIAMS,  
Ringwood, N. C.

Montebello Herd

## Aberdeen Angus Cattle

Reg. bull calves; also first class BERKSHIRE PIGS of Biltmore strain, for sale by L. H. GRAY, Lock box 58, Orange, Va.

## A NOTE IN PASSING.

"Yes," said the bandmaster, "we do have troubles with our musicians sometimes.

"Once we were engaged to play at a funeral. Our notice was very short, so we had no rehearsal. We reached the cemetery without any mishap, but there something happened. We were to play a solemn measure while the body was being lowered into the grave. Only a few instruments were needed. I was slowly and solemnly swinging my baton, the spectators were silently weeping, when suddenly the trombone gave a loud, long blast, enough to wake the dead. Some of the mourners fainted, the players stopped in consternation, and I jumped over chairs and racks to where the trombonist, a dull, heavy German, sat, stolidly gazing at his music.

"What the devil did you mean by bursting out that way?" I shouted.

"He raised his eyes slowly to mine.

"Vell, I was vatching de music, und just den a horse-fly got on de paper. I t'ought he vos a note, und I played him. Dat was all, ain't it?"—*October Lippincott's*.

## PRINCE RUPERT.

Mr. E. G. Butler, of Annefeld Farms, breeder of Herefords and Berkshires, sends us a handsome lithograph of his celebrated stock bull, Prince Rupert. Mr. Butler has every reason to be proud of this bull, not only for his past record, but for his present performances. Look up his advertisements elsewhere in this issue and send for a photo of Prince Rupert.

## NONE ON HAND.

"Dock" Squires was a queer old "yarb" doctor of decidedly limited education who flourished in New England a good many years ago. One day some one said to him:

"See here, Dock, have you any diploma?"

"Wal, no; I ain't got none on hand just now, but I'm going to dig some soon as the ground thaws out in the spring."—*October Lippincott's*.

## DE LAVAL SEPARATORS.

We are in receipt of a very neat brochure, printed in colors, giving descriptions and prices of the De Laval Separator. There is no advertisement of the De Laval Separator in this issue, but if any are interested in Cream Separators, it might be well for them to write the above company, in New York city.

## THE QUIT EVEN.

A red-headed man met a bald-headed man on the street one day. The red-headed man said to the bald-headed man:

"Huh! there don't seem to have been much hair where you came from."

"Oh, yes," replied the bald-headed man, "there was plenty of hair, but it was all red, and I wouldn't have it."—*October Lippincott's*.

Kentucky  
Herefords

Headed by the famous

## IMPORTED BRITISHER

No. 14506 Champion Bull over all breeds in England and Grand Sweepstakes Champion at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they wish from the FANCIEST THAT CAN BE BRED to the cheaper class usually desired by the beginner. Write us before buying. Glad to answer inquiries.

Giltner Bros., Eminence, Ky.

V. P. I.  
Farm Bulletin

We are now offering some choice young Bulls of the following breeds:

Shorthorn, Hereford, Aberdeen-Angus.

Write at once for pedigrees and prices.

D. D. NOURSE, Prof. of Agr.  
Blacksburg, Va.

HAYFIELDS STOCK FARM HAS  
FOR SALE

Seven Registered HEREFORD BULLS 3 months old to 2 $\frac{1}{2}$  years. Two Registered HEREFORD HEIFERS 3 months old and 1 year. Six OXFORD OWN BUCK LAMBS.

WM. D. MERRYMAN,  
Cockeysville, Md.

## DORSETS AND HEREFORDS.

Some Exceptionally Rare Bargains to Quick Buyers.

My herd bull, bull calves and Dorset bucks. Registered stock.

H. ARMSTRONG, LANTZ MILLS, VA.

A few fine ENGLISH SETTER puppies for sale at very reasonable prices.

JOHN A. CLARK,  
Malvern Hill, Va.

Scotch Collie Pups  
—AND—

## Berkshire Pigs,

For sale, 1 boar ready for service. Satisfaction guaranteed.

E. M. BALL, Emory, Va.

## ● COLLIE PUPS ●

By Imported Sires. Sable and white and tricolors. Prices \$3 to \$15. Older ones correspondingly low. Book on Training, 50 cents; FREE if you buy a Collie. MAPLEMONT STOCK FARM, Albany, Vermont.

Mention the Southern Planter in writing.

## RED POLLED CATTLE

—FOR SALE—

One extra fine, pure-bred Bull calf, 15 mos. old, out of 18082 Constance, by that grand sire, Flotilla 6225.

Also, one 9 mos.,  $\frac{1}{2}$  grade bull, a fine animal, excellent for grading up, and will knock the horns off every time, address

PIERSON BROS., SUMMIT, Spotsylvania Co., Va.

### Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

### JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

**FOR SALE.**—A NO. 1 REG. HEREFORD BULL, 7 months old, well marked, weighing over 500 lbs.

Address WM. C. STUBBS, Sassafras P. O., Gloucester Co., Va.

### ST. OMER HERD

Offers young bulls fit for service, out of tested dams with good yearly records. Strong in Exlle of St. L., Klog of St. L. and Stoke Pogis of Prospect. Reasonable prices.

JOS. T. HOOPES, Bynum, Md.

### Ayrshires, Berkshires and Oxford-Downs.

Ayrshire Calves of both sexes, Berkshires Pig and Boar and 2 Oxford-Down Rams for sale.

MELROSE CASTLE FARM, Enos H. Hess, Manager, Casanova, Va.

### ANGORA GOATS

WANTED. We desire to purchase 25 to 50 does, also the same number of does with kids by their sides. Write us stating lowest cash price.

FOXHALL FARM, Norfolk, Va.

### Purebred ANGORA BUCK

2 years' old, for sale. Price \$20 f. o. b., Howardsville, Va.

C. H. NOLTING, Medlock, Va.

### FOR SALE.—MY REG. ANGORA

"Gilbert of Aganaw" 4 years old, and as good as anybodys goat. Must sell to avoid inbreeding. Price \$25 00 f. o. b., South Boston, Va.

W. W. STOCKWELL, South Boston, Va.

**ANGORA GOATS** are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Clifty, Ky.

### POULTRY FENCE.

New advertisers in this issue are Chase Bros., of Colechester, Ct. They make a specialty of M. M. S. and Union Lock Poultry Fence. Look up their advertisement and send for interesting circulars. etc.

### A LIMIT TO ALL THINGS.

He had been away on a long journey, and upon his return his wife was detailing to him a number of reforms and improvements which she had successfully engineered during his absence.

"And you know," she said, "that closet that was locked for over a month and which you said couldn't be opened except by a locksmith? Well,"—triumphantly—"I opened it."

"Well, well, how in the world did you do it?"

"With a hairpin."

"And the furnace door," she continued, "has been slopping around on one hinge for ever so long just because you were too lazy to fix it, but it's all right now."

"Well, I'm glad you had it fixed."

"Had it fixed? I fixed it myself—with a hairpin."

"And then there's that crayon portrait of mother that stood in the corner for almost six solid weeks because you never would bring me any picture hooks—"

"Well, I intended to, but—"

"Oh, 'but!' Well, it don't make any difference now; I got it up with a hook I made myself—out of a hairpin."

"Ye gods!" he said.

"And there's the Willie; you've been coaxing him and bribing him for a year, trying to break him of biting his nails, and I broke him in a week."

"With a hairpin!" he inquired weakly.

"No!" she snapped, "don't be a goose! With a hair brush!"—*Truman Roberts Andrews, in October Lippincott's.*

### JACKS AND JENNETTS.

Our friends, W. E. Knight & Co., of Nashville, Tenn., start up the season's advertising with this issue. Jacks and Jennetts are their specialty, and any one giving description of their offerings.

### CASTALIA HEREFORDS.

Mr. Murray Boocock, owner of the Castalia Herefords, writes us regarding his present offering as follows: "I have a very choice lot of bulls for sale, from 18 to 20 months old, ready for service, at prices which cattienien can afford to pay because the return on the money investment is quick and sure. I am offering these bulls at only a little over calf prices to meet the demand for Registered Hereford yearling bulls at a low price. The present offering is one of the most useful lots I ever had. They are all rugged, thrifty, blocky fellows, and backed by the best of breeding."

## WARE VIEW FARM,

GLOUCESTER, VA.

### = OFFERS FOR SALE =

3 large Berkshire Boars:

BEAU OF BILTMORE,

COLUMBIANA'S MASON, and

BOB LOOMIS, JR.

Will be priced low, also about 100 head of extra fine Boar and Sow pigs by the above Boars and out of the best Sows. Entitled to registry. Price, \$12 each, or 3 for \$30, Send stamp for reply.

R. S. CAMERON & SON, Props.

## BERKSHIRES

ANNEFIELD HERD  
Represents the

### Finest Blood Lines

in England, or America.

Stock for sale at all times.

Correspondence Solicited.  
Inspection Invited.

EDW. G. BUTLER, Annefield Farms,  
Briggs, Clarke Co., Va.

### CHOICE YOUNG

## BERKSHIRES

of Both Sexes, for Sale.

By Highclere Topper of Biltmore II, out of Imported Harlene.

Miniborya Farm, Box 901, Richmond, Va.



### Southdown and Hampshiredown

FOR SALE; also ESSEX pigs. For prices, apply to L. G. JONES, Bethania, N. C.

## BERKSHIRES

We offer some extra choice young boars, entitled to registry. These are particularly nice pigs, in fact they are "tops," and we sell only "TOS." Let me have your inquiries and orders.

HAWKLEY.. J. T. OLIVER,  
STOCK FARM, Allen's Level, Va.

Poland Chinas, Chester Whites and Mammoth Bronze Turkeys at Farmers prices

S. M. WISECARVER,  
Rustburg, Va.

## —6 Scotch Topped—

**SHORT HORN BULL CALVES**

6 Scotch Topped SHORT HORN Bull Calves 3 to 15 months old; reds and roans; sired by Verbena's Champion No. 129851, and Royal Chief No. 185432, and he by Imp. Royal Stamp No. 146662. Poland China Spring pigs, good ones, sired by Coler's Perfection No. 56105. Pedigree furnished with all stock sold. Come or write your wants.

WM. T. THRASHER, Springwood, Va.

**ELLERSLIE FARM**

**Thoroughbred Horses  
AND SHORTHORN CATTLE,  
Pure Downshire Sheep  
and Berkshire Pigs.**

FOR SALE. R. J. HANCOCK & SON,  
CHARLOTTESVILLE, VA.

**COOK'S CREEK HERD**

**Scotch-Topped  
Shorthorns**

Herd Headed by Governor Tyler, 1885 48. Young Bulls for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

**Quietest**

**SHORTHORNS  
FOR SALE.**

1 yearling bull, 3 bull calves 2 two-year-old heifers bred to a pure Scotch bull, 3 yearling heifers and a few cows. This stock is first class and in excellent condition. Write to or come to see  
T. J. THOMPSON, Swoope, Va.

**PURE BRED****Short Horn Calves**

from fine Stock. Also

**Yorkshire Pigs**

of very Prolific Breed.

JAS. N. HOGUE, Hamilton, Va.

**Only a Few of My****Reg. SHROPSHIRE**

left, and they MUST go by Jan. 1st, as I am discontinuing farming.

I offer 1 yearling ram, 1 2 yr. old ram, 2 ram lambs, 2 ewes aged 4 and 5 yrs. at a bargain. Write at once. H. R. GRAHAM, Barclay, Md.

**O. I. C. PIGS**

FROM REG. STOCK.

FOR SALE. PRICES RIGHT.

F. S. MICHIE, Charlottesville, Va.

Registered P. Chinas  
C. Whites. Fine large  
strains. All ages, mated  
not a in 8 week, pigs.  
Bred sows. Service boars  
and Poultry. Write for prices and free circular.  
P. F. HAMILTON, Cochranville, Chester Co., Pa.

**HOG REMEDY.**

All readers of this paper are familiar at least with the advertisement of the Haas Hog Remedy, by Dr. Joseph Haas, of Indianapolis. Among them are very many who have regularly for many years relied upon it to ward off and cure the swine plague. It is enough to say of it that Dr. Haas' remedy has been on constant trial for twenty-seven years by the hog raisers of this country. It would long ago have passed out of mind if it had not proven effective. Readers should note the striking difference between Dr. Haas' guarantee and those ordinarily given. The common form is a promise to refund the money paid if not satisfactory. Dr. Haas goes further. The remedy not only costs nothing, but where his plan of treatment is followed, he agrees to pay the market price for all hogs that may die. This guaranter, coming from a man financially responsible, amounts to something to hog raisers, whose chief hazard is the dreaded cholera. The book "Hogology" mentioned in the advertisement elsewhere develops fully the Haas plan. A copy will be mailed free to all of our readers who request it.

**TOO SMALL FOR ITS AGE.**

A gentleman who had employed an old colored carpenter to do a piece of rather delicate cabinet work for him was pleased beyond his expectations with the result.

Wishing to show his satisfaction, he—after paying the price the old man asked—took from the sideboard a bottle of extraordinary fine whiskey that had just been sent him and poured a little into a glass.

"Uncle," he inquired, "have you ever tasted any whiskey fifty years old?"

"No, sah, I never has," replied the old dorky, his voice trembling with anticipation.

"Well, try that, then," said his employer, handing him the glass, "and tell me what you think of it."

The old fellow received it reverently, took one sip, and raised his eyes in ecstasy.

"Oh, sah! dat am sho'ly de fines' bevrage ris chile evah taste. But," with an anxious glance at the very slight quantity in the glass, "don't you tink, sah, it am jus' a little small for its age!"

It is, perhaps, needless to add that this gentle criticism had the desired effect.—October Lippincott's.

**A FAMILY NAME.**

The teacher of a county school asked his pupils, one day, if any of them could tell him who Joan of Arc was.

The question was followed by profound silence. Some of the pupils stared at the teacher, and some turned and stared at one another, as if seeking the information in the faces around them.

Finally a boy burst out with:

"O, yes, I know—she was Noah's wife."—October Lippincott's.

WANTED TO BUY A FEW HEAD YOUNG CATTLE, south of James river and east of Roanoke, Shorthorns or grades preferred, will also buy a few Angora goats. Address "W" care of this office.

**RAISE SQUABS;**  
more profitable than poultry. The famous P. K strain. Prices of breeders on application. E. C. JOHNSON,  
Manassas, Va.

**WOODLAND DORSETS.**

ONE of our customers writes: "My sales of grade Dorset winter lambs run this year: first 87 head brought \$870; then prices declined somewhat. I am looking for another good Dorset farm." Woodland Dorsets are standard in excellence.

J. E. WING & BROS., Mechanicsburg, Ohio.

**"Crop Growing  
and Crop Feeding."**

BY PROF. W. F. MASSEY.

383 Pp. Cloth, \$1.00; Paper, 50c.

We offer this splendid work in connection with the SOUTHERN PLANTER at the following prices:

Southern Planter and Cloth

Bound Volume, \$1.25.

Southern Planter and Paper

Bound Volume, 90c.

Old or new subscriptions.

**The RICHMOND, FREDERICKSBURG****and POTOMAC R. R.****and WASHINGTON SOUTHERN R'Y**

Form the Link connecting the

Atlantic Coast Line R. R.,

Baltimore and Ohio R. R.,

Chesapeake and Ohio R'y.

Pennsylvania R. R.,

Seaboard Air Line R'y

and Southern R'y.

Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Mention the *Southern Planter* when corresponding with advertisers.

## EMILY'S CHARGE.

(A Serial Tale by Mary Washington.)  
CHAPTER IV.

Emily now began to turn her attention to their "landed estate," as she called the little tract of land bequeathed by her Aunt Melissa. At first she had thought of selling it, but on second thought it flashed over her mind, "Why should we be wanderers and homeless when we have even this little foothold to serve us as a home?" The more she thought of it the more she liked the idea of living in their own little cottage, among the grand mountains, green meadows and clear streams of a pastoral country, and she finally resolved that if she could see any reasonable prospect of maintaining herself and the children, she would make her home there. But she determined to go there first herself and thoroughly examine the surroundings and prospects, for though her relatives called her Quixotic, she was by no means rash. She found the cottage occupied by a respectable couple, who had been living there for several years to take care of the place. The cottage was quite tasteful and comfortable, containing four rooms, and having a porch overrun by honey suckle and climbing roses. There was also a good building in the yard, containing two comfortable rooms, intended for a kitchen and servants' room. There were twenty acres attached to the cottage, of which ten were in cultivation, and the remainder consisted of wood land. There was a nice little orchard of peach and pear trees, as well as several rows of choice grape vines, for Aunt Melissa had a talent for making herself and friends comfortable, and had planted out such fruit as would bear during the season she was there. Mr. and Mrs. Wheeler, the couple in charge of the place, had kept it in good order. They were plain people, but practical, industrious and kind hearted. Mr. Wheeler owned a small tract of land adjoining the cottage tract, and by tilling this, he made a frugal living. They seemed, providentially placed where they were for the help and protection of the orphans. Emily hastened to engage them to remain, arranging for them to move into the outbuilding when she was ready to occupy the cottage. Finding that Mr. Wheeler understood the culture of vegetables, she proposed that he should raise these on her land and market them to the neighboring watering place, together with the fruit from the little orchard her aunt had so providentially planted. The watering place afforded a very good market for such products, from June to September.

But although her path seemed to grow a little clearer before her, Emily knew it would not do to depend entirely on the prospect of a little marketing during four months of the year, so before making her final decision to settle at the cottage, she set to work to ascertain what were her prospects for getting a school in that neighborhood the ensuing session.

# ON WINTRY DAYS



**THE FOUR MONTHS OUTLINED IN THE ILLUSTRATION,**  
Are the ones mostly feared for intense cold. Why not prepare for same and purchase a LEHMAN CARRIAGE AND SLEIGH HEATER? They will keep you comfortably warm at a cost of 2 cents per day, burning LEHMAN COAL, from which there is no smoke, smell nor danger. The fact that 200,000 of our heaters are in use, plainly show that they are FULLY as REPRESENTED, and they are guaranteed to be the BEST HEATER money and skilled labor can put together. They are known everywhere as the STANDARD, and are in use by the LEADING HORSEMEN, who highly recommend them.

Write for circular with price list. Your local carriage, harness or hardware dealer sells our goods.

LEHMAN BROS., MFRS.,                      J. W. ERRINGER, Gen. W. Sales Agt.,  
10 Bond St., New York.                      45 E. Congress St., Chicago.

## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. **BERKSHIRES** From noted strains, Imported Headlight, Lord Highclere and Sunrise.

### DORSET SHEEP

#### B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

**WE OFFER** a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young Berkshire boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

**M. B. ROWE & CO.,** - Fredericksburg, Va

When corresponding with our advertisers always mention the  
*Southern Planter.*

Those proving favorable, she made up her mind to try living at the cottage for one year at least, and if she could not sustain herself there, to sell it and make such other arrangements as the emergency seemed to call for. She then returned to her old neighborhood for the winter, thinking it best to wait until spring before making a move. All their friends and neighbors opened their doors to the orphans with whole-souled hospitality, and under the roof of kind entertainers, they lingered a few months longer, in sight of their old home. Mr. Crawford, the creditor into whose hands "Soldiers' Joy" had passed, was not a stranger to Emily, he and his family having frequently visited in the neighborhood in her childhood. His son, Allan Crawford, to whom he intended giving the place, had been a playmate of hers, and she had a pleasant recollection of the frank, manly boy. He called to renew their acquaintance a few days after taking possession of "Soldiers' Joy," and seemed greatly embarrassed. His kindly nature was pained at the idea of turning a young woman out of her home, and this chivalrous feeling was strengthened when he saw into what a lovely and charming young woman his former playmate had developed. Emily, on her part, took much pleasure in renewing the friendship of childish years, and he brightened up the quiet winter by many acts of kindness and attention to herself and the young ones under her charge.

When the spring fairly opened Emily began to prepare for their departure. Her friends all tried to dissuade her, begging her to remain and divide her time amongst them, but her resolution to go was unalterable. While the rest were voluble in expensing their regrets, Allen alone was so silent and constrained as to appear almost unfriendly. A few days before their departure, one sweet April evening, when all nature had awakened, after the cold and snows of winter, with a new, lovely and serene life, Emily strolling on the lawn, saw Allan approach her. He held in his hand a bouquet of spring flowers, hyacinths, lilies of the valley, and white violets gathered from the flower beds of her dear old home. They brought so many memories rushing over her that it was several moments before she could speak. Allan, too, seemed equally agitated.

"Dear Emily," said he, "I have come to beg you to return to these flowers, and to the old home. It seems so hard and cruel and unnatural for you to go away from them. I feel like an interloper, taking possession of these things, and you going away to buffet and struggle with the world."

"But, my friend," replied Emily, "you are too chivalrous and tender hearted. It is morbid in you to blame yourself, or feel badly about our old home having passed into your possession."

"I do not ask you to return for this reason," cried he, passionately, "but because I love you, and want you to be

## REGISTERED HEREFORD CATTLE.



Service Bulls; Imported Salisbury 76059 (19083), a grandson of the famous Grove 3d 2490, and a descendant of the world renowned Lord Wilton 4057 from the 4th generation.

Snowball, the dam of Salisbury, is now in the herd of His Majesty King Edward VII.

Lars, Jr., is by Lars of Western fame and his dam is Judy out of a Sir Richard 2nd cow. This makes a great combination of the Grove 3d, Lord Wilton, Anxiety, Peerless Wilton and Sir Richard 2nd strains. No better breeding in the world today.

FOR SALE—Yearling bulls by above sires. WANTED—Reg. Hereford heifers, 18 to 24 months old, not bred; will exchange bulls for heifers of equal quality.

Write your needs or call and make your own selection.

Keswick is on the C. & O. Ry., near Charlottesville, Virginia.

MURRAY BOOCOCK, Owner, Keswick, Alb. Co., Va.

### Bacon Hall Farm.

# Hereford REGISTERED Cattle

“TOP” BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.

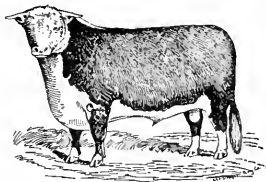
## VIRGINIA HEREFORDS,

Herd headed by the Champion  
PRINCE RUPERT, 79539.

Correspondence Solicited. Inspection Invited.

EDWARD G. BUTLER,

Annefield Farms. BRIGGS, Clarke Co., Va.



PRINCE RUPERT. 79539

## BARGAINS IN HEREFORDS.

To reduce our herd, we are offering a goodly number of registered bulls and heifers; not akin—at reasonable prices. (Telephone connection.)

STONEHURST FRUIT & STOCK FARM,

Fluvanna Co. - - - Union Mills, Va.



## ROSEMONT HEREFORDS!

HEADED BY THE FAMOUS ACROBAT 68460,

Assisted by MARQUIS of SALISBURY 167H 138894, the best son of Imported Salisbury. Correspondence solicited. Visitors welcome.

C. E. CLAPP, Berryville, Clarke Co., Va.



ACROBAT 68460.

When corresponding with our advertisers always mention the  
*Southern Planter.*

my wife."

Emily was startled beyond the power of replying at first. It had never occurred to her to look on Allan as even a possible lover. With eloquent pleadings he continued to lay his suit before her, not forgetting to assure her that he would provide for her brother and sister, as if they were his own.

Blushing, trembling and confused, Emily hardly knew what to say, or even what to think at first, but at length she told him that while she had a warm friendship for him, she could not return the friendship he expressed.

He refused, however, to take this as a final answer, especially after drawing from her the avowal that there was no other attachment in the way, and at length she agreed to defer giving her final answer for three days. Those three days were momentous ones to them both. There were many considerations that pleaded strongly in Allan's favor. He was a man she esteemed. He had no bad habits, no ignoble traits. From a worldly point of view it was a desirable match, one which would cut short the perplexities and struggles of her existence. Then his brotherly spirit towards Walter and Alice, and his generous offer to provide for them, exerted a strong feeling of gratitude in her mind. Again, the idea of returning to her old home was a strong inducement. In short, there was everything to plead for him except one, and that was the voice of her heart—that unruly member which can neither be persuaded nor forced. She liked Allen, but with the liking any one might have for any friend, not with the sense of thorough companionship, the deep and subtle sympathy, the exquisite tenderness that a woman feels towards a man whom she loves with the strongest and deepest love in human life. Allan was not the fortunate prince who had succeeded in breaking through the thorn hedge, penetrating to the palace of the sleeping beauty and awakening her. Emily's heart was slumbering yet. She did not love Allan, and she felt that she could never accord him more than a quiet, friendly regard, and she felt that she would do him an injustice to marry him, and let him lavish his devotion on her, when she could only make so inadequate a return. On the day appointed for her final answer Allan, after a long interview with Emily, went away sadly, pain and disappointment stamped on his frank, manly face. I will anticipate the course of my narrative by telling my readers that he did not here relinquish his suit, but twice in the course of the next few years wrote and renewed his offer to Emily. As her answer, however, did not vary from her first one, he gradually settled down into a steadfast friendship for his old playmate, a fact which spoke well for them both.

It seemed Emily's fate to be always making decisions and taking steps that other people regarded as Quixotic, and the last seemed to cap the climax. With an alternate sigh and

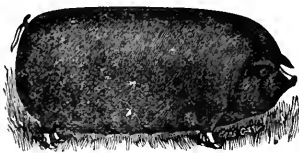
## ARMOUR'S BLOOD MEAL Cures Scours In Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

**PREVENTS** weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

**A Potent Food for Work Horses, Dairy Cows, Poultry.** Writes for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

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Chicago. Omaha. Baltimore. Atlanta. Jacksonville.



## LARGE POLAND- CHINAS.

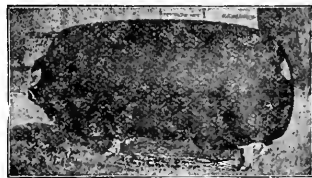
Closely related to such noted hogs as *Anderson's Model*, *Ideal Sunshine* and *W. B. Tecumseh*.

Choice pigs, boars and bred sows. **SHORTHORN** bull and heifer calves. Choice stock at farmer's prices.

Write for prices and testimonials.

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## POLAND- CHINAS.

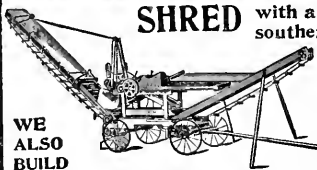


I have a limited number of pigs by my fine boars Gray's Big Chief, 57077; and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young boars and sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address

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the largest line of Huskers and Shredders of any manufacturer, also a full line of Horse Powers, Jacks, Corn Shellers, Hay Balers, Mowers, Seeders, Rakes, Loaders and Disc Harrows.

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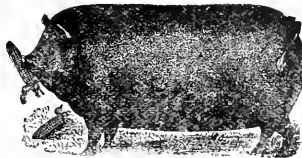
Hog raisers take absolutely no risk when they use Haas' Hog Remedy, as in case of loss the Remedy not only costs nothing, but I pay for all hogs that die at the highest market prices. Write for full particulars. Twenty-seven years' unprecedented success. Don't waste time and money experimenting with cheap "stock foods" which are made almost entirely of the food studs raised on every farm, and contain no medicinal properties whatever. The hog needs a medicine and the cheapest and most effective is Haas' Hog Remedy. Unequaled as a preventive of disease, conditioner and growth promoter and the biggest money maker for hog raisers known.

Prices: 25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid; pigs, \$2.50, 31.25 and 50 cents each. None genuine without my signature on package or can label.

### HOG BOOK FREE

"HOG LOGGY," my book about hogs, will be sent FREE to any one who mentions Southern Planter when asking for it. One hundred pages, fully illustrated, practical and complete. Invaluable to every swine raiser desiring the largest possible profits from hog raising.

JOS. HAAS, V. S. Indianapolis, Ind.



TRADE MARK.

smile, Emily reflected on the coincidence of this kind that had occurred since her mother's death, and wondered if it would be always so. If whenever anything that the world called advantageous presented itself, there would be some internal barrier that forbade her to avail herself of it. These barriers seemed unreal, shadowy and fanciful to most people, but to her they were so real and strong as to be simply insurmountable.

(To be Continued.)

#### GOOD HOUSEKEEPING.

##### TO PUT UP CORN IN THE SHUCK.

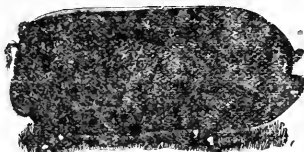
When there is danger of an early frost and you have a good supply of corn in the garden or field, a quick and easy way of preserving it for use is valuable. I have tried this one repeatedly, and with success always. Gather the ears before they are at all hard, and take off the shuck, leaving one layer to protect the grains. Pack these closely in a clean, water tight cask, until they are within a few inches of the top, then weight it all down with a piece of plank and a stone. Pour over this a brine that will float an egg, shut it up and use just as you do the new corn. If the brine weakens, you can add a little salt.

##### TO CAN CORN.

Cut the grains from the ears with a sharp knife, being careful to select only the soft tender ears. Weigh and put it into a kettle with enough water to cover it. Boil ten minutes and then mix into every ten pounds one ounce of tartaric acid, fill your glass jars very full and screw on the top while it is boiling hot. When you cook this take it out of the can at least two hours before you need it and cover it with fresh water, letting it soak that long; then pour off the water and use in any way that you use other kinds of canned corn. You will never lose a can if you use the acid, and it is perfectly harmless if the directions are followed.

##### APPLE FLOAT.

Select for this kind of float large, acid apples. Wash them and put them into a new pan with a small quantity of water, and let them bake thoroughly. Then scoop out the pulp, being careful



## BERKSHIRES.

Mr. H. F. Stratton of Erin, Houston Co., Tenn., writes me on Aug. 15th 1903:

"The little pig just received is a beauty, I am delighted with him—wouldn't take twice twenty dollars for him. He is thoroughly patrician. I expect great things from him at the head of my herd of Royal Berkshires."

So send to Thos. S. White for patrician pigs rather than buy plebeians for a little less, do not be "penny wise and pound foolish," and especially in thoroughbreds. I have had 13 sows to farrow in past few days with over 20 more nearly due, order promptly for shipments, I never have enough to go round.

**Short Horn** (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

Hill Top Stock Farm.

## BERKSHIRE HOGS and SOUTHDOWN SHEEP

—A Specialty.—

S. Brown Allen, who succeeds H. A. S. Hamilton & Co. in the ownership and management of this celebrated Stock Farm, with increased facilities, will make a specialty of breeding Berkshire Hogs and Southdown Sheep, without regard to cost, from the purest and most royal strains of imported blood.

## SOUTHDOWN BUCKS.

I have a few Southdown Bucks that cannot be excelled in this country, for sale. We have swept premiums on this stock for fifteen years over all competitors at Fairs in this and adjoining States

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)

We Are Still in the Business....

## "HILL TOP" Stock at Shadwell, Va.

Having changed our residence, we brought with us and have for sale a choice lot of HILL TOP stock.

**Jersey Cattle, Southdown and Shropshire Sheep, Berkshire Hogs and B. B. R. Game Chickens.**

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship after September. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

H. A. S. HAMILTON & SONS, Shadwell, Va.

not to carry any of the seed or core with it, and to a quart of this put one full cup of sugar, a little nutmeg and let it get very cold. Now beat very light the whites of four eggs, and have on the stove a large pan of boiling water. Slip the eggs on this and let them stay for five minutes. They will cook through without falling, and you can take them up with a skim, and beat them into the apples with no trouble, and you can make your float in the morning and it will be just as good as if made later and is far better than that made with stewed apples and raw eggs. I always serve float with cream seasoned with a teaspoon of vanilla and sweetened a very little bit

#### BAKED APPLE DUMPLING.

Peel the apples and cut them from the core, then put them into a tray and chop them fine with the meat chopper, sweeten and season with nutmeg or grated lemon peel. Make a dough of one quart of flour, two-thirds of a cup of lard, one teaspoon of baking powder, and enough milk to make a stiff dough. Roll this out and cut into pieces about the size of saucer. Put in a large spoon of the apples and gather the edges of the piece together, pinching to make them stay. Arrange the dumplings in a pan and fill it half full of water, springing sugar and nutmeg over them and boil them for about an hour. Serve hot with a hard sauce.

Sauce.—Cream one cup of butter until light, then stir in gradually three cups of white sugar, season highly with nutmeg and vanilla; beat it hard for a few minutes, and set it in the ice box.

#### CARAMEL PUDDING.

Two cups of damson preserves, one cup of sugar, half cup of butter. The yolks of three eggs, a little nutmeg, half cup of milk, and a teaspoon of corn starch. Beat the eggs very light and stir in the other ingredients. Bake this on a crust, and when done spread over it a meringue made with the three whites and six tablespoons of sugar, seasoned with vanilla.

#### GINGER CAKE.

Two and a half cups of sugar. Two and a half cups of syrup—molasses will do. Five eggs, beaten into the molasses. One and three-fourths cups of butter, or half butter and half lard. Five tablespoons of ginger, one of cinnamon. Two and a half cups of buttermilk, with two and a half teaspoons of soda stirred into it. Ten cups of flour. Bake in sheets, and it is well to set one pan into another to prevent burning, as everything with molasses in it burns easily. Eat hot with sauce, or let it get cold for tea.

#### GINGER SAUCE.

Three cups of sugar, three cups of water, boil hard for twenty minutes. One tablespoon of ginger and teaspoon of cinnamon and a half dozen cloves. Cream a large tablespoon of butter with a tablespoon of corn starch, and

## JERSEY CATTLE.

We have for sale, **Young Cows, Heifers and Young Bulls**, from cows testing **18 to 24 lbs. of butter in seven days**, and giving **40 to 60 lbs.** of milk per day. Also—

### LARGE YORKSHIRE PIGS,

The coming bacon breed. Our stock is from the most noted breeders in England and Canada.

Write for prices. Address—

## BOWMONT FARMS, SALEM, VIRGINIA.

## CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

G. S. LINDENKOHLE, Keswick, Albemarle Co., Va.

## SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

Baron Rosebo, 57666, by the great Gay Blackbird, dam by Eulalie Eric, 2d prize yearling at Columbian Exposition, 1893, heads the herd. Pedigree means only the tracing of good or bad qualities through several generations. The animals comprising this herd are direct descendants of the greatest prize-winners of the breed for the past twenty-five years. Does this mean anything to you, who see one of an animal of this the GREAT-EST BEEF BREED? If so, come and see the best lot of calves we ever bred, or write.

A. L. FRENCH, Proprietor, R. F. D. 2, Byrdville, Va.

(Note change of P. O. address),

Depot and shipping point, Fitzgerald, N. C., on D. & W. R'y, 24 miles southwest of Danville, Va.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



## THE OAKS

Has for sale, the grand Shorthorn bull, "ROCK HILL ABBOTTSBURN" 155113, a grandson of Mary Abbottsburn 7th; also a nice lot of CALVES, BULLS and HEIFERS; 2 Reg. MORGAN COLTS at a bargain.

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When corresponding with our advertisers always mention the  
*Southern Planter.*

stir it into the sauce just before you take it off. This is one of the best cold day desserts I know of.

CARAVEN.

**DOMESTIC RECIPES.**

Mrs. N. K. Guthrie.  
PICKLES—HYDEN SALAD.

One gallon chopped cabbage, half gallon of green tomatoes, one quart of onions, chopped, four tablespoons of ground mustard, two of salt, two of cinnamon, two of celery seed, and one of black pepper, and one of cloves. Add half gallon good cider vinegar and two pounds sugar, and boil for half an hour.

**TO CAN GREEN CORN.**

Gather corn as for present use. Cut from cob, and to every thirteen measures of corn add same measure of salt (one cup of salt to 13 cups of corn). Cover with water and boil thirty minutes and can as any other vegetable or fruit. When you wish to use the corn, pour off salt water that may be in can and soak corn one-half an hour in hot water, and then serve as you would in summer, for puddings, soup, stews, etc. This recipe for canning corn is the only one that I have found satisfactory, and I have tried many in the past thirty years.


**PICKLED PEPPERS.**

Take green peppers and cut a slit the length of one side and remove all the seeds. Soak in salt water for a week, remove and wash in fresh water and fill with a mixtures of chopped stuff, as follows: Cabbage, green tomatoes, string beans, young cucumbers, and season the stuffing with cloves, cinnamon and celery seed, and sew up the slit. Cover with good vinegar and cook for twenty-five or thirty minutes.

**PICKLED MANGOES.**

Take young canteloupes (just before frost) about the size of a pint bowl, cut out a lobe and remove all seeds and soak in salt water for six weeks. Then freshen for one night in water and fill with the following mixture: One race of ginger mashed, white mustard seed, celery seed, small quantity of black pepper, one nutmeg grated, onions and cabbage chopped fine. Stuff each melon, put the lobes in place, and tie with a string. Place in a jar and fill with vinegar, then pour off vinegar and add to vinegar cracked allspice, cloves and ginger, and one cup of grated horse radish and one ounce turmeric and two pounds sugar. Bring to a boil and pour over mangoes. For one gallon jar. The catalogue pickle will keep for years, and grows better with age. I make beautiful and delightful wine from garden and wild grapes, but recipes may not be in season. One I add for apple wine that is fine. To one gallon of sweet cider add three pounds of sugar. Put in open vessel and allow to ferment, then strain and put in a corked vessel (jugs or bottles, and in three months you have a splendid drink.

This cut is not the machine but simply shows the manner of fastening the steel rope to the stump. We cannot tell you all about it here. Our catalogue shows Full Line of Stump Pullers testimonials, prices, etc. It will surprise and interest you.



# PULLS

## Yellow Pine Stumps or Trees.

Our new 2-Horse **Hawkeye** is built for that purpose and does it rapidly and cheaply. A machine that will pull yellow pine stumps will pull almost anything else. It is being used by many planters and most of the leading R. R. and levee contractors. It has 3 times the power of our machines for ordinary work and pulls 8 acres at a setting.

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Write for our free 76 page illustrated catalogue.

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## BERKSHIRE PIGS

of choice breeding, and to make them more desirable, they are fine individuals, properly fed; therefore they develop well. Write

**Forest Home Farm,**  
Purcellville, - - - Virginia.

**NOW IS THE TIME TO buy HOLSTEINS from the Ury Farm Herd.**

Ury Alwina Count Paul De Kol; De Kol 2nd Butter Boy 3rd No. 2, and Lord Harford De Kol head of our herd. You know their official backing. There is nothing better. 15 bull calves at bargain prices. Their dams are of the De Kol, Aaggie, Netherland, Pieterje and Clothide strains and are of the producing kind. The best bulls are sold young; also a few cows and heifers. Choice ENGLISH BERKSHIRE pigs of the best strains. Before buying, correspond with or visit

**THOS. FASSITT & SONS, Sylmar, Md.**

Prof. JOHN SPENCER, Veterinarian, Virginia Agricultural Experiment Station, says:

## Chloro-Naphtholeum Dip

"Insures the Destructions of Mites. Outbreaks which have come under our notice have been thoroughly stamped out by dipping in a 2 percent solution of Chloro Naphtholeum Dip."  
If you've tried it you know how good it is. If you haven't, try it now. One Gallon sent prepaid upon receipt of \$1.50 money order or check. Booklet free. It can make money for you. F. V. GUNN & CO., Richmond, Va., Agts. Va. & N. C. • The WEST DISINFECTING CO., Inc., Mrs.

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For uniform drilling of grains, any kind and any amount per acre for grass seed sowing and even distribution of lumpy, damp or dry fertilizers, nothing equals the


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Positive force feed for fertilizer, grain and grass seed. Drills any depth, perfect regulation, low steel or wood frame, high wheels with broad tires. Easy to fill and operate. Light draft. Investigate before buying. Write for free catalogue.

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STANDARD EVERYWHERE. FULLY WARRANTED.



## THE "WE" THAT WINS.

A young man employed in a responsible position by a great corporation was recently discharged to make room for another. Surprised and mortified, he sought an explanation from the manager of his department. "Will you kindly tell me why you do not want me any longer?" he asked.

"Certainly," was the reply; "it is because you always said 'you' instead of 'we.'"

"What do you mean?"

"I mean just that! You never said, 'We' should do so and so; or 'WE' ought to follow out such-and-such a policy. It was always 'YOU' in referring to this company, of which you were a part. In speaking to a fellow-employee about our business, you would say 'THEY' (meaning this company), instead of 'WE.' This lack of a live personal interest in the success of the concern was expressed in your actions, no less than by your words. I should advise you to seek employment with some company to which you can refer as 'WE.'"

A common criticism of an ambitious young man is: "He acts as if he owned the concern, and he's only a clerk." It is the young man who works as if he did own the concern who often becomes the owner in time.

"We're going to pay a dividend of ten million dollars next month," proudly remarked an office boy to a waiting visitor in the reception room of a railway president. That boy's salary is five dollars a week. He is on the right track.

But it is necessary to think WE and act WE every hour of every day, as well as to say WE. WE means US, union, solidity, co-operative enthusiasm. YOU means the other fellows. It's the WE that wins!

## HIS EDUCATION WASN'T COMPLETE.

No more courteous judge ever presided at a trial than the venerable Chief Justice of the New York Court of Common Pleas, Charles P. Daly. The story is still told among our New York lawyers how, on one occasion, a young attorney, while trying a case, indulged in considerable vituperation of his opponent's witnesses, finally going so far as to answer the court very sharply when requested to modify his language.

Knowing that Judge Daly was somewhat of a stickler for the dignity of the judiciary, lawyers and court attendants gazed at the offending attorney in amazement.

There was a long interval of silence. Finally the judge leaned over the bench and said, with an ironical smile:

"My young friend, before you are as old as I am you will have learned that it is about as well to read Chesterfield as Blackstone."—Success.

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To get a buggy at a bargain of us, we are in a position NOW to sell you a **SPLIT HICKORY SPECIAL at \$47.50** a regular \$35 Job. The season's rush is past. Want to keep our experts working. You get the benefit. 30 Days' Free Trial. Write for catalogue and descriptions. OHIO CARRIAGE MFG. CO., Station 41, Cincinnati, Ohio.



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Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address, CHAS. N. FRIEND, General Agent,

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ROCKPORT, KANSAS, Nov. 21, 1902.

International Stock Food Co., Minneapolis, Minn.

DEAR SIRS:—Your "International Stock Food" is all you claim for it. We have the nicest pigs and hogs that we ever had. Tested it on one old sow that was very poor from suckling pigs. She could hardly make a shadow. We took the pigs away and fed her "International Stock Food" in her feed and I do really believe that she put on 5 pounds of flesh per day.

Yours truly, M. C. JERBY.

—We Have Thousands of Similar Testimonials and Will Pay You \$1000 Cash to Prove That They Are Not Untrue and Unfalsified.

We own "International Stock Food Farm," which is located 12 miles from Minneapolis and contains 650 acres. We feed "International Stock Food" every day to all of our World Champion Stallions, Day Fat Pig 1:50 3/4 and Duroc 2:04 1/2, to our York Stallions, Boars, Mares, Cows, Wagon Horses, Cattle and Hogs. "INTERNATIONAL STOCK FOOD" FEEDS ON ONE PLENTY and is Prepared from Roots, Herbs, Seeds, and Barley and Won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in growing or fattening stock because it increases the appetite and aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fattening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Cods, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Human System. You fasten entire medicinal ingredients with your own food at every meal. Salt is a stomach tonic and worm medicine, Pepper is a powerful stimulating tonic. It is a remedy for dyspepsia, indigestion, flatulency, and other ailments. You eat these medicinal ingredients almost with every mouthful of your food, and it is proved that these medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary as any medicinal tonic. It is a remedy for dyspepsia, indigestion, flatulency, and other ailments. You eat these medicinal ingredients almost with every mouthful of your food, and it is proved that these medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary as any medicinal tonic. It is a remedy for dyspepsia, indigestion, flatulency, and other ailments. You eat these medicinal ingredients almost with every mouthful of your food, and it is proved that these medicines promote health and strength for people and improve their digestion.

## WHAT PEOPLE SAY ABOUT THIS BOOK.

INTERNATIONAL STOCK FOOD CO.,

EAD CLAIRE, WIS.

Dear Sirs:—I received your "International Stock Book" and was more than pleased with it. It is worth more than \$1000 to me. Very truly yours,

RICHARD J. MORRISSEY.

INTERNATIONAL STOCK FOOD CO.,

ODessa, Mo.

Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish. Respectfully,

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# A \$3000.00 STOCK BOOK FREE

## IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, GATTLE, SHEEP, POULTRY, ETC.

The Cover of this Book is a Beautiful Live Stock Picture Printed in Six Brilliant Colors. Size of the book is 8 1/2 by 9 1/2 inches. It cost as \$3000 to have our Artists and Engravers make these Engravings. It describes common Diseases and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Cods, Hogs and Poultry. It contains Live Engravings of many very noted Animals, and also testimonials. The Editor of This Paper Will Tell You That You Ought to Have This Stock Book In Your Library For Reference. It Contains a Finely Illustrated Veterinary Department That Will Save You Hundreds of Dollars.

WE WILL MAIL IT TO YOU ABSOLUTELY FREE, Postage Prepaid.

We Emphasize You \$10.00 Cash if book is not as described. Write us at once, letter or postal card, and ANSWER THESE 3 QUESTIONS:

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Capital Paid in, \$1,000,000.  
600,000 Feet of Space in Our New Factory.

### THE REAL THING.

Virginia Rosamond Josephine, our pretty colored maid from the South, is the proud possessor of a rhinestone belt buckle which her mistress brought her home from Paris not long since. Teddy asked her the other day, "Are they real diamonds, 'Ginny'?" "No, indeed," she replied, with a toss of her woolly pompadour. "Dey's real grindstones. Missy fetched 'em to me from Paradise!"—October Lippincott's.

### SOME PROVERBS.

Without sterling honesty of purpose, life is a sham.  
When thinking of your future never use "if," use "when."  
Fortune favors the brave.  
Tact and diplomacy are the oil of civilization.  
Early to bed, early to rise, makes a man healthy, wealthy and wise.  
Solitude is the nurse of wisdom.  
He that will thrive must rise at five, he that hath thriven may lie till seven.

# The Chesapeake & Ohio Railway

Extending from Cincinnati and Louisville, and

## THROUGH ITS CONNECTIONS....

- THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;
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## FORMS THE MOST DIRECT AND FIVE TO TWELVE HOURS THE QUICKEST ROUTE.

To STAUNTON, HINCHBURG, CHARLOTTESVILLE, RICHMOND, PETERSBURG, NORFOLK, And Principal Virginia Points.

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## THE GREATEST OF THEIR KIND IN THE WORLD.

The largest city in the world is London, lying in four counties, and having a population of 5,250,000, equaling the combined populations of Paris, Berlin, Saint Petersburg and Rome. To walk through all the streets, avenues, lanes and alleys of the city, never traversing the same one twice, would require a ten-mile walk every day for nine years. The streets, placed in a row, would reach round the world, and leave a remnant that would stretch from London to San Francisco.

The largest geyser in the world is the Excelsior Geyser, in Yellowstone Park. Its basin is full of boiling water, from which clouds of steam are constantly ascending. At long intervals water is spouted into the air to a height of from 50 to 300 feet.

The largest crater in the world is that of Haleakala, in the Sandwich Islands. The circumference of the crater is about 20 miles; its depth, in places, being 2,000 feet. If the interior were cleared of its debris, New York city could be placed on the black lava floor, and from three to five other big cities put over it before their spires would protrude at the top.

The most magnificent work of architecture is deemed to be the palace Temple of Karnak, occupying an area of nine acres, or twice that of St. Peter's at Rome. The temple space is a poet's dream of gigantic columns, beautiful courts and wondrous avenues of sphinxes.

The largest library in the world is the National Library of Paris, which contains 40 miles of shelves, holding 1,400,000 books. There are also 175,000 manuscripts, 300,000 maps and charts, and 150,000 coins and medals.

The finest gardens in the world are the Royal Gardens at Kew, England. They cover an area of about 270 acres, and are visited by about 1,500,000 persons a year. The gardens contain the finest collection of exotic plants in the world, a palm house, a winter garden, a museum, an observatory, and a school for gardeners.

The largest cask in the world is the Blatner Cask of Nuremberg. It is 105 feet in diameter and 51 feet deep, and its completion a few years ago was celebrated by a ball, at which over 500 persons were on the floor of the cask, excluding musicians, waiters and assistants.

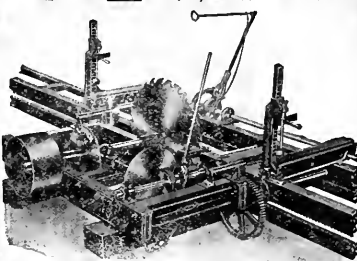
The reporter was interviewing the Western millionaire. "Is it true that you are going to endow a chair in that university?" "Endow a chair?" he thundered: "why, b'gosh, I can give a whole set of furniture, an' I'll do it, too. Say that in your paper! There ain't nothing cheap about me."

"Jenkins is an artist in his line." "So?" "Yes; he drew a glass of beer so natural that a patron came in and drank it." "Well, who is Jenkins, anyway?" "Well, he's a bartender, of course."

# Saw Mills

## For The Whole World! Big Ones and Little Ones!

All sizes from 4 H. P. Farmers' Mill that cuts 3,000 feet a day, up to the biggest that's made.  
OVER 10,000 DELOACH PATENT SAW MILLS IN USE.



## Our Large Catalog No. 66

will interest you. It illustrates and tells all about the famous DeLoach Patent Variable Friction Feed Saw Mills, Shingle Mills, Planers, Edgers, Trimmers, Stave and Lath Mills, Bolters, Cord Wood and Drag Saws, Corn and Buhr Mills, WaterWheels, Mill Gearing, Pulleys, Shafting, Etc.

Please mention the SOUTHERN PLANTER when writing us. We will appreciate it.

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The Largest Saw Mill Manufacturing Plant in the World.

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No Flip-Flap Contrivances.

You can scrape the mail out with your mittens on.

PRICE

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Our box is the best and cheapest, fully up to the government's requirements.

DISCOUNT IN DOZEN LOTS.

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POLAND-CHINA and TAMWORTH

PIGS, entitled to registration. Some ready for service. Also grade Herefords, both sexes, for sale at farmer's prices, by

J. C. GRAVES,

Barboursville, Va.

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### Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❁ ❁ ❁

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



### BILTMORE POULTRY YARDS.



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Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

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**Silver=Laced and White Wyandottes,**

**S. C. B. Leghorns and Mammoth Pekin Ducks,**

**AT \$1.00 PER SITTING.**

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Never known to run. The grittiest of all games. **\$2.00 PER SITTING.**

We give 15 Chicken and 13 Duck Eggs for sitting. **Order at once.**

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

**P. H. HEYDENREICH, - Staunton, Va.**

## DOMESTIC ECONOMY.

To remove blood stains, use clear, cold water at first, then soap and water.

It is just the right thing to have an embroidered bag to put one's night dress in.

Use a pancake lifter to place cookies on the tin, and to remove them when they are baked.

Cold boiled potatoes are more appetizing if a little flour is sprinkled over them while frying.

If your washtub leaks, turn the bottom side up and fill the leaky place with good hard soap.

When making soups or broths, put the meat or bones into cold water to draw out the juices.

Leather goods can be freshened up by rubbing them well with a piece of cloth dipped in the white of an egg.

To keep irons from sticking to starched pieces, lay a little fine salt on a flat surface and rub them well over it.

When acid of any kind gets on clothing, spirits of ammonia will kill it. Chloroform applied will restore the color.

To remove grass stains, allow the spots to remain saturated with alcohol for a little time, then wash in clear water.

When darning woolen hose, make the threads one way of stout thread, with the cross threads of woollen yarn. The result is a firm, smooth darn, which looks and wears well.

To remove fresh tea and coffee stains place the stained linen over a large bowl and pour through it boiling water from the tea kettle, held at a height to ensure force.

Paint spots on glass can be removed by moistening with a strong solution of soda—the common kitchen variety. This will soften them, when they can be rubbed off, and the glass should then be rubbed with alcohol.

To prevent wooden bowls from cracking, immerse them in cold water, then set over the fire, bring to the boiling point, and let boil for an hour, and don't take them out until the water has gradually cooled.

A soothing drink for a sore throat that is recommended, is made of a pint of barley water brought to a boil over a hot fire, to which is added, while stirring until dissolved, one ounce of the best gum arabic. Sweeten to taste.

To clean the ivory handles of knives, mix ammonia and olive oil in equal parts, and add enough prepared chalk to make a paste. Rub the ivory with this, and let it dry before brushing off. Several applications may be necessary.

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if you are not satisfied

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DO YOU SUPPOSE we would jeopardize our standing with the public and our chances of still greater success by failing to fulfill any promise we make?

DO YOU SUPPOSE we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods?

WE KNOW we can please you and save you money for HAYNER WHISKEY goes direct from our distillery to you, with all its original richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE and saving you the big profits of the dealers. That's why it's best for medicinal purposes. That's why it's preferred for other uses. That's why we are regularly supplying over a quarter of a million satisfied customers. That's why YOU should try it.

**Direct from our distillery to YOU**  
Saves Dealers' Profits! Prevents Adulteration!

# HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

**4 QUARTS \$3.20 EXPRESS PREPAID**

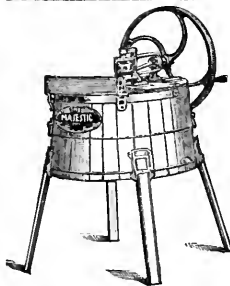
We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? We ship in a plain sealed case; no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo., must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

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ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.  
156 DISTILLERY, TROY, O. ESTABLISHED 1866.



A WASHING MACHINE is as great a necessity in the house as a wringer

## THE MAJESTIC ROTARY WASHER

has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of wood-enware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

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## ... Grocers, Feed and Liquor Dealers ...

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Read carefully below our low prices on best Groceries, Feed and Liquors.

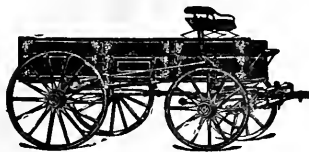
### SPECIAL ATTENTION GIVEN TO OUT OF TOWN ORDERS.

Levering Coffee, per lb.....	9½	Fresh Mixed Cakes, per lb.....	8	CHOICE WINES AND LIQUORS.	
Granulated Sugar, per lb.....	5	6 bars Colgate's Octagon Soap....	25	Moore's Crown, fine, per gal.....	\$3.00
Light Brown Sugar, per lb.....	4½	7 bars Octagon Shape Soap, 10-oz.		Moore's Excelsior, fine, per gal....	2.00
Lion Coffee, per lb., Daisy.....	10	cakes for.....	25	Moore's Keystone, 3 years old, per	gal.....
Arbuckle's Coffee, per lb.....	9½	10 bars Moon Soap, 8-ounce cakes.	25	Moore's Old Capital, 2 years old,	per gal.....
Best Green Tea, per lb.....	75	12 bars Hustler Soap, 8-oz cakes..	25	Pure Va. Apple Brandy, gallon...	3.00
Choice Green Tea, per lb.....	60	Small California Hams, per lb....	9	Maryland Apple Brandy, gallon..	2.25
Good Green Tea, per lb.....	40 & 50	Good Salmon, can, 9c.; 3 cans....	25	Imported Sherry Wine, gallon ..	3.00
Black Tea, Best, per lb.....	50	Large Mackerel, each.....	10	Good Gin, per gallon.....	2.00
Good Black Tea, per lb.....	40	Large cans Good Tomatoes, can..	8	Best Gin, gallon.....	2.50
Mixed Tea, per lb.....	30, 40 & 50	Large cans Best Tomatoes, can...	9	Best N. C. Corn Whiskey, per gal..	2.00
Fair Black Tea, per lb.....	25	2 lb. cans Best Tomatoes, can....	6	Best Catawba, per gallon.....	45
Best Rice, per lb.....	8	Large Juicy Lemons, dozen.....	15	Blackberry Wine, per gallon.....	45
Good Rice, per lb.....	5	Green Coffee, per lb., 9c.; 3 lbs....	25	Good Port or Sherry Wine, gallon..	1.00
Pure Leaf Lard, per lb.....	11	Quart Mason Jars of Light Syrup.	10	New England Rum, per gallon.....	2.00
Good Lard, 9c., or 3 lbs.....	25	½ gallon Can Light Syrup.....	20	7 year old Pure Rye, 1896, Good	
Cooked Sliced Ham, per lb.....	12½	1 gallon can Light Syrup.....	40	Hyshire Brand, per gallon.....	3.50
Good Salt Pork, per lb.....	8	½ bbl. Clipped Herrings.....	2.75	Duffy's Malt Whiskey, per bottle,	80c.; per dozen .....
Choice Salt Pork, per lb.....	10	200 pound sack salt, per sack....	85	O'Grady's Malt Whiskey, per bottle,	80c.; per dozen.....
Best Salt Pork, per lb.....	12	100 pound sack salt, per sack....	45	McDermott's Malt Whiskey, per	bottle, 80c.; per dozen.....
Best Potted Ham and Tongue, can.	4	Best Full Cream Cheese, per lb..	15	Pure Scotch Whiskey, User Brand,	per quart .....
½ lb. can Chipped Beef.....	10	Lump Starch, per lb.....	4	Pure Fulcher Mountain Whiskey,	per quart .....
New N. C. Cut Herrings, dozen,		Best Water Ground Meal, per peck,		Pure Savage Mountain Whiskey,	4 years old, very fine, gallon...
10c., or, per bbl.....	4.25	20c.; per bushel.....	70	Wilson Whiskey, \$1 bottle; per	dozen.....
New N. C. Roe Herrings, dozen,		Best Ship Stuff, per 100, \$1.20; ton.	23.00	With 1 dozen one-half pints free in	case.
18c., or, per bbl., \$5; or ½ bbl....	2.75	Best Bran or Brown Stuff, per 100.	1.10	3 year old pure Blackberry Wine,	per gallon.....
Our Pride of Richmond Flour, best		Best Mixed Oats, per bushel....	48	Jas. E. Pepper Whiskey, bottle...	1.00
patent, per bbl.....	4.75	Cotton Seed Hulls.....	9.50		
Our Daisy Flour, good patent, per		Best No. 1 Timothy Hay, per ton..	17.00		
bbl.....	4.25	Porto Rico Molasses, per gallon..	35		
Our Excelsior Flour, good family,		New Orleans Molasses, per gallon.	50		
per bbl.....	3.75	Good Dark Molasses, per gallon..	20		
Fresh Soda Crackers, per lb.....	5	Maple Syrup, ½ pint.....	10		
Ginger Snaps, per lb.....	5	3 plugs of any 10c. Tobacco for	25c.,		
New Mixed Nuts, per lb.....	12½	such as Peach, Plum, Grape, Reynold's			
Cocoanuts, 5c.; or, per 100.....	3.50	Sun Cured and other brands.			

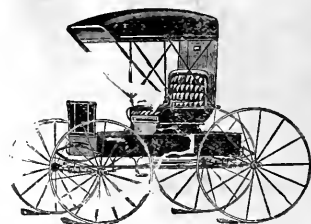
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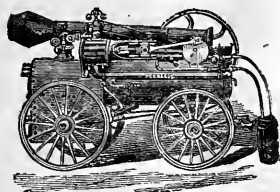
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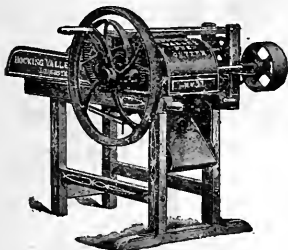
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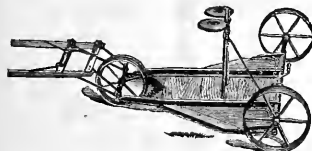
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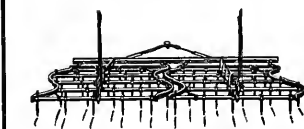
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SECTIONS OF WIRE FENCE.



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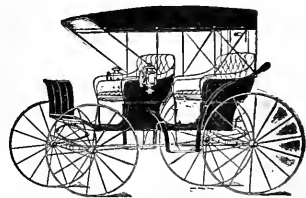
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The Sun, Baltimore, Md.....	3 00 3 40
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TRI-WEEKLY.	
The World (thrice-a-week), N. Y.....	1 00 1 25
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Harper's Weekly .....	4 00 4 00
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Montgomery Advertiser .....	1 00 1 00
Nashville American .....	50 75
The Baltimore Sun .....	1 00 1 35
Breeder's Gazette .....	2 00 1 75
Hoard's Dairyman .....	1 00 1 35
Country Gentleman .....	1 50 1 75
Religious Herald, Richmond, Va.....	2 00 2 25
Times-Dispatch, Richmond, Va.....	1 00 1 25
Christian Advocate, " " .....	1 50 1 75
Central Presbyterian, " " .....	2 00 2 25
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- CRITSON CLOVER,
- WHITE CLOVER,
- LUCERNE CLOVER,
- ALSYKE CLOVER,
- BOKHARA CLOVER,
- JAPAN CLOVER,
- BUR CLOVER,



- TIMOTHY,
- ORCHARD GRASS,
- RED TOP or HERDS GRASS,
- KENTUCKY BLUE GRASS,
- RANDALL GRASS,
- TALL MEADOW OAT GRASS,
- JOHNSON GRASS,
- GERMAN MILLET,
- BUCKWHEAT,
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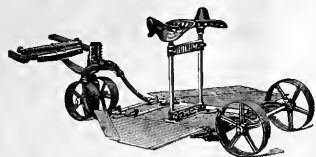
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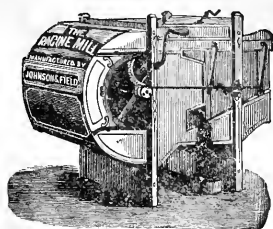
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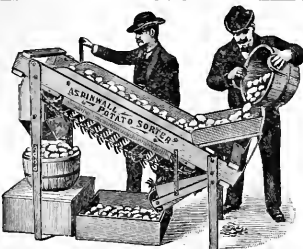


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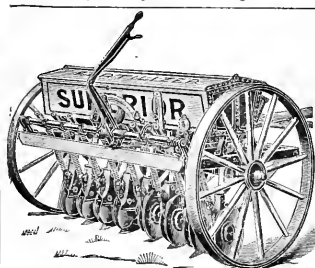


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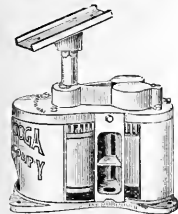
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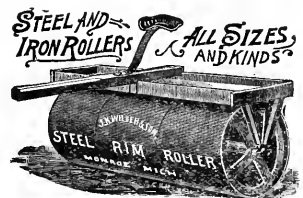
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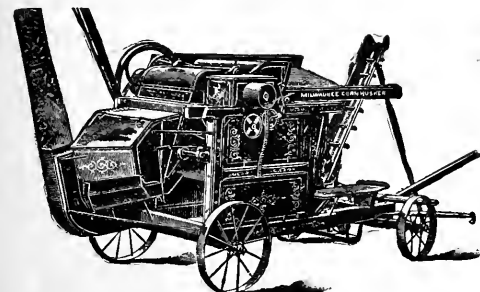
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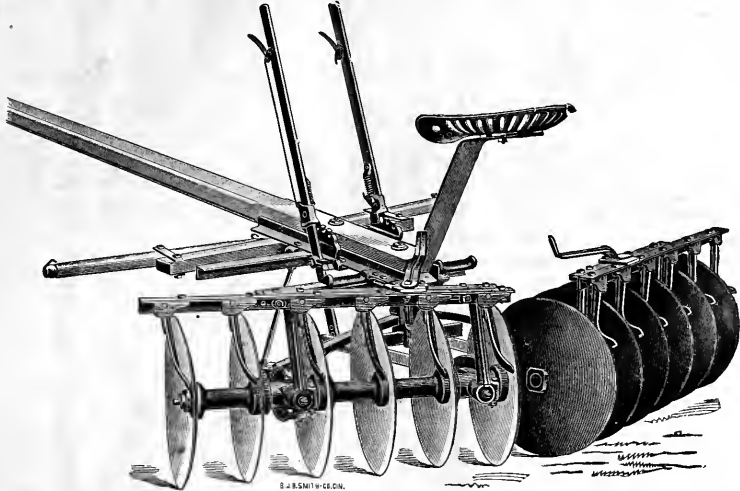
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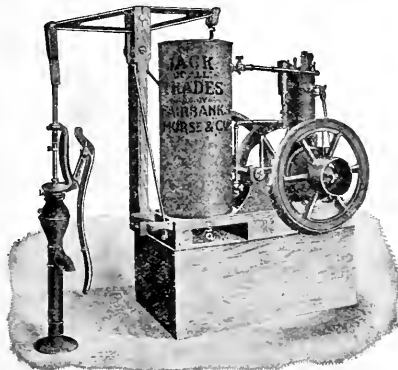
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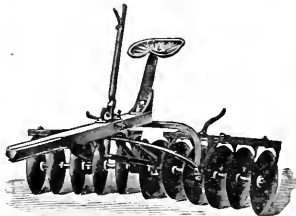
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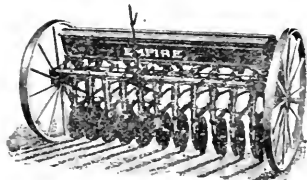
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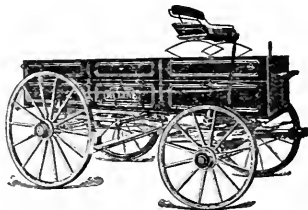
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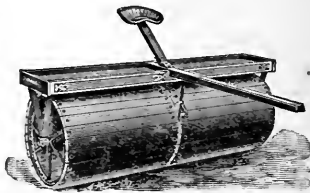
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Tillage and pasturage are the two breasts of the State.--SULLY.

---

64th Year.

Richmond, November, 1903.

No. 11.

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## Farm Management.

### WORK FOR THE MONTH.

The month of October has been up to this writing (20th) an ideal fall month and has done much to repair the effects of the abnormal season through which we have passed. Thousands probably millions of bushels of corn have been added to the crops of the year by the weather of October and whilst much of this will be defective from being either only partially matured, or from the effects of frost, yet it will make a very sensible addition to the feed bins of the country. Much spring wheat, too, has been saved in far better condition than appeared at one time to be possible. Cotton has been enabled to make a decided improvement in condition, yield and quality, and the crop which at one time looked like being an abnormally small one for the acreage will probably be equal in quantity to that of last year. Late tobacco has ripened up nicely and is curing well. Second and even third crops of hay and forage crops of various kinds have matured and been saved in fine condition and pastures have kept full of good eating and stock will go into winter quarters in fine condition and with the assurance of plenty of feed for the winter months. For these and many other benefits conferred by the glorious month, we have had to close the crop season, farmers and all the people should on Thanksgiving Day not fail to give thanks to the "Giver of all things."

weather has been such as to allow of the very best progress being made. Whilst it has been too warm to sow wheat without fear of injury from fly, yet the fine preparation of the land which has been possible will ensure such quick germination of the seed when sown as to make possible an ample growth before the cold becomes severe enough to check it. We would urge again the importance of perfect preparation of the seed bed before sowing. Better be a week later in sowing even at this time of the year than sow on badly prepared land. The late Sir J. B. Lawes in his more than 50 years experiments in wheat growing demonstrated how capable is the wheat plant of seeking and finding food sufficient for its growth even in land which presumably is lacking in fertility. He grew wheat on one piece of land every year continuously for over 50 years without the application of any manure or fertilizer for the whole time, and yet succeeded in getting each year a fair crop, 12 bushels to the acre, in the last year of the 50. He attributed his success entirely to the fact that each year he made a perfect preparation of the land before seeding, plowing deeply and working and reworking until the seed bed was deep, fine and properly consolidated below the top three inches. This point is also strongly brought out in the work done in carrying on the experiments in soil fertility by the Department of Agriculture discussed in the Bulletin from the Bureau of Soils upon which we comment in another article in this issue. The Cecil clay soils in Harford county, Md., under good cultivation and management give yields of 25 to 30 bushels of wheat to the acre, whilst the same Cecil clay soils in the

The work of preparing the land for the wheat crop could not have been carried on under better conditions than October has provided. The land has been in fine working order and the

Statesville area in North Carolina which have practically the same analytical content of plant food, only produce from 5 to 8 bushels to the acre under the ordinary system of management common in North Carolina, but with thorough cultivation and management bring yields almost equal to the same soils in Maryland. This is only one of many similar instances to be found in the Bulletin. The average wheat crop of the South this year, only some 8 bushels to the acre and over a series of years not exceeding the 12 bushels secured by Sir J. B. Laves after growing wheat 50 years without manure or fertilizer, is one of which the South has no cause to be proud. It could easily be doubled without the expenditure of a dollar an acre more for fertilizer by a proper system of rotation and perfect preparation of the soil before seeding. There is no profit in growing 12 bushels of wheat to the acre, but money can be made in raising 25. Let each one make an effort to reach this quantity by curtailing the area and making a perfect preparation of this smaller area. Harrow and roll, harrow and roll until there are no clods left but only a compact, fine sub-surface and a fine surface 3 inches. Sow only perfectly clean seed and let this be only the largest and plumpest wheat you can obtain. Blow out all small and shrivelled grains. Put in the seed to the depth of  $1\frac{1}{2}$  or 2 inches on heavy soil and rather deeper on light sandy soil. Sow from 1 to  $1\frac{1}{2}$  bushels to the acre according to the fertility of the land, the lighter seeding on the richer land. In selecting the variety to sow choose one of the early maturing ones, like Fultz or Fulcaster, in order as far as possible to avoid loss from damage by rust, which rarely attacks the crop until about the first or second week in June by which time the earlier varieties will have matured. We would like to see every farmer in the South make at least a small wheat crop. We ought at the worst to make our own bread at home and there is no reason why we should not do more than this. At present we do not feed ourselves. This year's crop is not going to be larger than will be required to meet our own and foreign demands and there need not therefore be any fear of a large surplus carried over for another year.

The saving and storing of the corn and forage crops should receive constant attention whenever the weather permits until all are safely stored in the barn or in stacks near the buildings. It is lamentable to see the carelessness which is common all over the South in this matter. Time, money and labor is expended in growing the crop and then too often a great part of it is lost by neglect in cutting, curing and

hauling it home. Especially is this the case with the corn crop. When once it is cut and set up in shocks all further thought of it seems to be abandoned until necessity calls for the produce and this is often not until winter has actually set in and then the hands will be seen pulling down the shocks and shaking the snow off them and carrying them in, one or two at a time, just as need calls for them. At that time much of the food value has been lost and much of it is absolutely wasted. There is no excuse for such an unbusinesslike way of handling the crop in the South. Our long, usually fine falls, give ample opportunity for the housing of the crop before winter sets in and this should be done as soon as ever the crop is ready for the house. The cutters, shredders and huskers make it possible to reduce the stalks into such a form that the fodder from a large area can be stored in small compass and when saved in this form it is practically as good as Timothy hay for feed. These machines are now being operated in many sections by the threshing machine men who travel from farm to farm and wherever a machine is not owned on the farm these should be secured to save the crop. Especially should their usefulness be appreciated at the present time when labor is scarce and dear. If no machine is to be had then at least carry the fodder home as the corn is slucked and either put it under cover if room can be found for it, or put up in stacks and cover with straw to protect it. It is too valuable to waste in the field. Not only is this wastefulness seen in regard to the corn crop but we often see clover and other forage crops left in the field in cocks for weeks after they are fully cured. In such cases a large portion of the crop is but of little value except for bedding. Such a practice is a strong reflection upon the business capacity of the farmer and causes unbounded astonishment to Northern and European farmers where every care is taken to save all that the labor of the season has produced. Farming will never pay conducted under such management. No business man in commercial life could succeed with such management. Very often the sole profit made in commercial undertakings is that made from the saving of the waste products of the principal business. It is said, and we believe with truth, that the great packing houses of the West could make no profit but for the careful utilization of the offal and waste of the cattle and hogs slaughtered.

All root crops should be dug or pulled during this month though ruta бага turnips need not and should not be pulled until the end of the month. A light

frost will not hurt them and they will gain more weight during this month than during any other like period of their growth. Beets and Mangold wurtzel beets should not be left to be frozen as they never keep well after frost has touched them. All root crops can be safely cared for during the winter, either in a dry cellar or shed, keeping them well covered with straw, or they may be put in heaps or kilns in the field on high dry ground where the water will drain from them. These heaps should be covered first with straw to the depth of 6 inches and then with soil which should be beaten solid to throw off the rain. See that the roots are dry and clean of soil when stored and that the leaves or tops are cut off cleanly but without cutting into the roots themselves. The leaves should be left on the ground to be turned under to add humus to the soil. Young cattle and sheep may be allowed to pick them over before turning under but milch cows should not be allowed to eat them as they are very apt to taint the milk and butter.

When all crops are safely housed keep the teams at work breaking the land intended to be cropped next year. Up to the end of this month land so broken may be and should be seeded in rye or rye and English vetch. This will make a cover crop to prevent leaching of the fertility out of the soil during the winter and spring and will make grazing and humus when plowed down, or an early forage crop. Do not hesitate, however, to plow all land intended to be cropped next year whether it can be seeded or not and plow it deeply thus enabling it to hold and store moisture for the needs of the coming crop and permit of the aeration of the soil and the reduction of inert plant food into an available condition. Recent investigation has shown that all soils contain nearly the same amount of the three principal elements of plant food dissolvable by water, and that one of the greatest factors in plant production is the reduction of the soil by plowing and cultivation into such a fine condition as will permit of the action of the water content of the soil upon each particle of the soil, so that this natural plant food can be put into solution ready for the needs of the crop which only feeds upon liquid food. The greater the amount of this plant food thus dissolved and held in solution the greater will be the yield of the crop. This dissolving of the natural plant food of the soil is a work requiring time and hence the importance of breaking the land in the fall and winter months. We are convinced from long practical experience and as the result of recent scientific investigation that the main

factors in successful crop production are not so much the application of fertilizers of any kind as the securing in the soil of a high moisture content and of soil microbic life. These microbes are silent workers in the interest of the farm and without their presence no high condition of fertility is possible. Everything possible should be done to encourage their presence and a finely broken condition of the soil is one of the first things required. This is the proper time to set about securing this finely broken condition before the soil has become unfit for plowing with the winter rains, and this breaking should be followed wherever possible by the addition of lime to the soil to correct any acidity and thus secure that alkaline condition of the soil which is necessary to the life of the microbes, and then, by the spreading of even a light covering of farm yard manure which is the principal medium through which the microbes are introduced into the soil. In a recent examination of the soil of a noted small farm in Pennsylvania where 20 cows are kept on 15 acres of land and where the manure from this stock is constantly applied to the land each foot of the soil was found to contain several million more of these microbes than the soil of an adjoining farm where little manure was applied and the soil was badly worked. The soil of the small farm was producing all the forage crops needed to feed this large herd of stock, making two and three crops per acre each year, whilst on the adjoining farm it was difficult to make even one paying crop per year. Another great advantage in fall and winter plowing is that it relieves the spring pressure of work and can be done with so much less injury to the team than in the spring. It also causes a quicker warming of the soil in spring and thus permits of earlier planting. Don't let the horses or mules stand in the stable in fine weather eating their heads off, but keep them at work in the fields. Even if land plowed now should require plowing again in the spring this will not hurt it but will only add to its productivity. *We in the South plow too many acres but never plow acres too frequently.* Plow and cultivate fewer acres but plow and cultivate them much more frequently, and thus make available the natural fertility in the soil and save money now spent in fertilizer which at best only give temporary fertility to the soil.

Have you seen to it that all your barns, stables, sheds and pens have been put into a good state of repair, roofs made water proof, windows reglazed, and walls cleaned and limewashed? If not no time should be lost in having this work done. Whilst

stock will do very well out in the pastures during the day for some time yet, the nights are getting too cold for them to be comfortable and if not comfortable they cannot make a profitable use of the feed they are eating. To bring them up and put them in stables through which the wind whistles and into which the rain leaks will not make them any more comfortable or profitable. If you have not already a good tight concrete floor in your stables and cowsheds have this remedied at once. You are losing money every day your cattle stand on a floor that does not prevent loss of the urine. A barrel of cement which will not cost over \$2 or \$2.50 will with some finely broken rock and sand, make a floor which will save this loss. You can do the work of mixing and laying yourself. The proportions should be 9 parts rock, 2 parts sand and 1 part cement for the body of the floor. Mix the sand and cement dry, then add to the rock and make into a mortar with sufficient water and lay it 4 inches thick and beat solid. After this is laid cover the surface half an inch thick with another layer made of two parts of clean sand and one part of cement mixed with water thin enough to spread evenly. Keep stock off the floor for a week or ten days when it will be firmly set. Use plenty of straw or other trash to absorb the urine held by this floor and you will have manure worth putting on your land. A good manure pit should also be made convenient to all the stables and barns so that when it is not fit to take out the manure directly from the stables to the land which is always the best and most economical way in which to handle manure, it may be stored without serious loss. This pit should have a good hard clay bottom and should slope from the sides towards the centre so that the liquid may not run away. If covered with a shed money will be saved by protecting the manure from the weather. Don't make the pit where the drainage from the roofs of the buildings will run into it. The rain which naturally falls on the manure will be all the water it needs. If the manure from the different kinds of stock be all mixed in this pit it will not overheat, but if the horse manure be put in one place alone it will do so and much of its value be lost.

See that the barn yard has a good fence around it so that when stock are turned out to drink or for exercise they may not be able to ramble all over the farm. Stock tramping on wet land do much injury to the crops. Have a gate or gates hung in the fence with proper means for fastening and make it a rule to keep them closed except when needed for passage. It is well to hang the gate so that it will close itself.

Have good dry pathways made from the house to the different buildings. These should be elevated above the general level of the land so that they will keep dry at all times. There are few farms where sufficient small rocks and gravel cannot be found to make these permanent improvements to the place and when once they have been made the comfort derived from them in being able to go about from building to building in wet weather without wading through mud and water will be so appreciated that they will never be dispensed with. Around the house and to the wood shed it will be well to make the walks of 3 inch slats nailed on two 2x4 inch bearers laid 2 feet 6 inches apart. This will ensure dry, clean walks at all times and prevent much dirt being carried into the house.

See that there is a good supply of dry seasoned wood in the wood house and at the wood pile. Do not subject the women of the house to the annoyance of having to cook meals and keep the house warm with wet green wood.

### PLANT FOOD AND CROP PRODUCTION.

For more years than we can recall agricultural writers, scientific authorities and practical farmers have been engaged in discussion of the problems affecting crop production and the discussion still proceeds even more vigorously than ever before. With the spread of scientific education and the realization that if farming is to be made profitable it must be conducted on scientific principles thousands who were formerly content to follow in the footsteps of their fathers find it absolutely necessary to give heed to the teachings of the expert scientists as to how and with what to feed their crops and fertilize their lands. The difficulty they experience in doing this is to know what teaching to follow. In the early days when farmers first began to realize that their lands in the old country needed help they were advised by Jethro Tull that "cultivation was the fertilizer they needed." Many accepted the advice and profited by it. Then investigation by scientific chemists having demonstrated that the food plants needed was nitrogen, phosphoric acid and potash in an available form Peruvian Guano to supply the nitrogen the German potash salts to supply the potash and super phosphate to supply the phosphoric acid were put within the reach of farmers and were found to give good results. Experience in the use of these fertilizers has, however, demonstrated the truth that to secure continued good results their use must when

once applied be continued and even then their action is very uncertain. One year they give excellent returns, whilst in another year and on the same crop no results can be seen. On one piece of land they will tell immediately whilst upon another their action will be inappreciable. These results led to the conclusion that what was needed was a chemical analysis of the soil in order to determine what were the plant food constituents lacking therein in order that these might be supplied. Experience, however, with this laboratory analysis of soils has not given such results as to warrant confidence in its use. Too often the chemist by means of his powerful acid solvents has found the soil to be well supplied with all the plant food needed, but the crop failed to make these available when only the natural solvents of the atmosphere were available. A careful consideration of all the work done in the past in advising and aiding farmers in the work of crop production and the practical application of these has led to the conclusion that other factors were at work determining the crop productive capacity of land than those hitherto deemed conclusive and with a view to endeavour to find out what these were a great series of experiments has been conducted by the Bureau of Soils of the Department of Agriculture under the direction of Profs. Whitney and Cameron. The result of these so far as they have proceeded has been given to the world in a Bulletin just issued by the Department of Agriculture. This Bulletin we regard as one of the most valuable ever published. After giving the results of the chemical examination of the natural moisture content, the true plant feeding constituent of all crops, of hundreds of samples of soil taken from typical soils in various parts of this country and abroad, the authors of the Bulletin say that the analyses show "that there are no wide variations in the amounts of plant food material going into solution where these various soils, so different in their other characteristics, are acted on by a definite proportion of water for a short but definite length of time, in other words all types of soils furnish about the same amount of plant food when treated with the same proportion of water other conditions as time, temperature, &c., being also the same. *The conclusion seems inevitable that all our principal soil types in fact all cultivable soils contain naturally a nutrient solution which varies within comparatively narrow limits with regard either to composition or concentration and which is usually sufficient for plant growth. Apparently, therefore, all these soils are amply supplied with the necessary*

*mineral plant foods and these plant foods are not in themselves a matter of such paramount importance to the agriculturist, for their supply as regards the plant is determined by the supply of soil moisture which the crop can obtain from the soil.* The chemical analysis of a soil can not in itself, therefore, throw much light upon the problem of fertility but when attempting to control the factors governing crop yield attention must be directed to the *mechanical condition* of the soil as affecting the supply of soil moisture with its dissolved mineral nutrients, to the effects of climate, to rotation, &c." In discussing the effect of climate on the yield of the crop—climate in this connection being understood as to its effect on the soil and temperature—the authors of the Bulletin say that "the effect of climate is very marked, that cultivation changes the climatic conditions of the soil, that is it changes the relation of the soil to moisture and probably also to temperature. It also changes the character of the atmosphere coming in contact with the root system. We know that stable manure and lime for example have a marked influence upon the texture of the soil and therefore indirectly upon the climatic conditions. It seems possible that other fertilizer materials may produce effects of a similar character. If fertilizers have any influence upon the texture of the soil or upon the movement of soil moisture they will not only influence the supply of water which will be delivered to the plant but also the supply of nutrient materials normally contained in this water. The important practical inference, if this is so, is that fertilizers have to a certain extent the same effect as cultivation and cropping, *but it is undoubtedly better to depend upon efficient methods of cultivation and cropping than to rely upon fertilizers while at the same time neglecting to give proper attention to the physical condition of the soil.* The effect due to cultivation is also more permanent than the effect due to fertilizers. Furthermore the influence of fertilizers on the yield of crops is not proportional to the amount of fertilizer added as it frequently happens that a small application is quite as efficient as a larger application. Discussing the effects of commercial fertilizers on the yield of crops the authors remark that where the annual application of the fertilizer has been discontinued the effect is at once apparent in the smaller yield of crops. In other words on a soil which has a natural capacity for 13 or 15 bushels of wheat as the Rothampstead soils in England seem to have where wheat is grown continuously and fertilizers have not been used for 50 years, the application

of certain fertilizers has increased the yield to 30 bushels to the acre, but to maintain that yield a constant annual application of fertilizer has to be given and subsequent applications merely maintain but do not increase the yield. It is recognized that in our own soils when under intensive cultivation as in the truck and tobacco areas large applications of manure and fertilizers are often used amounting to from 2 to 5 carloads of manure and 2,000 or 3,000 pounds per acre of the fertilizers the maximum effect of these is quickly obtained and these yields can only be maintained by continued large applications. The results obtained in the experiment by the Bureau of Soils go to show that these large annual applications of stable manure or of high grade fertilizers do not apparently change permanently the chemical composition of the soil as determined by chemical analysis of the water extracts, that is to say, immediately after the application the influence of the fertilizer can be seen in the soluble salt content of the soil but not only is this comparatively slight, but fields that have been annually treated in this way for a number of years do not show on the average appreciably more water soluble plant food than adjoining soils upon which no such applications have ever been made." The Bulletin discusses the influence of the texture of the soil of rotation, and variety of the plant, on the yield of crops and also the action and use of commercial fertilizers and their influence on the fertility of the soil. These subjects we will take up in a subsequent article together with the conclusions to be drawn from the experiments. The point we will now emphasize is that the position we have taken up and enforced in our writing for years, that the *physical and mechanical condition of a soil* is of more influence and importance in the yield of the crop than the application of any fertilizer, is more than sustained by the evidence accumulated in the Bulletin.

### FARMING IN SOUTH-SIDE VIRGINIA.

For years the greater part of the lands of the Central plain of Virginia south of the James river have been regarded as probably the poorest in the State, and as a consequence have been largely abandoned and allowed to grow up in broomsedge and pines, thus giving strong countenance to the prevailing opinion, and condemning these lands in the eyes of would-be settlers and buyers. That this opinion is not justified by the facts we propose to prove by showing what one intelligent, reading, systematic and practical farmer has succeeded in doing upon a farm

in the centre of the condemned section and which farm when he took it in hand some ten years ago was regarded as being probably one of the very poorest in the whole "South-side," so poor indeed that it was freely said he would lose all he had on it and die of starvation. Intelligent management, persevering industry, and the introduction of live stock and a diversified system of agriculture, has redeemed the land and proved that naturally the soil has its fair proportion of inherent fertility and is capable of giving ample returns on capital invested, a good living for the owner and one of the finest homes in the State. The farm in question is "The Grove Stock Farm," situate in Nottoway county, near Burkeville, on the Norfolk and Western and Southern Railroads, owned and occupied by Mr. T. O. Sandy. The farm is a large one having an area of about 1,000 acres, but the owner wisely has not undertaken to bring all this area into a highly improved condition at once. He has pursued the course we have so repeatedly advised, made a few acres rich each year and kept them so, and gradually extended this area as the means permitted, until now he has over 100 acres producing as fine crops as the richest river bottom lands in the State, although all the farm is upland. The residue of the farm has been inclosed with a wire fence and is used for the pasturage of live stock which are gradually working down the rough grasses and weeds and bringing in a good wire and Virginia blue grass sod capable of carrying and keeping fat a heavy head of stock. As an illustration of the capacity of the improved land to produce crops we cite what has been grown on some of the fields this year. On one 20 acre field there has just been cut as fine a crop of corn as could be found in the State and which is good for from 50 to 75 bushels to the acre. On an 8 acre field adjoining this two tons of Timothy hay per acre has been cut and saved. Near by in a field of 6½ acres has been grown a crop of corn for the Silo which has been the wonder of the neighborhood. One man describing it said that the corn was as tall as a house and as thick as a forest. Mr. Julian Ruffin, a member of the State Board of Agriculture, and late President of that Board, who called to see the farm of which he had heard good reports, told us that he had never seen better corn grow on the Pamunkey flats on which he farms and farms well. This field was a grass sod plowed and fitted well for the crop in April and May. One ton of agricultural lime to the acre sown broadcast was the only fertilizer applied. The corn was planted the 20th May, the variety planted being Cockes prolific. It was planted in rows 3 feet 10 inches apart and the seed dropped

8 inches apart in the rows. The crop was cultivated level 3 times. A gentleman who called to see the crop just before it was cut was so impressed with the quantity of corn on the land that he determined to ascertain closely what number of stalks was growing upon an acre. By actual count made by himself and

of land, sufficient to feed a herd of 24 cows for 8 months. What a vision of prospective wealth to Southside farmers this opens when the thousands of acres in that section of the State now growing broom-sedge and pines are brought into subjection and properly farmed and managed. Near to this field another



HOLSTEIN HERD OF THE GROVE FARM.

Mr. Sandy the number was found to be 14,564. These stalks were not merely stalks, for nearly every one carried at least one ear and many 3 and 4 ears, the average for the whole crop being about 2 ears of good corn to the stalk. The product when cut filled two Silos holding 60 ton each or a total of 120 tons on the  $6\frac{1}{2}$  acres. Silage made from such corn as this is worth much more per acre for feeding milch cows than an equal quantity of the best hay as it contains both long feed and grain feed sufficient to insure a heavy yield of milk. At a fair estimate the value of such silage as feed cannot be taken at less than \$8 per ton or \$1,000 worth of feed grown on  $6\frac{1}{2}$  acres

one of 30 acres has grown a heavy crop of cow peas now made into hay with a yield of at least  $1\frac{1}{2}$  tons to the acre. The wheat crop on the farm like that of much of the South this year was a failure, but the land having been seeded with mixed grasses and clover with the wheat, this crop came on and made a fine yield of hay. In addition to these crops Mr. Sandy has on part of the improved part of the farm as fine a pasture of mixed grasses as can be found even in Southwest Virginia, which carried all summer a heavy head of cattle, sheep and horses. The secret of success with all this land has been live stock and cow peas. Mr. Sandy is not a believer in

the use of commercial fertilizers for the purpose of permanent improvement of land, whilst not opposed to the use of some form of Phosphate for starting the growth of peas. For this purpose he has used slag meal and got good results. He is, however, a strong believer in the value of lime as an improver of the mechanical and physical condition of his lands. His experience in the use of lime he tells us has more than borne out all we have said in *The Planter* on the subject. It will now be asked by many Southside farmers what is the "money crop" of the farm. The answer is cream and choicely bred Holstein cattle, Dorset sheep, Hackney horses and Berkshire hogs. His herd of Holstein cows are heavy milkers, some of them giving as high as 4 gallons at a milking and few less than 2½ gallons. His milk is separated on the farm and the cream shipped daily to Richmond. For this product Mr. Sandy has a constant demand for more than he can supply. The secret of his success in securing and maintaining this demand is that he guarantees the percentage of butter fat in his cream and sells it at a price based on this percentage. Thus if a buyer wants rich cream he gets it and pays for it, whilst the one whose trade only calls for thin cream also gets it and pays proportionately less. The separated milk is used to feed calves and hogs, being enriched with grain feed as required by the animals being fed. For his Holstein calves and Berkshire hogs he has built up a fine trade through his standing advertisement in *The Planter* and rarely has any surplus stock, in fact, he cannot begin to supply the demand for his hogs. To accommodate the cattle and other stock Mr. Sandy has built commodious barns and stables and wisely does not crowd them into the same building as that which he uses for storing his feed. In this way he runs less risk from loss by fire and keeps his stock in better health and condition. All his young cattle and other stock are grazed during the summer months on the outlying part of the farm not yet brought under improvement. The grass on this has improved so much year by year by the grazing of the different kinds of stock and the dropping of their manure that it now keeps them in fine condition. They are to-day as fat as though they had been feeding on the blue grass sods of the Southwest—of course the land will not yet carry so much stock per acre as those lands but when not overstocked will make as fine grown cattle as the best of those lands. The carrying capacity is growing year by year and when brought into cultivation we doubt not they will be found capable of producing heavy crops. Such is briefly a record of what has been done on a poor Southside farm in a few years. Why will

not others go and do likewise instead of growing only a few acres of tobacco and corn and letting the trust magnates and the grain speculators fix the price to be paid for the products. No country that breeds and feeds stock is ever a poor one. The experience of every section of the world proves the truth of this

### TOP DRESSING GRASS LAND.

At the Rhode Island Experiment Station three plots of land were seeded in grass in 1898 with 7½ pounds each of common red clover, redtop and 15 pounds of Timothy. These three plots were treated exactly alike excepting that one plot had received no nitrogen for 11 years while the second had received a small dressing and the third plot a large dressing of nitrate of soda annually since 1892. The large application of nitrate of soda yielded much the greater profit. In 1901 the value of the hay from the plot receiving the heavy dressing exceeded the cost of the fertilizer by \$40.70 per acre and for the 3 years of the experiment by \$90.72. In all instances the use of a complete fertilizer gave the best results. The plot receiving the full application of 63 pounds of nitrogen per acre in the form of 350 pounds of nitrate of soda to the acre yielded 3½ tons of hay per acre in 1899, 4 tons in 1900, 4½ tons in 1901 and 4 tons in 1902. The value of the hay exceeded the cost of the fertilizers by \$19.02 per acre the first year, \$30.40 the second year, \$40.70 the third year and \$32.74 the fourth year. The total excess in the value of the hay over the cost of fertilizers for the 4 years was \$123.46 per acre, or an average of \$30.87 per acre for each year. The fertilizer used in top dressing the grass consisted of 807 pounds of acid phosphate containing 16 per cent. of phosphoric acid, 200 pounds of muriate of potash and 400 pounds of nitrate of soda. From the results of the four years experiments it is concluded that an application of 400 pounds of acid phosphate, 200 to 250 pounds of muriate of potash and 350 pounds of nitrate of soda per acre would probably have given better net returns than the quantities applied. Top dressing run out land which is not filled with the proper kinds of grass roots is considered a waste of fertilizer. For such grass lands plowing and reseeded heavily is recommended.

### GRASS SEED MIXTURES.

In a series of experiments conducted in Canada for several years, the following mixtures of grasses and clovers gave the best results. Tall meadow oat-



grass and Alfalfa made a yield of 3.2 tons per acre. Tall meadow oatgrass, orchard grass, mammoth red clover and Alfalfa made a yield of 3.1 tons per acre and Timothy and Alfalfa made a yield of 3.1 tons per acre. The best yields in 1902 were produced by Timothy with mammoth red clover, tall fescue with mammoth red clover, tall meadow oatgrass with mammoth red clover and orchard grass with mammoth red clover. Small grain crops grown after clover gave on an average for 3 years 833 pounds of grain more per acre than the same crops grown after grass.

### SEEDING CLOVER ALONE.

*Editor Southern Planter:*

As I said in a former article I have seeded clover without cover crop in patches for many years past and must say that is the surest way to get a stand. When I bought this farm twenty-two years ago (I am not a farmer to the "manor born"), it needed much attention and I thought, plenty of clover sown on it. I asked my foreman what he could do with an oat stubble field with so much to do. He could do nothing but harrow it. I remarked that I wanted to sow clover on it after he got it in order. He was a good practical farmer but like nearly all the farmers then, thought that clover needed a cover crop. He strongly advised against it and said I would lose the seed and labor. Others, very intelligent men, to whom I spoke of it, took the same view. I had only the experience of a town vegetable garden to base my opinion on,—That plants that get plenty of sun, air and moisture were healthier and stronger than shaded ones.

I seeded the field (22 acres). It cost me about seventy-five dollars for labor and seed and hauling stones off, of which there were many, and mowing the weeds down in August.

The field yielded the next season 30 tons of hay and 40 bushels of clover seed at \$6 per bushel, with marked improvement to the soil.

This place has improved in yield per acre fifty per cent, due chiefly to clover and live stock. I am always glad to read your advice to farmers to sow clover, and sow it alone. —

*Rockbridge county, Va.*

T. M. WADE.

### ALFALFA IN SOUTHWEST VIRGINIA.

We are in receipt of a very fine specimen of alfalfa grown by Major W. W. Bentley, of Pulaski county, Va. Major Bentley says that the seed of the crop was sown on the 4th July, 1903. It was sown in

growing corn and made a good catch although the land was not inoculated with alfalfa bacteria. The plant sent, which was dug up in the middle of September, 2½ months after the seed was sown, was a part of the crop which grew on land at the end of the corn rows. The plant is a fine bushy one and measures *three feet in length* from the tip of the root to the top of the stems. This shows what a wonderful growth the crop is capable of making in a short time. There are, however, no nodules on the roots thus showing the land not to be inoculated as yet with the specific bacteria needed to ensure a permanent stand. Major Bentley proposes to procure inoculated soil and sow over the field and we doubt not then that he will secure a permanent stand. Whilst we do not advise the practise of seeding alfalfa in a standing crop of corn or indeed with a crop of any kind as it undoubtedly does better sown alone, yet this example shows that in a favourable season for growth it will succeed on fertile land when seeded with another crop. As Pulaski is one of the counties of Southwest Virginia with a high elevation we shall be anxious to learn how the crop stands the winter there.

### HAIRY VETCH.

*Editor Southern Planter:*

On page 624 of the October issue I notice an article headed "Hairy Vetch." I will give you my experience with the crop. In 1901 I bought 2½ pounds of vetch seed and sowed it on a very small patch of ground and got 1 peck of seed. In 1902 I put that peck of seed on a quarter of an acre of land and got 2 bushels of seed. The vetch made a great growth on the land which had been in vetch before but not so good on the other part. Now while it was some trouble to get the crop harvested, it being put in with no other grain, yet it paid me for all the trouble I had with it. I could have sold the seed for \$10, besides getting a better crop of corn than I ever got off the land before, and I have a good stand of vetch yet. Will you please tell me how to get rye and vetch seed separated when they are threshed together?

*Iredell county, N. C.*

O. F. SHOOK.

The separation of the two grains is effected by the regulation of the blast of the fanning mill and by the use of appropriate screens or riddles in the mill. The one seed being heavier than the other when the blast is properly adjusted the barley will fall separate from the vetch seed almost completely. The perfect separation of the seed is then completed by the screens or riddles.—Ed.

### ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

#### Unsigned Enquiries.

We have enquiries to hand frequently from parties who do not sign their names. Such is the case this month. *We cannot give attention to such communications.* For our own information and as proof of the bona fides of the writers we must require all enquiries to be signed by the writers. If they do not desire their names to appear in print they have merely to say so and we will take care that their wish is respected.—ED.

#### Yield of Seed of Common Clover—Clover Hullers-- Ticks on Cattle.

1. What would be the approximate yield in bushels of annual clover seed per ton of cured hay as cut with mower? Would one ton of such hay be an average per acre?

2. Can clover seed be successfully threshed with a grain thresher and shaker to separate the straw from chaff. I have a fanning mill with clover cleaning attachments.

3. Can you inform me from whom I could buy a huller? (My idea being to thresh the clover with grain thresher as above stated, purchase a huller to hull same, then run through fanning mill. I have the grain thresher and fanning mill and do not wish to go to the expense of buying a regular clover thresher and huller, as I am only experimenting with clover seed raising.)

4. To what extent would hay be damaged for cow feed if allowed to stand until seed were matured?

5. If clover be fertilized with 400 pounds acid phosphate and kainit, 3 of acid to 1 of kainit in January or February, would it not be a sufficient application to make a fair crop of clover and also be a sufficient fertilizing for a crop of corn or cotton to follow clover?

6. Would the spring rains leach it from the land? Said lands are thoroughly ditched highlands which were improved this year with above application of fertilizer on them at time of sowing?

7. Is it necessary to apply nitrogen to either red or annual clovers? I have read with interest your articles on tick fevers. I have 50 head of cows and on which I venture to say there are not a dozen ticks and have not been in 3 years. I never allow them to run in regular pasture from October 15th to April the 1st. The lots on which they run in winter have no stock on them in summer.

Warren county, N. C.

W. A. CONNELL.

1. The yield of Crimson clover seed runs from 3 to 10 bushels to the acre. An average crop will make more than a ton of hay per acre probably half as much more. We have known over 2 tons made.

2. We have heard of clover seed being threshed with a grain separator but we think there would be much loss of seed.

3. Any of the agricultural implement dealers advertising in *The Planter* will supply you with a huller.

4. All hay that is allowed to mature seed is greatly reduced in value as feed for any kind of animals. In the process of producing and maturing the seed the feed value of the crop is largely transferred from the stems and leaves into the seed and this being removed or lost by shattering carries with it this food. In experiments made at the Illinois Experimental Station by Professor Hunt and others it was found that the protein (the muscle and flesh forming matter) and the carbo hydrates (fat forming matter) both decreased as the clover neared maturity or the seed forming and ripening stage. At full bloom the crop contained 400 pounds of Protein. When three-fourths of the heads were dead this was reduced to 379 pounds. The fat was 197 pounds at full bloom, 150 pounds when three-fourths of the head were dead, the carbo hydrates were 1,052 pounds at full bloom and 1,024 pounds when three-fourths of the heads were dead. In Pennsylvania a considerably greater loss than this was shown when all the heads were dead ripe nearly one-fourth of the feed value having gone. After threshing much further loss would be shown as a large part of the leaves would be beaten into dust.

5. The application of mineral fertilizers as a top dressing on grass or clover usually has little effect on the yield of the crop as they are so slowly soluble. They should be worked into the land previous to sowing then they will be acted on by the soil moisture and the microbes in the soil and are made available. The application suggested should be of value if applied in this way to both the clover and corn or cotton.

6. No. 7. No.—ED.

#### Keeping Sausage.

I shall be very glad if some of the readers who have had experience will give me, through the columns of *The Planter*, the best method of keeping sausage fresh for spring and summer use.

Also state an infallible remedy for keeping hams free from insects, etc.

AN ENQUIRER.

Pittsylvania county, Va.

Will some reader please answer? The rubbing of the hams with borax and black pepper will keep off insects.—Ed.

### The Use of Mineral Fertilizers.

I bought a rundown farm two years ago, but it has been getting better each year by cow peas, soja beans, &c., and what little manure I have been able to make. My hands have been tied for want of capital to buy stock. Although I am 60 years of age I have got the backbone to believe that if Mr. Bellwood can get his farm up as he has done, I can also by work. I have kept clean over 10 acres of peanuts and over 13 acres of corn and other crops without one cent of hire. I work two horses on all my tools, yet I want more light. Does not Mr. Bellwood use mineral fertilizers? You say on page 620 that he does not use any commercial fertilizer. On page 623 you say that the legumes must have them. Please give me light on that, and I have no doubt but there are others that your answer will help. GEO. A. GREENE.

Nansemond county, Va.

This question of the necessity for the use of mineral fertilizers in the growing of the leguminous crops is one which is likely to require much reconsideration in the light of the information now given us in the Bulletin from the Department of Soils noticed in this issue. It is certain that these crops call for the plant food supplied by the mineral fertilizers and up to this time it has been thought necessary to supply them liberally and the results have seemed to justify the practise. But if as now seems to be the case all lands have a more than sufficient supply of these mineral foods for the growth of crops for years to come the problem would seem to be to devise the means for making these natural supplies available and thus avoid the necessity for purchasing them. The available means seem to be deep breaking and fine cultivation of the soil so that it may become permeable by and capable of holding and feeding to the crop a heavy percentage of the water naturally falling on the land. This has been undoubtedly the cause of Mr. Bellwood's success in growing these leguminous crops successfully without the application of mineral fertilizers. The process is a slower one than that of supplying the need by buying the goods, but we believe that in the long run it will be the most successful and profitable as it will result in more permanent improvement of the soil. For years we have advocated this plan strongly from our practical knowledge of its success in England where we know some of the most profitable farms never to have had an ounce of commercial fertilizer used on them since they were brought into cultivation—hundreds of years ago—we have not, however, thought it wise

to ignore the value of commercial fertilizers as adjuncts to good farming and as a means of securing quicker returns from badly managed land. Many a poor man might die from starvation whilst waiting for the returns from his land if he neglected the means of securing the quicker returns which these fertilizers offer him. We believe that the true course to follow, when the work of restoring fertility to a worn out farm is undertaken, is to use every means of improvement, plow deeply, cultivate fine, start a good system of rotation of crops which will give a frequent recurrence of recuperating crops (legumes) and help the good work by a judicious application of mineral plant food especially phosphoric acid on the leguminous crops and then as the land becomes more productive, to limit the use of these fertilizers to the growth of those crops which have a high initial sale value and can be easily transported and be readily and quickly sold. These crops, like Irish and sweet potatoes and other truck and garden crops and also tobacco, in the sections to which it is adapted, can bear this extra cost, whilst bulky crops like corn and the other cereals, and hay which have a lower initial value and are more costly of transportation and in which, therefore, the item of freight is a large factor in the price, cannot afford to have so heavy a charge as that of bought fertilizers added to the cost of their production. These should be converted at home into a more condensed form and of a higher initial value and in the process of this conversion the manure made by the stock used in the conversion will make possible the production of other crops at a cost which they can bear and make permanent the improvement of the fertility of the land.—Ed.

### Money Crop in Fairfax County, Va.

What is the money crop in Fairfax county, Va.? Union county, N. J. JACOB KAMMERER.

Truck and dairy products for the Washington markets and fat cattle and grain. There are also canneries in the county which put up surplus truck produce.—Ed.

### Texas Fever Ticks—Hollow Tail.

Referring to articles on ticks in late issues of The Planter I beg to submit that ticks propagate themselves on rabbits and dogs. The chances of those ticks which live on dog meat reproducing themselves effectively is pretty slender, with rabbit ticks it is otherwise. One season a piece of land which had not been in pasture for upwards of twenty years but was a favorite location for rabbits was fenced and when cattle were turned in proved to be infested with

ticks. In view of the above the only simple and sure way of getting rid of ticks is to get the cattle up once a week and pick off the ticks by hand till there are no more.

The diseased tails referred to by your correspondent at Shelby county, Ky., were very probably tuberculous and cutting off above the affected place is the only practical remedy. **LOUIS DELACROIX.**

*Granville county, N. C.*

We have no record of Texas fever ticks ever having been found on either dogs or rabbits. They have been found on deer and possibly the pasture referred to may have been infected from this source. As it was apparently an unfenced pasture may not some cattle have strayed into it and thus infested it? We think ticks on rabbits would have as little chance of propagating themselves as those on dogs.—**ED.**

### Fertilizer for Irish Potatoes, Tobacco, Cotton, Asparagus and Corn.

Would you kindly inform me through your valuable columns:

First—Whether the following mixture would make a good formula for an Irish potato fertilizer, and (b) if so what quantity of it should be applied per acre:

650 pounds cotton seed meal.  
300 pounds nitrate of soda.  
800 pounds dissolved bone.  
250 pounds sulphate potash.

Second—(a) Whether the following mixture would make a good fertilizer formula for tobacco, cotton, asparagus and corn, and (b) if so the respective quantities of it that should be used per acre on the crops above mentioned:

650 pounds cotton seed meal.  
1200 pounds dissolved bone.  
150 pounds sulphate potash.

*Charleston county, S. C.* **NEW SUBSCRIBER.**

1. Yes, the ingredients mentioned in the proportions named will make a suitable fertilizer for Irish potatoes. Apply from 500 to 1,000 pounds to the acre.

2. For asparagus reduce the bone to 1,000 pounds and increase the potash to 300 pounds. Apply 500 pounds to the acre. For cotton. Experiments made in South Carolina indicate that the maximum quantity of fertilizer that can be in general used with advantage are such as will furnish 50 pounds phosphoric acid, 15 pounds of potash and 20 pounds of nitrogen to the acre, 400 pounds of 14 per cent. acid phosphate or dissolved bone, 150 pounds of kainit and 300 pounds of cotton seed meal per acre will meet this requirement.

For Tobacco. The fertilizer needed is one rich

in nitrogen and potash (in the form of a sulphate), and low in phosphoric acid. The following ingredients and proportion have given excellent results: 160 pounds of dried blood, or 80 pounds of nitrate of soda and 80 pounds of dried blood to supply the nitrogen, 120 pounds of sulphate of potash and 114 pounds of acid phosphate.

For Corn. The dominant factor in the fertilizer should be phosphoric acid. Potash is of service frequently in sandy soils, but not usually needed much in clay soils, whilst nitrogen is only called for in soils deficient in vegetable matter. Wherever this is abundant the crop will get all it needs. It is becoming increasingly certain that corn has the power in some way to assimilate nitrogen from the atmosphere like the legumes. Mix 1,200 pounds of 14 per cent. acid phosphate, 600 pounds of cotton seed meal and 200 pounds of muriate of potash and apply 500 pounds to the acre.—**ED.**

### Grape Vines Diseased.

I have some three year old grape vines which last year matured a full crop of nice grapes the latter part of September. This year the leaves turned brown and commenced to fall off by the first September, the grapes shrivelling and falling and many stems dying so that the whole bunch would fall off. The few grapes yet on the vines are from full green to ripe. Some of the present season's growth of wood is dying. Soil is rich, sandy loam with well drained red clay sub-soil. Location elevated, with sun all day and only moderately moist. Please say in your next issue what is cause of trouble and what remedy and when to apply same. **SUBSCRIBER.**

*Appomattox county, Va.*

No doubt your grapes have been attacked by Black Rot. Refer to the Spray Calendar in the March issue this year for the remedy.—**ED.**

### Ice Supply.

Can you give me any information on making and storing ice? I have an ice house, but no pond or running water. My idea is to hold the well water and let the air freeze it. I have a wind mill. If any of your files have the above information shall be glad to have the information. **HENRY TWYFORD.**

*Henderson county, N. C.*

You will find it a very tedious and uncertain means of getting a summer's supply of ice to have to rely on pumping water into a vessel or tank and then when it happens to freeze removing the ice to the house. Better make a shallow pond with a large surface and pump this full now and keep it full until all the ice needed is secured from its surface.—**ED.**

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

Cabbages may be planted out at the end of the month for the early spring crop in the trucking sections of this and adjoining states. The work of preparing and enriching the land should have attention up to that time. The better the preparation the greater will be the chances for a successful crop. Cabbages are great feeders, so do not pinch them of food.

Lettuce may be set out in cold frames for winter and early spring cutting. The soil for filling the beds should have been got ready during the summer and should now be in a sweet friable condition, well supplied with vegetable matter, and should now be enriched with some cotton seed meal acid phosphate and muriate of potash. The old soil in the frames should all be removed as it is very apt to cause the spread of fungus diseases and damping off. Keep the frames open as long as the weather is mild.

Orchard and small fruit planting and pruning should have attention. In this issue will be found an article on setting out an orchard.

Celery should be earthed up to blanch it. In doing this work see that the earth is kept out of the plants and only closely banked around them.

Cover asparagus beds with a heavy coat of farm yard manure, first removing all old stalks and trash.

All land not needed for other crops should be seeded in rye to conserve soil fertility.

### PLANTING AN ORCHARD.

In your valuable paper I note that you strongly advise your readers in this section of Virginia to apply themselves to "Fruit Growing." I intend to set out an orchard of winesaps, peaches and pears this autumn. Please instruct me, in your next issue, as to the setting and caring for a young orchard. Also kindly give me some "hints" as to improving the fruit of an old orchard, and oblige.

A NEW FARMER.

*Pittsylvania county, Va.*

The first consideration in setting out an orchard should be the situation. Let this be on high well

drained land preferably with an exposure to the east or Northeast. This will secure good air drainage and has a tendency in restraining too early blooming and consequent loss of the crop by late frosts. The next consideration should be the preparation of the land. This should be deeply plowed and if possible subsoiled all over the site of the intended orchard, but certainly in each line of intended trees. If subsoiling be not practicable from want of a subsoil plow or sufficient team, then the subsoil in each place where a tree is to be planted should be deeply and finely broken with the mattock or grubbing hoe. Trees will never make the growth they ought to do when set out on hard unbroken subsoil or hard pan. Let this work of breaking and preparing the soil be done as early as possible that the soil may have the benefit of the winter frosts and thorough aeration. Having thus prepared the land the location of the sites of the trees should be fixed. To secure perfect alignment of the trees which is essential in order that cultivation of the orchard during growth may be practicable and convenient the following method should be adopted. First decide on the distance the trees are to be set apart. For apples and pears this should be from 30 to 40 feet each way. For peaches from 20 to 30 feet is sufficient. Then take as a starting point the position of the first tree and sight a straight line from this point to the opposite end of the orchard parallel with the side of the lot. Place in this line (at prominent points if the land is rolling or hilly) 6 foot poles which may be several hundred feet apart so that three may be seen in line at once. With the two end poles place others in line in the opposite direction at such distances from each other as the trees are to be planted. Set intermediate poles in line on these new rows. Provide pegs a foot long in sufficient numbers to place one at the position of each tree. Provide also a coil of light trellis wire or stout cord of from 125 to 135 feet long according to distance the trees are to be set apart. Fasten a piece of white rag on this wire or cord at each distance the trees are to be set apart. Place a stout pole at each end of this wire or cord to be used as sighting poles. This is to be carried by a man and boy. Place the sighting pole at the position of the first tree then direct the boy to walk in the line of the poles set up for the first row. Stretch the wire or cord tight and let another boy with an armful of pegs place one in the ground at each rag

mark on the wire or cord. Proceed in the same way with each row of trees carefully sighting the originally set posts to see that perfect alignment is preserved not only in one direction but in all directions. The trees should line both horizontally and obliquely. The next work is digging the holes. Provide each digger with a 5 foot board 6 inches wide with a notch in the centre and holes at each end. Place the plank in line with the rows, the centre notch over the peg indicating the site of the tree and pin the plank down with a peg in the end and leave the board in position until the tree is planted. Turn the board on the peg out of the way until the hole is dug. The hole should be 4 feet across and at least 15 inches deep. Throw the top soil on one side and the subsoil on the other side of the hole. Some orchardists advise the using of compost or well rotted manure in planting, but if the surface soil is at all fertile we prefer not to mix anything with it, but if very poor mix some woods mould or rich soil and a little manure with this surface soil at each hole and you are then ready to plant the tree. Let the trees selected for planting be young, stocky and well rooted, never mind the height if you have a good stem and a good root. They will make height soon enough. In setting the trees the guide board is again turned round on the peg across the hole and the notch in the centre will then indicate the place to plant the tree. Raise a small mound of the surface soil right under the notch, set the tree on the top of this letting the stem come in the notch. Press the tree down gently until the surface of the soil is two inches above the crown of the roots. The planter should then hold the tree firm and as the surface soil is being thrown in work it in among the roots and pack it around them. Tramp the soil firm and fill level with the subsoil on top, leaving the soil slightly raised around the tree. Then mulch the ground 2 or 3 feet around the tree with coarse litter or leaves to prevent evaporation and drying out. After the young tree is set cut off entirely all side branches and cut back the stem from one-third to one-half the last year's growth. Let the top grow the following year retaining three or four branches at from  $4\frac{1}{2}$  to 5 feet above the ground. The land between the trees may grow a crop of corn or other cultivated crop the first year. This will ensure cultivation of the land, but do not disturb the mulch around the trees the first year, and be careful in cultivating later that the tree is not injured by the single-tree or traces. Better leave 2 or 3 feet next each tree uncultivated by the plow or cultivator and work with a hoe than damage the bark of a young

tree. In the fall after planting, when the corn or other crop is removed, plow and seed in crimson clover to be turned down in spring, and follow with a crop of cow peas. These crops may with advantage be fertilized with acid phosphate and muriate of potash 200 or 300 pound to the acre. In making the selection of varieties to be planted the distinction between a commercial orchard and one for domestic use should be clearly borne in mind. In a commercial orchard where the object is profit on the sale of the fruit, plant only one or at most, two varieties, selecting those specially adapted to the location. What the wholesale fruit buyer calls for is a large crop of a single variety. In an orchard where the fruit is to be used at home there should be planted a few of several varieties, a few summer, a few fall, and a few winter ones so that there may be fruit for all seasons. We should advise caution in planting pears. The blight is such a constant visitor in the South that there is but little satisfaction in attempting to grow this fruit. The Seckel and Keiffer are about the only varieties which can be relied on to stand. Of the better varieties Bartlett is perhaps the most resistant but it blights badly. In planting peaches take the advice of a good nurseryman having local knowledge. The Elberta is perhaps the best and most profitable market peach. We will say something as to renewing an old orchard in our next issue.

## ORCHARD AND GARDEN NOTES.

*Editor Southern Planter:*

The horticultural exhibits at the Southwest Virginia Fair at Radford were good in some respects. Variety of exhibits were lacking owing to the lateness of the season. Considerable enthusiasm was aroused among farmers and horticulturists in regard to the best specimens grown. The collection of apples was quite good. Those who saw the apple exhibits were convinced that this part of the State, while not considered in the "apple section," could grow fine specimens of Winesap, Baldwin, Fallawater, Virginia beauty, Ox pippins, and Roxberry russet. The specimens that grew on the higher, red lands were much more beautifully colored, as might be expected, than those that grew on the lower, valley lands. I believe that there is some as fine red apple land in this part of the State as one will usually find, but we are just learning where it is. This subject should receive most careful consideration by all those who are thinking of setting orchards. Highly colored apples grow best on the red clay soils, and

we usually find such soils on rather high, rolling land. As I drove along to the fair at Radford I noticed an orchard of one-half winesap trees so loaded with red apples that the trees were breaking badly. Near by were thousands of acres of just as good winesap land. While this part of the State is noted far and wide for blue grass and fat stock, still, I see evidences of a good reputation being made for "red apples." This season we are simply overloaded with apples, but next season the crop will be short, since we have let our trees overbear. We have not learned how to take care of our trees nor how to market the crop when grown. In fact most of the orchards here have not been planted for commercial purposes. Hence there is usually a small per cent. of each variety, and some orchards have as many as twenty-five varieties in them. The experimental stage with varieties is largely passed and it is time now that we plant orchards for definite purposes in this part of the State also. We need more winter fruit and less summer fruit.

Another fact brought out most forcibly by the exhibits at the Fair was the superiority of sprayed fruit over that unsprayed. Sprayed fruit took the first premium for best collection of apples. The specimens were larger, cleaner and of a more beautiful color. The usual number of persons were heard to say that they had just as fine specimens at home but did not bring them for some reason.

While this was the first time the Association offered premiums for horticultural and agricultural exhibits, still a good beginning has been made and we look for much larger exhibits in these lines next year. There is talk also of making the Fair an inter-state fair, which, if done, would bring together immense collections from the farm, orchard and garden.

There is but little that can be done in the orchard and garden this month except to continue to gather and store away the crops for winter. Of course all weeds that are maturing seed for next year's crop to give us the backache in destroying should be gathered up at once.

Specimens of apples affected with bitter rot will usually be found hanging on the trees late in the fall. Gather these and destroy them as time will permit.

Cut off all blighted limbs on apple and pear trees eighteen inches below the affected area and burn them. This is one of the best things to do for blight and it should be done with the greatest care in the fall and winter while the sap is dormant. Any diseased tissue that may be left over till spring will

serve as a source of infection from which blight is apt to spread as soon as growth commences again in the spring.

R. H. PRICE.

*Montgomery county, Va.*

## VIRGINIA STATE HORTICULTURAL SOCIETY.

The programme for the eighth annual meeting of this Society to be held at the Court House in Pulaski City, Va., on the 2nd and 3rd December next has just been issued. The meeting promises to be a most interesting one as the different sessions will be addressed by some of the most noted fruit growers and horticulturists on topics of the greatest interest and importance to fruit growers and truck farmers. Amongst those scheduled to address the meetings are the Hon. S. B. Woods, President; G. H. Powell, of the U. S. Department of Agriculture on "Handling Fruit for Cold storage." L. H. Derby, of Woodside, Del., on "Apple Culture in Delaware," Prof. Price, of Long's Shop, Va., on "Small Canning Factories in Virginia," Prof. Van Deman, Prof. Alwood, S. H. Lupton and Geo. E. Murrell on other topics of interest. The Governor of Virginia is also on the programme for an address on "How best to advertise the Resources of Virginia with special reference to the State Exhibit at St. Louis." There will be an exhibit of fruits and vegetables for the premiums mentioned in our last issue. The following are the classes for exhibition. Each exhibitor must be a member of the Society and the exhibit must be the growth of the exhibitor.

1. Best plate of Albemarle Pippins—Diploma and prize.
2. 2nd best plate of Albemarle Pippins—Diploma.
3. Best plate—"Grimes' Golden"—Diploma and prize.
4. 2nd best plate—"Grimes' Golden"—Diploma.
5. Best plate—Arkansas (Black Twig)—Diploma and prize.
6. 2nd best plate—Arkansas (Black Twig)—Diploma prize.
7. Best plate—York Imperial—Diploma and prize.
8. 2nd best plate—York Imperial—Diploma.
9. Best plate—"Winesaps"—Diploma and prize.
10. 2nd best plate—"Winesaps"—Diploma.
11. Most attractively packed box package of apples—Diploma.  
(This exhibit must illustrate grading as practiced by exhibitor.)
12. The best exhibit of winter apples harvested from sprayed trees (number of varieties not less

than 3 or more than 10.) Diploma and "Empire King" Spray Pump.

13. 2nd best exhibit of winter apples (same conditions as above)—Diploma.

14. The best winter seeding apple—50 apple trees (offered by Mr. J. A. Young, Greensboro, N. C.)

15. The most promising new variety of apples—Diploma.

16. (Sweepstake) for the best plate of any of the above varieties—Diploma.

17. Best collection of any varieties—Diploma.

18. Best exhibit of vegetables—Diploma.

19. Best exhibit of ornamentals—Bucket spray pump offered by Sydnor Company, Richmond, Va.

20. Best collection of vegetables—Prize, collection of garden seeds to value \$2.50 (offered by Messrs. T. W. Wood & Son, Richmond, Va.)

The prizes will be selected from the prize list when completed for the different classes, except those offered for particular displays (which are noted above.)

Prizes will be offered for 2nd best collections if there are sufficient for that purpose.

Further information as to the rules governing these exhibits and the time and place of entry may be obtained on application to the Secretary, Walter Whateley, Crozet, Va.

By special arrangements, railroads have agreed to rates as follows:

C. & O., R. F. & P., Washington and Southern will give a special rate of one and a third fares for round trip by card order, apply to Secretary or local Vice-President for card orders.

N. & W., A. C. L., S. A. L., and Southern Railway four cents per mile one way distance for round trip on application to local agents. All tickets restricted to continuous journey in each direction and will be sold November 30th and December 1st and 2nd, final limit 7th, 1903.

Maple Shade Inn offers special rate to members at \$1.00 per day (American plan.)

Hotel Pulaski will accommodate members at \$1.00 per day (American plan.)

### FORCING RHUBARB IN THE DARK.

During the winter of 1898 and 1899 the Department of Horticulture at the University of Ohio first attempted the forcing of rhubarb in the dark and in so far as we know this was the first attempt in this country to force this crop in any other than the usual way, which had been common for a long time. A quotation from "The Forcing Book," by Professor L. H. Bailey, will sufficiently describe the old method. "Thoroughly established clumps are dug in the fall, and these are packed in beds under-

neath the greenhouse benches, sifting the soil in tightly between the clumps, and then covering with from two to six inches of soil. The temperature should range as for lettuce and roses, or for very quick results it may be much higher. \* \* \* About four or five weeks after planting under the benches, is the usual time required for the first profitable cutting. Paragon and Linnaeus varieties may be used for earliest results, but the best crops are to be obtained from some of the larger kinds, like Victoria and Mammoth."

From the first the attempt to grow this crop in total darkness met with success, and now the dark grown product can be found on the Columbus, Ohio, market from the first of January until the outside crop makes its appearance. In the first quarterly of the Journal of the Columbus Horticultural Society for 1899 the results of this first experiment and the methods employed were described by J. F. Cunningham, then Assistant in Horticulture and Forestry, at the University. For the last five years the Horticultural Department has been profitably engaged in this new industry, carried on in the manner described in the above paper, with some few modifications worthy of note which have already been mentioned in notes from time to time since the first publication.

Until last year crowns from three to five years old were used for forcing purposes. In fact, it was thought that even the three-year old crowns were too young to be forced profitably. Last winter, however, we were led to try seedling roots, through rather unexpected and perhaps unusual conditions. Seed of the Linnaeus type was sown April 7, 1902, in a rather sandy soil in drills twenty-four inches apart. The seed came up readily and the summer was very favorable for its growth. The young plants were cultivated once a week until the leaves prevented the passage of the cultivator between the rows. The plants were not thinned, the idea being simply to grow plants to transplant the following spring and allowed two more years' growth before forcing. The plants were very thick and would undoubtedly have made a better growth had they been thinned early in the spring. As it was, however, the young plants made a wonderful growth. Visitors refused to believe that these leaves, many of them a foot across, with stalks fifteen to twenty inches long and an inch thick, were produced from seed sown the previous April.

Having more of these plants than we cared to transplant, and being unable to secure old crowns to fill our cellars, we determined to use every other row of these seedlings for forcing. Accordingly, the roots were plowed out early in the winter after they had been thoroughly frozen and thawed again (the work should be done before the ground freezes at



all), and the cellar filled. A number sufficient to fill the cellar the second time was spread in a thin layer on the ground and covered with a thin covering of earth to prevent drying. Two crops were thus secured from the cellars during the winter.

The roots were packed as closely together as possible in the cellars, care being taken to have all the crowns up, leaving walks about a foot wide every four feet. Soil was carefully sifted between the roots which were finally covered about two or three inches deep. The kind of soil used is not of so much importance, as the stalks get their nourishment from the food stored in the fleshy roots. Any good garden loam will do. The whole was then thoroughly soaked with the hose and the room made perfectly dark. In a very few days the stalks began to push through the soil and in four weeks we pulled the finest rhubarb we have ever seen.

From these small roots we obtained two pullings of splendid stalks, two more of only fair stalks, and two or three more smaller pullings of rather small and spindly stalks. The first pulling is always the best. The crop lasted about four weeks, making eight weeks in all that the roots occupied the cellar.

The exhausted roots were now forked out of the soil and a new supply brought in, using the same soil to cover the second crop as was used for the first. The second crop was simply a repetition of the first excepting that the temperature ran a little too high during the latter part of the period and we got more spindly stalks. The temperature should never go above 60° F., unless quick results are wanted at the expense of quality and quantity.

We give the following average measurements and weights of twelve stalks, which may be of interest:

- Average length of stalk, 17.33 inches.
- Average length of leaf blade, 4.45 inches.
- Average total length of leaf, 21.79 inches.
- Average width of leaf blade, 3.02 inches.
- Average weight, 4.64 oz.

The crop sold for from 60 cents to 75 cents per dozen bunches, there being from four to six stalks in a bunch. From three hundred and seventy square feet of cellar space we sold \$35.55 worth of rhubarb. This yield, we believe, can be materially increased, yet when it is remembered that this return was obtained from space that would otherwise have been idle, and from plants less than one year old, which had not been grown with the intention of forcing at this age, the possibilities of the industry becomes apparent.

The stalks receive practically all their nourishment from the food stored up in the fleshy roots during the previous period of growth, and naturally the larger the roots, provided they are healthy and vigorous, the larger will be the total crop received when forced either in the light or in the dark. The roots

forced in the dark will be more productive than those grown in the light, because all the strength of the root is directed into the stem, rather than partially into foliage. If by extra care in preparation of the soil, selection of seed, thinning and cultivating we are able to obtain roots large enough to secure profitable returns within the year, we have made an important step in supplying the market with this well known garden esculent throughout the winter months and at a profit to the grower.

The fact that under the old system the roots must occupy the ground from three to five years has prevented many gardeners from forcing this plant except in a small way. A very large immediate yield lost its munificence when the rent on the ground occupied for these years was considered.

By planting the seed on heavily manured loam soil and thinning the plants to a distance of one foot in the rows, with proper cultivation and mulching if need be, we believe roots can be grown in a single season which will give twice the yield received from our experiment. If it can be done with certainty from year to year the question of obtaining crowns for forcing purposes will be solved. It is worthy a trial at least, and we hope to experiment further in this direction.

V. H. DAVIS.

*Journal of Columbus Horticultural Society.*

In England the practise of forcing rhubarb in the dark for the winter markets has been carried on successfully for more than 30 years to our knowledge and all the large markets of the country are constantly supplied with beautifully grown stalks running from 2 to 3 feet in length and of a bright pink color from December to the close of winter. This rhubarb is in large demand there and makes delicious pies and dishes of stewed fruit. There is no reason whatever why we should not have the same demand here and thus a market be made for a product easily produced and of a most wholesome character. Here in the South the roots should be dug from the open ground and be placed in the cellar in November and December as soon as growth has ceased and the leaves have died down.—ED.

### Gathering Apples.

Can you tell me what is the best time to gather apples? They are ripe and falling fast. Do you gather them before or after frost? I have had mine gathered and spread out on a floor. They usually rot very fast.

SUBSCRIBER.

*Amherst county, Va.*

Apples should always be gathered from the trees a little under ripe, rather than fully ripe. When the seeds are turning brown and the stems will part readily from the twigs when the fruit is pulled lightly the crop is ready for gathering.—ED.

## Live Stock and Dairy.

### HOLLOW HORN—HOLLOW TAIL.

*Editor Southern Planter:*

The stand you take, re "hollow horn," "hollow tail," in your September and October issues is the correct one. There are no such diseases (except as you say in the imagination), from which cattle suffer generally. These organs—the horn and tail—are not entirely exempt from diseased conditions, but even those are rare, and most generally develop only local symptoms. In twenty years practical experience in the veterinary profession, I have seen cattle suffer almost every known acute disease to which they are heir, and then be subjected to further torture, at the hands of ignorant people, upon the supposition that they either had "hollow horn," or "hollow tail" (and more frequently both), when upon a thorough and intelligent examination, both were found in perfectly normal condition except for the damage done by the barbarous treatment to which they were subjected. The trouble, sir, is this, people don't investigate intelligently for themselves and acquaint themselves with the normal appearance of these and other organs, but merely jump at conclusions, and they are satisfied with what their grand-parents told them for that must be true. If such arguments were sound, the veterinary and other scientific professions would not make the progress they have made, especially the past decade.

People who are ignorant upon the subject do not realize the dangers they are exposing their animals to by boring holes in the horns of animals, and pouring in all sorts of irritants, of unknown action as far as they are concerned, and leaving the holes open exposing them to attacks of many parasites, especially the Blow fly. Many such cases do suffer as the result, and confirm the diagnosis of their tormentors, when it actually becomes an I-told-you-so affair. It would be unfair if I were to stop here merely throwing out what many would call an unjust criticism of their opinion, therefore, my real purpose in addressing you upon this subject is to clear up at least some of those old-time ideas which our profession have taken from the mysterious and arrayed among those which are now understood at least more thoroughly.

The name "Hollow Horn," or Horn Evil, got its name from the unnaturally low temperature of the horns, which is an accompanying symptom of some forms of digestive disturbance, especially impaction

of the rumen with solid food, where the nerve force is weak or deficient, and the peristaltic action of the muscular coats of the stomach is suspended. Here we find the animal standing with an arched back, disinclined to move, emits a grunting sound when breathing, pulse quick and weak, bowels constipated, or an offensive diarrhoea, *horns cold*, rumen pits on pressure with the finger and pit remains, showing that its coats are inactive, loss of cud. Strange as it may appear, the dullness and refusal of food and cold condition of the horns, especially the latter are the only conditions taken into account. Here is a case of "hollow horn," a gimlet, some salt, pepper and turpentine are the requirements. No readers, the cow has indigestion and wants a purgative of epsom salts, a liberal amount of clean pure water to drink, followed by tonics, stimulants and more careful and too frequently more generous diet and care. Many young cattle especially in the spring of the year, or fall after a dry summer, become much emaciated for want of proper food and present symptoms of general debility, accompanied by unthriftiness. On these animals the hair is dry and stands up; mucus membranes become pale (bloodless) swellings appear under the jaws and dependent parts of the body. Those cattle want better care and a gradually increasing better diet of good well cured clover hay, (not old bleached out stuff, that only contains the original woody fiber), with corn and bran, and let me advise the reader that if his cattle are not worth this sort of care then if they wish to remain in the cattle business profitably the only reasonable solution of the matter is, buy some that are. Improved breeds are within the reach of all to-day and here is an argument which hits the scrub bull pretty hard. While these forms of indigestion and emaciation are not the only ones that give arguments to the "hollow horn" apostle, they are the most frequent, and a large per cent. of that goes back to want of care and proper feeding.

Under the head of "hollow tail" besides what I have enumerated, for I have yet to find any symptom by which it may be distinguished, we do find a few, at least more numerous conditions in support of the argument in favor of a real disease, yet when investigated it is almost entirely the *effect* instead of the *cause*. Grub in the tail might and no doubt does exist. So it exists in the back, yet are all cattle with grubs in their backs, late in the winter and early

spring, subjected to such treatment as splitting open the skin and pouring in salt and pepper and why not? One who knows the anatomy and physiology would naturally suppose that those in the back were in a position, in closer proximity to vital organs, to create more disturbance than those at the end of the tail. The fact is this, when grubs as they are called, are found to exist in the tail they are merely the larva of some parasite, and probably a stray *Hypoderma Lineata*, which is actually doing less damage there than its kin folk, which are in their proper place, and destroying the skin as they develop and prepare their exit. Again the tail is an organ which frequently suffers injury and goes through the same changes as other organs similarly damaged. Then again during extreme emaciation from want of care it is not infrequent to find the end of the tail suffer for want of sufficient circulation to keep the tissues nourished, being farthest from the center of the circulation. This is also an effect and not the cause. Again, cattle may have ever so good care and an abundance of apparently good food, yet if such food is contaminated with the fungus disease known as ergot, which frequently follows a wet season, we invariably have a starved condition of the tissues commencing at the end of the tail, tips of ears and above the feet, accompanied by convulsions, which is known as convulsive ergotism. The reason is simply this, the action of ergot on the system is to lessen the caliber of the arterioles (small arteries under control of the nervous system) and restrict the flow of blood to the parts. Those situated farthest from the heart or where the blood pressure is least, are the first to suffer, and a dead, dry gangrenous condition of the feet, ears or tail, are the effect and not the cause. The treatment does not consist in removing the dead tissue, but to stop the supply of ergot, remove the cause.

I beg to thank you for allowing so much space and patience to this matter, and if only we can convert a few erring ones and induce them to investigate impartially for themselves, and stop their barbarous treatment where it does absolutely no good and often much harm, but go at things more intelligently, by treating the cause rather than the effect, then we have this day "truly done something."

JOHN SPENCER,

Professor Veterinary Science.

Virginia Poly. Inst., Blacksburg, Va.

### TICK OR TEXAS FEVER.

Editor Southern Planter:

I heartily agree with you on this subject of Texas Fever ticks as stated in your October issue. If the

instructions laid down there were as vigorously followed out as the quarantine authorities have been opposed on this tick question in the State of Virginia the entire State would soon breathe the air of freedom as far as ticks and Texas fever are concerned. I am personally acquainted with Dr. Butler, the author of your quotation, as we were graduates of the same class, and know him to be a gentleman of sound judgment and indomitable perseverance, such as every State should have managing its quarantine affairs.

Texas Fever can only be transmitted (except by direct inoculation) by the Texas Fever tick (*Boophilus annulatus*) and upon the eradication of this tick and this only can the disease be stamped out and the Federal quarantine be dispensed with.

JOHN SPENCER,

Professor Veterinary Science.

Va. Polytechnic Institute, Blacksburg, Va.

### PURE BRED CATTLE IN THE SOUTH.

Editor Southern Planter:

Mr. C. A. Williams, of Halifax county, N. C., contributes to your September issue a long letter on the subject of "keeping pure bred cattle in the south." The impressions given by a casual reading of this letter are utterly at variance with its final conclusions. The writer starts out with a jeremiad account of cattle losses from ticks and fever and closes with an invitation to the world to come and inspect his immune bulls in proof that "the pure bred cattle business can be made a success" even in a "tick district." Mr. Williams' case shows two things and only two. It shows:—

1st. He lives where ticks abound like "autumn leaves that strew the brooks in Vallambrosa."

2nd. Even in a Paradise of the parasites, nothing is needed, absolutely nothing, but *inoculation*.

Our Tar-heel friend is a royal, good fellow. We sympathize with him. He deserves success. Now that he has learned a few things about a new business he will achieve success. Having put his hand to the plow he is the last man to give up and lie down in the furrow in full prospect of a legitimate harvest. If he wants to find the money he has lost, let us assure him he must look for it exactly where he lost it. No business is exempt from difficulties. The pure bred cattle business in the south presents fewer difficulties than any other enterprise open to our people. It offers better returns upon less capital and labor. We know that in some sections the cattle tick is a great pest, but even there a little time and attention

will fix the feature of impossibility upon the problem of his mischief. In the *PLANTER* of September, 1902, read what another Mr. Williams, of N. C., said to the *Breeder's Gazette*:—

"My method of clearing the farm of ticks has been this:—the cattle were inspected almost daily during the season and no tick was allowed to mature and drop off. I prevented this by washing my cattle with a strong solution of water, kerosene oil and sulphur. If this solution is thoroughly applied it will kill the young ticks and the old ones as well. If no ticks are allowed to mature and drop in the pastures the farm will soon be free of ticks. To cure a tick fevered cow, first give a liberal drench of salts, then follow with liberal drenches of sulphur. The finest cow in our herd to-day had as bad a case of fever last summer as we ever saw." W. M. WATKINS & SONS.

*Charlotte county, Va.*

#### FOREST HOME DAIRY FARM, LOUDOUN CO., VA.

Dairy farming in the South has until within a very recent period been almost wholly neglected and even yet is confined to practically a very small number of farmers out of the gross total of those making their living off the land and yet it is a business with one of the greatest opportunities before it in this country and wherever it has become the staple branch of farming in any State or locality it has resulted in



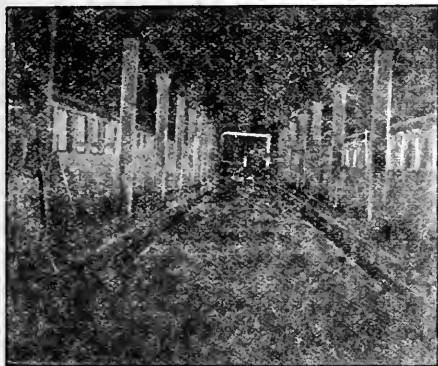
enhancing largely the value of the land and the wealth of the community. This is evidenced by the prosperous condition of the farmers in sections of Wisconsin where cheese and butter making are staple industries, in the section around Elgin in Illinois where butter making is a great industry and in New York state where milk and cream is largely produced.

Around nearly all the large cities of the North and East there is a zone of country from which the milk supply of those cities is drawn where land is much higher in value than elsewhere in the State and where the farmers are much more prosperous. In the South this condition has not been reached to any considerable extent anywhere as the people of the cities have not yet realised the full value of milk



as a food. Recent statistics go to show that the consumption of milk and cream per capita in the cities of the South is not one-half of the consumption per capita in the North. There are few cities in the South where the consumption of milk exceeds one third of a pint per head per day and in some cities it falls to one-fourth of a pint. In some of the cities of the North it reaches one pint per head per day and the average exceeds one-half pint per head. The consumption of cream is in the like degree small in the South, indeed in many cities it is practically impossible to obtain cream. On a few farms in this State advantage has been taken of this realised want of milk and cream in the cities and dairy farming has become an established business and wherever this has been done under proper conditions financial success has followed, but we have not as yet made the business a recognized one by the establishment of milk and butter factories where the handling of the milk of a locality is centralized and conducted as a commercial undertaking. One of these farms where the business of supplying cream to Washington City is being successfully conducted is the Forest Home Farm in Loudoun county, owned and operated by H. T. Pancoast. Mr. Pancoast has equipped the farm with a fine barn with stalls for 60 cows, well lighted, ventilated and supplied with pure water and with every appliance necessary to keep the same per-

fectly clean and sweet. Silos having a capacity of 500 tons hold a large part of the feed for the stock and a 15 horse power engine and 20 horse power boiler supply power to run the machinery and steam and hot water to sterilize and keep clean and sweet all dairy utensils. The milk of the herd of 50 pure bred registered Jerseys is separated by a DeLaval Separator and the cream after being sterilized and cooled is shipped in jacketed cans to Washington City. Mr. Pancoast also buys and separates the milk of a number of his farm neighbors and thus enables them to share in the advantages of dairying. The



separated milk is fed to a herd of Berkshire hogs of the finest breeding. For these hogs and for his Jersey cattle Mr. Pancoast has secured a reputation and is building up a fine business selling the young animals all over the South. The farm is situate in a fine section of Loudonn county, one of the most fertile counties in the State, and is producing fine crops and gradually growing in fertility from the application of the manure from the large quantity of live animals kept upon it. We give views of the outside and inside of the cattle barn and of a few of the choice Jersey cows showing their fine udder development.

### SOUTHWEST VIRGINIA FAIR, RADFORD, VA.

At this fair last month there was a fine exhibit of pure bred cattle from the breeders of Southwest Virginia. The classes shown were Short Horns, Herefords and Polled Angus. The number exhibited in all classes was 95.

The exhibitors of Short Horns were Major John T. Cowan, of Montgomery; Major W. W. Bentley, of Pulaski; Virginia Polytechnic Institute; C. E.

Bryant, of Grayson county; W. W. George, of Smyth county; J. G. Davis, of Grayson, and Ex-Governor Tyler, of Radford.

Major Cowan had the largest exhibit, his herd being represented by twenty-five splendid cattle, that won over \$550 in premiums. The finest of his herd was a bull between two and three years of age, "Blood Royal," recently purchased from the herd of E. K. Thomas, of Paris, Ky. This superb animal won the premium as the best Short Horn bull on the grounds. Another of his prize-winners was a beautiful snow-white yearling bull weighing 915 pounds. Still another was Gwendoline XI, a cow weighing 1,500 pounds, and the winner of many premiums.

The largest animal on the ground was Mr. Bryant's bull, "Duke of Beechwood," which weighed 2,400 pounds. "Governor Tyler," the property of Virginia Polytechnic Institute, was another Short Horn bull that took a first premium. His weight is 2,300 pounds.

The exhibitors of Herefords were S. W. Anderson, of Greenbrier county, W. Va.; Haynes L. Morgan, of Smyth county, Va.; Virginia Polytechnic Institute; C. B. Einstein, of Montgomery, and Edgar Phipps, of Grayson county. Mr. Anderson's herd was represented by twenty-four white-faced beauties, and his premiums amounted to \$600.

Among the other prize-winners were "Crimson Rambler" and "Marmaduke," owned by Haynes L. Morgan, and "Governor," owned by Major Bentley.

The Short Horn premiums amounted to \$1,000, the Herefords to \$1,000 and the Polled Angus to \$400. All of the premiums on Angus cattle were won by Virginia Polytechnic Institute.

### A CONVENIENT HOG BARN.

*Editor Southern Planter:*

Will you kindly submit in the columns of your most valuable paper a plan of a hog house, large enough to accommodate 12 brood sows and their probable increase, say 72 pigs, keeping in view the question of sanitary conditions and the saving of the manure in the most economical way, with plank or cement floor.

A SUBSCRIBER.

*Norfolk county, Va.*

The following description by Prof. Soule of a hog house erected at the Tennessee Experimental Station which we take from *The Practical Farmer*, will meet this request of our subscriber. The house seems to be very conveniently arranged, but if we were building one we would increase the width of the house 8 feet and make a gangway or alley 4 feet wide on the outer side of the pens and feed slop food from this alley into troughs fixed in that side of the pen instead of having the troughs next to the middle alley. We

would let the floors of the pens slope from the centre alley to the outside and raise the troughs an inch or two above the floor. Fixed in this way all liquid splashed out of the troughs would immediately drain away from the pens out into the yards together with all the liquid voidings of the animals a gutter being laid just outside the pens in the alley to carry this away into the yards at fixed points. The pens would thus always be kept dry and clean. Dry food could be fed from the centre alley on to the dry floor of the pens. Instead of the floors of the pens being partially wood and partially ashes we would concrete the floor of the whole house before fixing the pens making provision by the insertion of posts at the proper places for the pen divisions before laying the concrete. This is the only effectual way to keep the floor of the pens level and dry. Hogs will root unless prevented by either concrete or stone and a floor rooted up is always more or less a wet one. The pens for breeding sows should have a fender rail 4x4 fixed 6 inches above the floor and 6 inches from the sides of the pen to prevent the little pigs from being crushed by being laid on. When the pigs are weaned they should live as much as possible out in the fields or hog lots and only require a shed for protection from sun and storms except in cold wintry weather when they should be kept in the pens in the house.

The following is the description above referred to:

A hog barn was erected a little over a year ago on the University farm which has proven to be very satisfactory in its arrangement, and as it was erected at a moderate cost, some facts concerning its construction will doubtless interest swine breeders who may contemplate erecting buildings at an early date. This barn, with yards and all complete, cost about \$400. It is 18 feet wide and 100 feet long, and contains a feed room at one end 16x18 feet and 16 pens 7x8 feet, with a 4-foot passage down the centre. Eight of these pens open directly into yards 8 feet wide and 50 feet long. These are intended primarily for brood sows and young pigs, in order that they may go out and enjoy all the sunshine and fresh air possible. The eight pens on the other side are intended primarily for the fattening of experimental animals. They could easily be utilized for breeding animals, if so desired, as the doors to each pen are exactly 4 feet wide and those on each side of the passage are swung from the opposite side, so when any two are open they form a complete runaway across the hall so that animals can be conveniently transferred from one side of the house to the other. The partitions between the pens are movable, so that if desirable one pen 7x16 feet can be made. The flooring extends under the troughs and covers 3 feet of the pens. The

troughs and flooring are laid on a heavy bed of coal cinders, which protects them from the damp and prevents their rapid decay. The flooring is made of 1½x12-inch oak planks, both for the stalls and for the hallway as well. The balance of the pen is kept well filled with coal cinders or bedding, according to the season of the year. The principal objection to coal cinders is that it makes white hogs look very unsightly, but for black hogs it does not make so much difference. As the hogs are fond of cinders and eat them quite freely, they answer a very useful purpose in the economy of the hog. The feeding troughs are 5 feet 9 inches long, 10½ inches wide and 10 inches high. They may be preserved almost indefinitely by lining with a single sheet of galvanized iron metal, which prevents them from becoming sour and infested with undesirable bacteria, which may later breed some form of disease. When covered with a single sheet of metal in this way they can be effectually sprayed, as can the whole building, once a week or oftener, with some disinfectant material. Gates 5 feet 9 inches long are swung over each trough. These gates are provided with a wooden slot and handle so they can be lifted up and held by the back side of the trough until the food is placed therein when the latch is again lifted and they are adjusted to a normal position. This keeps the hogs out of the trough until the food is properly distributed and saves much annoyance and loss of time and food as well.

A window is provided for each pen in the barn, and a door is placed directly underneath each window on the side opening into the yards. This gives 18 windows to the building, and as they are 2x10x3x4 inches with six panes 10x18 inches, they admit plenty of light and air. They are set in slots and can be moved to one side at will.

The sills and corner posts of the building should be constructed of 4x6s. The rafters should be 2x6s, and the studding 2x4s or 2x6s if special durability is desired; ½x10x12 siding should be used, and ½x2 inch battens. Matched flooring should also be used for the feed room. The building described is 8 feet high at the rear and 12 feet at the front. It has proven satisfactory in every way, providing an abundance of light and fresh air at all seasons of the year, and as it will house from 50 to 75 hogs, depending on the size, considering the first cost, it should prove a cheap and satisfactory pen.

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Don't turn the cows out in the cold autumn rains and storms.

Don't serimp the feed when the cows leave the pasture.

Don't milk with wet hands.

## The Poultry Yard.

### PREPARING FOR WINTER.

Now that work does not press so closely, just take a day off from farm work and give it to the hens. Have the house thoroughly cleaned, burn up all old nests and trash of every kind; repair all defective places and especially all broken windows and close up most of the ventilators. In winter very little ventilation will suffice to keep the atmosphere pure, and excess of it means roup and non-laying hens. When all repairs are completed, lime wash the house and nest boxes, mixing a little kerosene in the wash. Then put a good layer of fine gravel or sharp sand on the floor and cover with leaves or short cut straw. Cull out all old hens and surplus roosters and either sell or eat them. They will be non-producers at the time when the cost of production is the highest. Arrange to begin feeding every day a warm mash in the morning, made up of bran, corn meal and oatmeal in equal parts. Scald this and feed at once. When the morning is very cold add a pinch or two of black pepper or boil some red pepper pods in the water. See that there is always a good supply of fresh water in the troughs and in very cold weather this may with advantage be warmed just sufficient to take the chill off. Feed hard grain, wheat and corn mixed at night.

### HOW LAYERS ARE MADE.

If market prices follow the natural course of events there will be good prices ruling for eggs through November and December, and every one will want to be on the ground floor. To get there the first move will be to kill off all hens over eighteen months old: then out of the remaining year-old hens, and this year's pullets, select any that are known to be very poor layers and relegate them to the culinary department. The remaining stock is then the most suitable for egg producing. If there is an over supply of pullets and yearling hens remember that the May hatched pullets, if they have had good treatment, make the best fall and winter layers. The flock can then be reduced accordingly. Properly, the flock should be reduced to its working size by the twentieth of the month, and from then on can be crowded for profitable operations.

In connection with getting the flock into working order, the results of a trial at the Central Experimental Farm last year are interesting. On October 22d, seventy birds were enclosed in comfortable quarters with limited runs, and one hundred and forty-seven were left out to run over a large range. Winter laying had not begun in either lot, and both were fed

the same rations. At the end of November the enclosed lots had laid 192 eggs, and those having a large run had laid 132; the advantage very clearly being with those that were enclosed, and thus encouraged to begin laying. By the middle of December, however, laying was general in both flocks. The average age at which the pullets began laying was five months.—*Farmer's Advocate (Canada.)*

### WHY THE HENS DO NOT LAY.

The reason your hens do not lay any better is, I believe, you are feeding a too narrow ration. While many poultry raisers feed oats I do not use them at all now. The hens do not like them and will eat up everything they can get before they will eat the oats. I do not believe in compelling my fowls to eat what they do not want. Nature seems to have given an appetite to fowls for the kind of food the system calls for. The oats would be all right if we could dispose of the sharp pointed burr or husk. Corn and wheat are all right, especially the wheat. So are the green feeds; but if your mash is composed of nothing but bran it is not sufficient. Try a chop of fine ground oats, corn and wheat, with one and one-half pints of good meat meal to every three gallons of mixed soft feed, and above all give plenty of good, fresh water. I cannot agree with Mr. Clipp in regard to oyster shells. The laying hens are fairly ravenous for shell and if they are not constantly supplied will eat it like corn when they do get the chance. I find that if my yarded fowls do not have shell they will eat their eggs. A neighbor asked me what she could do to keep her hens from eating eggs, as they would eat every egg they could find. I told her to try oyster shells, and they quit at once. That woman will not do without shell at all. Before we went into the poultry business and made a study of it we would lose a large number of fowls with various diseases, mostly cholera, but since we use oyster shell on the inside and louse powder on the outside of the fowls we have not had a single case of cholera.—*National Stockman.*

### POULTRY SHOW IN RICHMOND, VA.

The Virginia Poultry and Pet Stock Association will have its annual exhibition in the Masonic Temple, Richmond, 23d to 28th November. The premium list is a heavy one, and the judges experts and reliable men. Dogs will also be a prominent feature at the show, under the auspices of the Virginia Kennel Club. See advertisement of the show in this issue. We would like to see a great success achieved. The poultry interest is now a great one in the South.

## The Horse.

### NOTES.

Richmond's third annual Horse Show was a grand success in point of attendance, the character of exhibits and financially, and interest never seemed to flag from the rise of the curtain on Tuesday evening, October 13th until the close on the following Saturday. The management of the Association made up of President J. T. Anderson; Vice-President Harry C. Beattie, Secretary W. O. Warthen, Manager C. W. Smith and others, were well pleased over the result and are already maturing plans for a show to be held on even a grander scale in 1904. And all of this in spite of the financial depression which has strongly affected Richmond. Well known stables from prominent northern centres were here in force with prize winners that have held their own at the big shows all down the line, but at that, Virginia horses made a grand display and their work on the tan bark brought forth unbounded applause. This, of course, applies mostly to hunters and jumpers, because harness horses like those exhibited by Dr. W. E. Woodend, Mrs. John Gerken, Mrs. James B. M. Grosvenor, G. Trowbridge Hollister, Mrs. A. E. Deiterich and others were of a very high class and able to compete successfully in any company, but even then home bred products were in evidence. The four-in-hand driving of the noted whips, Charles Fownes with Dr. Woodend's horses, and Jack Donnelly with those of Mr. Trowbridge and Mrs. Hollister was a revelation to Richmond audiences. Sidney J. Holloway, with his sister, Miss Maria Holloway, of Scarsdale, N. Y., brought down the well known hunters and jumpers, Chappie and Freelance and their horsemanship was simply grand. Howard Willet's, of White Plains, had the world's champion high jumper Heatherbloom, Toronto and several others in charge of Richard Donnelly. Heatherbloom was booked to jump against the record, but was drawn on account of the death of Mr. Willet's son and Donnelly sent his own horse Rifle over the jumps on Saturday night at seven feet, two inches. The display of Virginia bred hunters and jumpers was great, among them being Amaret, Hornpipe, Buck and others that have won at the big shows. Among the best known Virginia exhibitors were Chas. H. Hurkamp, Harry C. Beattie, T. L. Evans, J. B. McComb, Morris & Joslin, Mr. and Mrs. Blair Johnson, L. D. Passano Jr., R. M. Taylor, C. W. Smith, J. Stewart Bryan, Miss Louise Selden, R. C. Selden and others.



The largest winners at the Richmond Horse Show were Dr. and Mrs. W. E. Woodend, of New York, who are credited with \$1,750, but they had the large

stable here, numbering some 16 harness and saddle horses, while Mrs. James B. M. Grosvenor followed with \$750, G. Trowbridge Hollister, with \$725, Mrs. John Gerken with \$520, Thomas Deford with \$300, Charles Pfizer with \$250, R. M. Taylor with \$175 and Mrs. A. E. Deiterich with \$250. These were from a distance but Virginia horses did well and their owners stand credited as follows: E. A. Saunders, \$325, Garber & Garber, \$175, John Kerr Branch, \$200, W. E. Boeing, \$150, Mr. and Mrs. J. Stewart Bryan, \$247.50, T. L. Evans, \$183, L. D. Passano, Jr., \$167, D. B. Tennant, \$112.50, McComb & Snyder, \$150, Hon. Henry Fairfax, \$100, John H. Selden, \$100, B. S. Forbes, \$100, Mrs. Blair Johnston, \$150. In this list the most noteworthy winners are Mrs. Blair Johnston with Robin Adair and Lord Chesterfield, both of whom were in the saddle classes, and Charles H. Hurkamp, who only had three horses and was here three days. Amaret, Hornpipe and Alan-a-dale made up the Hurkamp stable. Three blues and a couple of red ribbons went to Amaret, one blue to Hornpipe and Alan-a-dale, a green horse, followed with one yellow ribbon.



Through an advertisement in the PLANTER, which in passing I may add is excelled as an advertising medium by no journal in the land treating on similar subjects, to which replies were received from widely different sections, I have sold to W. C. McMackin, superintendent of the speed department of the North Carolina Agricultural Society, Raleigh, the bay stallion Whalebone, 7872, by Abdallah Wilkes, son of George Wilkes; dam Molly O, by Abdallah, 15, the sire of Goldsmith Maid 2:14; the famous sires Almont, Belmont, etc. Mr. McMackin will drive Whalebone on the road and use him in the stud. The son of Abdallah Wilkes has size, finish and good looks, and his get take after him. Five of his daughters were bred in the spring to Pilot Medium, Jr., 2:09 3-4, who holds a world's record to cart; and to D. C. Lester, sheriff of Polk county, Hatfield, Arkansas, the brown colt Featherbone, 38363, foaled May 27, 1902, by Whalebone, dam Aleyrene, 2:27 3-4, trial 2:19 1-4, by the famous dead Aleyone, 2:27. This colt is well formed, handsome and of nice size, while his action and gait betoken both speed and race horse quality. Featherbone was purchased by Mr. Lester to place in the stud. His dam, Aleyrene, I sold last spring to M. W. Savage, owner of Dan Patch, 1:59; Directum, 2:05 1-4, etc., and she is now a member of the great band of brood mares in his stud. Aleyrene was bred to Directum.



That ever popular and meritorious organization,



the Deep Run Hunt Club is evidently taking on new life, as a meeting was recently held at the Westmoreland Club and matters of importance discussed, while officers for the ensuing year were elected. The Hunt Club has played an important part here since its organization more than a decade since, not only socially, but in stimulating an interest in well bred horses and creating a demand for hunters and jumpers, likewise in the development of such, and drawing the attention of the outside world to Virginia's splendid resources in that direction. It is likely that the present headquarters of the club may be changed at an early date and other sports, including shooting and golf, added. A number of members are favorable to having a country club house out on the Cary street road and the impression prevails that the Hermitage Club and Hunt Club are likely to unite in securing a home. The officers elected: President, Cotesworth C. Pinkney; Vice-President, W. Otto Nolting; Secretary and Treasurer, Major P. A. Wellford; M. F. H., Mr. Harry C. Beattie; Board of Directors, Messrs. Joseph Willard, J. Stewart Bryan, Harry C. Beattie, J. T. Anderson, Frank W. Christian, Carter W. Branch, H. S. Hawes, Barton H. Grundy and Dr. J. A. White.



At the sale of imported thoroughbred brood mares, yearlings and weanlings consigned by Douglas H. Grand, of Kent, England, and sold under the management of the American Blood Stock Agency at the American Horse Exchange, New York, October 2nd, Robert Neville, Welbourne, Virginia, was among the purchasers and secured the following: Cashla, chestnut mare, 11 by Bend Or, dam Ashgrove, by Albert Victor, \$500; chestnut filly, weanling, by Queen's Birthday, dam Cashla, \$50; bay colt, weanling, by Freak, dam Sunspot, by Prism, \$100; chestnut filly, weanling, by Carleton Grange, dam Claire, by Lowlander, \$75; bay colt, weanling, by Missel Thrush, dam Armoury, by Mouron, bay filly, weanling, by Earwig, dam Ravello, by Sir Hugo, \$75; chestnut colt, yearling, by El Diablo, dam Australian Gold, by Bendigo, \$175.



Capt. Edward R. Baird, breeder of thoroughbred harness horses, hunters and jumpers at Epping Forest Stud Farm, Occupacia, Va., writes me that he is well pleased with the condition of his stock, all of them on the farm. The thoroughbred department includes the brood mares imp. Pleasure, a chestnut, foaled 1889, by Fortissimo, dam My Beauty, by II Gladiatore, bred to Judge Morrow, and Niofe, by Eolus, dam Nita, by imp. Billet; bred to Chiswick, Lotus Lilly, bay filly, yearling, by imp. Water Level, dam Evangeline Cisneros, by Eon; Iron Prince, chestnut colt, yearling, by Chiswick, dam imp. Pleasure, and Kepstone, black colt, weanling, by Iron

Crown, dam imp. Pleasure. Capt. Baird also has some good looking half bred from standard bred mares, among them a couple of handsome geldings 4 and 5, which are being driven to pole.



Mr. Chamblin's Lucky Clover, bay gelding, 5, by Flatlands, dam Lucky Clover, by Bersan, certainly won the title of our champion steeplechaser by winning the great \$10,000 steeplechase at Morris Park, New York, on October 3, with 167 pounds on his back and defeating the best horses in training, among others the well known Self Protection, a winner of this event last season and who was once regraded as a likely candidate for English Grand National honors. Land of Clover was bred by J. H. McGavock, Fort Chiswell Stud, Max Meadows, Va., and sired by Flatlands, the son of imp. Woodlands and Maggie B. B., dam of Iroquois. Flatlands heads the Fort Chiswell Stud and has sired among other winners this season Callant, Miss Liza and Old Mike, all of whom were bred at Fort Chiswell. Callant is owned by C. D. Hutzler, of this city, for whom he has won some good races at the Chicago tracks.



At famous Belle Meade Stud's dispersal sale, which took place recently at New York, the former noted race mare Ma Belle, a product of the Ellerslie Stud, by imp. Charaxus, dam Ada Belle, by Molus, was purchased by R. C. Brien for \$1,050. Ma Belle is 15 years old and has been a matron at Belle Meade for some years past. The Belle Meade horses were sold in New York and the highest price obtained was \$15,000 for The Commoner, chestnut horse, 11, by Hanover, dam Margerine, by Algerina, the Virginia bred son of Abdel Kader and famous Nina, by Boston.



The Tranter-Kemney Company, of Lexington, Ky., offered a prize of \$25 for a name best suited to the yearling colt by Jay McGregor, dam Millionaire, by Norwood. Something like one thousand names were submitted from many different sections, but the prize went to J. H. Wingate, City Engineer, of Roanoke, Va., who chose the name Plutoerat and got the prize.



President J. T. Anderson, of the Richmond Horse Show Association, is authority for the statement that the profits of the recent exhibit here were \$10,000. The total expenses were \$20,000 and the receipts from all sources reached \$30,000, thus leaving quite a nice balance on which to do business next year.



Dan Patch has again beaten the record, having gone the distance at Memphis on the 22d October in 1.564, and this without a wind shield in front of him. Records are now being smashed so rapidly that we cannot keep pace with them.

BROAD ROCK.

## Miscellaneous.

### COURT DAY IN VIRGINIA.

This old institution of the State is now almost a thing of the past. In a few months, under the provisions of the new Constitution, the county courts will be abolished and circuit courts held at longer intervals will take their place. We rejoice at this change. It is one which we had long advocated. There was no reason whatever why the taxes of the people should be expended in maintaining 100 county court judges with the necessary staffs, when a much less number could easily discharge the duties. Economy and efficiency both demanded the change. Whilst, however, we rejoice in the abolishing of the courts, we do not wish to see the gathering of the people together on the court days abolished. In order that this may not follow, we suggest that the county authorities and the people should, before the new Constitutional provisions come into operation, meet on a court day and make the necessary arrangements for continuing the court days as monthly markets at which the citizens of the counties can meet and dispose of their live and dead farm products. In England every county town and most other towns in the counties, have a certain day in each week which is known as "market day." These are old established institutions, many of them dating back hundreds of years. On these particular days, and also on two or three other days in the year, known as "fair days," the farmers bring in their produce of all kinds and dealers and buyers from all over the county and from adjoining counties and cities attend to buy the same. In this way a large business is done, every one knowing that buyers and sellers will be there for products of every kind. There is no reason whatever why this same system of markets and fairs cannot be established here, and usefully take the place of the old "court day," affording an opportunity much needed, of a place to buy and sell, and also for the meeting of the people to discuss business and local and national questions. The County Board of Supervisors and other county authorities should arrange their meetings so as to be held also on these market days, and thus aid in establishing the market by bringing the people together. We commend this suggestion to the attention of the authorities and people of each county, and shall be glad to hear the views of the people on the subject. In the words of the good old Book, we would say: "Forsake not the assembling of yourselves together." There is not much

isolation amongst farmers already. Get together and correct this.

### ICE HOUSE BUILDING.

We have several enquiries as to the building of an ice house, and as to whether we advise a house above ground or a pit in the ground as a storage place for ice. In reply to these, we will say that we strongly prefer a house above ground to a pit for many reasons. In the first place, it is easier built than a pit is dug. In the next place, it is more economical and saving of ice than a pit, and it is also easier to fill and to empty. A house for keeping ice should be built on high, dry ground, with easy means of good drainage, for upon perfect drainage of water from the ice, and good ventilation over the top of it, depends largely the economical storage of the article. The other conditions requisite for success in storing is such a house as will effectually exclude the air from the ice and maintain an equable low temperature. The best ice house, is practically a house within a house. The space between the inner lining and the outer house should be from 12 to 15 inches, and this space should be packed tight with sawdust or some other non-conducting substance, but sawdust is usually the cheapest and most easily obtained. This double wall feature should be extended to the roof, which should be also double and packed like the side walls. Double doors should also be provided, and the intervening space be packed with bags of sawdust when the house is closed. The floor should be raised a few inches above the ground level, say 6 inches, and should be laid with battens an inch apart to permit of drainage from the melting ice. The water thus draining from the ice should be drained away from the house by a pipe drain, which should have a bend in it, which will hold water the full circumference of the pipe, so as to completely exclude air from the ice house. In the gables of the roof there should be fixed two ventilators, which will carry off all heated air from the top of the ice. As the ice is filled in it should be chucked with ice between the blocks and should be covered with 12 or 15 inches of sawdust, over which should be spread a thick covering of marsh hay or fine ent straw. Ice weighs about 50 pounds to the cubic foot, so that it is easy to calculate what size of house is necessary when the daily consumption is known. A house 10x10x10 will hold 1,000 cubic feet of ice,

or about 25 tons, this after allowing for wasting by melting will provide 200 pounds per day for 150 days, an ample supply for a large household and for a dairy. If the ice house can be built on the north side of other buildings overshadowing it or under a large tree it will be desirable to build there, as these will protect it from the rays of the hot summer sun, and thus save ice.

### KEEPING BEES.

*Editor Southern Planter:*

Every progressive farmer should have a small apiary. Besides the profit in bees, there is a satisfaction in caring for them and studying them scientifically. I say "scientifically," for I should not advise any one to keep bees in any other way. Books and periodicals on bee-keeping, and standard bee materials, are so accessible and cheap in these days that obsolete and makeshift methods are out of the question.

One or two colonies are enough to start with, for it will take some time to become expert enough to handle a great number with success. Any of the first class modern hives will do. The simplest are generally the best. Avoid all fancy, trick hives, and don't make the mistake that I did in getting more than one kind, whose parts will not exchange. Of course, you should have the frame hive, which you can open at any time for the purpose of ascertaining the condition of your bees. There will be a brood chamber below occupied by the bees as a permanent house. Above this is a smaller story, called the super, in which they will deposit all surplus honey which falls to the share of the master. In the lower story the brood frames extend the whole length of the hive, while the upper story is filled with small section frames about large enough to hold a pound each of comb honey.

Modern beekeepers have a great many appliances, some of which you will find very necessary, while others are not. A smoker is very essential. You also want a bee veil of fine material as a protection against stings. A pair of cheap buckskin gloves is not amiss, though you will soon learn to do without them, as I did. If you deal gently with your bees and smoke them properly, there is little danger of stings.

The bee yard should be near the house, where swarms may be seen as soon as they come out. Otherwise they will often get away without your knowing it. The bees should be fenced off in a little inclosure

to themselves. This is to ward off stock and protect the bees from disturbance. It is well to have some shade for each hive, though either very much shade or very little is not best. The stands should face the south, and, if in the edge of an orchard, so much the better. Bees and fruit go well together. The bees carry pollen from bloom to bloom, and make them fertile, while the blooms in turn afford honey for the bees.

While it is not necessary to be working with a small number of bees continuously, they should never be out of mind. They require some attention in all seasons. In the early spring there will be weak colonies, which will require feeding. Late in the fall, if the lower story is not sufficiently packed with honey for winter, it is again necessary to feed, and thus replenish the stores. All through the warm season the combs of the brood chamber should be examined every three or four weeks to see if they contain eggs or brood. If they do not, the colony is probably queenless. In that case a new queen must be introduced, or else you should put in frames of combs containing eggs from other hives. From these the bees will raise a new queen. If this is not done, the colony will soon die out from want of new bees, for bees live but a short time—only a few months at longest. In getting my experience, I let two colonies die, and I now feel sure that they had become queenless.

About fifty years ago the Rev. L. L. Langstrath invented the modern hive, with movable frames. He may be called the greatest of beekeepers, and his motto was: "Keep your colonies strong." If this is done, you need not have much fear of the result. Moth worms cannot hurt a strong colony. They only take possession as the colony weakens down and dies out.

The main honey flow comes early in the season for most parts of the country. Orchards and white clover usually furnish the principal crops. Sourwood and chestnut blooms are valuable pasture. The poplar, or tulip tree is a rich honey producer in the South. Cotton, cow peas and buckwheat are perhaps the best crops on the farm to produce honey as a by product. It will scarcely pay to sow any crop as a honey producer alone. Many weeds afford good bee pasture. Spanish needles, bonaset, stick weeds (asters) and golden rod are our main dependence late in the summer and fall.

Bee pasture is not equally good in all parts of the country. The most honey is produced in the buckwheat districts of New York and the alfalfa fields of

the Rocky Mountain region. The wild sage of California is also rich in honey. Apiaries in these sections of the country are very profitable. The product of a single season often reaches many tons, and brings in several thousand dollars to a single producer. Texas is perhaps the best honey State in the South.

*Knox Co., Tenn.*

T. C. K.

## TOBACCO MARKETS.

*Editor Southern Planter:*

Permit me, through your columns, to appeal on behalf of Virginia tobacco growers, to the Legislature to enact some statute to regulate the sale of leaf tobacco. Some years ago when all warehouses were bonded, we only had to pay 3 per cent., and we had a State officer to see after citizen's or producer's interests. Warehouse men went before the Legislature and represented that this State officer was a useless burden on the good people, and if done away with they would sell tobacco at a less cost. The Legislature (as they usually do in such cases) heeded them, and immediately there sprang up in every little town tobacco warehouses, and they have gradually increased their charges until now they charge about what they choose. This seems to be the schedule: 10 cents per 100 for weighing, 25 cents per pile auction fee (they boast they sell 6 piles per minute, \$1.55 per minute, made by a man they hire at \$10 per month sometimes, as I understand), and after charging as above, they charge 2½ per cent. on gross sales for handing over the money. Taking the entire crop, I suppose this amounts to about 25 per cent. of what it brings. Of course, when the tobacco is good and sold in large lots this percentage is reduced, but as the bulk of the crop is sold in small lots and comes in the low grades, the charge is large. Tobacco is different from any other product, as all we can do with it is to sell it, and there are so many people dependent on that crop for a livelihood, it should be legislated about as milling is. If I send a load of grain to market, all I am charged by the commission merchant is 3 per cent., for a crate of eggs, coop of chickens, or other country produce I am only charged 5 per cent., and it is certainly twice as much trouble to handle these small articles as tobacco. This legislation would help both the merchant and manufacturer, as the farmer's purchases are generally only limited by his purse. Virginians pay warehouse men about \$2,000,000 annually for selling tobacco. A warehouse with a good custom is a veritable gold mine. Three per cent. is all they ought to be allowed to charge, and they can make good money at that.

*Mecklenburg Co., Va.*

THOS. H. ORGAIN.

We doubt much whether such legislation as is sug-

gested would be desirable. We hold strongly to the opinion that the less legislation there is interfering with the free choice of a man as to his manner of conducting his business or himself, so long as he does not injure his neighbor by his conduct, the better it is for all. With a multiplicity of warehouses such as now exist free competition should give better results than limiting the opportunities for selling. Why should not the tobacco growers organize themselves into an association like the Sweet Potato growers of the Eastern Shore have done and then sell their own produce in their own warehouses on their own terms. If there be the profit in conducting warehouses, which our correspondent asserts there should be no difficulty in doing this. Better regulate terms of business by organization than by legislation. It is easier done, and they can then be altered or abolished whenever desired by those who are primarily affected.—Ed.

## FARMING AS A BUSINESS.

(The following article was prepared and read before a recent Farmers' Institute at the Agricultural College, Miss., by Mr. W. B. Mercier, of Centreville, Miss. Mr. Mercier is an old time subscriber to and reader of THE SOUTHERN PLANTER, and a successful farmer and business man.)

*Mr. President and Gentlemen:*

The most hopeful sign of the times, from an agricultural standpoint, is the general recognition by thinking men of the importance and necessity of brains in our farming classes. The old theory that any fool can farm, and when any one fails in another calling he may take up farming and succeed, is now regarded as an insult to the farmers. Farming, as a business, was instituted by the Creator Himself. It has been recognized as an indispensable and important occupation by the greatest men. But it is only recently that farming has begun to take precedence over the professions. We, as farmers, should never be satisfied with anything short of the leading place for it; for upon its successful pursuit all other callings must of necessity depend for their very existence. Farming as a business is fast attracting the attention of our greatest thinkers and financiers, and we rejoice to see numbers of our brainiest young men remaining upon the farm and putting forth all their energies to build up this long neglected vocation. The successful farmer is now looked upon as the shrewdest business man of his neighborhood. This is just to his ability, as no other occupation requires so broad a range of strictly business forethought and mental work in the general arrangement of its plans. Nothing else offers such a great opportunity for the development of a truly great business career.

We believe there is no other place on earth to be compared with the farm in our beautiful South-land, and especially in the State of Mississippi for opportunities and inducements to any thorough-going business-seeking young men. Farmers, as a class, are fast commanding the respect of the world, and are rapidly taking their places along with the most advanced men of our time, intellectually, socially and financially. Therefore we are called upon to put forth every effort and to assume the lead in all the affairs of State which the natural position of our business requires of us.

To insure the greater success for our young men, they should have a thorough course in an agricultural college, where the theory as well as practice of modern scientific farming may be learned. In the case of older men, whose circumstances and environments preclude the possibility of such a course of study, we recommend the careful reading of several good farm papers along with the various Experiment Station bulletins from our own State institution and from the United States Department of Agriculture, at Washington. By all means they should attend the farmers' meetings, foremost, and, we think, the most successful of which are Farmers' Institutes, which have recently become so popular throughout the country. These institutes are now held at various points through the State, so there is scarcely a farmer who cannot easily attend one of them. No one can attend a session without coming away with some new and useful idea about some part of his farm work. We would, however, warn the college graduate of the dangers of theoretical farming without the ability to substitute at any and all times the more staple and reliable art of practical work. We have found from actual experience that many beautiful theories in farming will not pan out in practice, and unless a man has common sense enough to choose and apply practical methods in conjunction with theories, in all farm work he had best follow something else.

The application of strictly business principles to all lines of farm work has been, and still is, the crying need of the day. We can no longer succeed by the old slipshod methods, any more than a doctor or lawyer can succeed by applying the methods of his forefathers. Plans should be laid out for a series of years, often as much as ten years ahead. We must, of course, be governed by circumstances in the ultimate carrying out of these plans. Constant changes and revisions must be made to meet the ever-changing demands of the hour. No iron-clad rules can be laid down for any branch of work on the farm, no more than any one medicine can be prescribed for all diseases, for no two seasons are alike, consequently what would be good one year in working a crop could not be done at all the next. The business farmer must know when and how to prepare and cultivate his

soils. Use only such fertilizers, and in such quantities, as are best suited to each crop. Grow the crops that require the least expenditure of labor and money for the largest profits. Sell what one makes at the highest price and buy only the best at the lowest prices possible. Raise only the best stock and these from good specimens of the chosen breed. Save everything grown that can be utilized as feed, and return the same to the land from the barnyard and stables.

Preserve the fertility of the soil regardless of other things, for upon this will depend final success or failure, as no man can prosper on the proceeds of a constantly decreasing capital. Our farm lands are our only capital. If we study our business, adopt the best known methods, grow only such crops and stock as will give the greatest returns for the money and labor invested, nothing will keep us from attaining the highest ideal in farm life. The mere fact that so many make a reasonable success at farming in the old way is conclusive proof that no other occupation under the sun is so sure of handsome returns when followed upon purely business principles. Sum up the drains and small losses on the farm under the ordinary management, and we can readily see that no other business could sustain half the loss and survive.

Another serious problem facing the agricultural interest of our State and country is that of labor. It grows scarcer and less reliable each year. This can be partially met, and perhaps successfully so, by substituting crops that can be grown and harvested by the use of improved machinery, and turning out more of our thin lands to pastures for growing more stock. The farmer who first foresees and adopts this plan will live to rejoice in his good judgment. There can be no denying the fact that the peaceable and successful employment of the negro as our only farm help will soon be a thing of the past unless some more stringent laws for his management and control can be devised.

Diversified crops must be grown to insure permanent prosperity. The man who has something to sell at all seasons of the year can always be pointed out in a community as the man who is prospering. He soon learns when and what to raise for sale. He buys the best from his neighbor, who, through ignorance of the market or carelessness in his management, is glad to sell at any price in order to eke out a mere existence. The well-informed man very frequently reaps his greatest profits from stock and other produce bought from this thriftless neighbor at low prices, and sold at a profit when such produce is in demand at the highest market prices. Every wide-awake business farmer keeps books, and can at a moment's notice tell what crop has paid a profit and what has not. Strict accounts are kept of every business transaction during the year, so when the season for balancing ac-

counts comes up he can see where he stands financially as compared with the year before. No farm can be run properly without a system of good bookkeeping, and each day's transactions, as well as the work, kind of weather, and anything of note may be recorded. We have found nothing in which this can be done so concisely, yet correctly, fully and conveniently, as what is sold as the Farmer's account book and farm record, published by E. A. Böhne & Sons, Hansen, Neb. This book is handsomely bound, containing a record for three years. It is ruled off and arranged to contain any and everything which may need recording on the farm, from a map of farm to the smallest itemized accounts with laborers or tenants. At the end of each year there is a blank for balancing up the year's account, and if your book has been properly kept it is only a few hours' work to give a detailed statement of the entire year, from which can be easily drawn conclusions as to what line of farming is most profitable to follow.

While we have heretofore, as a State, adhered to the all cotton plan, except in a few communities, it is gratifying to note the growing tendency to raise other crops enough for home consumption at least. We note with pleasure that where the change from all cotton to diversified crops has been greatest there is the more general indication of thrift and prosperity among the people. We are pre-eminently a cotton growing State, and are likely to continue as such for years to come, but it is apparent to any observing farmer that we can raise profitably all our food stuff and plantation supplies, and at the same time grow just as many bales of cotton as we now do on half the land now devoted to growing it. We admit that the high price of cotton now has a tendency to make us loose our heads along this line, but if we stop to consider the relative high prices of other farm products we can easily see that many other things can be grown at a much greater net profit. Take, for instance, the price of meats for the past two or three years, and consider how cheaply hogs and cattle can be raised with the foods to finish them for the market, and we will have some idea of the bank accounts we might have had if we could only have been shrewd enough and had nerve enough to break from our old idols and have taken up the new.

We have a neighbor who last year raised \$1,000 worth rice on 16 acres of land with about 3 hours labor each day from the time of planting until ready for harvesting. The preparation of land and harvesting was done with improved machinery at the minimum cost. After tending his land he had only to turn a creek into his ditches to irrigate the whole plat. The keeping up of these terraces and changing water gates was all the labor needed in growing the crop. This year his prospects are finer than last, with the additional satisfaction that the cost of labor

has been still further reduced, and the original area enlarged. The same party raises hogs for market at a cost that would astonish an old cotton veteran. You had as well talk to this man about flying as to try to induce him to grow cotton. He is sharp enough to see how cheaply he can grow these crops, and he has easily figured what it cost to grow cotton. By growing these crops he finds time to improve and beautify his farm and home, and he is not rushed to death 12 months of the year like every cotton farmer.

All of us are not situated to grow these special crops as this man, but many of us are, and it seems like folly not to raise them when we are assured that we are taking little risk as compared with cotton. We must not fail to call attention to the bearing organizations among farming communities have upon their business standing. This is a day of organization and counter organization. No business or profession is without them, and when every one adopts a thing there must be some good derived from it. The farmer cries out against organizations in other enterprises, but fails to realize that it is possible for him to organize into a body that could defy the world. Since we have trusts and combines with us, and they are here to stay, would it not be a sensible proposition for us to stop complaining and play them at their own games? If we will combine properly, it is in our power to regulate freight rates, taxation, buy and sell our products at wholesale, thereby cutting out the questionable profits of middlemen and commission men. We could fix a uniform and reasonable price on our farm products, and in hundreds of other ways take our business affairs into our own hands. This would stop every other vocation from fleecing us, and we would cease to hear the cry of oppression from the agricultural part of our land. We read of where combines among farmers in the West have resulted in great benefit where they have handled all their business themselves. In some instances they have actually run the trust out of business. This only serves to illustrate the power we could exert by combined effort. But as long as we are cursed by the credit system in vogue throughout the South we need not hope for financial freedom. This evil can be eradicated by us, and until we arouse ourselves along this line and begin to examine into the business principles which underlie our farming interest we need not expect the universal prosperity and goodwill which might reign supreme among us.

It is a generally accepted theory that we have not sufficient capital at command to develop our agricultural interests to the highest degree. All of us realize how handicapped any farmer is without sufficient money at hand to carry out his best plans and ideas to a successful business end. We must demonstrate to those who have money to invest that there is no business that returns such sure profits on the investment,

when properly managed, as farming. When we succeed in establishing this fact to the satisfaction of the moneyed men of the country we will have no further trouble in finding plenty of money at cheap rates of interest to be loaned on good farm security. When we consider that often our crops are cut off 50 per cent. in one year, and that frequently we suffer losses in stock and property that would bankrupt any other line of business, there should not be any great difficulty in proving to the capitalists of our country that no security is so good or certain for a term of years as a good farm with a wide-awake, business-like farmer in control.

W. B. MERCIER.

*Centreville, Miss.*

### A CHANCE FOR AMERICAN FARMERS—MONEY IN GOATSKINS.

A new industry is offering itself to the farmers of the United States. The fact that twenty-five million dollars' worth of goatskins are now annually imported into the United States, and that her enterprising manufacturers are obliged to send halfway around the world for a large share of them, suggests that the farmers of the country have a great opportunity to put a large share of this sum into their pockets.

A statement just presented by the Department of Commerce and Labor shows that importations of goatskins into the United States are now running at the rate of twenty-five million dollars per annum, and that a large share of these are brought from India, China, Arabia and southeastern Russia. The increasing popularity of certain classes of kid leather for footwear, as well as gloves, has increased very greatly the demand for goatskins in the United States within recent years. In 1885 the value of goatskins imported was about four million dollars; by 1890 it had grown to nine millions, by 1898 it was fifteen millions, in 1900 it was twenty-two millions, and in 1903 twenty-five millions, in round numbers.

Of this large sum of money sent out of the country to purchase goatskins, seven million dollars went to India, nearly two millions to China, two and one-half millions to France, two and one-half millions to Russia, one and one-half millions to Brazil, one million to Argentina, and another million to Arabia. From India, which took less than five million dollars' worth of merchandise of all kinds from the United States last year, and has increased her purchases from us less than two million dollars in a decade, we have increased our importations of goatskins alone from two million dollars in 1892 to seven and one-half million dollars in 1902. From Brazil, which has reduced her imports from the United States from fifteen million dollars in 1895 to ten million dollars in 1903, our purchases of goatskins last year were one and one-half million dollars. France, Russia, the United

Kingdom, Turkey in Europe and Turkey in Asia, Arabia, China, southern Africa, Argentina and Mexico also contribute liberally to the supply of goatskins to make up the twenty-five million dollars' worth of this product brought into the United States annually.

The farmers of the United States are apparently making no effort to reap any part of this golden harvest for themselves. The census of 1900 showed the total number goats in the United States to be less than two millions, and when it is understood that the skins of probably twenty million goats were required to make the twenty-five million dollars' worth imported last year, it would be seen that the supply from the United States could have formed but a small share of the total consumption. Yet the fact that a large share of our supply of this important import comes from India, China, France and Mexico suggests that there are large areas in the United States which might produce goats successfully, and in sufficiently large numbers to supply the entire home demand.

### GOOD ROADS.

WHY FARMERS SHOULD FAVOR GOVERNMENT CO-OPERATION.

By Col. J. B. Killebrew.

The rapidity with which the sentiment in favor of national aid to the common roads of the country has spread, and the eagerness with which the proposition is welcomed since the introduction of the Brownlow bill in Congress have not only been highly gratifying to the friends of the measure, but surprising and astonishing to its opponents. The truth is, the great body of the farmers of the land are slow in demanding what they are justly entitled to. Had the same necessity as the want of good roads among farmers existed in relation to the manufacturing, mining or commercial interests of the country, such a necessity would have long since been recognized and met by adequate appropriations from Congress. The tillers of the soil do not work for their own advancement. By the census of 1900 the whole number of people above the age of ten years engaged in gainful occupations in the United States was 29,074,117. Of this number 10,331,765 were engaged in agricultural pursuits. No other specified occupation employs so many. The manufacturing and mechanical pursuits employ 7,085,992 persons; trade and transportation, 4,766,964, and professional service, 1,258,739. And yet, the farmers of the country, that contribute more to its permanent prosperity than all other classes combined, have the smallest amount of consideration in the matter of Congressional appropriations. In all the history of the past legislation of the country

but few efforts have been made to equalize the benefits of Congressional appropriations. Until the rural mail routes were established a citizen living in the country rarely received direct benefits from the money expended by the general government, except that for the agricultural department.

The commerce of the country felt the exuberance of fresh and lusty life and vigor from the improvement of the rivers and harbors, but this exuberance would have been vastly increased had half the money appropriated for rivers and harbors been applied to aid in the improvement and maintenance of the public roads, the very foundation of commerce.

It must not be imagined that anyone proposes that the government shall enter upon the work of building public highways without the co-operation of the State, county or other political sub-division. The policy of the government should be to help these communities that help themselves: to stimulate action and enterprise rather than to repress it by appropriating money to those communities that do nothing for themselves.

#### A CORN EXHIBIT.

At a recent meeting of the Virginia St. Louis Exposition Committee it was decided to make a corn exhibit of not less than one thousand bushels in the ear.

As an aid in locating fine corn crops and to stimulate interest in this exhibit, the commission will give \$20 as a prize for the best 100 ears sent in by any competitor with the understanding that all competing exhibits are to be donated to the corn exhibits.

Competing corn should be shipped in tight boxes or barrels to George E. Murrell, superintendent, No. 14 Governor street, Richmond, Va., C. O. D., by freight, on or before December 1st of this year.

Corn exhibits of from one bushel of ears to a flour barrel full of a kind, and of as many varieties as possible are desired. And as Virginia has a fine crop, it is hoped that corn growers, whether competing or not, will send in shipments which in each case must bear the grower's name, and thus by united effort show what Virginia can do in this line.

#### VIRGINIA TOBACCO GROWERS TRYING TO ORGANIZE.

A large number of tobacco growers and business men met recently at Boydton, in the court-house, and organized a tobacco growers' protective association. Two organizers were appointed who will organize associations in every section of the county and endeavor to induce 80 per cent. of the tobacco growers to pledge themselves to abide by the rules and regulations of the officers of the association.

One of the first things that will be attempted will be to reduce the acreage cultivated in tobacco. This will have to be done by a general and uniform system, so that no more tobacco will be raised than is required each year. It is intended to hold a state meeting in Danville some time in November, to be attended by delegates from all the tobacco growing counties in Virginia, when an effort will be made to devise some uniform plan of work throughout the state.—*American Agriculturist*.

#### Grass for Name.

I enclose a sprig of grass like I sent some time ago when you advised me to send you a seed pod and bloom. I could not send it sooner as it is only just blooming out now. Please state in your next issue what it is and if it is of any value. J. G. Cox.

*Carroll county, Va.*

The grass is one of the "Nimble-wills" (*Muhlenbergia Mexicana*). It is a native perennial of the Eastern United States. It is a very late grass not especially relished by stock and of little economic value.—Ed.

#### How to Get Rid of Fleas.

Subscriber, Wythe county, Va., asks how to get rid of fleas. As the domestic animals, especially dogs and cats, furnish the principal supply to the house, it is necessary to keep such animals clean of fleas, which can be done by applying oil of pennyroyal liberally in their fur. Stand the animal to be treated on a large sheet of paper so as to catch the fleas as they fall off. Then roll the paper up closely and burn immediately. Work rapidly, as the fleas soon revive after falling off the animal.

FREDERICK HUTCHISON, M. D.

*Loudoun Co., Va.*

#### THE EGG LAYING CONTEST.

Australian hens are still being beaten on their own ground by the three pens of American fowls which Miller Purvis, of Chicago, caused to be entered in the egg laying competition at the Hawkesbury Agricultural College, near Sydney. Seventy pens of six hens each are competing. It is learned that the invading flocks hold first, third and seventh places in the competition, which was started last April and will continue until March. With a record of 270 eggs in the first four months, six hens from Nebraska lead their nearest Australian competitors by thirty eggs. At the end of the present contest, another competition will be inaugurated with 100 pens entered—ten from the United States, ten from England, three from Canada, three from New Zealand and the rest from Australia.



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**SWEET POTATOES.**

I have reasons for believing that at least a portion of the orders for my sweet potato pamphlet failed to reach me. Therefore any person whose order has not been properly filled, will please address me at Carthage, N. C.  
BRYAN TYSON.

**PUBLISHER'S NOTES.**

**TO ADVERTISERS.**

All advertisements and matter pertaining to advertising must reach us by the 25th of each month. Please bear this in mind.

**Liberal Subscription Offer.**

To induce non-readers of the SOUTHERN PLANTER to become subscribers, we beg to announce that all new subscriptions received between this time and December 1st will be given the remaining numbers of this year free. In other words, 50 cents will pay for a subscription from now until December 31, 1904.

Our regular subscribers, upon whom we have called so many times, will confer a favor, which will be reciprocated at any time, if they will bring this offer to the notice of their friends who are not subscribers to the SOUTHERN PLANTER.

**WHERE HE CROSSED THE  
EQUATOR.**

As one of the very few occasions when the wit of Rufus Choate was foiled, an incident is recalled when that brilliant lawyer was examining one Dick Barton, chief mate of the ship "Challenge." Choate had cross-examined him for over an hour, hurling questions with the speed of a rapid-fire gun.

"Was there a moon that night?"  
"Yes, sir."  
"Did you see it?"  
"No, sir."  
"Then how did you know there was a moon?"  
"The 'Nautical Almanac' said so, and I'll believe that sooner than any lawyer in the world."  
"Be civil, sir. And now tell me in what latitude and longitude you crossed the equator?"  
"Ah, you are joking."  
"No, sir, I'm in earnest and I desire an answer."

"Indeed. You a chief mate and unable to answer so simple a question!"  
"Yes, the simplest question I ever was asked. I thought ever a fool of a lawyer knew there's no latitude at the equator."—Success.

**WOOD'S SEEDS.**

November is the best time to plant

**Hyacinths, Tulips, Lilies, Crocus and other Spring Flowering Bulbs.**

We carry full and complete stocks of all the best varieties. Our Fall Catalogue gives descriptions, prices and tells how to plant.

Catalogue mailed FREE. Write for it.

**T. W. WOODS & SONS,  
SEEDSMEN, Richmond, Va.**



**"How to Grow Paper-Shell Pecans,"**

FREE. Best varieties in U. S. True to variety. Gions cut from bearing trees by member of firm. Full descriptive Catalogue of ALL FRUIT trees, free

B. W. STONE & CO., Thomasville, Ga.

**Virginia Polytechnic Institute  
STATE AGRICULTURAL AND MECHANICAL COLLEGE**  
at Blacksburg, Va.,

**A SOUTHERN INSTITUTE OF TECHNOLOGY.**  
Forty-five instructors. Thoroughly equipped shops, laboratories and infirmary. Farm of four hundred acres. Steam heating and electric lights in dormitories. Degree courses in Agriculture, Horticulture, Civil, Mechanical and Electrical Engineering, Applied Chemistry and General Science. Shorter courses in Practical Agriculture and Practical Mechanics. Total cost of session of nine months, including tuition and other fees, board, washing, text-books, medical attendance, etc., about \$195. Cost to State students about \$165. Session began September 21, 1903. For catalogue and other information, apply to

J. M. McBRIDE, Ph. D., LL. D., President.

**Alfalfa Bacteria  
Infected Soil**

Can be obtained from Ewell Farm Experimental Plot. A perfect stand three years of age, abundantly supplied with root nodules. Price \$1.00 per 2 bus. burlap bag, weight about 150 lbs., f. o. b. Ewell's Station, Tenn.

GEO. CAMPBELL BROWN,  
Spring Hill Tenn.

There is more catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials.

Address, F. J. CHENEY & CO.,  
Sold by Druggists, 75c. Toledo, O.  
Hall's Family Pills are the best.

#### WITH THE ADVERTISERS.

The Blackman Stock Remedy Co. advertise their well-known goods in another column. Look up the ad. and send for descriptive circulars.

T. O. Sandy is advertising Holstein bulls and heifers elsewhere in this issue. He has a particularly choice lot of heifers which are now ready to go.

The Imperial Fruit and Stock Farm has a choice offering of poultry in this number. Look up the half page ad. and get some of these bargains.

The Weber, Jr., Gasoline Engine is advertised regularly in our columns by its makers.

Look up the ad. of Glen Rock Woolen Mills. It will interest you.

Macheth is advertising his well-known lamp chimneys on another page.

"Hogology" is the title of a book that Dr. Haas would like to send to all of our readers. Refer to his ad.

The Breeder's Gazette has a full page ad. in this issue. This is the best live stock paper published, and we can furnish it along with the SOUTHERN PLANTER for \$2.00.

The Annadale Dairy Farm desires to purchase some nice dairy cattle.

Dr. H. H. Lee is advertising his Silver Laced Wyandottes.

Andersch Bros. will buy all of your furs, skins and pelts. Look up the ad. Fleming Bros., chemists, of Chicago, have renewed their ad. for another year, and their well-known remedies should be kept on hand by all farmers. The Cahoon Seed Sower is advertised by the Goodell Co.

The Woolson Spice Co., makers of Lyon Coffee, have a card in this issue.

The O. S. Kelly Co. resume advertising in this issue. The Kelly Duplex Feed Mill is their offering.

The Chattanooga Nurseries are a new advertiser in this number. This firm comes to us well recommended, and our readers should look into their stock before purchasing elsewhere.



# STEVENS FIREARMS

## Protect the Farm and Teach us to Love

and live in the great "out-of-doors." We make firearms for every purpose suitable for boy or man, from \$2.50 to \$150.00.

We recommend Especially  
Our Rifles

- |                         |     |
|-------------------------|-----|
| "Stevens-Maynard, Jr.," | \$3 |
| "Crack Shot"            | \$4 |
| "Favorite," No. 17      | \$6 |

If your dealer won't supply you  
—send to us. We will send to  
you by mail, express paid.

## Send for Our Free Book

of 128 pages, which tells about the  
"Stevens"—gives pictures and prices.  
Contains interesting articles on Hunt-  
ing, Canoeing, Target Shooting, etc.

**PUZZLE** a clever Rifle Puzzle will  
be mailed postpaid for 4c.  
in stamps. It is lots of fun—"easy  
when you know how"—but ev-  
eryone can't solve it. Can you?

**J. Stevens Arms & Tool Co. 921 Main Street  
CHICOPEE FALLS, MASS.**

## 9 GORDS IN 10 HOURS BY ONE MAN

**RUNS EASY, NO BACK ACHE. EASILY CARRIED. SAWS DOWN TREES**

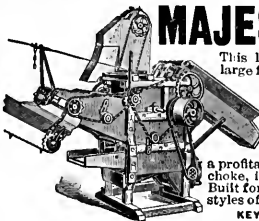
Forced to cut  
fast by large  
coil springs.

Springs can  
be adjusted  
to suit a boy  
12 years old  
or the  
strongest  
man.

Folds  
Like a  
Pocket  
Knife.

With our Folding Sawing Machine, saws any kind of timber. Instantly adjusted to cut log square on rough or level ground. Operator always stands straight. One man can saw more with it than a man can in any other way, and do it easier. Saw blades 6', 6 1/2' or 7 1/2' long. Champion, Diamond or Lance Teeth, to suit your timber. **GUARANTEE**—If any part breaks within three years, we will send a new part without charge. Send for Free Catalog showing latest improvements, giving testimonials from thousands. First order secure agency.

**FOLDING SAWING MACHINE CO., 55-57-59 N. Jefferson St., Chicago, Illinois.**



## MAJESTIC SELF FEED SHELLER.

This labor-saving machine meets the imperative demands of large farmers, feed stores, mills and elevator men. It is furnished either mounted or unmounted with wagon box elevator or double sacking elevator as illustrated. Its capacity is

**75 to 100 Bushels An Hour.**

The mounted sheller is peculiarly adapted to carrying on a profitable neighborhood business in custom shelling. It will not choke, is perfect working in sacking and feeding attachments. Built for long, efficient service and fully guaranteed. We make 80 styles of shellers, both hand and power. Ask for free catalogue.

**KEYSTONE FARM MACHINE CO., 1854 N. Beaver St., York, Pa.**



**You Try It.**  
It costs nothing. Return as soon as you like. If this mill fails to grind shelled corn, ear corn, all grades or mixed feed stuffs, easier, faster and better than any other.

**New Holland Mills**  
are the practical, every day mills for every day wants. No other good mill at so low a price. Made in 3 sizes. Adapted to any kind of power. You'll fail to get our free catalogue before buying.  
**NEW HOLLAND MACHINE CO.,**  
Box 163, New Holland, Pa.



**A Sheller That Shells**  
clean and lasts long. It's one of many terms (you probably recognize it) of famous **FREEMAN** Corn Shellers.  
Our little book shows and describes them all. Write for it. Windmills, Feed Cutters, Wood Saws, etc., shipped straight from factory. Ask for catalogue No. 1.  
**S. Freeman & Sons Mfg. Co.,**  
Reina, Wisconsin.



**All Grinding**  
Ear corn, with or without husks, and all grains ground fine or coarse as wanted with the **KELLY** **DUPLEX** Grinding Mills. They never choke. Double cut breakers and double set burrs give the greatest feed. One cut and small grain, faster and better than any other. Strong and durable. 4 sizes. Catalog free.  
**THE O. S. KELLY CO., Springfield, Ohio.**

**TRY THIS MILL**  
15 days to prove that it grinds meal or feed, ear corn and small grain, faster and better than any other. If it doesn't, return our expense.

**Monarch Mills**  
either attrition or the imported French burr, approach perfection in make and service. Lead all others in popularity. Meet every farm need. Stay on until you get the Monarch catalogue.  
**Sprout Waldron & Co.,**  
Box 202, Muncy, Pa.



**HEEBNER'S FEED CUTTERS.**  
Feed all your fodder. By using Heebner's cutters with shredder attachment the whole of the nutritious stock is crushed and shredded, and rendered edible. No waste. Animals eat it greedily and thrive. Shredder attachment costs \$6.00. The model another cutter. Also make Wood Saws, Lawn Mowers, Light Goat and Penna. Thrashers, Wood Saws, Feed Mills, etc. Catalog free.  
**HEEBNER & SONS, 26 Bond St., Lansdale, Pa.**

The Snoddy Remedy Co. has a card in another column offering its Hog Cholera Cure. Our readers should investigate this offer.

Mr. G. Norris Watson is a new advertiser in this issue. He has some nice stock at reasonable prices and guarantees satisfaction.

The Hawkeye Incubator advertising starts up with this number. This company makes a good machine and would like to send its catalogue to any poultryman interested.

The Glen Allen Stock Farm is offering some choice Angus cattle. Look up the ad, and write to Mr. W. P. Allen, the proprietor, for prices and breeding.

Another new advertiser in this issue is D. B. Hendricks & Co., who have a very meritorious hay press with which they would like to acquaint our readers.

The Reliable Incubator and Booder Co. starts the season's advertising with this issue. By the way, this firm is offering a portion of its capital stock to the public. They will be very pleased to send you a prospectus, if you will only write for it.

Hollybrook Farm is offering some nice Berkshire pigs.

The Jeremy Improvement Co. has some nice Angora goats for sale.

The old reliable Frazer Axle Grease is being used in greater quantities than ever. It will be found advertised regularly in our columns in the future as in the past.

R. W. Haw, Jr., is offering some choice young Brown Leghorns.

Pit Games are offered by T. W. Jarman, Yancey Mills, Va.

Send for catalogue, descriptive of 32 choice varieties of poultry, to John E. Heatwole, Harrisonburg, Va.

The Annefield herd of Berkshires represent the finest blood lines in England or America. Mr. Butler, the proprietor, invites inspection of his stock at all times.

Armour's Blood Meal is recommended for scours in calves. Look up the ad. in another column and write to the nearest office for particulars.

The DeLoach saw mills are being advertised as usual in this issue. This firm claims to be the largest saw mill manufacturing plant in the world.

Home-made and well-made buggies and wagons are offered by the Richmond Buggy & Wagon Co. in another column.

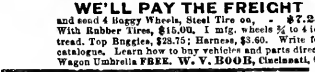
Mr. Ashton Starke, the well-known implement dealer, has an interesting advertisement on another page.

J. S. Moore's Sons have a page advertisement elsewhere in this number that will interest all housekeepers, we feel sure.

"Have you noticed any signs of improvement to-day?" asked the doctor. "Oh, yes," replied the nurse. "He swears now when I give him his medicine."—*Medical Journal.*

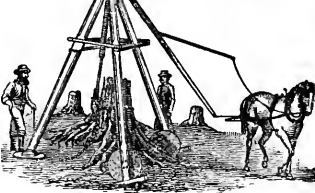


**Wise Man's Wagon.**  
The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS** have given a new lease of life to thousands of old wagons. They can be had in any desired height and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hubs, etc. Guaranteed to carry 400 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalogue describing the merits of these wheels and wagons sent free. Write for it.  
**ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**



**ELECTRIC**

**WE'LL PAY THE FREIGHT**  
and send 4 Hopy Wheels, Steel Tire 60, \$7.25. With Rubber Tires, \$15.00. 1 pair, wheel 1/2 to 1 to tread, Top Springs, \$28.75; Harness, \$3.50. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella BASK. W. V. B. 0013, Cincinnati, O.



**THE IMPROVED SCREW STUMP PULLER**  
Write for Prices.

**Chamberlin Mfg. Co., Olean, N. Y., U. S. A.**  
**HERCULES STUMP PULLER**  
Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.  
**Hercules Mfg. Co., 413 17th St., Centerville, Iowa.**

**A Bushel In Less Than 3 MINUTES.**  
That's the way our feed will be ground when you use **KEYSTONE** Triple Gear **GRINDING MILL.** Built as strong as an anvil. Burrs are of hard white iron. Bore and eye iron furnished with mill. Capacity of mill from 20 to 200 bushels per hour. We are making a special introductory price now. Write for the catalogue and press on the full line. Corn shellers, planters, cultivators, feed cutters, etc.  
**Keystone Farm Machine Co.,**  
1854 Beaver St., York, Pa.

**Pressing Hard Easy**  
sounds queer, doesn't it? But it isn't difficult to understand if you are using a



**RED RIPPER Hay Press**

It bales tight bundles, large or small, and does it with the least amount of stralo on the horse. The Red Ripper has been twice entered in competition with other presses, both times at the Georgia state fair, where it was awarded first premium. Dealers who handle the Red Ripper say that it just drives other hay presses out of the market. The lowest priced press on the market, and less than others to operate. Progressive, economical farmers will want to know more and can be sending for our new Catalog No. 453. Distributing points, Baltimore, Memphis, Cincinnati.  
Address **SIKES MFG. CO., Macon, Georgia.**

**Hendrick's Baling Presses**



are classed with the best if you are looking for a good press, either upright or perpetual at a reasonable price, write us for particulars.

**D. B. HENDRICKS & CO., Kingston, N. Y.**

**"ELI" HAY BALERS.**

38 styles and sizes.



The world's standard.

Work fastest, bales are tightest and shapeliest. Load easy to load at horse. In use that reduce, insure safety and facilitate work. Steel and wood frames, horse and steam power. All catalog free. **Collins Plow Co., 1185 Hampshire St., Quincy, Ill.**

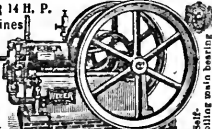
**WELL DRILLING MACHINES**

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

**Loomis Machine Co., Tiffin, Ohio.**

**THE WEBER 14 H. P.**

Gasoline Engines for cutting grinders, shredders, cutters, shredders, etc. Free catalogue with all sizes. Weber Gas & Gasoline Engine Co., Box 10, Kansas City, Mo.



Salt-casting main bearing.

**WARRINER'S CHAIN HANGING STANCHION.**

CLEAN, SAFE, COMFORTABLE.

Mfg. by **W.B. CRUMB, Forestville, Conn.**




**GET ALL THE CREAM,**

—BY USING—

**THE SUPERIOR CREAM SEPARATOR.**

Does not mix water with the milk. It is the best separator made. A trial can vouch and every separator is guaranteed. Write today for Catalogue to the **SUPERIOR FENCE MACHINE CO., 291 Grande River Ave., Detroit, Michigan.**



MAGAZINES.

The November number of The Century, which opens Volume LXVII, celebrates that event by a new cover in color, and by a variety of colored insets, which include among the subjects Tropical Sunsets, Wild Animals, and Italian Gardens.

Edmund Clarence Stedman contributes the opening article on the New York Stock Exchange, entitled "Life 'On the Floor.'" As a veteran and retired broker, Mr. Stedman brings to this subject a personal knowledge, which is admirably supplemented by his trained literary style. The article makes a unique appeal to the interest of the lay reader, as well as to that of all men engaged in business with the exchanges. The paper is illustrated in a lively way by Blumenschein and Bacher.

Of the color work four pictures are by Maxfield Parrish, accompanying the first article of Edith Wharton's series on "Italian Villas and their Gardens," a project upon which the author and the artist were engaged last winter in Italy. Mrs. Wharton's special topic is Florentine Villas, and there is an introduction by her setting forth in general the desirable features of Italian Gardens.

A leading feature of the number is the opening paper of the new literary "find," Thackeray's letters recording his friendship with an American family, the Baxters of New York, to which Miss Lucy W. Baxter contributes an introduction, and which are accompanied by a number of drawings and interesting autographs of Thackeray. A piece of hitherto unrecorded adventure is entitled "Fighting the Hudson," in which H. Addington Bruce relates a perilous emergency in the course of the construction of the Hudson River tunnel, now nearly finished.

At the head of the fiction of the number is the first of a new novel entitled "Four Roads to Paradise," by Maud Wilder Goodwin, author of "Head of a Hundred," etc., a story of New York society people, the scene partly laid in Florence. In the short stories the element of humor predominates. "The Missing Exequatur," by Benjamin H. Ridgely, a laughable story of consular life; "The Marrying of Susan Clegg," by Anne Warner, a writer new to The Century; "The Reggie Livingstones' Country Life," a story of hunting society, by David Gray; "The Little Canoe," a humorous sketch of Porto Rico, by H. W. Phillips. Two stories of a more sentimental cast are "The Shadow of Love," by George Hibbard, and "The Summer of St. Martin," a phantasy of very delicate charm by Dr. Weir Mitchell. The editorial articles are "All Eyes on New York!" relating to the municipal election, and "Some Effects of Modern Publicity," and there is a variety of light material.

Readers of the November St. Nicholas will turn first to and linger long-

**UNION LOCK POULTRY FENCING**

HAS BEEN FULLY TESTED AND FOUND SUPERIOR TO ALL OTHERS.

Will fit uneven ground without cutting. Every part can be stretched perfectly. Made of high grade galvanized steel wire. All horizontal lines are cables, making it stronger. Has fine mesh at the bottom for small chicks. We also make extra heavy for gardens, lawns, etc. The largest poultry farms are using this fence—over 700 rods by Lakewood (N. J.) Farm Co. We pay freight and satisfy every one or no sale. Can ship from N. Y., Chicago, or San Francisco. Write for free catalog of Farm, Lawn and Poultry Fencing.

**CASE BROS., Box 340, Colchester, Conn.**



**Genuine Spiral Spring Wire FENCES AND GATES**

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

**INTERNATIONAL FENCE AND F. CO.**  
Columbus, Ohio.



**IF YOU WANT**

a better, more practical, longer lasting, heavier galvanized wire fence, YOU WANT

**PAT. WOVEN WIRE FENCE CO., Adrian, Mich.**



**LAWN FENCE**

Many designs. Cheap as wood. 28 gauge Catalogue Free. Special Prices to Customers and churches. Address **COLLETS SPRING FENCE CO., Box Q, Winchester, Md.**

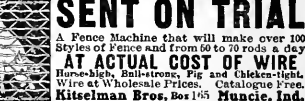


**SENT ON TRIAL**

A Fence Machine that will make over 100 Styles of Fence and from 50 to 70 rods a day

**AT ACTUAL COST OF WIRE**

Horse-high, Bull-strong, Pig and Chicken-tight. Wire at Wholesale Prices. Catalogue Free. **Kitselman Bros., Box 195, Muncie, Ind.**



**FENCE! STRONGEST MADE.**

Bull strong, Chicken tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalogue Free. **COLLETS SPRING FENCE CO., Box 95, Winchester, Indiana, U. S. A.**



STOP THAT RATTLING, TIGHTEN YOUR OWN BUGGY TIRES. No heating; does not mar the paint; any one can operate. Machine complete with 100 washers sent on receipt of \$2.00. Guaranteed to do the work. Your money back if not as represented. **RAPID TIRE TIGHTENER CO., Station F., Toledo, Ohio.**

**Now Plant Seed.**

You want the book that tells how, when and what to sow.

**SEED SOWER'S MANUAL**

sent out because not put in it is one of the old reliable Chascon Broadseed Books. The book is free. Better write for it now.

**GOODELL CO., 63 Main St., Astoria, O. A.**



ELMWOOD NURSERIES.

ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 100 for 2 mos. for BARK'S, PALMETTO, CONOVER.

APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

Splendid Assortment of Ornamental, Shade and Fruit Trees.

EGGS from B. P. Rocks, Light Brahmas, Brown Leghorns at \$1.00 per 15.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hollisboro, Va.

EMPORIA NURSERIES

Offer a line of Nursery Stock, mostly APPLE TREES, 4 to 5 feet, and PEACH TREES, 3 to 4 feet, at reduced prices to clear land. All Stock healthy and free from Crown Gall, Aphid, San Jose Scale, or any other disease, and WILL BE FUMIGATED BEFORE shipped.

Send for reduced price list. Good No. 1 Agents for 1904 wanted. C. S. LINDLEY, Prop., Emporia, Va.

Also agents for Universal and Gardner's Dust Sprayers; far ahead of any other and cost of power is very small. Send for price and description.

TREES! TREES!!

I offer a fine lot of whole root trees,

Apples, Peas, Peaches, Cherries, Plums, Grape Vines, Raspberries, Etc.

Save agent's commission by sending your orders to the nursery.

CATALOGUE FREE.

All Stock Inspected and Fumigated.

WERTZ'S NURSERY, Salem, Va.

Strawberry Plants,

All grown in fresh rich ground, healthy, well-rooted plants that will please you; over 30 kinds to offer Raspberry plants and Peach trees also; see us before you buy. Our stock has been thoroughly inspected and found free from any disease.

Address JOHN LIGHTFOOT, Sherman Heights, Tenn.

est over the opening chapters of B. L. Farjeon's "A Comedy in Wax." "A Comedy in Wax" is the story of little Lucy, her sister Lydia, Lydia's lovers, and Mme. Tussand and her waxworks—the famous waxworks exhibition in Marylebone Road which for nearly a century has been one of the most popular shows in London. There are illustrations by Fanny Y. Cory in her usual happy vein; and the story promises to increase in interest as the months come around. There are good short stories too in the November issue for both girls and boys. "Ted's Contract" tells of a manly little lad's adventures in his loyal devotion to his father's interests; and Albert Bigelow Paine's "Two Little New York Maids" are well worth knowing. "The Poison Bubble" is a real, good, old-fashioned magic story; "Richard, My King," by Livingston B. Morse, is a new setting of the beautiful story of Blondel's love for his king; and Charlotta Sedgwick's "The Late Unpleasantness" is a capital tale of real boys and girls. O, the November St. Nicholas is rich in fiction!

The best part of the more solid portion of the feast is a discussion by James M. Dodge, president of the American Society of Mechanical Engineers, on "The Money Value of Training." Mr. Dodge gives suggestions and statistics of great value, and urges every lad, whatever his life-work is to be, to invest in himself, by increasing his own potential energy. Then George Ethelbert Walsh tells about "Some Queer Mail Carriers and Their Ways"; and Dallas Lore Sharp writes of "Bird Friendships."

"A House Divided" is the taking title of the novel in Lippincott's Magazine for November. Its author's name, Ella Middleton Tybout, is a familiar one to readers of Lippincott's Magazine, though heretofore her productions have been in the line of short stories. Her "Parables in Black" lately running through Lippincott's are particularly striking and indicate that which is richly fulfilled in this latest work. The little State of Delaware has been chosen by Miss Tybout for the placing of "A House Divided" and her portrayal of a farmer who, because he believes his wife to be untrue to him, has not spoken to her for sixteen years, is a remarkably clever bit of characterization. Lippincott's novels are always worth while—and the November number sustains this opinion.

"The Girl with the Banjo" is by a writer whose pen-name, Jean D. Hallowell, keeps one guessing who is the real author of so racy a tale. The sex is confessed by such expressions as "a saucy little lace petticoat" and the whole thing shows the pliancy of a woman rather than the touch of a "mere man."

"The Man in the Tower," by Francis Howard Williams, is a forceful story of a railroad signal tower, where,

Peach and Apple Trees,

BONAVISTA NURSERIES, Greenwood, Va. We offer a fine lot of choice trees for Fall and Spring planting Our apple trees are the best—Wine Sap, Mammoth Black Twig, York Imperial and Albarmar Pippin, all perfect and well grown trees.

Our peach trees are the standard sorts, Stump, Elberta, Bileyn's (Comet,) Wonderful Champion, Globe, Piqueet's Late, Albright's Winter, Crawford E. & L., etc.

We send out none but good trees and have never had a complaint made by any purchaser of our stock. Order soon, especially Peach's, as good trees will be very scarce this season.

CHAS. F. HACKETT, Manager.

**1000 Per Cent. Profit in..**  
**Wealth and Health**  
 In fresh, luscious, home grown  
**STRAWBERRIES**  
 allowed to ripen thoroughly on the vines. We sell the plants packed to carry fresh anywhere in the United States. Our 120 page manual (free to buyers) makes growing for pleasure or profit plain to all. Plant now. Also save labor.  
**FRUIT TREES**  
 by buying direct from us, saving agents' profits. Write for free Catalogue, mentioning this advertisement.  
**CONTINENTAL PLANT CO.**  
 KITTRELL, N. C.

**ROOFING TIN**  
 Iron and paper roofing, nails, builder's hardware, sash, doors, etc., carriage and wagon goods, paints and oils, cook and heating stoves, guns, pistols, rifles, "Robin Hood" loaded shells. Do you use any of the above? Write us.

**HARRIS HARDWARE CO.,** 409 E. Broad, Richmond, Va.

**PATENT YOUR IDEAS**  
 \$100,000 offered for one invention; \$5,000 for another.  
 Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.  
**CHANDLER & CHANDLER, Patent Attorneys**  
 976 F Street, Washington, D. C.

**SKUNK** Skins, HORSE HIDES and CATTLE LEATHER  
 and all other kinds of Raw Furs bought for spot cash, 10 to 50% more money than to ship to us then to sell home.  
 Write for price list and market report.  
**HUNTERS' and TRAPERS' GUIDE** \$2.00 book, 300 pages, cloth bound. Illustrating all for animals. All about trapping, traps, secrets, kind of traps, decoys, & Special price \$1. to Hite and Fur Shoppers.  
**ANDERSCH BROS., Dept. 5, Minneapolis, Minn.**

**HOW TO FEED AND BREED HOGS**  
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Bulletin 137. Orchard Studies X. A Consideration of the Commercial

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Bulletin 138. Orchard Studies XI. A Consideration of the Principles and Technique Involved in the Fermentation and Final Finishing of Ciders.

Bulletin 139. Orchard Studies XII. The Chemical Composition of Ciders.

Bulletin 140. Orchard Studies XIII. Some Observations on Crown Gall of Apple Trees.

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Imperial Department of Agriculture for the West Indies, Barbadoes, W. I. Agricultural News, September, 1903.

**BOOKS AND PAMPHLETS.**

Grasses, and How to Grow Them.—The above is the title of Professor Shaw's new book just issued from the presses of the Webb Publishing Co. It is the only book ever published in America which treats of the growth of the grasses of this continent in a regular and systematic way. The book has 470 pages. It is neatly bound in cloth and is sufficiently illustrated. It is written in that clear, plain and orderly style which characterizes all Professor Shaw's writings. So practical is the information presented, that while the book discusses all the grasses of any considerable economic value grown in America, the person who never grew them previously should be able to do so in an intelligent way after reading the book. Price, cloth, \$1.50. We can supply this book at the published price.

The Feather's Practical Pigeon Book.—By J. C. Long. Profusely illustrated. Published by Geo. E. Howard, Washington, D. C. Price, 50 cents. This book will be found of interest and value to those keeping or contemplating keeping fancy pigeons. We can supply the book at the publisher's price.

The School and the Commonwealth, the Centre of Our Larger Hope.—An address to the graduates of the Richmond High School, June, 1903, by Wm. M. Thornton, LL. D., University of Virginia.

Principles of Profitable Farming, published by the German Kali Works, Nassau street, New York city, will be sent free if you mention THE SOUTHERN PLANTER.

**PREMIUM LISTS, CATALOGUES, ETC.**

Virginia State Horticultural Society. Programme of the Eighth Annual Session, to be held at Pulaski, December 2d and 3d, Walter Whately, Secretary, Crozet, Va. Virginia Pigeon, Poultry and Pet Stock

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Paper Shell Pecans. Fruit Guide and Catalogue. B. W. Stone & Co. Thomasville, Ga.

DeLaval Separator Co., Cortlandt St., New York city. How to apply business principles to the testing and selection of a Separator.

Studebakers' Farmer's Almanac, 1904. Studebaker Bros. Mfg. Co., South Bend, Ind.

The Reliable Incubator and Brooder Co., Quincy, Ill. "A reliable business opportunity." Prospectus offering stock in the capital of the Company.

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Krauser's Liquid Extract of Smoke Makes it Useless.

The smoke house always was a source of worryment, vexation and expense, anyhow. When it catches fire let it go up in smoke. There's a better way to smoke meats. That is by using Krauser's Liquid Extract of Smoke. It's been gaining in all parts of the country for several years past and there is no longer any doubt that it is driving the smoke house out of business.

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## AN OPTIMIST.

According to the Chicago Daily News, the old man was sitting on the roof of his house in Kansas after the floods, and was gazing placidly across the rushing waters.

"Washed all your fowls away?" asked the man in the boat.

"Yes, but the ducks swam," smiled the old man.

"Tore up your peach-trees?"

"Don't mind it much. They said the crop would be a failure."

"But the flood! It is up to your windows!"

"Wal, them windows needed washing, anyway, stranger."

## BERKSHIRES

ANNEFIELD HERD

Represents the

## Finest Blood Lines

In England or America.

Stock for sale at all times.

Correspondence Solicited.

Inspection Invited.

EDW. G. BUTLER, Annefield Farms,  
Briggs, Clarke Co., Va.



## Southdown and Hampshire down

Sheep and Lambs  
FOR SALE; also ESSEX PIGS For  
prices, apply to L. G. JONES,  
Bethania, N. C.

## HAWKLEY STOCK FARMS

Offers some very fine

BERKSHIRE PIGS; also choice young  
BOARS. Nothing but Tors sold. A few fine S.  
C. B. LEGRON Cockerels left; from extra fine  
layers. J. T. OLIVER, Allens Level, Va.

## Farmer's Prices.

ON GOOD, GROWTHY, THIRTY  
English Berkshires and Poland Chn Pigs,  
6 wks to 4 mos. old, to close out stock; also  
White Plymouth Rocks at reasonable figures.

BYRD BROS, R. F. D., SALISBURY, N. C.



## O. I. C. PIGS

FROM REG. STOCK.

FOR SALE. PRICES RIGHT.

F. S. MICHIE, Charlottesville, Va.

Registered P. Chinas

Berkshire,  
C. Whites. Fine large  
strains. All ages, mated  
not a in. 8 week, pigs,  
Bred sows. Service boars  
and Poultry. Write for prices and free circular.  
P. F. HAMILTON, Cochranville, Chester Co., Pa.



## Aryshires, Berkshires and Oxford-Downs.

Aryshire Calves of both sexes, Berkshire  
Pigs and Boar and 2 Oxford-Down Rams for  
sale. MELROSE CASTLE FARM,  
Edos H. Hess, Manager, Casanova, Va.

Poland Chinas, Chester Whites and  
Mammoth Bronze Turkeys at Farmers  
prices

S. M. WISECARVER,  
Rustburg, Va.

ANGORA GOATS are handsome, hardy and  
profitable. For large cir-  
cular address E. W. COLE & CO., Big Clifty, Ky.

# BREEDER'S GAZETTE

## SPECIALS!

Those who subscribe now for the world's greatest illustrated agricultural weekly—THE BREEDER'S GAZETTE—will get, in addition to the brimming regular issues, such special numbers as the following: . . . . .

*November 18*

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*December 9*

*Chicago International Show  
Report—Illustrated.*

*December 16*

*Christmas Number.*

Needless to say these will be up to THE GAZETTE'S usual standard. Why not have the best?

The Christmas Number will have a lithographed cover reproduction of the drawing that won THE GAZETTE'S \$200.00 cash prize for best design for that purpose. A great double number free to all subscribers.

Terms \$2.00 per year. Special rates to agents and clubs.

Sample copy of regular issue free if you mention this paper. Address

**J. H. SANDERS PUBLISHING CO.,**

358 Dearborn Street, . . . . . CHICAGO, ILL.

## Market Toppers for Sale, Low.



Lot fine Reg. Angus bull calves, five to six mos., \$75.

Lot 1/2 grade Angus heifers coming 2 years. Safe in calf by Reg. Angus bull. Price, 6½c per pound.

1 Bull Calf coming 4 mos., out of fine Hereford cow, by Reg. Angus bull. \$40

Lot 1/2 grade Angus heifers, coming 1 year. Price, 6c. per pound.

One 12 mos. old Reg. Angus heifer. \$100.

Pure-bred White Plymouth Rock Cockerels and Pullets, \$1.00 each.

W. M. WATKINS & SONS,  
Saxe, Charlotte Co., Va.

## ANGUS BULL CALVES

SIRED BY THE

Champion Bull **BARON IDA.**

These calves are choice individuals.

ENGLISH SETTER PUPS.

Sire and dam prize winners.

WARREN RICE, Winchester, Va.

## H. F. COLEMAN & SONS,

MULBERRY GAP, TENN.,

—BREEDERS OF—

## ABERDEEN-ANGUS CATTLE.

JANNET'S KING, 48271, greatest son of Valiant Knight II, 29331, first prize bull at all three of the International shows, heads the herd. Visitors and correspondence invited. Young things for sale.

Splendid Registered

## ANGUS BULL

Age 17 mos., thoroughly tick proof (immune), for sale. Price, \$250. Also a beautiful 5 mos. ANGUS HEIFER. No kin to bull, for \$50. Write for breeding, etc. C. A. WILLIAMS, Ringwood, N. C.

## ANGUS BULL CALF.

Adrance Star, 64559, 1 yr. old, Nov. 28, 1903; sire Zofre 31571; dam Audubon Beauty. This calf is well bred, weighed 560 lbs. at 9 mos., and bids fair to be a superior Herd Bull. For price and further particulars, address

Rev. S. S. HEPBURN, Oliver, Va.

## WHITE YORKSHIRE PIGS

Entitled to registration, FOR SALE.

HENRY H. CLARKE, "CHANILLY,"

Broad Street Road, Richmond, Va.

Kingsley, Ia., Sept. 16, 1903.

Dr. Jos. Haas, V. S., Indianapolis, Ind.:  
Dear Sir:—We take much pleasure in informing you of our success in handling your most valuable Hog Remedy during the past five years. We have sold during that time about \$3,000.00 worth of the Remedy, to more than 100 regular customers, who have used it right along with great success. A good number of our customers report to us that they have cured the cholera in their herds, after the disease had broken out, and several hogs had died before they began using the Remedy. We can get sworn statements from our customers to the above facts if desired.

Our experience with your Remedy has taught us that it should in all cases be used as a preventive, before the hogs are taken sick, and by so doing it keeps them in a healthy condition, also will pay many times the cost of the Remedy by the extra gain in the weight of the hogs.

We can cheerfully recommend your Remedy to all dealers and feeders, after our long experience with it, as we feed it to our own herd of thoroughbred Duroc-Jerseys, in addition to selling it to our customers. Our boar, American Royal, No. 15452, won sweepstakes over all ages at the Interstate Fair, held in Sioux City this month, over entries from Iowa State Fair, Missouri, Nebraska and South Dakota. Yours very truly,

EDMONDS, SHADE & CO.,  
Dealers in Grain and Live Stock.

The man or woman, boy or girl, who wants to succeed with poultry ought by all means to have a copy of the new annual catalogue of the Reliable Incubator & Brooder Co., of Quincy, Ill. The book will convince any one who contemplates buying an incubator or a brooder that the "Reliable" is as good as its name indicates; and there is a lot of valuable information in it about hatching and the care of poultry which is new to all but a few experts who are making fortunes out of poultry. Any one who will follow "Reliable" methods and our "Reliable" machines, can make money out of poultry. The "Reliable" people make money themselves out of their immense poultry farm, a side issue of their business, and their experience has enabled them to build up an immense business in "Reliable" poultry supplies, which comprise "everything for the poultryman." To get acquainted with the "Reliable" people is like getting acquainted with some good neighbor, who has made a lot of money and takes pleasure in telling you how you can do it.

Smithers—"Do you know any one who has a horse to sell?" She—"Yes; I suspect old Brown has." Smithers—"Why?" She—"Well, papa sold him one yesterday."—*London Punch.*

# V. P. I. Farm Bulletin

We are now offering some choice young Bulls of the following breeds:

Shorthorn, Hereford, Aberdeen-Angus.

Write at once for pedigrees and prices.

D. O. NOURSE, Prof. of Agr.  
Blacksburg, Va.

## Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

## JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old. \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

## Fine JERSEY BULL For Sale.

I offer at a reasonable figure, a thorough-bred Jersey bull, 4 years old June 10th, 9103 Gentle, solid color with black tongue and switch and cut out to registry. This bull is a great grandson of the famous Canada's John Bull, and is in every respect, a strictly first-class animal. For full information apply to W. B. WALKER, Walker's Ford, Va.

MILCH COWS WANTED.—Car load lots heavy milchers or springers. Give detailed description individuals, breed, age, guaranteed production and lowest spot price delivered Asheville. Address ANANDALE DAIRY FARMS, Asheville, N. C.

FOR SALE.—A NO. 1 REG. HEREFORD BULL, 7 months old, well marked, weighing over 700 lbs.

Address WM. C. STUBBS,  
Sassafras P O, Gloucester Co., Va.

## ST. OMER HERD

Offers young bulls fit for service, out of tested dams with good yearly records. Strong in Exile of St. L. King of St. L. and Stowe Pogla of Prospect. Reasonable prices.

JOS. T. HOOPES, Hynum, Md.

## —FOR SALE—

100 good grade breeding ewes. Bred to Shrophire bucks for early lambs, in lots to suit purchasers.

A few good Horses and Mules also for sale. Also one-half interest in twenty-four thousand acres West Virginia Coal and Timber lands. Will take in exchange good James River lands. Call on or address

JOHN MATHEWS, East Richmond, Va.

## FOR SALE.—My Trotting-bred Stallion

GEORGE BURNS, foaled May 14, 1900. Mahogany bay, star in face, left hind foot white, of good style, easy to handle; will make good breeder. Write for his breeding.

J. TABB JANNEY, Van Clevesville, W. Va.

## ***BILTMORE FARMS, = Biltmore, N. C.***

**Headquarters for GOLDEN LAD JERSEYS,**

**Also Get of TREVARTH and GEN. MARIGOLD. ❀ ❀ ❀**

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



**BILTMORE POULTRY YARDS.**



**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

**Headquarters for the best IMPORTED ENGLISH BERKSHIRES.**

*APPLY TO BILTMORE FARMS, BILTMORE, N. C.*

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# **THE IMPERIAL**

# **.. FRUIT and POULTRY FARM ..**

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**— OFFERS —**

## **1,000 Cockerels and Pullets**

All HIGHLY BRFD of the following breeds:

**Barred and White Plymouth Rocks, White and Silver=Laced Wyandottes and Brown Leghorns, at = = = \$1.00 each.**

**WRITE AT ONCE AND GET THE BEST.**

(No Ducks to offer at present).

**P. H. HEYDENREICH, Prop., : : : Staunton, Va.**

## ANGORA GOATS.



A few pairs for sale—High grades,  
\$15; Registered, \$40 per pair.  
JEREMY IMPROVEMENT CO.,  
SAXE, VA.



**150 Jacks, Jennets and Mules.**  
Best assortment I ever owned. Can  
suit you exactly. Write for descrip-  
tion and prices. Also  
will sell 2 Percheron  
Stallions at close fig-  
ures.  
BAKER'S JACK FARM,  
Lawrence, Ind.

## Knight & Jetton,

Breeders of and Dealers in  
Jacks, Jennets, Stallions.  
Durham and Hereford  
YEARLINGS.  
Send stamp for Catalogue.  
Murfreesboro, Tenn.



**Jacks, Jennets and Stallions**  
FOR SALE. FINE JACKS A  
SPECIALTY. Write for writ-  
ting state exactly what you want  
or come and see our stock.  
W. E. KNIIGHT & CO.,  
Route 5, Nashville, Tenn.

## Sale or Exchange

2 BEAUTIFUL JACKS, for pure-bred  
Red Polled cattle, good draft or coach  
stallions. W. S. MOTT, Dixondale, Va.

## DORSETS AND HEREFORDS.

Some Exceptionally Rare Bargains to Quick Buyers.

My herd bull, bull calves and Dorset  
bucks. Registered stock.

H. ARMSTRONG, LANTZ MILLS, VA.

### PURE-BRED

M. BRONZE TURKEYS, GOLDEN and  
SILVER PENCILED HAMBURG and BAR-  
RED PLYMOUTH ROCK Chickens. Eggs in  
season. For sale by T. J. WOODBRIDGE,  
French Hay, Va.

### FOR SALE AT A BARGAIN.

A thoroughbred Registered HOLSTEIN-  
FRESIAN Bull Calf. H. W. MANSON,  
Crews, Va.

## THE INTERNATIONAL LIVE STOCK EXPOSITION FOR 1903.

The leading agricultural and live  
stock educators of the United States  
and Canada are paying tribute to the  
value of the International Live Stock  
Exposition to the country in almost  
every current issue of the agricultural  
and live stock press. A word, there-  
fore, as to the arrangements for the  
1903 exhibit will no doubt prove of  
value to your readers.

The Board of Directors have issued  
a statement regarding the new col-  
iseum, and while it is regrettable that  
we will not have our entire buildings  
at our disposal this year, nevertheless  
with the old building, provided with  
greatly increased stall room and with  
better arrangements for pens for the  
hogs and sheep, we will be able to  
handle the show more advantageously  
than any of its predecessors. Tempo-  
rary facilities will be constructed to  
secure ample room for each depart-  
ment to prevent any branch crowding  
the other.

The programme will be arranged to  
give each and every breed and kind  
full benefit of all that the show im-  
plies to the exhibitor.

The live stock people have shown  
their earnestness in the welfare of the  
International by taking memberships  
in the permanent organization, yet a  
more general membership is looked  
for to insure continued success. In  
this connection there is no change in  
the rules or regulations of the Ex-  
position. The awards are open to the  
same competitors as heretofore, wheth-  
er exhibitor is a member or not, so that  
whether your application for member-  
ship is filed as yet or not, your "rela-  
tionship so far as being an exhibitor  
is concerned is the same as at former  
shows.

The entries and inquiries received  
indicate a greater interest and larger  
exhibit than at any of the previous ex-  
positions.

The railroads have given the same  
rates for visitors, with earlier selling  
dates for exhibitors, as published each  
previous year, and additional special  
excursions will be run this year by sev-  
eral of the lines reaching Chicago.  
Everything points to a big event No-  
vember 28th to December 5th at Chi-  
cago. W. E. SKINNER.

### ONE WAS SUFFICIENT.

Jimmy, aged five, had been naughty,  
and his mother had punished him in  
the good, old-fashioned way. His father  
pretended to be greatly shocked at  
overhearing the aggrieved youngster  
express a hope that a large stray bear  
might happen along some dark night  
to make of his offending parent.

"But, Jimmy," said his father, im-  
pressively, "you shouldn't say such  
dreadful things. You should always  
remember, my son, that a boy never  
has more than one mother."

"Thank God for that!" breathed  
Jimmy fervently.—November Lippin-  
cott's.

# Kentucky Herefords

Headed by the famous

## IMPORTED BRITISHER

No. 145096 Champion Bull over all breeds in  
England and Grand Sweepstakes Champion  
at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they  
wish from the FANCIEST THAT CAN BE  
BRED to the cheaper class usually desired by  
the beginner. Write us before buying. Glad  
to answer inquiries.

Giltner Bros., Eminence, Ky.

## ELLERSLIE FARM

Thoroughbred Horses

AND SHORTHORN CATTLE,

Pure Southdown Sheep  
and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,  
CHARLOTTESVILLE, VA.



COOK'S CREEK HERD

Scotch-Topped  
Shorthorns

Herd Headed by Governor Tyler, 1585 48.  
Young bulls for sale. Inspection and corre-  
pondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

Quietude

SHORTHORNS

FOR SALE.

1 yearling bull, 3 bull calves 2 two-year-old  
heifers bred to a pure Scotch bull, 3 yearling  
heifers and a few cows. This stock is first class  
and in excellent condition. Write to or come  
to see T. J. THOMPSON, Swoope, Va

PURE BRED

Short Horn Calves

from fine Stock. Also

Yorkshire Pigs

of very Prolific Breed.

JAS. F. HOGE, Hamilton, Va.

## SPRINGWOOD SHORTHORNS.

SPECIAL OFFERING.

4 yearling bulls, sired by Verbena's cham-  
pion No. 12981. One two-year-old POLAND  
CHINA Boar, a fine breeder, recorded bred in  
Ohio, sired by Guy Wilkes.

Good 8 weeks' old POLAND CHINA Pigs,  
\$5.00 each. Fed green furnished with all stock  
sold. Inspection invited.

WM. T. THRASHER, Springwood, Va.

## WOODLAND DORSETS.

ONE of our customers writes: "My sales of  
grade Dorset winter lambs run this year:  
first 87 head brought \$870; then prices de-  
clined somewhat, I am looking for another  
good Dorset ram." Woodland Dorsets are  
standard in excellence.

J. E. WING & BROS., Mechanicsburg, Ohio.

**BUILDING THE HOG HOUSE.**

This subject comes up to every hog owner and as the cost of such a building is one of the first considerations and an item that in many cases causes poor protection and consequently a loss in pork to the owner. Yet the cause and loss go on, one following the other for, the want of a start of a first-class house to protect against cold and storm. A few years ago C. E. Morrison gave this subject much attention and as the result he built a pen at small expense that is as near an ideal for all purposes as can be devised, one that can be built cheaply and extended from time to time at will without disturbing the first part. Full designs and plans of this model hog house will appear in the November issue of Blooded Stock, that great practical swine paper edited by farmers that get right at its subject, with sleeves rolled up, in a common sense way. It is being advertised in the columns of this paper and also in our clubbing list. It is worth having and stops when the subscription expires.

**OF VALUE TO HORSEMEN.**

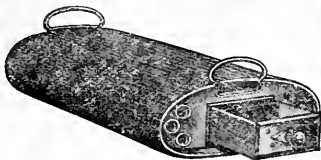
Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course, it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

**HEEBNER'S ENSilage AND FEED CUTTERS.**

The Feed and Ensilage Cutters manufactured by Heebner & Sons, Lansdale, Penna., are intended to avoid much of the waste which ordinarily results in the feeding of the corn crop. Too many overlook the feed value in the lower stalk, which lies around on the feed lot until spring and is then gathered and burned. If the stalk be cut and shredded there need be little if any loss. The Heebner cutter with Shredder attachment, are admirably adapted to this work. Each machine may be made a combination cutter, crusher and shredder, putting the stalk in the best possible condition for mastication of the whole by the animal. A power well adapted to their operation, and one without expense to procure because always present on the farm, is the Heebner Level Tread Pow-

# SOLID COMFORT

Of  
the  
**RIGHT  
SORT.**



At  
the  
**RIGHT  
TIME**

Is what is wanted when one is seeking pleasure while driving, and this may be secured by using a CELEBRATED LEHMAN HEATER.

They are universally recognized as the STANDARD CARRIAGE, WAGON AND SLEIGH HEATER. Over 200,000 Lehman Heaters are in actual use. They burn Lehman Coal, from which there is no smoke, smell nor danger, and may be operated at a cost of 2 cents per day.

For sale by all carriage, harness and hardware dealers. Write us for booklet telling more about them.

LEHMAN BROS., MFRS., J. W. ERRINGER, Gen. W. Sales Agt.,  
10 Bond St., New York. 297 Wahash Avenue, Chicago, Ill.

**We Are Still in the Business...**

## "HILL TOP" Stock at Shadwell, Va.

Having changed our residence, we brought with us and have for sale a choice lot of HILL TOP stock.

## Jersey Cattle, Southdown and Shropshire Sheep, Berkshire Hogs and B. B. R. Game Chickens.

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship after September. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

**H. A. S. HAMILTON & SONS, Shadwell, Va.**

# FOR SALE BERKSHIRE PIGS

of choice breeding, and to make them more desirable, they are fine individuals, properly fed; therefore they develop well. Write

## Forest Home Farm,

Purcellville, - - - Virginia.



### IT PAYS TO DEHORN.

Hornless cows give more milk. Hornless steers make better beef. The best dehorner, the most humane and easiest to use is the **Keystone Dehorning Knife**. Cut on four sides at once, without crushing or bruising. Highest award at world's fair. Order with cash filled from Chicago if desired. Send for circulars. M. T. PHILLIPS, Box 45, POMEROY, PA.

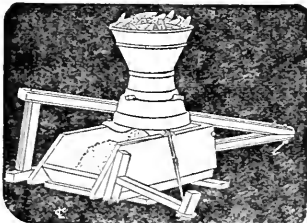
cr. These powers have been manufactured by the Heebners, father and sons, for upwards of sixty years. They are strong and durable and well adapted to serve many uses on the farm in addition to Ensilage cutting. The Heebner Catalogue is a very interesting book on these and other specialties of the Heebner manufacture. Consult the advertisement and write the firm for it.

#### YOUR MONEY BACK IF YOU'RE NOT SATISFIED.

Do you suppose that a company, with a capital of \$500,000.00 paid in full and the proud reputation of 36 years of continuous success, would make such an offer and not carry it out to the letter? Do you suppose we would jeopardize our standing with the public and our chances of still greater success by failing to fulfill any promise we make? Do you suppose we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods? We know we can please you and save you money, for Hayner Whiskey goes direct from our distillery to you, carries a United States Registered Distiller's Guarantee of purity and age and saves you the big profits of the dealers. Read our offer elsewhere in this paper.

THE HAYNER DISTILLING CO.

Among feed mills now on the market we give illustration of one whose qualities, we think, will commend it strongly to the general feeder. It is the Triple Geared Sweep Mill manufactured by S. Freeman and Sons Mfg. Company, Racine, Wis. Many readers are familiar with the illustration from having studied it in the advertisement elsewhere. It is the practical kind of mill with but few parts.



The illustration shows it as a corn crusher and grinder. At this work its capacity reaches 20 bushels of ground feed per hour. But it is adjustable in character, and does equally good work, though of course, less rapid in fine grinding of oats, rye wheat, etc., with its finer set of burrs.

Smooth running and the absence of all jerking motion characterizes it. It is one individual of a most valuable and practical line of farm appliances, such as feed and ensilage cutters, corn shellers, wood saws and windmills manufactured by the above company. It should receive the careful consideration of any feeder who is about to buy a mill.

## HOG BOOK FREE

A copy of my book, "HOG LOGY," revised and enlarged, will be sent Free to any hog raiser who mentions this paper when asking for it. A few of the many important subjects that are thoroughly covered in this valuable book are: Descriptions and illustrations of the leading breeds of swine; swine-recording associations; best location for hog-raising; selecting a breed; what constitutes a good hog for the farmer; value of a good boar; value of a pedigree; breeding; care of the sow; rearing fall pigs; fecundity of sows; practical foods; the runt pig; when to market; lambreeding, anatomy of the hog (fully illustrated); diseases and treatment, etc., etc.



TRADE-MARK.

### I Insure Hogs and Pay for All That Die

When my Remedy is used as a preventive. Write for plan. This Remedy is a MEDICINE especially for hogs, and must not be confounded with cheap "stock foods." 27 years unequalled success and the biggest money maker for hog raisers known.

PRICES:—25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid; pkgs., \$2.50, \$1.25 and 50c. each. None genuine without my signature on package or can label.

JOS. HAAS, V. S., Indianapolis, Ind.



## BERKSHIRES.

Mr. H. F. Stratton of Erin, Houston Co., Tenn., writes me on Aug. 15th 1903:

"The little pig just received is a beauty, I am delighted with him—wouldn't take twice twenty dollars for him. He is thoroughly patrician. I expect great things

from him at the head of my herd of Royal Berkshires."

So send to Thos. S. White for patrician pigs rather than buy plebeians for a little less, do not be "penny wise and pound foolish," and especially in thoroughbreds. I have had 13 sows to farrow in past few days with over 20 more nearly due, order promptly for fall shipments, I never have enough to go round.

**Short Horn** (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

Hill Top Stock Farm.

## BERKSHIRE HOGS and SOUTHDOWN SHEEP

—A Specialty.—

S. Brown Allen, who succeeds H. A. S. Hamilton & Co in the ownership and management of this celebrated Stock Farm, with increased facilities, will make a specialty of breeding Berkshire Hogs and Southdown Sheep, without regard to cost, from the purest and most royal strains of imported blood.



## My BERKSHIRE PIGS

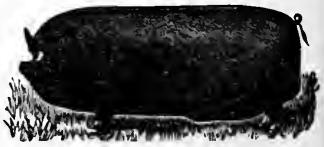
For this Fall delivery will weigh 100 pounds at 12 weeks of age, and for INDIVIDUAL MERIT cannot be excelled in the United States. They will make show hogs against any and all competitors and are being engaged every day.

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.





**LIFT THE QUARANTINE.**  
INTERESTING ANNOUNCEMENT TO FARMERS AND CATTLE SHIPPERS.

The appended notice will be interesting to farmers:

Office of State Veterinarian,  
Blacksburg, Va.

Notice to Stockmen, Railroad Companies, and Others doing Business in the State:

The cattle quarantine through the State of Virginia will be raised November 1, 1903, to remain so until January 31, 1904. Thus during the months of November and December, 1903, and January, 1904, cattle may be transported to and from any portion of the State without quarantine restrictions.

And it is ordered That all stock pens which may have been reserved for the use of cattle from the quarantine district, prior to November 1st, next, shall not be used for receiving or storing cattle from the quarantined district which have been inspected and passed, nor for cattle originating outside of the quarantined district, except when such cattle are intended for immediate slaughter.

By order of the Board of Control.

J. G. FERNYHOUGH,  
State Veterinarian.

#### THE STATE POULTRY SHOW.

The annual show of the Virginia Poultry, Pigeon and Pet Stock Association is becoming an event of importance to the breeders of fancy poultry and other stock, not only throughout Virginia, but a number of adjoining states. The importance of the poultry industry is coming to front more forcibly from year to year and the poultry show is the educator that is largely responsible for its growth. A handsome premium list has been issued which gives all information, and those interested should send for it at once as the entries close November 12th. Address the Secretary, Frank Jenkins, 517 W. Broad street, Richmond. The show will be held Thanksgiving week, November 23-28, when reduced rates will be in effect on all railroads. The Masonic Temple is unsurpassed as a show room, all stock will be fed and cared for and the best judges will place the awards.

#### SHE GOT THE CANDY.

It was a Chicago child, not yet three years old, who, having been punished by her mother, called up her father on the telephone for sympathy. "Papa," was the call that his stenographer heard on answering the ring.

"Why, it's the baby," she said to her employer. The startled man, with visions of disaster in his mind, caught the receiver and said,—

"What is it, baby?"

"Mamma 'panked me," came the reply.

"What do you want me to do about it?" asked the relieved and amused parent.

"Come right home and bring me a pound of candy," said the child.—November Lippincott's.

## ARMOUR'S BLOOD MEAL Cures Scours in Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

**PREVENTS** weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

**A Potent Food for Work Horses, Dairy Cows, Poultry.**

Writes up booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

**THE ARMOUR FERTILIZER WORKS,**

Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

#### SUNNY HOME HERD OF

## ABERDEEN-ANGUS CATTLE.

Baron Roseboy, 57666, by the great Gay Blackbird, dam by Eulalies Eric, 2d prize yearling at Columbian Exposition, 1893, heads the herd. Pedigree means only the tracing of good or bad qualities through several generations. The animals comprising this herd are direct descendants of the greatest prize winners of the breed for the past twenty-five years. Does this mean anything to you, who want an animal of this the **GREATEST BEEF BREED?** If so, come and see the best lot of calves we ever bred, or write.

A. L. FRENCH, Proprietor, R. F. D. 2, Byrdville, Va.

(Note change of P. O. address).

Depot and shipping point, Fitzgerald, N. C., on D. & W. R'y, 24 miles southwest of Danville, Va.

## CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

G. S. LINDENKOHL, Keswick, Albemarle Co., Va.

## JERSEY CATTLE.

We have for sale, **Young Cows, Heifers and Young Bulls**, from cows testing **18 to 24 lbs. of butter in seven days**, and giving **40 to 60 lbs.** of milk per day. Also—

### LARGE YORKSHIRE PIGS,

The coming bacon breed. Our stock is from the most noted breeders in England and Canada.

Write for prices. Address—

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FRUIT GROWERS, read the best fruit paper. SEND 10 CENTS and the names and addresses of 10 fruit growers to SOUTHERN FRUIT GROWER, Chattanooga, Tenn., for 6 months' trial subscription. Sample free if you mention this paper. Regular price, 50c. a year. Best authority on fruit growing.

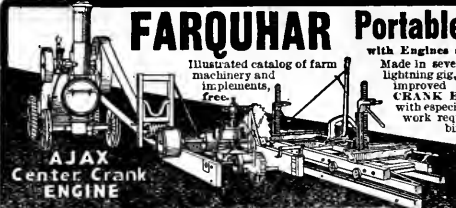
## EMILY'S CHARGE.

A Serial Tale by Mary Washington.  
CHAPTER V.

Soon after the episode recorded in the last chapter, the orphans set out for their new home. Mr. and Mrs. Wheeler gave them a hearty welcome, and they soon arranged their furniture and effects so as to make their cottage home quite comfortable, and even attractive, and they felt as well pleased with it as if it had been a brown-stone residence on Fifth avenue. The furniture was not of a showy kind, but consisted of carefully kept old family pieces each with a history attached to it. They had a few fine engravings and portraits, and a good stock of books which lent an air of refinement to their home.

Emily now felt the value of the systematic habits and practical instruction she had derived from her mother. The latter had taught her (amongst other useful things) how to make excellent bread, which branch of knowledge now proved most serviceable, enabling her to furnish their table with bread at once palatable and wholesome. They were fortunate enough also to find a cow awaiting them, a descendant of one that their Aunt Melissa had kept there, long before, and the milk and butter proved valuable adjuncts to their diet. Emily assumed the brunt of the household work, herself, but Alice assisted her as much as she was able, and between them, they kept the cottage in beautiful order. Walter's share of the work was to bring the water, cut up and bring in the wood and make up the fires. The gardening season had opened by the time they reached the cottage, and Mr. Wheeler was busy at work planting vegetables not only for home folks, but to market at the Springs. Emily turned her attention at once to flower culture, not only because she loved flowers, but because she had understood from Mr. Wheeler that there was a good sale for them, at the Springs, during the summer, made up in bouquet and boutonnières. Mr. Wheeler brought her rich black earth from the woods, and Emily fell diligently to work on her flower garden, assisted by Walter and Alice. She had brought with her a stock of sweet, old fashioned flowers from her old neighborhood, and to these she added a few tea roses, a stock of geraneums and verbenas, and of showy, brilliant annuals, such as Drummond phlox, asters, nasturtiums, scarlet, sage and others which flourished well on her rich flower bed. Under her careful tendance.

As "May glided onward into June," the season began to open, though it was not at its height till August, Emily and the children were enlivened by seeing the stage go daily between the Springs and the railway station. The garden and the orchard at the cottage thrrove very well, and every day or two, Mr. Wheeler wended his way to the Springs with fruit or vegetables. Towards the end of the summer, he



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with Engines and Boilers Complete. Made in seven sizes, friction feed, cable lightning gig, patent chain set works and improved dogs. **AJAX CENTER CRANK ENGINES** are constructed with especial reference to the peculiar work required of them. This combination of engine and mill makes the best sawmill outfit on earth.

**A. B. Farquhar Co., Ltd**  
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## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.

### —DORSET SHEEP—

## B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

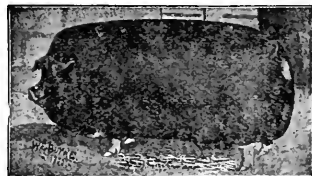
WE OFFER a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young Berkshire boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

**M. B. ROWE & CO.,** - Fredericksburg, Va

# POLAND-CHINAS.

I have a limited number of pigs by my fine boars Gray's Big Chief, 57077; and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young boars and sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address



GRAY'S BIG CHIEF, 57077.

**J. B. GRAY, Fredericksburg, Va.**

## THE OAKS

Has for sale, the grand Shorthorn bull, "ROCK HILL ABBOTTSBURN" 155113, a grandson of Mary Abbottsburn 7th; also a nice lot of CALVES, BULLS and HEIFERS; 2 Reg. MORGAN COLTS at a bargain.

B. B. BUCHANAN, Bedford City, Va.

carried some dandy little bouquets of scarlet sage or geranium, tastefully blended with other flowers. The peaches, pears and grapes coming into market by about this time also sold very readily, so while Mr. Wheeler's modest marketing did not bring in any marvellous influx of money either to himself or the orphans, still it was enough to supply them simple and moderate wants for several months, and moreover he raised enough vegetables to supply the table of both families, besides.

Whilst busy with her flowers and household cares, Emily did not forget the important duty of instructing Walter and Alice. She was well fitted to teach, not only from having had good advantages of education herself, but because she had a gift for conveying information to children, and stimulating their minds. In addition to the formal routine of school, she took great pains in forming and directing the literary taste of her brother and sister, the more so as she looked chiefly to literature to supply any deficiency that might exist in their school training. She used often to quote a remark of her mother's, that whoever loved nature and literature could never be utterly lonely, as they would always have two delightful and cheering companions. They fortunately had a very choice collection of books, saved from the wrecks of their fortune, and as Emily unpacked these, she recalled a cheering passage from Channing's noble essay on "Self Culture," to the effect that no one need consider his roof a poor one when it holds beneath its shelter such kingly guests as Milton, Shakespeare and other great writers.

In the autumn her promised school was given her, and the Trustees, with kindly consideration, located it near the cottage. Emily, of course, had occasional difficulties to contend with in the shape of stupid, unruly or obstinate pupils, but take it all in all, her school was very satisfactory, and she worked in it gladly, both because she loved the work itself, and because it enabled her to support those whom she loved; so though she "led laborious days," they were cheerful ones. She carried on her work with zest and vitality, and infused some of the same spirit into her pupils. She had no arbitrary rules for them; only a few simple and reasonable ones, on a compliance with which she insisted.

She gave her pupils a great deal of oral instruction, thereby making things much more clear and comprehensible to them. In short, she figured out for herself a sort of kindergarten system. She tried the same plan she had found so advantageous to Walter and Alice. She read aloud daily to her scholars, making judicious selections, and reading with an animation and expressiveness that gave life and clearness to the reading.

Sometimes she could not help feeling a little anxious about Walter's and

## REGISTERED HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083), a grandson of the famous Grove 3d 2490, and a descendant of the world renowned Lord Wilton 4057 from the 4th generation.

Snowball, the dam of Salisbury, is now in the herd of His Majesty King Edward VII.

Lars, Jr., is by Lars of Western fame and his dam is Judy out of a Sir Richard 2nd cow. This makes a great combination of the Grove 3d, Lord Wilton, Anxiety, Peerless Wilton and Sir Richard 2nd strains. No better breeding in the world today. FOR SALE—Yearling bulls by above sires WANTED—Reg Hereford heifers, 18 to 24 months old, not bred; will exchange bulls for heifers of equal quality.

Extremely low prices to close out this bunch; only a few left. Write your needs or call and make your own selection.

**MURRAY BOOCOCK, Owner, Keswick, Alb. Co., Va.** Keswick is on the C. & O. Ry., near Charlottesville, Virginia.



Bacon Hall Farm.

## Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO Satisfaction or no sale.

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## VIRGINIA HEREFORDS,

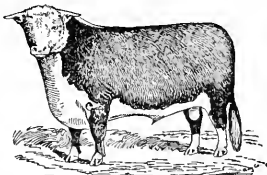
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Correspondence Solicited. Inspection Invited.

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PRINCE RUPERT. 79539

## ROSEMONT HEREFORDS.

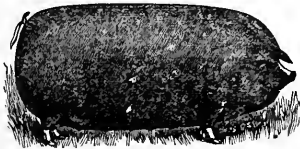
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Assisted by MARQUIS of SALISBURY 16TH 138894, the best son of Imported Salisbury. Correspondence solicited. Visitors welcome

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Choice Pigs, Boars and bred Sows of best breeding and individuality.

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Write for prices and testimonials. Choice stock at farmer's prices.

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*Southern Planter.*

Alice's education when they should be a few years older. She did not feel so much disturbed about Alice as about Walter, however. She had seen so many girls acquire something of learning, at boarding schools, and superficial accomplishments which they dropped in a few years, that she felt no desire for Alice to do likewise. Alice showed no turn either for music or drawing, which lessened Emily's regret at her mobility to have her instructed in these branches. She might have taught her music, herself, but for lack of an instrument, but as it was, she resolved to teach her thoroughly and carefully in all the other branches in which she herself was versed, not neglecting needle work and bread making, two branches which like the famous "low voice" of Cordelia, are "excellent things in a woman." She aimed also to make Alice a thorough student of the English language, for amid the multifarious branches taught nowadays, the structure of ones own language is not studied as closely as it should be, nor are its vast and noble resources sufficiently mastered.

About Walter, she could not make her mind quite so easy. She could not shut her eyes to the fact that in a few years, he would need another teacher than herself, in some branches but she tried to take short views of life, and to dismiss this anxiety, trusting that an opening would be made for him, when his need arose.

The orphans found winter in the mountains more severe than they had been accustomed to, but good Mr. Wheeler was careful to supply them well with fire wood, so they suffered but little from the rigor of the weather.

When Christmas came, their festivities consisted chiefly in decorating the cottage profusely with evergreens, interspersed with red berries, and the waxy white berries of the mistletoe which Walter scaled the top of a gigantic oak to obtain.

For a year or two after this, these annuals scarcely afford anything sufficiently eventful to retail to our readers. Their life went on in much the same routine as we have already described. Year by year, the little cottage grew more comfortable and homelike, and the flower garden, larger and more flourishing. By dint of economy and ingenuity, they gradually introduced more and more conveniences and refinements into their little home. Every thing in it had a history, a memory, a sentiment attached to it, for it was partly filled with old family furniture and pictures, and partly with things that had been gifts, or had been provided by their own efforts or ingenuity. The book shelves, for instance, were Walter's work, he having a considerable mechanical turn, and his wits having been sharpened moreover, by their having no place to keep the books. On the mantel piece was a pair of little vases he had given Emily one Christmas, bought with a little fund

## NOW IS THE TIME to buy HOLSTEINS from the Ury Farm Herd.

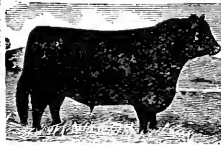
Ury A1wina Count Panl De Kol; De Kol 2nd Butter Boy 3rd No. 2, and Lord Harford De Kol head our herd. You know their official backing. There is nothing better. 15 bull calves at bargain prices. Their dams are of the De Kol, Aaggie, Netherland, Pieterje and Clothide strains and are of the producing kind. The best bulls are sold young; also a few cows and heifers. Choose ENGLISH BERKSHIRE pigs of the best strains. Before buying, correspond with or visit

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Pigs from 4 to 6 months old. Boars ready for service, and young sows with pigs. Prices Reasonable. Apply to . . .

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## ABERDEEN ANGUS BULLS

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"Every Bull a Show Bull."

The choicest lot of young bulls in Southwest Virginia, all out of prize winning families at low prices. Do you want a bargain? If so, come and see us, or Address W. P. ALLEN, Prop of Glen Allen Stock Farm, WALNUT HILL, VA.

## ... 2,000,000 ELBERTA PEACH TREES ...

We offer 2,000,000 Elberta June Buds, besides a large stock of Belle of Georgia, Mamie Koss, Carmen, Greensboro, etc. Big assortment of 2-year Fear and Cherry, and small fruit plants. Write for Catalogue.

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REFERENCES: Hamilton Trust & Savings Bank; N. Dietzen & Bro., Chattanooga; Dunn's Mercantile Agency; Southern Planter.

## Do You Ship Apples?

If so, let us call your attention to the California and Oregon apple boxes, the coming packages for nice apples, particularly for foreign shipments. SOUTHSIDE M'F'G. CO., PETERSBURG, VA.

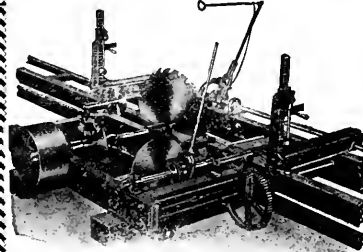
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A two-cylinder gasoline engine: superior to all one-cylinder engines. Costs less to buy and less to run. Quicker and easier started. Has a wider sphere of usefulness. Has no vibration; can be mounted on any light wagon as a portable. Weighs less than half of one-cylinder engines. Give size of engine required. Sizes 1½, 2, 2½, 4, 5, 6, 8, 10 and 15 horse power. Mention this paper. Send for catalogue. THE TEMPLE PUMP CO., Meagher and 15th Sts. CHICAGO.

he had obtained by selling chestnuts, and his sister prized them more than if they had been of the finest Sevres China. Some pleasant association was linked with every article in their simple household, and thus their little possessions gave them more satisfaction than is felt by a wealthy person who has only to own his furniture and adornments from trades people.

(To be continued.)

## GOOD HOUSEKEEPING.

### WAFFLES.

Take two pints of flour and one of meal and sift them together, add a heaping teaspoon of salt and three well beaten eggs and enough butter-milk to make a thin batter (an old cook's rule was to have them as thick as strained honey) dissolve a teaspoon of soda in a little warm water and add it to the mixture. Make the waffle irons very hot and cook the waffles quickly, serve at once.

### SALLY LUNN.

Two quarts of flour, one quart of milk and a cup of yeast, and five eggs nearly a cup of butter and lard mixed, a tablespoon of sugar and a teaspoon of salt. Beat all these well together and set it in a warm place to rise. After dinner beat it down well and put it into a greased cake pan and let it rise again. Cook as you do lightbread and serve very hot.

### ENGLISH HOT CAKES.

Two quarts of flour and three eggs, half cup of butter or butter and lard mixed, a cup of yeast. Mix up with new milk into a dough as stiff as biscuit dough and let it rise all night. In the morning roll out the dough about three quarters of an inch thick and cut into squares with a sharp knife. Let them rise and just before you need them fry on a very hot griddle, or bake in a very hot oven for fifteen minutes. These are not good after they begin to get cool, so they should be served as quickly as possible.

### SMOTHERED CHICKEN.

Always try to have the chickens killed the day before you use them. It is best to have a large frying sized chicken for smothering. Split them down the back and fold the wings and legs under. Lay them in a pan of slightly salt water awhile before cooking. When ready to cook put them in a pan, rub them well with butter, sprinkle salt and pepper over them and put two or three slices of bacon in the pan. Put about a quart of water to two chickens and set them inside the stove. Let them cook slowly, and baste frequently. When done take out and make a gravy with the water in

## Bales Hay, Straw, Moss, Husks, Cotton, Wool.

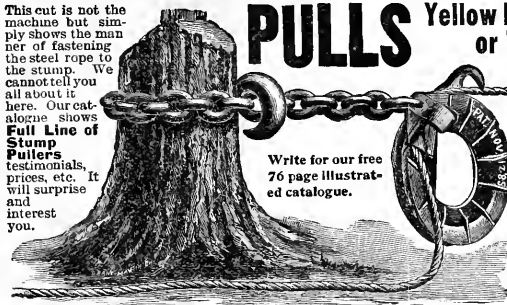
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This cut is not the machine but simply shows the manner of fastening the steel rope to the stump. We cannot tell you all about it here. Our catalogue shows Full Line of Stump Pullers testimonials, prices, etc. It will surprise and interest you.



## PULLS Yellow Pine Stumps or Trees.

Our new 2-Horse

### Hawkeye

is built for that purpose and does it rapidly and cheaply. A machine that will pull yellow pine stumps will pull almost anything else. It is being used by many planters and most of the leading R. R. and levee contractors. It has 3 times the power of our machines for ordinary work and pulls 8 acres at a setting.

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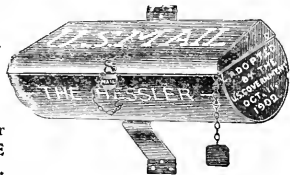
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DISCOUNT IN DOZEN LOTS.

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For further information, address,  
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CHAS. N. FRIEND, General Agent,  
CHESTER, VIRGINIA.

the pan by adding a well beaten egg and two or three spoons of browned flour creamed with a large tablespoon of butter. Pour it around the chicken and garnish the dish with parsley. Serve hot.

#### CHEAP FRUIT CAKE.

This is not only a cheap fruit cake, but one of the best I know of and will prove perfectly satisfactory except where the real black cake is desired.

Three heaping cups of flour. Two cups of sugar. Two cups of butter. SIX eggs beaten separately and very light. Half pound of raisins. Half pound of currants. Quarter of a pound of citron. One teaspoon of cinnamon, one of nutmeg and one of cloves. One glass of brandy. Cream the butter and sugar together, then add the yolks of the eggs, and then stir in the fruit which is floured, and lastly sift in the flour, bake slowly in a loaf or in small pans.

#### THANKSGIVING APPLE PIE.

Pare the apples and stew them with very little water until they can be put through a colander. Sweeten them and season with cloves and all-spice. Make a rich pastry dough and line your pie plate with it, put the apples in and sprinkle a layer of seeded raisins over them, then put on a top crust and bake. Sprinkle the tops with powdered sugar and serve either hot or cold.

#### SWEET POTATO PIE.

One quart of potatoes mashed and put through a colander, one cup of butter, six eggs, beaten separately, four cups of sugar, two cups of rich milk, one small glass of brandy or whiskey, vanilla, nutmeg and cinnamon. Save the whites till the last then stir them in. Bake in a rich paste and serve cold.

#### THE BEST SPONGE CAKE.

One pound of sugar. Ten eggs. Three quarters of a pound of flour, the juice and rind of one lemon. Beat the whites and yolks separately and then mix the yolks and the sugar slowly beating hard all the time, to these add the flour and the whites alternately just folding them in without heating. Lastly add the lemon and bake very quickly in a loaf.

#### GINGER CAKE.

Two pounds of flour, one of butter and lard mixed. (I sometimes use altogether lard.) One pound of sugar, light brown is best, one pint of molasses, three ounces of ground ginger, one teaspoon of cinnamon, and one teaspoon of soda. Roll and cut into shapes.

CARAVEN.

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We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? We ship in a plain sealed case; no marks to show what's inside.

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1724 E. MAIN ST., (Cor. 18th,) RICHMOND, VA.

We furnish everything to eat for man and beast, at the lowest possible prices. Send us a trial order. Satisfaction guaranteed.

Prices subject to market fluctuations. Order now,

Remember, we are Wholesale and Retail Grocers, Feed and Liquor Dealers. . . . .

Levering Coffee.....	10	Fresh Mixed Cakes, per lb.....	8	Country Butter, per lb.....	22
Granulated Sugar, per lb.....	43	6 bars Colgate's Octagon Soap....	25	Irish Potatoes, bushel.....	85
Light Brown Sugar, per lb.....	43	7 bars Octagon Shape Soap, 10 oz.	25	Best Water Ground Meal, per pk..	20
Daisy Coffee, per lb.....	10	10 bars Moon Soap, 8 oz.....	25	Best Water Ground Meal, bush....	70
Arbuckle's Coffee, per lb.....	11	12 bars Hustler Soap, 8 oz. cakes.	25	Best Ship Stuff, per 100, \$1.20; per	23 00
Best Green Tea, per lb.....	75	Lenox Soap, 7 bars.....	25	ton .....	23 00
Choice Green Tea, per lb.....	60	Small California Hams, per lb....	9	Best Bran or Brown Stuff, per 100.1	10
Best Black Tea, per lb.....	50	Good Salmon, per can, 9c.; 3 cans.	25	Best Mixed Oats, per bush.....	48
Good Green Tea, per lb.....	40 & 50	Large Mackerel, each .....	10	Best No. 1 Timothy Hay, per ton.17	00
Good Black Tea, per lb.....	40	Large Can Good Tomatoes.....	8	Porto Rico Molasses, per gal.....	35
Mixed Tea, per lb.....	30, 40 & 50	Large Can Best Tomatoes.....	8	New Orleans Molasses, per gal....	50
Fair Black Tea, per lb.....	25	2-lb. can Best Tomatoes, can.....	6	Good Dark Molasses, per gal.....	20
Best Rice, per lb.....	8	Large Juicy Lemons, dozen.....	15	Maple Syrup, ½ pint.....	10
Good Rice, per lb.....	5	Green Coffee, per lb., 9c.; 3 lbs....	25	3 plugs of any kind of 10c. tobacco	
Pure Leaf Lard, per lb.....	10	Qt. Mason Jars of Light Syrup... 10	10	for 23c.: such as Peach, Plum,	
Good Lard, per lb., 9c.; 3 lbs....	25	½ gal. can Light Syrup.....	20	Sun Cured, Grape, Reynold's,	
Cooked Sliced Ham, per lb.....	12 ½	1 gal. can Light Syrup.....	40	and other brands.	
Good Salt Pork, per lb.....	7	½ bbl. Clipped Herrings.....	2 75		
Choice Salt Pork, per lb.....	9	200 lbs. Sack Salt.....	85	CHOICE WINES AND LIQUORS.	
Best Salt Pork, per lb.....	11	100 lbs. Sack Salt.....	45	Moore's Crown, fine, per gal.....	\$3 00
Best Potted Ham and Tongue,		Best Full Cream Cheese, per lb... 16	16	Moore's Excelsior, fine, per gal..	2 00
per can .....	4	Swiss Cheese, per lb.....	20	Moore's Keystone, 3 years old,	
Chipped Beef, one-half lb.....	10	Lump Starch, per lb.....	4	per gal.....	2 50
New N. C. Cut Herrings, dozen		Evaporated Peaches, per lb.....	9	Pure Virginia Apple Brandy, per	
10c.; or bbl.....	4 25	Prunes, 7 lbs.....	25	gal.....	3 00
New N. C. Roe Herrings, dozen,		Malta Vita, box.....	12	Maryland Apple Brandy, per gal.	2 25
18c.; or hbl. \$5.; or ½ bbl.....	2 75	Can Corn, 4 cans.....	25	Best Gin, per gal.....	2 50
Our Pride of Richmond Flour, per		New Currants, 1 lb. pkge., 12c.; 8		Good Gin, per gal.....	2 00
bbl. ....	7 50	oz. pkge.....		Best N. C. Corn Whiskey, per gal.	2 00
Our Daisy Flour, per bbl.....	4 25	Beans, bushel, \$2.75; per qt.....	25	Blackberry Wine, per gal.....	45
Our Excelsior Flour, per bbl.....	4 00	Buckwheat, per lb., 5c.; 6 lbs....	25	McDermott's Malt Whiskey, per	
Fresh Soda Crackers, per lb.....	5	Seeded Raisins, 1-lb pkge.....	9	bottle .....	80
Ginger Snaps, per lb.....	5	Mother's Oats, pkge.....	9	Wilson Whiskey, per bottle.....	1 00
New Mixed Nuts, per lb.....	12 ½	Quaker Oats, pkge.....	10	Jas. E. Pepper Whiskey, bottle..	1 00
Cocoanuts, 5c.; or, per 100.....	3 50	Elgin Butter, per lb.....	25	O'Grady's Malt Whiskey, per bot.	80

## BARBED WIRE:

4-Point Galvanized, 500 Pound Lots, 2 $\frac{3}{4}$  Cents.

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For Immediate Orders.

The Review of Reviews is keeping up its reputation as the best interpreter of the news of the day among our monthly journals. The November number deals with the postal investigation, the fall elections, the recent exposures of "high finance" in trust organization, the Panama Canal situation, the award of the Alaska boundary tribunal, the protectionist movement in England, and the issue in the Far East between Russia and Japan. Contributed articles describe "Men and Issues of the New York City Campaign," just closing; "The Nation's Print Shop and Its Methods"—including a review of the famous "Miller case" and its outcome and the whole question of the status of labor unions in the Government Printing Office; "The Fort Riley Maneuvers," which began on October 15th; "The New Springfield Rifle and the Improvement in Small Arms"; "Galveston's Great Sea Wall"; and "The Rebirth of the Japanese Language and Literature"—a history of the movement for the adoption of the Roman character in writing and printing, in place of the Chinese systems of picture-writing. Dr. George F. Kunz writes an authoritative account of the discovery of radium, and the uses and properties of that wonderful element. In this number also appears the defense of Russia's policy in Finland, which was addressed last month by Minister de Plehve to Mr. W. T. Snead. Altogether a typically "live" number.

### ON THE INSTALMENT PLAN.

Mrs. Browne.—"Oh, what lovely wedding presents! Such beautiful silverware and such rare china! Wasn't it nice to get such presents?"

Mrs. Greene.—"Yes, it was; but we are now beginning to pay for them on the instalment plan."

Mrs. Browne.—"Pay for them? On the instalment plan? Why, Mrs. Greene, what do you mean?"

Mrs. Greene.—"Why, the young people who gave us wedding presents are getting married, and we have to send them wedding presents."—November Lippincott's.

## THIRD ANNUAL SHOW

—OF THE—

Virginia Poultry, Pigeon, and Pet Stock Association,

RICHMOND, VA., November 23-28, 1903,

IN MASONIC TEMPLE.

Classification embraces Poultry, Dogs, Pigeons, and all kinds of Pet Stock. Liberal Cash Prizes. Guarantee fund insures prompt payment of premiums.

PREMIUM LIST NOW READY.

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GEO. O. BROWN of Baltimore, Judge of Poultry.

Entries Close Nov. 12. For Premium List, address

FRANK JENKINS, Secretary, 517 W. Broad St., Richmond, Va.

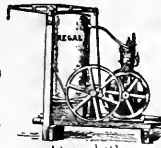
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Pumps, Windmills,  
Rams, Tanks. . .

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(INCORPORATED).

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1 $\frac{1}{2}$  and 2 $\frac{1}{2}$   
HORSE-POWER.

is so hard to get nowadays that every farmer appreciates the necessity of using labor saving devices, such as Gasoline, Pumping and Wood-sawing Engines.

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A litter of five pedigree pups, from driving parents, sable and tri-colored. Also BUFF PLYMOUTH ROCK CHICKENS. Farm raised. No other breed.  
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By imported Sires. Sable and white and tri-colors. Prices, \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents; FREE if you buy a Collie. MAPLEMONT STOCK FARM, Albany, Vermont.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

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BY PROF. W. F. MASSEY.

383 Pp. Cloth, \$1.00; Paper, 50c.

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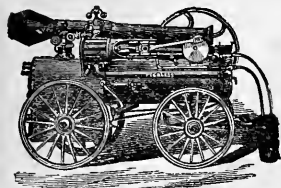
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# THE WATT PLOW CO.,

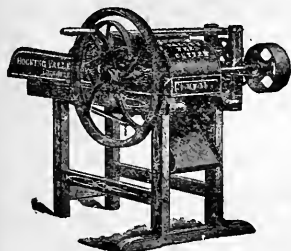
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15th & Franklin and 14th & Main Sts., Richmond, Va.

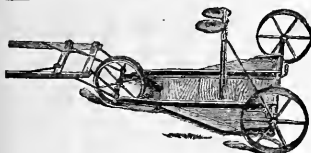
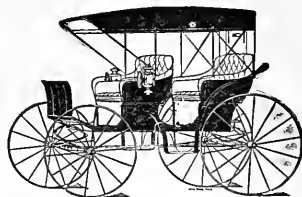
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Machinery, Vehicles and  
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DAIN CORN CUTTER.



STAR SWEEP MILL.

A full stock always on hand, and prompt shipments guaranteed. South Bend, Dixie and Farmer's Friend Plows and repairs. The Hancock Rotary Disc Plow, warranted to go in the ground where all others fall.

Hocking Valley Feed Cutters, Cyclone Shredders, Smalley Feed Cutters, Dain Corn Cutters. Equal to any made. Staver Buckeye Feed Mill and Horse Power Combined. Star Sweep Mill. Either grinds corn on cob or shelled.

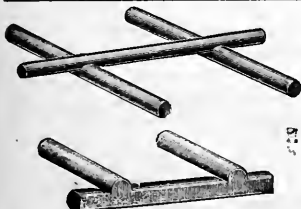
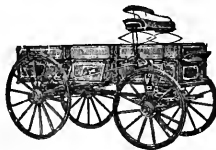
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The celebrated Columbus, Ohio, Buggies, Carriages, Runabouts, and Traps. Farm Wagons and Delivery Wagons, a complete stock.

Correspondence solicited.



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Nashville American .....	50	75
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Breeder's Gazette .....	2 00	1 75
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"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable FIELD AND GARDEN SEEDS of every variety at Lowest Market rates, included in which are

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For Tobacco, Corn, Wheat, Potatoes, &c.

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Parties wishing to purchase will find it to their interest to price our goods. Samples sent by mail when desired.

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We make a specialty of handling dealers' orders.

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| Apples,   | Nectarines, | Pecans,       | Ornamental and |
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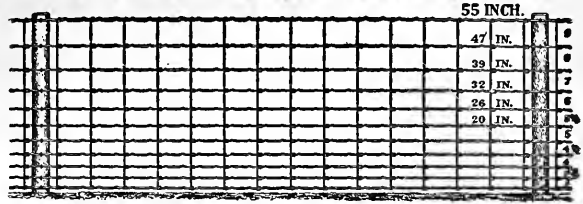
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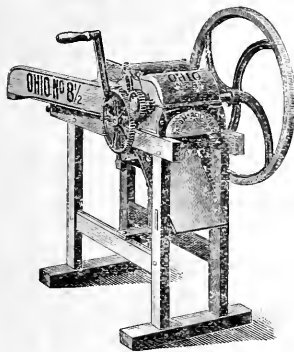
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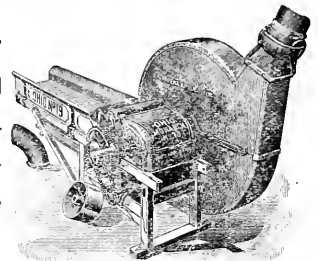
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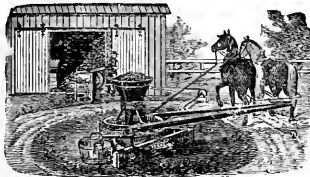


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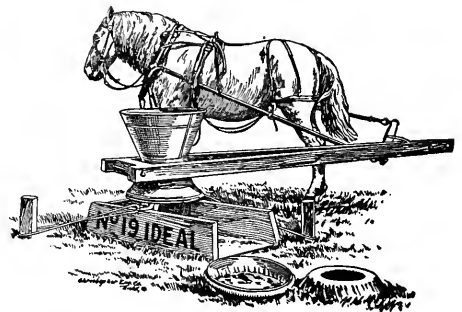


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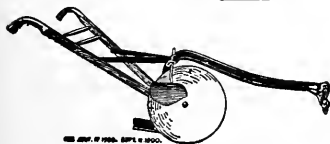
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Plant out in November and December while they are in a dormant condition for best results.

Our outdoor grown roses are larger, stronger, hardier and better rooted plants, and thrive better and give much better results in every way than the plants started and grown in greenhouses as usually sold.

OUR LIST INCLUDES THE BEST VARIETIES IN CULTIVATION. PRICE, 25c. EACH, \$2.50 PER DOZEN.

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These make a larger growth, larger flowers, and bloom more profusely than the Tea or Monthly Roses, but do not bloom so continuously throughout the year. While they are in bloom, however, they make a more showy and magnificent display, and the individual flowers are larger and handsomer.

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Very desirable free blooming hardy roses.

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The Tea Roses bloom continuously throughout the year, and make beautiful buds and cut flowers, but do not make as large a mass of blooms at one time as the Hybrid Perpetual, nor do they make as vigorous a growth of bush.

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SAFRANO. Orange yellow, tinted with rose.

CATHERINE MERMET. Beautiful pink; a splendid rose.

WHITE MAMAN COCHET. Finest outdoor tea roses;

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These two Maman Cochet Roses should be in every collection.

CHAMPION OF THE WORLD. Classed as one of the greatest everblooming roses in cultivation; color deep rich rosy pink; hardy and of vigorous growth.

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CLOTHILDE SOUPERT. Color ivory white, shaded with rose; beautiful and remarkably free bloomer.

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LA FRANCE. Light silvery pink, delicious fragrance.

METEOR. Rich velvety crimson; makes fine cut flowers.

PAPA GONTIER. Color rich crimson; very fragrant and beautiful; makes large buds and flowers.

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REINE MARIE HENRIETTE. Cherry red; a beautiful rose, and gives the very best satisfaction in the South.

CLIMBING METEOR. Produces deep rich velvety red flowers, free bloomer, and a fine climbing rose.

GLORIE DE DIJON. Color rich creamy white; not entirely hardy.

WHITE RAMBLER. Beautiful white climber; free foliage.

CRIMSON RAMBLER. Bears clusters of crimson flowers.

YELLOW RAMBLER. Earlier than the crimson; splendid.

PINK RAMBLER. Vigorous growing; fine foliage.

HELENE. Bears magnificent clusters of violet crimson flowers, larger than Crimson Rambler.

DOROTHY PERKINS. A beautiful new climbing rose.

JERSEY BEAUTY. The well-known type of Memorial Rose, fine foliage, of creeping or trailing habit, has large, yellow flowers, produced in clusters.

Price of all varieties, 25c. each; \$2.50 per dozen.

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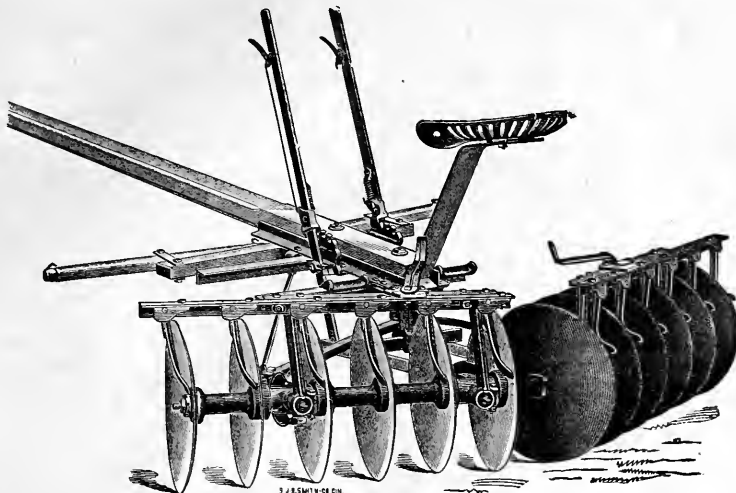
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Not all for the dollar:                      Something for reputation.

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THE LARGEST AND FINEST LINE OF HARROWS TO BE HAD.



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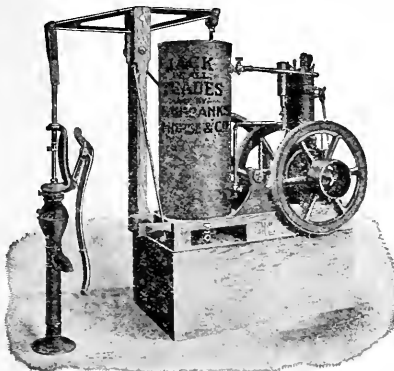
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## RICHMOND ENGINE AND PUMP COMPANY:

More of our Gasoline Engines made and sold than any three  
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THE SIMPLEST,  
THE STRONGEST,  
THE BEST,  
THE MOST  
POWERFUL.  
NO OTHER ENGINE  
COMPARES WITH IT.



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PUMPS FOR HAND AND POWER. HYDRAULIC RAMS TANKS AND TOWERS.  
The Duplex Grinding Feed Mills, a specialty.

— 75 HEAD —

**..GOOD GRADE CATTLE..**

FOR SALE. Will average 1,000 lbs or more. Well suited for export another year. A. D REYNOLDS, Bristol, Tenn.

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EARLY JERSEY WAKEFIELD,  
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50,000 Dahlia and Canna Bulbs.  
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bers can be had for 25 cents. Address  
our Business Office.

**AN INTERNAL DIFFICULTY.**

Little Archie Richards, at the close of the Thanksgiving dinner, sat at the table with his face suffused with tears. His mother was greatly troubled. With a sweet smile and with gentle intonation she put one arm around her little baby boy and asked,—

"What is it mamma's little darling wants?"

But "mamma's little darling" continued to cry.

Mamma made another effort to find out the trouble.

"Does mamma's baby boy want some more cake?" she asked.

"No'm," said the child, while the tears continued to flow.

"Does he want some more pie?" she further inquired.

"No'm," he further replied.

"We'll," said the mother, making a last effort to reach his case, "tell mamma what baby wants."

The little boy managed somehow to say between sobs, "I wants some of this out I've got in."

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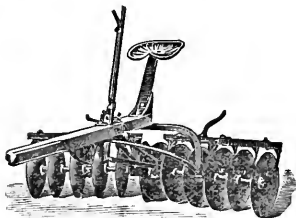
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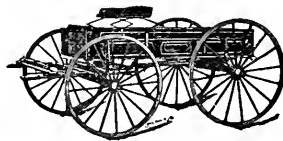
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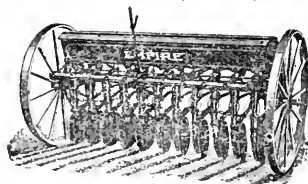
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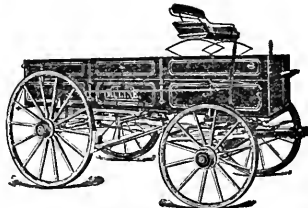
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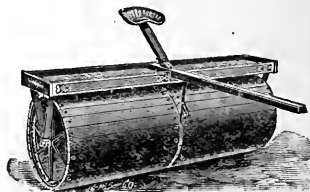
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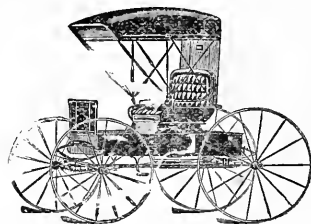
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L. A. GOODMAN, *Secretary*,  
Kansas City.

### THERE WERE ENOUGH INSIDE.

In England, the lord chancellor, by virtue of his office, has a right to inspect all public asylums and hospitals. One day, while the late Lord Herschell was paying a visit at the house of a friend near Norwich, he went for an afternoon stroll, and, happening to pass by the great insane asylum at that place, the thought struck him that this was a good time to perform an official duty. Incidentally, it may be said that Herschell bore the repu-

tation of being somewhat pompous at times. He knocked at the door, which, after a long delay, was opened by an attendant.

"You can't come in," he was informed. "It's not visiting hours."

"That makes no difference. I shall inspect this institution just the same." "Indeed, but you'll not."

"Come, come, my good man, I'm the lord chancellor," Herschell expostulated.

"Oh, that's all right," answered the functionary, "we've four of you inside already."—*Success.*

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Richmond, December, 1903.

No. 12.

## Farm Management.

### WORK FOR THE MONTH.

Another year has rolled round to its closing month, and the ingathering of the crops, the result of a year's toil and anxious care, has been practically completed. The year has been in regard to the weather an abnormal one, and the effect is largely seen in the crop returns. Excessive rains throughout nearly the whole South were the characteristic of the spring and early summer months, and had it not been for the fine, open and dry fall which we have had the crop returns would have undoubtedly been most disastrous. The seeding and planting of all crops was delayed, and when got in they were too often planted in badly fitted seed beds, and the working of them was rendered practically impossible upon the river and creek low lands. Wheat, which promised finely in the early spring, was practically rendered a complete failure by the heavy rains at the blooming period. The pollen was washed from the ears, and as a result of imperfect fertilization of the blooms the ears were only very partially filled and the grain was light and rashy. The average yield of wheat in Virginia is placed by the Department of Agriculture at 8 bushels to the acre. In North Carolina, at 5 bushels; in South Carolina, at 6 bushels; in Tennessee, at 7 bushels, and in Maryland, at 12 bushels. Winter and spring oats were also very unsatisfactory crops. The corn crop, however, made some amends for the disappointment in these crops, as it is on the whole a good one, probably on the high lands one of the best ever raised in the South, and, on the whole, compares very favorably with the crop in the rest of the country. The average yield for Virginia, as estimated by the

Department of Agriculture, is placed at 21 bushels per acre against a 10 years average of 19 bushels. In North Carolina the estimated yield is 14 bushels per acre, against a 10 years' average of 13 bushels. In South Carolina the yield is estimated at 10 bushels per acre, against a 10 years' average of 9 bushels. In Maryland the yield is estimated at 28 bushels per acre, as against a 10 years' average of 29 bushels. In Tennessee the yield is estimated at 23 bushels per acre, as against a 10 years' average of 21 bushels. The tobacco crop of Virginia is estimated by the Department at 745 pounds per acre, as against a 10 years' average of 640 pounds. In North Carolina the crop is estimated at 627 pounds to the acre, as against a 10 years' average of 535 pounds. In South Carolina the crop is estimated at 610 pounds to the acre, as against a 4 years' average of 711 pounds. In Maryland the crop is estimated at 650 pounds to the acre, as against a 10 years' average of 633 pounds. In Tennessee the crop is estimated at 700 pounds to the acre, as against a 10 years' average of 642 pounds. The Irish potato crop is above the average, whilst the sweet potato crop is also above the average in all the coast States. The hay crop in all the coast States is above the average, the yield per acre being even in excess of all the Northern and New England States, and comparing very favorably with that of all the Middle States, indeed being in excess of several of the best of these. The cotton crop, whilst not yet fully ascertained, is expected to be about an average in the coast States, with a price for it away above the average. Indeed, this crop alone for lint and seed is expected to bring more than \$500,000,000 into the

Southern States. The market value of all the crops is well maintained, with the exception of tobacco, and whilst the market for this crop opened very flatly, there is already indication that better prices are in prospect. Even with the opening low prices growers should bear in mind that these compare favorably with figures at which the crop was selling a few years ago, and are relatively only low as compared with those of the closing sales of the year before last and the opening sales of last year. We have had planters in our office who have already sold this year at prices ranging from 6 to 10 cents for dark shipping. The season has been a most propitious one for the production of forage crops of all kinds, and there is an abundance of feed for all live stock for the winter, whilst the fine, open fall has kept grazing on the pastures good up to the present writing. No doubt the cost of production of all crops has been higher this year on account of labor scarcity, but we conclude that on the whole Southern farmers may look with satisfaction on the result of their labors, certainly with more satisfaction than can farmers in many of the Northern and Western States. We are beginning in the South to see the results attained by the adoption of a system of "farming" rather than "planting" in the substitution of a system of rotation of crops in which the legumes and other forage crops are brought more frequently into the course, and in which deeper plowing and better cultivation is being practiced. We have been urging these changes for many years, and feel a sense of satisfaction in seeing the results of our labors bearing fruit. We have always been confident that we were advising the right course to bring prosperity to Southern farmers and increased and permanent fertility to the lands of the South, and each year only emphasizes the truth of this and makes us more determined to continue urging rotation of crops, deep plowing and repeated and more perfect cultivation. These and not so much a reliance on purchased fertilizers, coupled with attention to the breeding and keeping of live stock sufficient on every farm to consume all the rough products and forage crops and much of the grain are the true sources from which prosperity must come, and the farmers themselves are now realizing these truths more than ever in the past. We have the climate, we only need to supplement it with a sound system of rotation and justice to the land in the way of breaking and working it to ensure success in production and a better system of utilization of the crops on the farm when produced to ensure profit in the ultimate results.

Canada peas and oats, and this crop ought only to be sown in December in the Tidewater and central plain of the coast States. Elsewhere in the South it should be sown in January, February and March, according as the section rises in altitude from the sea. In middle and Tidewater Virginia we have known Canada peas and oats to make an excellent yield of forage and grain seeded in December. Much, however, depends on the character of the seed bed. If this be dry and finely worked and a good cover be given to the peas, they will take no harm, even if the weather becomes severe. Canada peas and oats are essentially a cold climate crop, and to be grown successfully in the South want to be got in the ground sufficiently early to make and complete their growth before the hot weather strikes them, otherwise the crop will not be worth the raising. As a green forage crop for hogs, and as a hay crop, it is very valuable as it comes in at a time when feed is usually getting scarce. The peas at the rate of  $1\frac{1}{2}$  or 2 bushels to the acre should be planted deep with the drill or be plowed down so as to give them a cover of 4 or 5 inches. The oats, at the rate of  $\frac{3}{4}$  or 1 bushel to the acre, should then be sown on the top and be harrowed in. The crop will be ready for grazing by April, and should be cut for hay in May.

So long as the weather keeps open and the land dry enough to plow the teams should be kept at work breaking all land intended to be cropped next year. In doing this work see that the plow is kept as deep in the ground as a strong team can pull it, and that some portion of the subsoil is turned up in addition to the old worked soil. This subsoil contains an abundance of natural plant food, and only requires to be subjected to the influence of the atmosphere long enough to make this available. When turned up in the spring there is not time for this action to be exercised long enough for advantage to be secured, now it can be turned up with safety and ultimate profit. Wherever possible, in addition to the deep turned furrow have the hard subsoil broken with a subsoil plow following the turning plow in each furrow. In this way this subsoil becomes permeable by the atmosphere and capable of holding the rainfall for the subsequent use of the crops and this rainfall will dissolve the plant food therein, which will be taken up by the roots of the crop, which will easily penetrate the loosened soil. Plants of all kinds are solely dependent for their growth on the food in the soil which is held in solution by water. They cannot utilize any of this food in a solid form, hence the importance of conserving the moisture in the soil. In our

It is too late in the year now to sow any crop except

last month's issue we pointed out in discussing a recent bulletin of the Department of Agriculture, that as a result of the investigation of the Department, it had been found that all soils capable of cultivation contained nearly the same amount of plant food capable of being dissolved by the soil water, and that this quantity was amply sufficient for the production of maximum crops for years to come if made available. The only means of securing this availability is to make the soil capable of holding sufficient moisture to dissolve the plant food, and this can only be done by deep and perfect cultivation and the filling of the soil with humus, which acts like a sponge in holding the moisture. Now is the time to break the soil and subsoil, and then the humus making crops and manure can be added later. We know that many Southern farmers and some agricultural authorities doubt the advisability of fall and winter plowing in the South, unless the land can also at the same time be seeded with a winter growing crop. They contend that as we have not usually much severe frost to disintegrate the soil, that little benefit is derived from breaking the surface, and that the winter and spring rains will so pack the land as to make necessary reploting in the spring. We cannot agree with this view. Whilst we would plow and seed with winter growing crops as long as possible, yet we would not cease to plow when compelled to cease seeding. Even should the soil become somewhat packed, it will certainly break much more easily either with the plow or the disc or spading harrow in the spring than if left unplowed in the fall, and it will certainly have secured a much better supply of water in the subsoil than can possibly be the case if only plowed in the spring, and this water will have dissolved more of the inert plant food and rendered the same available. One of the great weak points of Southern farming has been, and is, the lack of plowing and finely breaking the soil sufficiently. We plow too many acres and do not plow the individual acres sufficiently. A reversal of this system will result in much greater profit and no more work. Especially would we advise deep plowing and subsoiling now on lands washed and gullied, as we too often find them. This washing and gullying can only be stopped and the land be made profitable again by deep plowing and subsoiling. The soil washes away because the rainfall cannot get down into the subsoil. Open this and make of it a reservoir to hold the rain, and the washing will cease and the land will produce good crops when once some humus has been got into the soil. After these gullied fields have been plowed and subsoiled, spread any kind of vegetable trash or straw manure on the surface, and when the soil is

dry enough work it in and then in February or March sow 2 bushels of oats to the acre, and let this growth be lightly grazed or be mowed before the oats head, and the cutting be left as a mulch on the ground. In June turn the growth under and sow cow peas 1 bushel to the acre. Turn these down in August and sow 12 pounds of crimson clover seed and a bushel of oats, rye and wheat mixed in equal parts, to the acre. When this crop comes off in the following year either by grazing or cutting, the galls and gullies will be ended and the land can be cultivated in staple crops or be seeded to grass.

The work of planting the staple crops in the spring can be greatly helped by utilizing the winter months in getting the manure and fertilizer into the land. Barn yard manure can never be put to a better use or be better conserved than to use it as a top dressing on winter growing crops or by applying it in winter to the land to be put into crop in the spring. Get the manure out of the barns, stables and pens as made, whenever the land is fit to haul on. The leachings will then find their way into the soil, where they will be utilized by the crops and not into the creek or river. The solid matter will decompose and rot as well on the land as in the barnyard, though not quite so fast. All the phosphatic and potassic fertilizers, and some of the nitrogenous ones like tankage, can with safety be applied in the winter. The phosphatic and potassic fertilizers require considerable time to become assimilated and dissolved in the soil before crops can derive benefit from them, and there need be no fear of their being lost by leaching. Tankage, cotton seed, and all other organic nitrogenous fertilizers also require time to rot before they can be utilized, but they should not be applied too long before the crop is planted or some of their value may be lost. Nitrate of soda, the most active nitrogenous fertilizer, ought, however, never to be applied before the crop has commenced to grow, as it is as soluble as salt, and the nitrogen is immediately available, and may be quickly lost if there be no crop growing to utilize it. In these various ways the fine, open winters which we experience here ought to be fully utilized, and thus we can be ready to plant our crops as soon as ever the weather is suitable. If we do not thus utilize the winter months we fail to do our duty, and might as well be living in the cold, hard frozen North.

The work of cleaning up new land and old fields that have not been under cultivation and are again intended to be cropped, should be attended to. When

ever work of this character is undertaken, let what is done be done thoroughly. Do not leave stumps and rocks in or on the land, but remove them out of the field. Small stumps can be easily pulled out and larger ones should be blown out with dynamite. Left in the ground they only form breeding places for weeds, briars and fungoid diseases, and are the constant source of broken tools and implements and injured horses and mules. Rocks should be gathered up and hauled on the roads of the farm or the adjoining highways, where they can be profitably utilized in making and repairing good, hard, dry, permanent roads. Let all old fences be straightened and repaired, and the necessary new ones be built. Where good old rails are still found in the old fences these can be utilized in the building of new ones and a much greater length of fence be built by combining them with wire. Set the posts at a proper distance to utilize these old rails and then fasten them to the posts by stapling a length of wire to the bottom of the post and carrying it up the post on the one side and down on the other side, making loops at the proper distance apart to hold the ends of the rails in place and stapling the wire to the post above and below each rail. In this way a five or six rail fence can be built for a long distance with the rails taken out of an old worm fence.

Ditches should be opened out and cleaned, and drains be put in where needed. When any draining is to be done see that before starting the work a good plan is prepared and levels be properly taken so that no mistake be made in so placing the drains as to secure sufficient fall for all drains and a good open outlet for the main drain. Do not fail to put the drains down deep into the land. At least 3 feet should be the depth from the surface. The water which does the harm to the land is not that lying on the surface, but the water in the subsoil, which is stagnant and prevents the surface water from getting down. Drain off this stagnant underground water, and that which falls on the surface or finds its way there will soon get down and away out of the land. Fill the drains with the soil and clay taken out, and not with loose stones or rubbish. The tighter they are filled the better they will draw the water out of the subsoil, which is what is needed, and the longer they will continue to be effective. We have packed tile drains tightly with clay from the tile up to the surface and found them to be thoroughly effective for twenty years afterwards. In draining a piece of hilly land, let the drains run directly down the hill and not across or in a diagonal direction. When run

straight down the hill the drain draws water from both sides, whilst a drain run across or diagonally will only drain water from the upper side.

Have the ice pond cleaned out and cut off all sources of impure water flowing into it. The freezing of water does not purify it as many think, and the absolute necessity for using only pure ice is so great in the way of health that no risk should be run of impounding impure water. The ice house should also be thoroughly cleaned out and be put into good repair. In our last issue and in this one will be found articles dealing with the building of ice houses.

Have all implements and tools not in use gathered together and put under cover. Clean them thoroughly, and grease the bright metal parts, and on wet days repair and paint them. A few dollars spent in paint will make tools and implements last years longer. The loss sustained by farmers from the careless way in which their tools and implements are cared for amounts to millions every year, and in itself amounts to a considerable profit on the working of a farm.

See that plenty of seasoned wood is stored in the wood shed, and do not subject the women of the household to the annoyance of having to use wet fuel to cook the meals and keep the home warm.

Have an abundance of feed stored convenient for the stock, so that if short handed at Christmas and New Year, which is very often the case, the stock will not have to suffer.

Don't send all the best of the farm products to the Christmas and New Year markets, but keep an abundant supply for home use, so that all the family and visitors may be able to enjoy a merry Christmas. "It's a poor heart that never rejoices," and no one has a greater right to enjoy the good things of life than the farmer who produces the most of them.

That the New Year may be a happy and prosperous one for all our readers is our heart-felt wish and prayer.

### ROTATION OF CROPS.

The subject of the proper rotation of crops on a farm is one that up to the present has received comparatively little attention in this country, and practically none in the South. With the vast areas of un-

occupied land in the country and the large quantity of uncultivated land common on the great plantations of the South, the subject has not pressed for attention. When Uncle Sam could give every farmer a new farm when the old one ceased to return good crops men thought it of no concern to them to learn how to make the old farm permanently profitable, and were content to call their farm a profitable one so long as they could secure from it a good living for themselves and something over and took no stock in the idea that it was a duty they owed to posterity to maintain fertility. They held strongly to the Irishman's theory that posterity had done nothing for them, and therefore they need not concern themselves about posterity. And yet this conception of a profitable farm is a radically wrong one. A truly profitable farm is one which not only provides a good living and something over for the present owner, but also maintains and adds to its fertility for the benefit of those who come after. How few Southern farms answer to this requirement! Now that Uncle Sam has given away all the good farms, and many of his poor ones also, the subject presses for consideration. In the South the question has up to the present been answered by turning out the old cultivated land and taking in and clearing up some of the new land, or in more recent years by turning again to that part of the plantation which had been turned out years ago, and upon which nature has been exercising her beneficent work in recuperating the soil slowly by adding each year to the soil the decaying matter of the natural vegetation, and the pines have been pumping up from the subsoil and making available the mineral plant food naturally existing in the soil. The spread of the system of breaking up the old large plantations into small farms to meet the requirements of an increasing population and the incoming of settlers from the North and West and the Northwest is gradually lessening the opportunities for thus meeting the difficulty of lessened fertility in the old cultivated lands, and forcing the consideration of rotation of crops as a remedy for the evil of one crop production, and consequently sterility of the soil. The example of England and the result of the investigations of the Bureau of Soils shows conclusively that these so-called exhausted old farms are not yet devoid of fertility. Hundreds of years of cultivation of the land in England has not yet deprived its lands of the capacity to produce even greater crops than the virgin soil of this land, and this because for a great part of that time, certainly for the last hundred years, a system of rotation of crops has been positively required by the owners of the lands as a condition of their occupancy.

The recent investigations of the Bureau of Soils prove conclusively that all soils capable of cultivation, whether they have been manured or fertilized or not, contain about the same proportions of plant food soluble in the natural soil moisture, and that in all cases there is of this plant food an abundance for the needs of crops for years to come. The problem, then, is how to secure this and to make farming profitable without having to seek new lands in a country where every day these are getting scarcer. In seeking to solve this problem the Bureau of Soils has come to the conclusion that the most potent factors are more perfect and deeper cultivation of the soil, so as to permit of the holding of more soil moisture, and a judicious rotation of crops. They support these conclusions by numerous examples of exactly similar soil producing in one section good crops and in another poor ones solely as the result in the one case of better plowing and cultivation and in the other of following out the old system of barely breaking the surface. As an illustration of the value of rotation they cite the case of the Rothamstead wheat experiments in England, where, on one field which has grown wheat continuously without manure or fertilizer for fifty years, the yield has been reduced one-half, and where in another and adjoining field wheat has been grown, also without manure or fertilizer, in rotation with other crops only once in four years, and the yield has continued practically the same over the whole period. What has been done can be done, and is being done, in some few places here. Where one or two crops only are grown they are continuously making a call upon the land for the same elements of fertility, and thus exhausting these and unbalancing the fertility of the soil. A balanced plant food ration is as essential as a balanced stock food ration, in securing profitable crops, and profitable feeding. Again, the character of the one or two crops grown is usually such that they are robbers and not recuperators of the soil. They use up the humus in the soil, and thus render it hard and incapable of holding moisture, and they do not secure for it any of the nitrogen so essential for fertility, and which is found in unlimited quantity in the atmosphere. The lack of a system of rotation is also injurious to crop production in that it conduces to the spread of insect and fungoid pests which alone cause the loss of millions of dollars every year to American farmers. Nearly all these pests are dependent for their continuous existence on conditions which provide them with practically the same food, or the same host plants, on the same land each year. Break this continuity and the pests are at once lessened or exterminated. In the

absence of their accustomed food, or host plants, or in the presence of their enemies, which come often upon other crops, they succumb. We have surely said sufficient to show the importance of establishing *now* a system of rotation on every farm. What that rotation should be is purely a local question. In some sections it may be a long one, running over five or even seven years, in others it should be a short one, not exceeding three. In some sections the soil is better adapted naturally to one or two crops, and local market conditions may make these more profitable than others. In some sections a grass sod holds naturally on the soil and keeps in full vigor for several years, whilst in others it will only hold for one or two years and then become infested with weeds or become so thin on the ground as not to yield profitable crops. All these and many other considerations must be borne in mind when deciding upon a rotation. The one thing of importance to decide is that no field shall grow two grain crops of the like character in two succeeding years. As far as possible determine that an exhausting crop shall always be succeeded by a recuperating crop. In a section where red clover does well, let this be one of the crops to come on the land at least once in each rotation, and in the South this can usually be more than accomplished, for here we can grow a red clover crop in the summer and a crimson clover crop in the winter. Where clover does not succeed well, then let cow peas, soy beans and vetches take the place of the red clover. These are all recuperating crops. They take nitrogen from the atmosphere and fix it in the soil for the benefit of the succeeding crops. We have known a crimson clover crop to increase the yield of a corn crop 25 bushels to the acre, and a cow pea crop to increase a wheat crop 10 bushels to the acre. The vetch crop is even more successful in fixing nitrogen than the cow pea. In an experiment made at Cornell Experiment Station, N. Y., it was found that a crop of hairy vetch had secured 256 pounds to the acre, as against an average of 52 pounds secured by cow peas in the section where they are most successfully grown. In the central and coast plain of the Southern States, where a grass sod does not usually hold well to the soil a three or four years' rotation is, in our opinion, the one likeliest to be adopted with success, whilst in the Piedmont sections and further West a five or six years' course will be best and most profitable. Whatever length of time is decided upon, never wait so long to break up a grass sod as to allow it practically to die out. Not only will it in such a case be an unprofitable field for either a hay meadow or a pasture in the last year or two, but it will cause the loss of the vegetable matter of the

grass and the roots which it is always an important matter to consider, as these tend so largely to add to the humus in the soil. Break a sod always when it is beginning to fail, and not when it has failed. Put the coarse manure of the barnyard on the sod in the fall and break for corn. A clover sod should in like manner be utilized by breaking it for wheat. It will supply the nitrogen needed by the crop, and thus make the cost of production much less and the certainty of a good yield greater. By watching these chances of securing help to succeeding crops much economy in production can be secured, and at the same time the fertility of the land not be impaired, but be enhanced.

### PLANT FOOD AND CROP PRODUCTION.

In our last issue we discussed at some length a part of the bulletin issued by the Bureau of Soils of the Department of Agriculture, which, as we then stated, we regard as one of the most valuable contributions to the science of crop production ever issued. We propose now to take up other points in the bulletin. As pointed out in our last article, the texture of the soil influences the climate of the soil in that it affects the water supply and the temperature under which the crop is produced. The actual distribution of the water which falls, and the supply of water to the crop, is regulated almost entirely by the physical characteristics of the soil. So far as the necessary water supply of crops is concerned, therefore the crop is not dependent directly upon the rainfall, but upon the daily and hourly supply which can be delivered by the soil to the roots of the plants, whether the ultimate source of supply is from rainfall irrigation or seepage. The influence of the texture of the soil upon the yield of crops is strikingly shown in the cropping of the light sandy soils of the Atlantic coast, which, because of the light yield of corn and wheat, are used almost exclusively for truck crops, and in the use of the Hagerstown loam and clay of the Lancaster area of Pennsylvania, the valley of Virginia and the blue grass region of Kentucky and Tennessee in producing hay and grain. For the same reason the Miami black clay loam of Ohio and Illinois is used for corn, the sandy soils of Virginia for bright, yellow tobacco, and the clay soils of the same State for the heavy manufacturing and export tobacco. The investigations of the Bureau indicate approximately the same amount, and the same proportions, of plant food per unit of soil solution in these different types of soil. The physical properties, however, are very different. The Miami clay loam maintains usually from 25 to

30 per cent. of water. The Norfolk sand maintains usually only about 6 per cent. of water. The Miami clay, with good methods of cultivation, yields 60 or 80 bushels of corn to the acre. Experiments have shown that every pound of dry matter in the corn crop requires about 300 or 400 pounds of water to make it. The corn plant would presumably require as much water per pound whether grown on the Norfolk sand or on the Miami clay, but because it cannot obtain this in the Norfolk sand the crop there only makes from 8 to 10 bushels to the acre. *The amount of soluble plant food in both soils is practically the same. The water holding capacity of the soil and its power to deliver this to the plant is the cause of the difference in yield, and this water holding power is affected largely by the texture of the soil and its physical conditions as controlled by cultivation.* Another influence controlling the yield of crops is rotation. This is well illustrated by the Rothampstead wheat experiments. There the yield of wheat grown continuously without manure or fertilizer for fifty years has been reduced from 33½ bushels to 15 bushels. Where wheat has been rotated with roots, barley, clover, beans or fallow, the wheat being sown every fourth year for forty-four years without the addition of manure or fertilizer, the yield of wheat has not been sensibly reduced. The yield of wheat even where the roots were carted off and the land left in fallow being 33½ bushels in 1883, as against 30½ bushels in 1857, and 35 bushels in 1859. The yield of wheat in this same experiment on land where mixed mineral and nitrogenous manures and fertilizers has been used in some part of the rotation has not been sensibly larger. *In this case, then, by a simple rotation and change of cultural methods from year to year with the change of crop the yield of wheat has been maintained practically constant for forty-four years, whereas the yield of wheat under continuous culture has fallen one-half in the same time.* This decrease can be ascribed only to some physical change in the soil, to some chemical change other than the actual loss of plant food, or possibly to the accumulation of disease germs, insects, etc., which it is known frequently occurs where rotation is not practiced. Another influence affecting the yield of a crop is the variety of seed used. Just why this should influence the yield has never been determined. It is due unquestionably to other factors in plant growth, possibly to seasonal changes, conditions of cultivation, or other influences of which we know nothing. It may be that the great variation in the yield from different varieties of seed are really due to the condition of the preceding crop or the vitality and state of maturity of the

seed, but so far as known the differences are due to the kind of seed used as influenced by the condition of the soil and climate.

In further discussion of the part played by commercial fertilizers in the yield of crops, the authors of the bulletin say: "If the generalizations contained in the bulletin to the effect that the soil moisture has sensibly the same composition in different types of soil and in soil under good and poor methods of cultivation, and that there is more of these fertilizing ingredients in all soils than the plant actually needs be sustained, it may well be that the role of fertilizers requires other explanations than those now generally accepted." The fundamental idea in the use of commercial fertilizers has been that of supplying plant food in an available form. It is significant that other conditions of growth have so much influence on the yield that in but very few instances, even after long continued experiment, has it been demonstrated that any particular fertilizing ingredient or ingredients are required for any particular soil, and that even then the effect of the fertilizer varies so greatly from year to year that no specific law has been worked out from which the fertilizing requirements could be deduced. *It is a fact admitting of no argument that fertilizers rarely take the place of efficient methods of cultivation and of cropping in increasing or maintaining crop yields.* With the present methods of cultivation the difference between the yield of 8 bushels of wheat per acre on the Cecil clay in North Carolina and 25 to 30 bushels per acre on the same soil in Maryland cannot be adjusted by the application of any kind or any amount of fertilizers to the North Carolina soil. The idea now held by the Bureau of Soils as a result of the investigation is that the ratio of the nutrient elements (plant food) in normal soils does not play a very important part in the yield of crops, or, to be more explicit, *low yields are usually related to the physical condition and characteristics of the soil.* The conclusions drawn by the authors of the bulletin from a consideration of all the data of the experiments made, is that plants can and do yield ordinary crops though growing in soils containing very small traces of all the plant foods, while if the amount of these plant foods is increased a thousand times, as in the case of the alkali soils of the West, where potash, lime, phosphoric acid and nitrates are frequently found in very large amounts, they are unable to give corresponding increases in the yield. On the contrary, the yield from these arid soils under irrigation is no greater than that obtained from the soils of the humid regions which contain far less of these mineral plant foods, provided the season in the

humid region is just right, or that irrigation be practiced. The exhaustive investigation of many types of soil by very accurate methods of analysis under many conditions of cultivation, and of cropping in areas yielding large crops, and in adjoining areas yielding small crops, has shown that there is no obvious relation between the amount of the several nutritive elements in the soil and the yield of the crops—that is to say, that no essential chemical difference has been found between the solution produced in a soil yielding a large crop of wheat and that in a soil of the same character in adjoining fields giving much smaller yields. The conclusion logically follows that on the average farm the great controlling factor in the yield of crops is not the amount of plant food in the soil, but is a physical factor the exact nature of which is yet to be determined. It is not to be deduced from this that fertilizers do not frequently increase the yield of crops, but whether this increase is due to an actual increase of the plant food in the soil, to an early stimulation of the plant to enable it to get its roots out into a sufficient volume of soil, or to some physiological or physical effect, is not altogether clear. The results of these investigations also seem to indicate that the actual quantity of water a soil can furnish the plant, irrespective of the percentage of water actually present in the soil has probably a very important influence on the yield. *The conclusion seems justified, that although differences in the dissolved salt content (plant food) or in the concentration and composition of the soil moisture may be a factor in the yield as well as quality of a crop, it does not appear to be a major one in determining or controlling the wide variations observed in crop yields on different soils. It appears further that practically all soils contain sufficient plant food for good crop yields, that this supply will be indefinitely maintained, and that this actual yield of plants adapted to the soil depends mainly under favorable climatic conditions upon the cultural methods and suitable crop rotation—a conclusion strictly in accord with the experience of good farm practice in all countries.*

### TALL CORN.

In a recent issue, replying to a correspondent who asked whether it was not possible to secure a shorter growing corn in the South by using Northern seed, we replied that there was no means known to us of preventing corn from becoming much taller in the South than in the North and West, and that if Northern seed was used it would at once commence to grow tall,

and in two or three years would become as tall as that grown from Southern seed. This reply was founded on practical experience. We have known the experiment tried and it resulted as we state. Our long growing season and a climate specially congenial to the corn plant, causes this. The Editor of the Practical Farmer (Prof. Massey), in a recent issue of that paper, takes partial issue with us on this subject, and contends that with care in selection of the seed for a number of years much may be done to correct this apparently natural tendency of the corn plant here, and that we can get rid of the very tall stalks with only one ear growing near the top. Whilst experiments made in the West go to show that a great increase can be made in the yield by selection and careful breeding of corn for a series of years, yet we doubt much whether this will largely affect the height to which the stalks will grow in this Southern climate. Prof. Massey suggests Cocke's Prolific as the variety to use in endeavoring to correct the tall growing habit. Whilst we agree with Prof. Massey in the advisability of selecting Cocke's Prolific as the variety to use for experimenting, yet this agreement is not based on the idea that its use would result in a shorter corn, but rather that it would result in a greater yielding corn. Cocke's Prolific is one of the tallest growing corns we know, and one which takes the longest time to complete its growth. In this respect it is well adapted to our climatic conditions. It originated in the James River Valley west of Richmond, and has been there bred to great perfection. The greatest corn yield ever made in the State, 160 bushels to the acre, was made by Cocke's Prolific grown near by Bellmead, where the variety originated. The grower of this crop, Mr. H. E. Wood, sent us a large bundle of the stalks of this crop to let us see the character of the same. These stalks ran all the way from 14 to 18 feet tall. The peculiarity, however, and this is characteristic of the variety and what makes it so valuable, was in the number of ears on the stalks. On the tallest stalk sent us there were 11 ears of corn, and none of the stalks had less than four ears on them. The average number of ears on a stalk throughout the crop was not less than two, and a very large proportion had three good ears. Now, with such a production of ears possible, we see no reason why we should desire a shorter stalk. If, in addition to producing from two to three ears on the stalk, we can also get the great increase of fodder, which a tall stalk gives, we surely need not seek to alter the habit of the variety. One thing is perfectly certain, that without a tall stalk and a great leafage on the stalk we can never secure a variety that will also give a great num-



ber of ears, for the seed bearing possibility of all plants is largely controlled by luxuriance of growth. Without the stalk and leaves to elaborate the sap and juices of the plant and convert them by nature's methods largely into seed vessels and seed no great yield of seed or fruit can be looked for from any plant. A healthy and luxuriant foliage on any plant is a *sine qua non* for successful seed and fruit bearing and in this respect corn is no exception. We quite agree with Prof. Massey that it is desirable to get rid as far as possible of the tall growing corn so common in the South, each stalk carrying only at most one ear, and many not an ear at all, and believe that this is quite possible by following his suggestions as to selection of seed, but we see no reason why we should desire to get rid of tall growing corn carrying at least two ears on each stalk. The heavier the growth we can get out of an acre of land and the more profit we can get out of it if we only utilize that growth as we ought to do, and especially is this true of corn where analysis shows that nearly one-half of the nutritive feed value of the crop is in the stalk and fodder.

### SMALL FARMS WELL TILLED.

*Editor Southern Planter:*

I strongly and persistently advocate the "small farm well tilled." A few years ago a German-American correspondent of ours came to Norfolk with his wife and three small children. The mother was in the last stages of consumption and lived only a year after reaching this seaport.

After paying the expenses, incident to the death and burial of his wife, he found himself three dollars in debt. His assets comprised a few articles of household goods, and three small children and not a dollar in his pockets. On the contrary he owed three dollars when he began working for one of our market gardeners.

He soon began, however, to work for himself in a small way. Now after a few years he is getting on his feet and is considering the purchase of a good farm of his own. Having accumulated considerable money and learned all about the trucking business, he is now in a position to buy.

At my suggestion he has been keeping close account of a little field or piece of his market garden. He selected a plat, which, by measurement, contained a little less than one-third of an acre of land.

On the 15th of September, 1902, he sowed it to spinach, which he marketed in January, 1903; selling fifty barrels at one dollar and fifty cents per barrel:

and twenty-one barrels at two dollars per barrel. His expense account with the one-third acre was as follows: Cost of barrels, thirteen dollars and eighty-one cents; cost to cut spinach, four dollars and ninety-seven cents; cost of fertilizer, six dollars and fifty cents; freight to New York, ten dollars and sixty-five cents; commission for selling in New York, nine dollars and thirty-six cents; seed, forty cents.

By adding these items of expense together, and deducting the same from the gross sales, one will see that the spinach crop netted him seventy-one dollars and thirty cents from the one-third acre, clear of all expense.

The last days in February or first week in March he set out lettuce on this one-third acre, and in April, 1903, sold one hundred and thirty-five baskets of lettuce, at two dollars per basket, or two hundred and seventy dollars. His expense on the lettuce crop was: Baskets, nine dollars and forty-five cents; freight, eighteen dollars and ninety cents; commission for selling, twenty-one dollars and sixty cents; fertilizer, five dollars; labor, seventy-five cents; leaving two hundred and fourteen dollars and forty cents net profit after deducting all expenses.

Before the lettuce was sold, in April, he planted snap beans between the rows; but the crop was not a success, yet he realized a little over ten dollars clear profit from the beans. We here see a clear net profit of two hundred and ninety-four dollars and sixty-one cents from less than one-third of an acre, inside of nine months: from the 15th September, 1902, to 15th of June, 1903. These nine months included the winter months, and there were three growing months left in the year yet—from June 15th around to September 15th, in which our friend could have grown another crop, and thus made his net cash profit, on one-third acre, in one year's time, more than three hundred dollars.

Now in this case, this man had no great capital, and made no special or great effort, and could, in all probability, do even better next time.

Had he been able to have retailed his produce here at home, direct to the consumer, he could have made much greater profit; but he sent every package of his produce to commission men in New York to sell for him, and still made, as stated, two hundred and ninety-four dollars and sixty-one cents, from one-third of an acre, in nine months time.

Of course all can not do as this poor but thrifty farmer did; simply or mainly because they do not have the climate, soil and markets to aid them; but there are several hundred thousand acres of land in Eastern Virginia, which, if carefully and thoroughly

cultivated, and the produce harvested and marketed in a businesslike manner, would yield a net cash return; which would astonish the Western wheat and corn grower.

I plead earnestly for intensive farming. Give us good thorough intensive farmers and farming in Eastern Virginia for a few years, and we will show you extensive and very satisfactory results.

If one is near to a good local market, or has a cheap freight rate to reach a half million consumers, let him put in a five acre garden; and, after his family is supplied, ship the balance, and see if the five acres in garden crops do not return more clear profit than forty acres in corn or wheat.

Do not try to cover too much land, but cover it well. This should be the aim of every tiller of the soil; especially of every one who lives in this mild and middle latitude, near-the-sea, which insures an equable climate, a liberal well distributed rainfall, cheap transportation, and easy access to ten million consumers.

If Eastern Virginia is once thoroughly and intensively tilled it will be able to furnish "garden sass" for more than fifty million consumers.

Norfolk county.

A. JEFFERS.

### ENQUIRERS' COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

#### Cotton Seed Hulls, Corn Shucks, English Peas, Irish Potato Planting in December, Wood Ashes, Manure.

1. Are cotton seed hulls at 50 cents per hundred valuable for feeding milch cows?

2. Are corn husks fed alone as good for milch cows as the stalk fodder?

3. Which is better to plant English peas in December or February for early crop?

4. Should potatoes planted in December be cut or be planted whole?

5. Are pure dogwood ashes worth 10 cents per bushel for a fertilizer for garden truck and what kind of truck are they best for?

6. Should manure put on plowed ground this fall be scattered and harrowed in?

7. Will it pay me to haul manure for one mile at 30 cents for a one-horse load that has sawdust in it?

J. L. BRITTON.

Mecklenburg county, Va.

1. The digestible nutrients in cotton seed hulls are

less than are contained in oat straw. The protein and carbo-hydrates are less, the fat a little more. For feed therefore they are only worth the price of straw.

2. There is very little difference in the digestible nutrients in shucks and stalk fodder. As feed they are about of equal value.

3. In your section we would plant the English peas in December if we could get them in on well prepared land and a nice seed bed not too wet. February is often a wet month and one in which it is difficult to get a good seed bed. If the ground is, however, in nice order they will do well sown in February.

4. We would plant the sets whole in December.

5. We cannot find an analysis of dogwood ashes but presume they will be about as rich in potash as other hard woods. This varies from 4 to 5 per cent. in unleached ashes. This potash is worth about 4 cents per pound, say 16 to 20 cents per hundred pounds of ashes. The other main constituent of the ashes is lime, which has, of course, some value, but not much should be added to the price of potash for this. Ashes are valuable to use on all the potash loving crops like Irish potatoes and cabbages and also for fruit trees.

6. Scatter the manure at once but there is no immediate necessity to harrow it in. This can be done when preparing the land for the crop.

7. If the stock making the manure is well fed stock it should pay to haul it that distance and pay 30 cents per load for it though we should prefer to have it without the sawdust. There is no value in the sawdust except in so far as it may help to lighten a piece of heavy land.—En.

#### Corn on Wire Grass Land,

Please publish the best way to work corn on sandy wire grass land.

A. T. BROOKE.

Essex county, Va.

Corn and wire grass will not grow successfully together. Land infested with wire grass should be cleared of this before planting in corn. The way to clear it is to shade it densely. This may be done with a crop of peas or with corn planted thickly for fodder or with sorghum planted for a forage crop. Peas are the best as they will improve the land at the same time as they are killing out the grass. The peas should have a good dressing of acid phosphate given them, say 300 or 400 pounds to the acre, to insure a heavy crop. Wire grass must have sun or it will not grow. We once saw a field with one of the heaviest wire grass sods on it cleaned almost entirely of it in one year with a heavy crop of corn grown for fodder. The

year following only a small patch here and there where the corn had been thin made an attempt to grow and these were dug out and a perfectly clean field was the result. It then grew a fine crop of corn. If the land is not rich give the corn some acid phosphate, say 300 or 400 pounds to the acre, to ensure a good growth. It is folly to try to grow corn for the grain and wire grass together. It cannot be done. The wire grass will beat the corn every time.—Ed.

### Farm Management.

About six years ago I took charge of this place, which belongs to a gentleman from New York. He has been coming here about four months in the year, but now his boys are going to school and he will not be able to come down for so long and consequently asks me to reduce expenses. When I took charge of this place it was like many places in the South, run down by continually planting corn. I have brought it up with the help of your valuable paper to bring about 5 to 6 barrels of corn to the acre where it brought 2 to 3 before. I have also raised all the hay to keep six head of cattle and four of horses, and will be able to sell 10 to 12 tons of hay in addition. How can 60 acres of land be made to pay when I have to drive five miles to a depot and 25 miles to the nearest town and with no opportunity to get a separator if I should raise grain. Would it pay to buy a separator and reaper?

What are the rules in taking a farm on shares?

*Stafford county, Va.* A SUBSCRIBER.

We do not think that you would do wisely to buy a separator and reaper for such a crop of small grain as you could raise on a 60 acre farm after setting apart the land you would put in corn, hay and pasture. It would seem to us that the best course for you to follow would be to make the place into a dairy farm. You are on the main line to Washington City and not too far from it to ship your dairy products there, where there is an unlimited market for these products when made of fine quality. Make butter or ship cream and use the skim milk to raise calves and hogs for veal and pork. Mr. Sandy, whose farm we described in the last issue, is much further from this market than you are from Washington and he has made a success by the adoption of this course.

The terms of renting on shares vary in different sections. Here it is the custom very generally to pay one-third but often other arrangements are made, dependent upon the help given by the owner of the farm in developing and improving it.—Ed.

### Barren Corn Stalks,

Last year I planted a field of peanuts on which I

used acid phosphate, after digging the peas I sowed the land in rye for a fallow. This spring I plowed the rye under, planted the field in corn, which grew large, healthy looking stalks, but not more than two-thirds of the stalks eared. Can you tell me why the stalks failed to ear? J. ROPER JOHNSON.

*Dinwiddie county, Va.*

A prolific source of so many barren stalks of corn in our corn fields is the permitting of these barren stalks to tassel and pollenize the other corn. Every barren stalk should be cut out before it tassels or the tassel be cut off before it opens. There can be no doubt but that the principle of "like producing like" obtains in the vegetable kingdom as well as in the animal. A great addition could be made to our corn crop every year if only the practise of cutting out barren stalks was carefully followed every year all over the State.—Ed.

### White Pine,

Will you kindly tell me through THE PLANTER, something about the pruning and care of white pines?

Here, in exhausted and worn out fields the pine grows luxuriantly and were it not for knots, makes a beautiful and useful lumber. They come from seed only, and often a thousand will cluster about a single parent tree. Can we not prune these young pines and grow a forest, free from limbs and knots? What season is most favorable for this work?

One dead pine infested with a certain worm sometimes proves disastrous to the entire surroundings and I am told that it is only at certain seasons that cutting or pruning endangers the pine. Any information will be appreciated.

RUFUS T. COX.

*Carroll county, Va.*

We referred the foregoing enquiry to the Forestry Bureau of the Department of Agriculture and have been favored with the following reply:

Replying to your letter of November 12, which has been referred to me for attention, I beg to say that the only recent literature available in regard to the care of planted white pine is contained in an article published in Forestry and Irrigation in July, 1902. By applying to Mr. H. M. Suter, Editor, Atlantic Building, Washington, D. C., you can secure a copy of this journal. Excellent illustrations point out the various advantages of artificial trimming and other treatment for such planted groves.

As a rule white pine and other eastern conifers can be safely pruned from March to April inclusive. This spring pruning is advisable since shortly afterward the spring growth of wood begins and if the pruning is properly done the wounds are likely to be healed over that season.

The Bureau of Forestry will shortly publish an exhaustive bulletin embodying the results of a careful study of planted white pine. In this report will be included a chapter on the insect which has become so destructive of this species in planted groves. So far as we know now the insect does not enter the tree through wounds made by trimming. It appears to attack the tender leader and other similar portions of the tree. As soon as this bulletin becomes available, you will receive a copy of it and we believe its contents will be of great interest to your readers.

Very truly yours,

Geo. B. SUDWORTH, *Chief.*

### Broomsedge—Red Jersey Hogs,

Would like to get some practical plan to eradicate broomsedge. It takes all vacant land here from newly cleared new ground to old fields. I have pasture sod of different grasses—sowed two and three years ago—good rich, fresh land, too, that is rapidly succumbing to the broomsedge. Nothing but cultivation will check it. One does not feel like buying expensive grass seeds and building fences for pastures when one has nothing but broomsedge in the pasture in a short time.

A friend in Iowa has sent me a pair of Red Jersey pigs. Neighbors wish me to keep for breeders, but I am partial to Berkshire or Poland Chinas. Are the Jerseys considered a good breed? What are their general characteristics?

H. D. LINDSAY.

*Surry county, N. C.*

If you could only persuade your neighbours to join with you in getting rid of broomsedge you would soon be rid of it as it only comes from seed and this is easily prevented coming on the plants on your own land by running the mower over the pastures before the seed ripens. The difficulty is that your neighbors allow their broomsedge to seed and then this seed, like thistle seed, flies all over the country and seeds itself on every man's land. If, however, you get a good sod on your land of the better grasses this will largely prevent the broomsedge from getting hold. We know of no way to eradicate it but cultivation, though close pasturing will tend largely to prevent it spreading and becoming troublesome.

3. The Red Jersey hogs are very popular out in the West. It is claimed that they make a better bacon hog than the Poland Chinas or than the Berkshires when corn fed. They make more lean meat. There is a much larger demand for them in the East now than there was a few years ago. One breeder who advertises them with us says that he cannot supply the demand he has for pigs, although he keeps a number of sows. Give them a trial. They should do well

with you, though like you, we think nothing can beat a Berkshire for an all-round useful hog.—Ed.

### Keeping Sausage Meat,

We have had a great number of replies to "An Enquirer" as to keeping sausage meat, etc. We select the following from those sent in as being sufficient to meet the request:

Replying to "An Enquirer" in the November issue of THE PLANTER: Have your sausage meat clean without washing—water left in it causes mould—season, then mill it, and at once, while soft from the mill, pack closely, leaving no crevices or air pockets. Pack in stone vessels, if for winter use—pack smoothly and evenly full, and paste over the top a skin from the side or leaf fat, having first dipped the skin in warm water and stretched it until soft and elastic; or if the skins are not at hand, leave a space for an inch of warm lard to be poured over your sausage, which also makes it air-tight.

To keep through the summer you must pack in small sacks and hang up to cure and dry, the same as your hams. I use new, rather thin brown cotton, 10 inches long, 12 or 14 inches in circumference when full. Then paste tightly around each roll, over the cotton sack, a skin from the side lard, treated as above. This prevents too great evaporation, whereby much of the outside would be hard and unfit for use.

The bladders from your porkers well cleaned, turned inside out, and blown up to their full size, keep sausage perfectly. Pack tight, tie the mouth and hang up to cure. Then in February or by March 1st drop them in thick strong cotton sacks, to keep off insects, and hang high until wanted for use.

This same thick cotton—a heavy closely woven unbleached domestic, will keep insects from your hams. Trim the hams smooth so the sack will fit without air spaces, sew them on with close stitches, leaving no holes, sew a loop to one end, hang high and dry, before the 1st of March.

For twenty years,

*Russell County, Va.*

A READER.

Replying to Enquirer in last issue about keeping sausage: The only successful plan we have ever pursued is to put sausage up in the casing, then hang up. Smoke it several weeks until thoroughly cured, and then put away in sacks or in a dark cool place. It can be kept indefinitely this way and is really more delicious than when fresh. By "casing" I mean the small intestines which, of course, have to be thoroughly scraped and cleaned. This requires much care and some experience but is well worth the trouble. An

ordinary grinder, with stuffer attached, is all that is necessary. Care should be used in stuffing to not tear the casing and also use a needle to puncture the air accumulations.

H. D. LINDSAY.

*Surry County, Va.*

"An Enquirer" from Pittsylvania county, Va., wants to know a method of keeping sausage fresh until spring. Make a sack of the best and closely woven cotton goods, three inches wide when smoothed out (i. e., cloth over six inches before doubling and sewing) about thirty inches or more long to suit taste and cloth; soak well in strong brine, stuff the sausage into the sack with an Enterprise stuffer, stuff so tight that the lard will come through the cloth and look like frost. Tie the end close to the sausage and hang in a dry cold place.

A FRIEND.

*Wythe County, Va.*

In answer to the enquiry as to keeping sausage I send a receipt which I use and find the meat keeps perfectly as long as required.

To 20 pounds of sausage meat add 6 tablespoonsful of salt, 3 tablespoonsful pepper, and 1 tablespoon of red pepper if preferred. Mix thoroughly and pack well in stone jars and cover with hot lard, about one inch deep. Keep in a cool place.

I generally pack in one gallon jars, as after they are once opened the meat will not keep long exposed to the air.

MRS. DR. HALSEY.

*Fauquier County, Va.*

I grind nice lean fresh hog meat in the sausage mill. To every eight pounds of this ground meat I use 5 tablespoons of salt, 4 tablespoons of sage, 2 tablespoons of black pepper,  $\frac{3}{4}$  tablespoon of cayenne pepper. I mix this thoroughly and grind the second time in sausage mill.

The day after grinding it I make it into cakes and fry it as for eating. I pack these cakes in stone jars without crowding, leaving about an inch at the top. The next day I melt lard and pour over it, completely covering the sausage. This will keep all the year perfectly fresh.

MRS. SLADE.

To keep sausage fresh for spring and summer use, prepare it as for table use, that is, make it in small cakes and fry it nicely in plenty of fresh lard. Put the cakes as fried into crocks and each time pour the lard over the sausage that you fried it in, and when your crocks are packed full of sausage, let stand till cold, then if any of the sausage is not covered with the lard, put cold lard enough to thoroughly cover. Then tie a cloth over crocks and put a wooden lid on, and set

aside to use in spring and summer. Sausage put up in this way will keep fresh till September following.

*Greene County, Tenn.*

L. E. OTTINGER.

### Curing Hams,

For the benefit of "Enquirer," Pittsylvania county, Va., I give recipe for curing hams.

Salt down the pork for about two weeks, take up and resalt, with one teaspoonful of saltpetre to each ham, and three pounds of brown sugar to each hundred pounds; pack down for two weeks more; take up and wash hams in warm water and put them in clean sacks of coarse, white cloth, which have been steeped in a solution of lime; hang and smoke for about three weeks, and they can then be left hanging the entire season. I can assure you no insects will molest them if thus prepared.

GEO. H. C. WILLIAMS.

*Washington, D. C.*

### Cotton Opening—Draining Land—Feeding Pumpkins.

I would like to ask your advice, or opinion concerning cotton bolls on heavy river land caught by the recent frost, as to whether you think they will open. I have noticed by opening some of the hard bolls, that while the lint is dry the seed are not wholly made, being very soft. I have over fifty acres of such land in cotton and have only picked out 14 bales, while the stalks are in most parts yet covered with bolls.

2. Please give best idea of draining land, where it is perfectly flat, and inclosed by dykes. Would you suggest making a basin and using "centrifugal pumps," and forcing the water over the dykes; if so, what size pump? And the cost of said pump? There is in this tract of land about 450 acres.

3. Is there any truth in the saying that feeding milch cows on pumpkins will cause them to go dry?

*Kershaw county, S. C.*

B. H. BAUM.

1. If the weather keeps dry it is probable that a considerable proportion of the bolls will yet open.

2. The problem of draining such a flat as you describe is one for an hydraulic engineer. We have known one such flat on the James river drained by the use of a pump run by a windmill. In England in the Fen district syphons are largely used for this purpose. We would suggest that you write The Sydnor Pump and Well Company, of this city, on the subject. They have had experience with such problems.—E.D.

### Cabbage Growing—Canada Peas.

1. In the October number you advise sowing phosphate on cabbage this fall. Would you broadcast this or put it in drill?

2. What do you think of drilling stable manure along the cabbage rows after they are set? Would this be as good as commercial fertilizer?

3. I also have a piece of land I intend to set cabbage in next spring. Would you plow this land this fall or let lie until next spring? If plowed this fall would it be a good plan to sow rye or leave it bare all winter? I expect to manure it over this winter with stable manure and it will have to be plowed some time in March.

4. Would you sow Canada peas before or after Christmas? Would like to sow oats with them.

HENRICO SUBSCRIBER.

1. If you apply more than 500 pounds to the acre put it on broadcast. If less than this amount apply in the drill mixing it well with the soil.

2. We would prefer to apply the manure in the drill covering it before setting the plants. If, however, it is not convenient to do this from the fact of the manure not then being available then a top dressing later would no doubt help them. If plenty of manure is available you can do without commercial fertilizer, but as cabbages call for a large quantity of potash and phosphoric acid, in which elements farm yard manure is always lacking, a dressing of these two plant foods along with the manure will be an advantage.

3. We would plow the land now but it is too late to sow rye to get much growth from it before time to set the cabbages in the spring. Apply the manure on the plowed land and then cross plow to cover the manure or work in with the cultivator.

4. In this issue you will find advice as to sowing Canada peas and oats.—ED.

### Protecting Cabbage Plants—Manuring for Cabbages.

1. Would it be well to cover cabbage plants with hay or straw laid on the plants or to put poles over them and lay the hay on the top of the poles?

2. Is it better to put manure for cabbages on broadcast or apply it in the drill? W. W. WEBSTER.

*Dinwiddie county, Va.*

1. A very slight protection is usually sufficient for cabbage plants in this section. Pine branches placed around the bed and in the bed amongst the plants is usually sufficient. If the weather comes very severe some hay spread lightly over the branches would afford ample protection. Do not put the hay directly on the plants as it would lay too close and cause them to rot.

2. This depends on the quantity to be used. If a heavy dressing is available, sufficient to cover the whole plot thickly, apply broadcast. If the quantity is

smaller than is sufficient for this purpose apply in the drill.—ED.

### Stencil Ink.

Will you give me through your columns a good receipt for making stencil ink to use with a brush for brass stencils, something that will stand weather and not rub? Is it possible to make a white stencil ink?

X. Y. Z.

We regret that we are unable to comply with this request. We know nothing of making inks. Inks of every color for stencils can be had from The Southern Stamp and Stationery Company, Richmond, Va.—ED.

### Drain Tiles.

Will you let me know the address of some one from whom I could get drain tile? I would rather deal directly with the manufacturer.

JAS. T. GARROW.

*Warwick Co., Va.*

The Powhatan Clay Manufacturing Company, Richmond, Va., make drain tiles.—ED.

### APPLES WANTED ABROAD.

Some time ago we called attention to the short apple crop of Europe, suggesting that there would be a good outlet for American apples on the other side this fall and winter. Late advices have shown that this view was correct. Shipments of apples have been very heavy of late, but the demand for them is so large that prices are well maintained. At Hamburg last week American apples brought from \$2.66 to \$5.56 per barrel, choice Kings topping the list. At London the range was from \$2.14 to \$4.84, with prime Greenings at the top; and at Liverpool from \$2.42 to \$5.20, Albermarle pippins at the outside price. With such a foreign market and a crop not any too large apple growers should realize good returns from the orchards which have produced fruit this year.

An old broom is useful in the stable to clean the thickest mud from the horses' legs. Finish up with a coarse cloth or a handful of clean straw.

When corresponding with advertisers, kindly mention the *Southern Planter*.

## Trucking, Garden and Orchard.

### WORK FOR THE MONTH.

The planting of cabbage and lettuce crops in the trucking sections of the State has proceeded with very little interruption from bad weather and the plants set out have been able to make a start quite sufficient for the time of the year. This work may still proceed until we have severe weather but provision should be made for protecting the lettuce plants in case of severe weather by mulching and by shading with pine boughs on the north and east sides of the beds. Young lettuce plants intended for setting out in early spring should also have protection given in case of hard weather, but so long as the weather keeps mild leave them exposed, as protecting them in such weather only makes them more susceptible to the hard weather. Lettuce set out in cold frames should have the lights off during the day in all mild weather. They require all the air possible until cold weather sets in. When really severe weather may be expected mats or straw should be kept handy to put over the lights. As the plants are cut for the table or for market new plants should be set out in the places thus keeping the beds full.

The pruning and cleaning up of the orchard and small fruit plantations should receive attention. Burn all prunings and trash and thus destroy insects and fungoid spores.

Strawberries may still be set out though it is questionable whether it is not better to defer planting until spring when the work has been so long delayed. Wherever plants are now set out they should be mulched with pine tags or short straw to prevent heaving of the plants by frost.

In Tidewater and Middle Virginia and Eastern North Carolina Irish potatoes may be set for a very early crop. We have had very satisfactory reports from a number of subscribers who have tried this December planting. Special care, however, must be taken in planting. The land should be deeply plowed and finely broken and the rows be then opened very deep by running the plow twice in each row, and the land should be a dry sandy loam. Apply a good potato fertilizer in the rows and mix with the soil. Then drop the sets which should be uncut and of medium size at the usual distance apart and cover lightly with soil. On top of the soil a good covering of farm yard

manure should be spread and on this plow a furrow from each side, thus making a ridge over the set. This ridge should be harrowed down in the early spring. If the plants should show signs of coming through the soil before danger of frost is past plow a light furrow on to them.

### A NEW ENGLAND FARMING COMMUNITY.

#### A Connecticut Orchard.

*Editor Southern Planter:*

While at the American Pomological Society meeting at Boston I was invited by Mr. J. H. Hale, the newly elected President, to visit him at his home. I accepted with pleasure for Mr. Hale is the greatest peach grower in the world and a recognized authority on peaches and I knew it afforded me a fine opportunity to learn. Mr. Hale is a man of unusual parts, his mind is of broad and comprehensive grasp, quick and unerring in judgment; as a speaker he is strong and forcible with a full appreciation of what is humorous; in business affairs he is energetic, practical, and with great faith which is productive of great works. His orchards at South Glastonbury, Ct., number over 50,000 bearing trees while his orchard in Georgia is up in the hundreds of thousands, his force of hands between five and six hundred and his shipments of fruit go out by the car loads, and train loads. Like most men who have attempted great things Mr. Hale has been subject to much criticism. To grow fruit on the abandoned farms of Connecticut or the cotton fields of Georgia was pronounced absurd, his methods were condemned and his failure was freely predicted. But with pluck, tireless energy and administrative ability of the highest order Mr. Hale kept on and to-day he has one of the best organized and most successful agricultural enterprises in the United States.

At Hartford we left the N. Y., N. H. & H. R. R. and took a trolley running in full view of the State House, crowning a hill in a splendid park. It has an unusual history for a public building. Three million dollars were put at the disposal of six citizens, three Democrats and three Republicans. They had the building completed in the very best manner and not only had no deficit but returned over \$70,000 to the treasury.

The trolley line runs through an unique agricultu-

ral community; for fifty miles it extends along a broad highway, shaded by handsome elms and sugar maples, with farmers' houses built up on either side like a continuous street. About every 2½ miles is a school house, church, store, post-office and blacksmith's shop. Thus the farmers have the social advantages and conveniences of city life. The political system is a most admirably democratic one. The country is divided into townships, governed by a board selected by the people, who levy their own taxes and whose treasurer once a year settles with the board and with a "town meeting." Ten days before the settlement his accounts are published in pamphlet form, showing every item of disbursement fully and this is put in the hands of the people themselves. There are often several hundred people present at these "town meetings" and they are fully informed about their affairs and moneys.

Mr. Hale's home is an ideal farmer's home, a broad veranda, ornamented with running vines, a fountain, graceful walks with brilliant flowers artistically grouped, so as not to break up, but to heighten the effect of the lawn. The house was built in seventeen hundred and something out of virgin oak and wrought nails by Mr. Hale's great-grandfather.

Back of the house is a handsome flower garden, where colors are massed together with fine effect, and behind this a vegetable garden, and fields of strawberries for plants, and countless young trees in the nursery for orchards yet to come. Utility is combined with ornament, producing a happy effect and suggesting some valuable lessons for us in Old Virginia. One thing I learned in growing tomatoes which may be of value to others. The plant is pruned to two branches and these are trained by tying to a pole until they are six feet high, all branches are pruned off except at the top where a tuft is allowed to grow and only the fruit blossoms are left below it. This brings tomatoes two or three weeks earlier than the old way and masses the fruit on the two stems for three or four feet. The plants are set deep in the ground and hilled up as they grow, cultivation being clean. This method raised the tomatoes which took the medals of France, Spain and Italy. The peach orchards show a master hand, and the dark green foliage, fine growth of new wood—the fruit wood—wide open branches extending from tree to tree, tell the story of good care. Mr. Hale believes in clean cultivation and goes over his bearing trees ten or twelve times a season. This year, in trees that were caught by the freeze, he cultivated once and sowed crimson clover and now the ground is covered with clover and the usual fall

growth. The effect has been splendid on the trees, and a part of the orchard, cultivated once, shows a decided improvement over a part where there was no cultivation and where the clover was mowed and left as a mulch. Mr. Hale is satisfied that no treatment will equal cultivation. A large block of trees which were growing up too high were cut back, the top taken out of them and now they are full of a vigorous growth of new wood and much lower. The best system is the broad flat tree headed low and kept low by cutting back. Mr. Hale tells me that in his Georgia orchards about half the fruit can be picked while sitting on the ground, and none of his trees are allowed to grow high. The disc harrow, and spring tooth harrow, gang plow with three plows, each about the size of a one-horse plow, are the tools principally used. Mr. Hale is cleaning up new ground and planting it out, some of it being grubbed clean and some of it with the stumps left in the ground.

There was one thing it did me good to hear Mr. Hale say: "I'm not afraid of the San Jose Scale any more." Last year it broke out in the old bearing peach orchard and Mr. Hale killed it last winter with the California wash, salt, sulphur and lime. He says it can be relied on to do the work and though his climate has a greater rainfall than ours it was found entirely satisfactory. Winter is the season to use it and we should all in the next few months give our orchards a good dose of it. It kills other pests besides the scale and is good for the tree. I notice that a recent bulletin of the Geneva (N. Y.) Experiment Station states that a mixture of lye in the California wash does away with the necessity of boiling it, a great thing for us if it has been fully proved.

From an observatory we looked down the hillside over a forest of peach trees and rolling ground to the waters of the broad and beautiful Connecticut river, which comes like a silver band through emerald fields from Hartford, seven miles away. The great city spread out with lofty spire and shining dome before us, the broken line of hills beyond the river, the white steamboats coming and going, all in the mellow sunshine of a September evening formed a picture of surpassing beauty, that will always come to memory's call at the sound of the name "Connecticut." Gone forever is the thought of wooden hams and nutmegs and instead rise up with pleasing grace, peaches, royal in beauty and rich in flavor, views of picturesque loveliness and an openhearted hospitality which would have done credit to Old Virginia in her palmiest days.

SAM'L B. WOODS.

*Albemarle county, Va.*



## FRUIT CULTURE IN VIRGINIA.

*Editor Southern Planter:*

It was my good fortune to spend nearly two months in Southwestern Virginia this fall, returning home only a few days ago. I had the opportunity of paying particular attention to the apple crop, and made observations as to fruit growing in Virginia in general. Your grand old State has many localities where the raising of fruit for the market can be conducted with great success. The celebrated "Valley of Virginia," extending, we might say, from the Potomac on the east, or southeast, by the Blue Ridge, and on the west, or northwest, by the Alleghany Mountains, has a variety of soils especially adapted to the apple, the pear, the plum, the peach, the cherry, the quince and the grape, as well as the small fruits—strawberries, raspberries, blackberries and the like.

All fruits did well this year in the section of Virginia visited, but the apple crop was unusually heavy. Beautiful apples were hauled into the cities of Roanoke and Staunton, and to the principal stations of the Norfolk and Western and Chesapeake and Ohio railroads, to be packed in barrels and shipped. Some lots were intended for export, a considerable fruit trade with England, I understand, having developed in the past few years.

I find that the leading apple, on account of its great productiveness, fine appearance and excellent quality, is the Albemarle pippin. This variety is undoubtedly identical with the Newtown pippin of the north, but it has succeeded so admirably in Virginia, and particularly in Albemarle county that it is now more generally known by its local synonym. (We doubt this identity.—E.D.)

The Albemarle pippin is shipped to the principal cities of the United States, but especially to Washington, Baltimore, Philadelphia, New York, Pittsburg, Cincinnati and Chicago. Albemarle county is still the largest producer, and it is expected that this fall's shipments of apples from that county will exceed 50,000 barrels. Other counties of Virginia that are large producers are Frederick, Augusta, Warren, Fauquier, Wythe, Rockingham, Botetourt, Roanoke, Montgomery, Nelson and Culpeper, which have been mentioned in the order of their importance. Each will ship this fall from 10,000 to 25,000 barrels.

One grower in Roanoke county, twenty miles from the city of Roanoke, sold his crop of apples for \$16,000. J. Coles Terry, of the Bent Mountain district, in the same county, has 4,500 acres at an elevation of 2,800 feet, where he is raising fruit very successfully. His orchards contain mostly Albemarle pippin trees. From 25 acres he realized this fall

\$5,500 for the selected apples and has many bushels of culls left for cider and vinegar. The product of 36 trees sold for \$455. Mr. Terry has exported some of his finest apples to Liverpool, obtaining \$11 per barrel. Daniel Locke, of Kearneysville, picked 1,800 bushels of apples from 60 trees, twelve years old. They brought \$1.30 per barrel. The fruit was of excellent quality. A few barrels of the fruit will be kept for the St. Louis Exposition. Dr. D. W. Border, of the same county, a pioneer fruit grower of the Valley of Virginia, also had an enormous yield of apples. One tree bore 57 bushels, and another 45. His entire crop was 2,500 barrels, the largest he ever had.

The Ben Davis, a Southern apple of showy appearance and, therefore, very salable, but notoriously deficient in quality, is also quite prolific in Virginia, where it is as popular as in Kentucky, the State of its reputed origin. The York Imperial, a Pennsylvania variety and a great favorite in that State, also succeeds remarkably well in Virginia. The Winesap is another popular kind, and, on account of its bright color, sells well. There are large orchards in Virginia in which this variety predominates. That excellent all-round apple, the Smoke House, which originated in Lancaster county, Pennsylvania, the greatest agricultural county in the Union; and the red-cheeked Maiden's Blush, of New Jersey origin, are the popular autumn varieties of Virginia. Not much attention is paid to the summer varieties, but the Early Ripe and Yellow Transparent are those mostly grown. The Red Astrachan, which is one of the best early varieties in the north, ripens unevenly in Virginia.

In the apple districts of Virginia the orchards are not limited to 10 or 20 acres as in Pennsylvania, but there are commercial orchards hundreds of acres in extent. Col. A. M. Bowman, of Salem, a member of the Virginia House of Delegates, and President of the Diamond Orchard Company, has 45,000 trees (apple and peach, but mostly the former), just coming rightly into bearing. Nearby these are orchards of 150 to 300 acres. This is not equal, to be sure, to the Osage Mountain apple district of Missouri, but it is quite fair for a beginning, as the apple industry of Virginia is in its earliest stages of development. Possibly we may yet hear of the equal of that Osage Mountain orchard of 18,000 acres, as the Stuart Land and Cattle Company, of Southwestern Virginia (Russell county), owning 40,000 acres of land, was recently organized for fruit growing and cattle raising purposes. It is to be hoped, however, that this company will not, like that in Missouri, limit the number of its varieties of apples to two—the Ben Davis and Jonathan. Land

suitable for apple culture in the Valley of Virginia and on the ridges, can be had, we ascertained, for \$10 to \$30 per acre.

There are some varieties of apples which in Virginia attain unusual size, just as the Yellow Bellflower of the State of Washington is twice as large as the same variety grown in Pennsylvania. The Pennsylvania Fallwater, or Pound, grows to enormous proportions. The writer caught one of the elevator boys of a Roanoke hotel one day munching an apple of this variety, while he directed the operations of the car as it ascended and descended. The apple looked to be almost as large as his head. The following colloquy took place: "Boy, where did you get that apple?" we inquired. "Bought it," he managed to say sheepishly, (as though he had been detected in stealing it), his mouth full of the juicy fruit, and his cheeks fairly bulging. "What did you pay?" was the next question. "Three cents," he said. Then raising the seat in the elevator he revealed a still larger apple. "Two for five?" we asked. "Yep," he said, with a grin.

The San Jose Scale, that most pernicious insect, has made its dreaded appearance in most of the apple districts of Virginia. Fortunately, through the enactment of the State law of March, 1896, the pest is being successfully combated. Bulletins replete with information on the scale and other injurious insects, as well as on fungus and atmospheric diseases of fruit trees and plant life, are issued regularly from the Agricultural Experiment Station at Blacksburg, and sent to the leading fruit growers of the State, as well as to all who write for them. It is to be regretted that Virginia does not appropriate more money for carrying on this commendable work.

The trees (following out the recommendations contained in these bulletins), have been treated with either the whale oil soap solution, or the kerosene emulsion, or both, at the discretion and convenience of the grower. Recently, the head gardener and horticulturist of the Norfolk and Western Railway Company, Mr. Patrick Foy, of Roanoke, discovered the efficacy of caustic soda for the destruction of the San Jose Scale. As to the value of this remedy he has been confirmed by the New York State Fruit Growers' Association, members of which were engaged this year in a series of experiments with caustic soda, in connection with lime and sulphur.

This new wash for ridding tress of the San Jose Scale consists of 33 pounds of lime, 17 pounds of sulphur and from 3 to 4 pounds of caustic soda to one barrel of water, mixed without boiling, thus saving expense and much labor. The scale can be controlled

by the thorough application of this wash in winter or early spring. A pure article of lime should be used, so as to reduce to a minimum the quantity of gritty sediment. The wash can be readily sprayed through a Vermorel nozzle.

The great danger of the orchards of this country being overrun by the San Jose Scale makes it imperative that an unrelentless and unceasing war should be waged, and the remedies to be used should be published again and again. There is no excuse for ignorance in this matter. Several months ago two physicians of the writer's acquaintance, who had gone extensively into fruit culture near the city of Reading, purely as a business venture, found their orchards infested with the scale. Without looking around long for remedies they ordered all trees that had been attacked to be cut down. Their loss amounts to thousands of dollars, all of which could have been saved if the owners of the orchards had had the proper knowledge.

Nine years ago, at a meeting of the State Board of Agriculture, the writer presented a report making known the first appearance of the San Jose Scale in Pennsylvania, and gave the remedies that should be used, recommending more particularly the whale oil soap solution, to be applied to the bark of tree on which the scale had appeared, the application to be made while the trees were in dormant condition. By the following year the scale had made such progress that its presence was reported in twelve counties. Now in this year of grace, 1903, there is scarcely one of the sixty-seven counties of the State, in which it has not appeared. The necessity for vigorous action is thus apparent.

CYRUS T. FOX,

Reading, Pa., Nov. 20, 1903. *State Pomologist.*

## SMALL CANNING FACTORIES.

*Editor Southern Planter:*

Now that winter has come and work in the garden and orchard is not pressing, we can figure some on broadening our work next year. Why not think of starting a small cannery next year? If there had been more small canneries in Southwest Virginia this year a large per cent. of the immense apple crop that wasted could have been canned up at a good profit. While we must not expect such a crop next season, still, other fruits can be put up at a profit and tomatoes can be grown at the rate of one to three hundred bushels per acre. I have grown them in this county (Montgomery) at the rate of four hundred bushels per acre. Perhaps there is no other vegetable for canning that pays better than the tomato. Canned to-

atoes are one of the standard articles of the grocery-man. There is always a demand for them.

People in Virginia and other Southern States are consuming more fruits and vegetables each year. It is being found out that we can grow large quantities of fruits and vegetables on our soils with comparatively small outlay. Sometimes the market prices go down and these products do not pay well to ship. Just here the small cannery comes in and not only saves what might otherwise go to loss, but makes a handsome profit. It puts fruit growing and truck farming on a more sure basis.

The cost of small canning factories is now so low that each individual grower may have one.

Two years ago when I completed some experiments with a small canning outfit which I had put up for experimental purposes, and had published the results of my experiments, I received a number of letters from almost every Southern State asking for more information upon the subject. I advocated strongly the establishment of small canning factories in connection with cotton gins, where there is a water supply and the boiler and house lie idle during the canning season. Now there are a large number of small canning factories in Texas where these experiments were carried on. And since I have come back to my native State I am informed that Botetourt and Roanoke counties can more tomatoes than any other two counties in the United States. I am glad to know that Virginia is wakening up along this line. The money that is usually spent for these things may be kept at home. It was formerly believed that canning factories were very costly, and this belief has retarded development of the canning industry in the Southern States.

The first outlay for my canning factory was \$340, and the capacity was estimated at 5,000 cans per day. However, to be more accurate, I will give here some quotations from the catalog of a firm that sells small canning outfits and of whom I purchased mine.

Capacity estimated at 3,000 3 pound cans or 5,000 2 pound cans per day. Kettles set in brick work or attached to steam boiler. Process kettle, 36 inches in diameter by 36 inches deep, \$18.00; exhaust kettle, 36 inches in diameter by 24 inches deep, \$16.00; scalding kettle, 30 inches in diameter by 24 inches deep, \$14.00; 3 sets grate bars, 3 furnace doors, or 3 steam coils if boiler is used, \$15.00; 2 gasoline fire pots, complete, \$32.00; 2 6-tier process crates, \$14.00; 2 1-tier exhaust crate, \$7.00; 1 set crane fixtures, \$10.00; 4 capping machines, \$3.00; 4 copper cappers, \$4.00; 2 tipping cappers, \$1.00; 2 scalding baskets, \$2.00; 1 forging handle, 25 cents; 1 forging stake, \$2.50; 1 vise, \$2.50; 1 dozen files, \$1.35; 2

pair can tongs, 70 cents; 1 forging hammer, \$1.00; 1 floor truck, \$12.00; 2 dozen peeling knives, \$2.00; total, \$158.30.

Such a plant would can everything except corn and beans. For these two things a closed top kettle is necessary, and this would cost about \$120.00. At least a 15 H. P. boiler should be used. A building 20x45 feet is necessary, also good clean water in abundance. If the boiler is placed in a separate room it is much better on account of the heat. I am informed that a number of persons in Virginia have their kettles set in brick work. While this method is much less costly, it is much more inconvenient. The kettles are more difficult to clean and the capacity is lessened.

I have had a great many letters asking questions on the subject how to can. Full instructions on this subject are sent by the factory people when the machinery is sold. However, the Virginia Experiment Station at Blacksburg has just published an excellent bulletin on "processing," which can be had by writing for it.

In starting a factory one should have an expert for a short while. Labor is usually paid for by the piece or job. Women and children usually do the best work. The prices paid will vary in each locality. The following, I consider, a low estimate: Peeling tomatoes, per 2½ gallon bucket, 11 cents; peeling apples, per 2½ gallon bucket, 2½ cents; string beans, per 2½ gallon bucket, 3 cents; husking corn per dozen ears, 1 cent. The processor should have \$2.00 per day, the capper \$1.00, and the tipper less.

The following figures will enable one to estimate how many bushels it will take to fill a certain number of cans:

	2 lb. cans.	3 lb. cans.
1 bushel apples will fill . . . . .	30	20
1 bushel string beans will fill . . . . .	30	20
1 bushel blackberries will fill . . . . .	50	33
1 bushel corn will fill . . . . .	45	..
1 bushel peaches (standard) will fill . . . . .	25	18
1 bushel peaches (pie) will fill . . . . .	45	30
1 bushel tomatoes will fill . . . . .	24	18

Three pound cans will cost about \$2.25 per hundred. Two and one pound cans will cost less, of course.

The freight on cans is rather heavy since our nearest shipping point has been Baltimore. Now, I understand a can factory has been established in this State at Buchanan. I strongly advise starting a small factory at first and then enlarge it as more experience is acquired. A great deal depends upon good business management. Labor is one of the most costly items and this part of the business has to be looked

after closely. But the profits are usually very satisfactory with good management. I may discuss this subject further in another number.

Montgomery County, Va. R. H. PRICE.

### THE BITTER ROT OF APPLES.

We take the following advice as to treatment for this disease from a Bulletin recently issued by the Bureau of Plant Industry, Department of Agriculture:

1. The bitter rot or ripe rot is one of the most serious diseases of apples. The loss due to this disease in 1900 was estimated (for the United States) as \$10,000,000. It is one of the most difficult diseases to control and is constantly on the increase.

2. The bitter rot is due to a fungus, *Glomerella rufomaculans* (Berk.) Spaulding & von Schrenk, hitherto generally known as *Glaeosporium fructigenum* Brk.

3. This fungus until 1902 was known only in its conidial stage on pomaceous fruits and grapes. The perfect or ascus stage has since been discovered both in cultures on fruits and in artificial cankers on the apple limbs.

4. The fungus attacks ripening apples during July and August, and is most virulent during moist, hot summers. It is most active on apples in the belt of States on the line of the Ohio river, from Virginia on the Atlantic Ocean to Oklahoma in the West, and southward.

5. During the past summer canker-like areas were discovered on apple limbs from which the disease seemed to spread. These cankers generally occurred in the upper parts of trees and contained spores of the bitter-rot fungus, as proved by direct inoculations into apples.

6. Inoculations into healthy apple limbs of bitter-rot spores from pure cultures of the bitter-rot fungus (made both from diseased apples and cankers) resulted in the formation of cankers similar to those found in the orchards. Spores from these cankers produced the bitter rot in sound fruits. This proves beyond doubt that the bitter-rot fungus is the cause of the cankers on apple limbs in the orchard.

7. The spores of the bitter-rot fungus are washed from the cankers onto the apples below the cankers. Spores are carried from tree to tree by insects, and possibly by raindrops.

8. One of the best methods for combating this disease will consist in carefully cutting out all cankers during the winter. These should be burned at once. All diseased apples on the ground or in the tree should be collected and destroyed. As a further precaution, trees should be sprayed with standard Bordeaux mixture at least once before the buds open, and again frequently from midsummer until the fruits are almost ripe.

### ORCHARDING.

Editor Southern Planter:

In setting an orchard, experience has proven that it is best to head the trees low, that is, let the tree limb out near the ground. It is best for several reasons. It prevents sun-scald of the body by shading the South and Southwest sides of the trunk of the tree in spring, summer and winter, and making a healthy body will entirely eradicate the flat-headed borer, one of the worst pests in the orchard which has not been properly set.

I discovered while working in my father's orchard in 1876, that trees headed low were healthy bodied and free from flat-headed borers, while those headed high were injured by the sun, and were invariably attacked by this pest. Many articles have been written about how best to fight this enemy. For more than 20 years I have not had this insect to contend with in any of our orchards, amounting to over 2,000 acres. Low headed trees entirely eradicated them. In order to get a low headed tree, we formerly had to raise our own nursery stock. Now, your nurserymen will provide you with a low headed tree, if you ask for it, and I would not plant any other.

To make a low head does not require a forked head. Trim to make a centre. I will treat of trimming in a future article. A forked tree will sooner or later split in a wind storm, or when loaded with fruit. You can prevent forks, and make a head with a centre when they are small and thus let the trees start properly. Another advantage in low headed trees is that it prevents wind storms from topping or uprooting them so easily. It also preserves part of the crop from storms, as the limbs near the ground will be loaded with fruit while the storm takes the top fruit nearly all off. Do not be afraid that the fruit will not properly color. I have gathered more than a barrel of fine apples resting on the ground from the lower limb of a single tree. A low headed tree also saves one-half the expense in picking, as most of the fruit can be gathered while standing on the ground. Another point to be observed in setting trees is with reference to the direction of the prevailing winds. To illustrate: Here in the Ozark our prevailing wind is from the Southwest, and the hot sun on the orchard in spring, summer and winter is from that direction. Therefore to properly set trees, they should be leaned to the Southwest about 20 degrees or more in setting them, and the tree, before it reaches the age of bearing will be perpendicular, if not leaning to the Northeast. A tree planted perpendicular at the time it is set will lean to the Northeast before it is bearing, and thus be injured by sun scald as above stated. It is, therefore, important in setting a tree to observe this precaution.

A tree should be set in the orchard not deeper than it stood in the nursery. There are several reasons why this is best; not only to prevent the "root rot,"

but to prevent other diseases, and also the aphid. A tree set near the surface will not be so easily killed by the round headed or root borer, for when the tree is set deep in the earth it is easily girdled and killed by this insect, but if the roots start at the surface, this borer will usually follow and kill but one root, and the tree will throw out new rootlets, and the orchard not die so readily from this pest.

A tree set properly with its roots near the surface will seldom have aphid. It is best in setting your trees to take about 10 or 15 pounds of tobacco dust and place it in a large candy pail or tub full of water and let it soak for a few hours, and just before setting the young trees dip the roots in this solution; it is a preventive of aphid.

*Springfield, Mo.*

S. A. HASELTINE.

### SELF-STERILITY IN APPLES.

C. E. S., U. S. DEPT. OF AGRICULTURE.

About ten years ago Prof. M. B. Waite called attention to the absolute sterility of certain varieties of pears when fertilized with their own pollen. Later Prof. F. A. Waugh and others showed that all the varieties of Japanese plums are self-sterile, and will not bear any fruit whatever unless crossed with other varieties. This work led to similar investigations with apples and very interesting results have been obtained. The Ben Davis apple, which proved self-fertile at the Kansas Experiment Station, was found entirely self-fertile at the Experiment Stations in Rhode Island, Vermont and Canada. Even in Kansas, where 26 per cent. of the self-fertilized blossoms set fruit, it was found that the self-pollinated fruit was not so large or so vigorous as the fruits from cross-fertilized blossoms on the same tree. Besides, a much larger proportion of the self-fertilized fruits dropped before they reached the size of a hazelnut than of the cross-pollinated fruit.

The following alphabetical list shows the varieties of apples that have thus far been found by actual trial at one or more experiment stations to be self-sterile: Arkansas Black, Belleflower, Astrachan, Ben Davis, Blenheim, Canada Red, Early Ripe, English Russet, Fameuse, Fanny, Gilpin, Golden Pearmain, Gravenstein, Grimes Golden, Hawley, Huntsman, King, Lily of Kent, Mammoth Black Twig, Mann, Missouri Pippin, Nero, Northern, Northern Spy, Paragon, Porter, Primate, Red Kennedy, Red Streak, Ribston, Rhode Island Greening, Roseau, Roxbury Russet, Spitzenberg, Stark, Staymen, Strawberry, Talman Sweet, Wealthy, Westfield, Williams Favorite, Willow Twig and Winesap.

The following varieties have been found more or less self-fertile and capable of producing some fruit when standing alone, and not cross-pollinated: Alexander, Astrachan, Baldwin, Ben Davis, Bough, Cooper Early, Chenango, Early Harvest, Esopus,

Fameuse, Jonathan, July, Ontario, Rhode Island Greening, Smith Cider, Smokehouse, Twenty-Ounce, White Pearmain, Wine and Yellow Transparent. With many of the varieties in this list not more than one blossom in a hundred set fruit when self-fertilized. With scarcely any was a good crop secured, and in nearly every instance the fruit has been smaller and less desirable than cross-pollinated fruit. The conclusion seems inevitable that large blocks of a single variety of apples should never be planted. Varieties should be intimately mixed in the orchard to insure cross-pollination. These varieties should be such as will blossom about the same time and capable of cross-fertilizing each other.

With respect to the latter point, Jonathan, Huntsman, and Cooper Early proved especially valuable as pollenizers at the Kansas Experiment Station. Prof. G. H. Powell at the Delaware Station found that Paragon, Staymen, Winesap and Lily of Kent, all weak pollen bearers except the latter, to be inter-sterile, and should therefore never be planted together in commercial orchards for the purpose of cross-pollination. Further work along these lines to determine what varieties bloom together and are most suitable for pollenizing each other is very desirable. And since varieties behave differently toward each other in different sections of the country, these data should be determined in many different localities.—*American Agriculturist.*

### VIRGINIA CORN EXHIBIT AT ST. LOUIS.

As a further incentive to stimulate Virginia corn growers to make a creditable showing at the St. Louis Exposition, the Virginia Commission have decided to offer \$120 in premiums as follows: \$50 for the best exhibit of corn, from any county to consist of ten or more varieties of 100 ears each; \$30 for the next best exhibit from any county, of ten or more varieties, and \$20 for the third best exhibit from any county, of ten or more varieties, and \$20 as before offered, for the best one hundred ears sent in by any grower.

All corn competing will be exhibited under the competitors name, whether a prize winner or not, and all exhibits sent in, must be sent with the understanding that they are to become the property of the Commission for this purpose. Competent judges will be chosen to make the awards in this competition, and notice of the winners will be published in the State papers.

The Commission will pay freight charges on all shipments, which should be packed in substantial boxes or barrels and shipped by freight to Geo. E. Murrell, Superintendent, No. 14 Governor street, Richmond, Va.

V.A. COM. TO THE LOUISIANA PURCHASE EXPOSITION.

*Richmond, Va., Oct. 26, 1903.*

## Live Stock and Dairy.

### THE DUAL PURPOSE COW.

In replying to an inquirer as to the relative merits of different breeds of cattle, and especially as to the value of Red Polls for the ordinary farmer in the South, we remarked that cattle of this breed had done what no other breed had done—viz., take first premiums as beef cattle at a fat stock show, and first premiums at a dairy show. Commenting on this statement, the editor of Practical Farmer (Prof. Massey), in a late issue of that journal, takes strong ground in favor of the keeping of breeds of cattle bred for specific purposes, and against the dual purpose cow. He remarks that "a jack of all trades seldom is as good as one with a definite hobby, be it a cow or man. Good dairy form and capacity in a cow is an entirely different thing from good beef form, and no one animal can have both types in perfection." Whilst there is a good deal of force in what the editor says as to a jack of all trades, yet we would remind him that there is another type of man who fills a very wide place in the world whilst not essentially a specialist—viz., the man who "knows something about everything, and everything about something." So, in like manner, we think a cow which meets the needs of a very large class of the farmers of the country is a valuable cow, even though she be not so specialized as to only perfectly fill one place in the economy of the farm. Such a cow is the dual purpose cow, and that she can be found, the experience of English farmers and many in this country conclusively proves. The Breeder's Gazette says this week that the supremacy of England in live stock is unquestioned and unquestionable, yet we venture the assertion without hesitation or fear of contradiction, that more than three-fourths of the cattle in that country are dual purpose cows. Our position on this question of dual purpose cows cannot be better stated than in the words of Prof. Thomas Shaw, one of the best judges and most experienced cattle men in this country. He said in stating his position on the subject: "I believe in a special dairy cow. She includes the Holstein, Dutch Belted, Ayrshire, Guernsey, Jersey, French Canadian, and Kerry of the pedigreed breeds in America. Her place is on farms where cattle are kept almost entirely for the dairy products, which they furnish, or in the stable of the individual who keeps but one cow. I believe in the special beef cow. Her place is on the range or on the large farm, where circumstances forbid the milking of the cows by hand. Her domain in America has probably

more than attained a maximum since large farms are being divided. I believe in the dual purpose cow. Her place is on the arable farm, where the farmer is not a dairyman in the special sense, and where production is sufficient to justify the rearing of steers for beef. This means that there is a place for her on probably two-thirds of the farms of the United States, and that on these she can be reared more profitably than either of the other two classes of cows. There are in America five pedigreed breeds of dual purpose cows. These are the Shorthorn, the Polled Durham, the Brown Swiss, the Red Poll, and the Devon. The dual purpose cow is at present far more numerously represented in the graded than in the pure bred form." In England the dual purpose cow is most numerously represented by the milking type of Shorthorn, but the Red Poll comes as "good second." One or other of these types are to be found on almost every farm. The pure dairy types are there only found on few farms. The Jersey is almost solely confined to the home farms of the great land owners and to the small farms of gentlemen who keep them for a domestic supply of butter. The dual purpose Shorthorns and Red Polls furnish nearly the whole supply of milk for the great cities and towns of that country, and the farmers keeping them supply a very large part of the steers which are fed for the meat supply of those places, and also a great number every year of fat cows and heifers which have failed to breed. This is the beauty of these breeds in the eyes of the English farmer. If they fail to breed and become milkers, they will make as good beef as the beef breeds, and will do it profitably. A bull calf from one of these cows is as readily and profitably made into veal or into a feeding steer as a bull calf from any of the beef breeds. Here, as there, no one wants a Jersey or grade Jersey bull calf. He will neither make good veal nor a profitable steer. Only a few days ago we noticed a communication in the Breeders' Gazette from a correspondent in Missouri complaining that when the steer buyer comes around and asks for a bunch of steers his first question is "Any Jerseys among them?" If you are unlucky enough to have a Jersey or Jersey-Shorthorn steer the buyer will tell you he cannot use him or "you take that Jersey out," or I will give you \$5 less for that Jersey-Shorthorn steer. If you ask the reason why, the answer is, "He won't feed, a poor seller, spoils my other steers." This is exactly the position of our farmers in the South. They have got this Jersey blood so spread amongst

the cattle here that instead of being able to supply a large part of the feeding stock of the country we are practically shut out from this market and have to waste feed and time fitting these ill-favored animals for local markets where they sell at about half the price that a good steer ought to fetch. The great majority of our farmers cannot be dairymen if they would. They are not so situated as to be able to market the produce and if they were their entrance upon the business would be the signal for such a drop in the price of dairy products as would make the business unprofitable. In the neighborhood of large cities or where the farm is on the direct road to Northern cities and not too far away from them, there is an opening for dairying, and there the pure dairy breeds should be kept, but speaking generally the type of cow needed on the farms of the South is one which will give an abundance of milk to supply the farmer's family and hands and a few nearby people in the small towns and will raise fat veals and good steer calves for feeding. The Shorthorns and Red Polls will do this and high grades of these types not having any Jersey admixture of blood in them will be almost as serviceable. Until our pastures and feeding capacity are improved, we find by experience that the Red Polls better meet our needs than even the Shorthorns. They are not such heavy cattle and have not been so long accustomed to high living as the Shorthorns. Hence they do better on our thinner pastures and coarser feed. In England the Shorthorns and Shorthorn grades do better as the pastures and feed are there much better. We have kept Shorthorn grades (high ones) in England that made 22 pounds of butter per week giving over three gallons of milk at a milking, and have made these cattle into fat beef weighing from 1,200 to 1,500 pounds, and their bull calves into steers weighing 1,500 or 1,600 pounds at two and one-half years old. In this country a grade Shorthorn cow weighing 1,500 pounds in fair flesh has given 9,628 pounds of milk in the year and made 439 pounds of butter, and would at any time, when dry, have made a 1,600 pound fat beef cow. Whole herds of Red Polls in England have averaged 6,000 pounds of milk in the year and several cows have produced over 10,000 pounds of milk. In this country in the Red Poll herd of Capt. Hills, of Ohio, several cows have produced over 10,000 pounds of milk in the year and one cow produced 52,858 pounds of milk in five years. Against steers of these two dual breeds there is no discrimination by buyers. They are as freely bought as the steers of the true beef breeds as it has been found that invariably they feed

as fast and as economically as those of any pure beef breed, and the fat stock show records give them a high place. On thin lands probably no better type of a dual cow can be found than the Devon. She is only small but she gives milk enough to make a fat calf and supply a family, and will raise steer calves that will feed into useful beef, and this at a minimum cost for keep. What the Southern farmer generally needs now is cattle of this type. When farms are more generally improved then he should take up the pure beef breeds, and raise steers that the great feeders want, or that he can feed himself into prime beef for the great markets. These beef breeds will give milk enough to raise their calves but no surplus for the family or for sale. The dual breeds will do both and do both profitably. The special bred cow like the specialist amongst men has a place to fill but that place whether for the cow or the man is not the place to be found on the great majority of farms or in the great mass of the people.

### INOCULATION FOR TEXAS FEVER.

*Editor Southern Planter:*

Messrs. W. M. Watkins & Sons, of Charlotte county, Va., seem to think, judging from their letter in your November number, or attempt to try and show that inoculation is nothing but a notion. I have tried quantities of both, salts and sulphur, too. I venture to say, of the 20 or 25 head of cattle lost from our herd within the past two or three years from tick-fever, that they had been treated to more than 100 pounds of salts, and quite a lot of sulphur. Nothing is absolutely safe but inoculation and parties who contemplate purchasing pure-bred cattle to carry into ticky districts, should secure them now and have them inoculated about the first of January and again the first of March, and have this work done by a veterinarian of tick-fever experience. Salts and all other remedies failed in case of Mr. R. F. Moss, of Booker, Va., and likewise in case of the Norfleets at Roxobel, N. C., and if others would testify from an honest purpose, you would doubtless be surprised to know the fatality from just nothing but ticks.

If parties who want immune cattle could see this Angus bull, they would soon be convinced that he had battled fearfully with ticks, for he bears the scars to convince even the most doubtful. As a rule, when you find a cow, sick with tick-fever, she is then too far spent for salts or sulphur even should they be the best of remedies.

Being thoroughly convinced of these facts as I have

found them out and conclusively proven them to be true, I stand solidly on this rock, "Inoculation," and with one before firmly feel:

"Come one, come all, this *Rock* shall fly,  
From its firm base as soon as 'I,'"

*Halifax county, N. C.*

C. A. WILLIAMS.

### LIVE STOCK SALES IN CHICAGO.

The American Swineherd of Chicago says that market alone has received up to November 1st 462,000 cattle more this year than they did last, and the receipts of hogs for the same period show a shortage of 460,000 as compared with the same time last year, and this applies to one market only.

### FORAGE CROPS AND PORK PRODUCTION.

It is well known that swine are healthiest and do best when given plenty of exercise and kept in sanitary surroundings. The hog in a state of nature is a clean animal, feeding on grass and herbs and having his lair in some secluded, well drained spot. He also is careful about his domestic habits—a strange contrast to the degraded creatures which are so often found shut up in filthy pens by indifferent owners. Where such conditions prevail it is not surprising to find hog cholera a dreaded scourge. If these same animals were given the run of a large pasture, cholera would soon disappear and they would become healthy, contented animals paying a handsome profit to the owner. There is no section of the country where some grazing crops cannot be had throughout the greater part of the year. Where bluegrass or other tame grasses and red or alfalfa clover can be had, they are excellent for the purpose, though they will probably not fatten animals so rapidly as a good succession of crops such as can be grown in many localities. In this respect the south is particularly favored, for a succession of crops can be had from seven to nine months of the year, or throughout the entire year, if one includes the winter growing cereals. If a succession is properly planned it is quite possible to put young hogs on grazing crops in the spring and with a limited amount of meal, finish them for the market by November or December; in other words, in a seven to nine months' grazing period. This means the production of extremely cheap pork.

The grazing experiments here discussed were commenced in June, 1902, at the Tennessee experiment station and were concluded in November the same year. They are initial and subject to modification. The succession of crops used was winter oats, June 2 to July 10; cowpeas, September 2 to October 7, and soy beans from October 7 to November 8. The hogs were put on the oats when the grain was just coming

into head and were not turned off until it was dead ripe. They were put on the first lot of cow peas when the plants were vining and were turned off when it was in full bloom. They went on the sorghum when it was in early bloom and were turned off when it was dead ripe. When placed on the second lot of cowpeas the pods were beginning to form; when taken off there were many ripe pods. When put on the soy beans the pods were well formed and the plants were dead ripe before the hogs were removed.

Six pigs were run on the crops mentioned. While on oats and cowpeas they received corn meal; while on sorghum and matured cowpeas they received wheat meal; and while on the soy beans, corn meal. The meal was fed at the rate of one pound per head per day. The gain of the individual hogs was as follows: On oats one-half pound, on young cowpeas one-half pound, on sorghum one-quarter pound; on matured cowpeas one-half pound; on soy beans 0.8 pound. The six pigs weighed 240 pounds when they went on these crops and 745 pounds when they came off. With hogs of the weight indicated, an acre of oats would have fed six pigs 248 days or 82 hogs 15 days.

An acre of cowpeas just vining would have fed six pigs 187 days; sorghum, six pigs 67 days; cowpeas, six pigs 113 days; soy beans, six pigs for 124 days. This would be at the rate of 643 pounds of pork from an acre of oats; 562 pounds from an acre of partially ripened cowpeas; 400 pounds from sorghum; 366 pounds from matured cowpeas, and 600 pounds from soy beans. Had corn meal been fed with the cowpeas when nearly matured, they would doubtless have made a much better gain than that indicated.

These facts show beyond the question of reasonable doubt that soiling crops can be utilized to the greatest advantage in the production of pork in the middle south, and that a large amount of pork can be secured from an acre of land with a very small consumption of grain.

A. M. SOULE.

*Exp. Station, Tenn.*

### CATTLE QUARANTINE IN VIRGINIA.

The State Veterinarian issues the following notice to cattlemen, railroad companies and others doing business in Virginia:

BLACKSBURG, VA., Nov. 12, 1903.

From November 1, 1903, to January 31, 1904, inclusive, cattle from the quarantined district of the State of Virginia may be moved for purposes other than immediate slaughter to the non-infected area within the State of Virginia, after inspection and upon written permission by an inspector of the Bureau of Animal Industry, or a duly authorized inspector of the State of Virginia.

The following bureau inspectors will inspect cattle at the points named below, viz.:



Dr. J. M. Goode, at Roanoke, Va.; Dr. G. C. Fawcett, at Norfolk; Dr. Yingist, at Union Stock Yards, Richmond, and Dr. D. C. Hanawalt, at Lynchburg, Va.

If the Boards of Supervisors of the different counties wish to have local men appointed to do this inspecting, in order to move cattle to the non-infected area of this State (said local inspectors to be appointed at the expense of the counties where the inspecting is done), then the names and addresses of these men who are recommended by the supervisors to do this work, should be sent to the office of the State Veterinarian, at Blacksburg, Va., at once, in order that said local inspectors may be instructed, duly authorized and appointed by the Board of Control of the State of Virginia to inspect cattle from the quarantine district of the State, and when said cattle are found to have no ticks on them, then the inspector may give a written permission allowing these cattle to be moved across the quarantine line.

J. G. FERNEYHOUGH,  
State Veterinarian.

### A BIT OF THE RANGE.

*Editor Southern Planter:*

Channing next boss! A gentle shake by Sam and then—as the patient fails to realize the situation—a more vigorous shake, this does the business. The “tenderfoot” is on his feet and has his toilet complete just as the train pulls into the pretty little town of Channing, Texas, way up in the Pan Handle and right pretty it certainly was that November morning at 2:30 with the full moon shining as the moon shines only on the great plains. Making his way to the hotel to finish that nap the writer finds the concern has changed hands since last winter, the jolly Irishman has given place to a more staid Yankee, but the bell boy is the same and with a fist in his sleepy eye he welcomes us in true Texas style. We are soon tucked away in a cosy bed there to remain a couple of hours, then up and breakfast before day. Stepping into the office after breakfast we were greeted with “Hello, Mr. French! had to come back again did you?” Turning I was glad to see Mr. Bob Duke, foreman of the “Rito Blanco” division of the great X. I. T. ranch. A jolly good fellow is Bob. A cow man every inch of him. Soon Col. Boyce, the hustling manager, comes in. After he has told a couple of his good stories and we have used up considerable of N. C. tobacco he remarks, “The boys are saddling up and as you are going out with them would you prefer to travel in the buggy or on horseback?” What a question to ask a North Carolinian even if he is an adopted son. I chose the saddle, of course, and so “Pinto” was brought out—he being well along in years and in the opinion of the boys perfectly safe for the “Tender-

foot” to ride. A brisk canter of four miles and we were at the gate opening into the first large pasture—fifty square miles in extent. Just as the sun peaks above the horizon we halt and Bob gives his orders. “Charlie, you and Jim work left front, Hank you take left centre, George, Tom and I will work right. Mr. French, you can work center, we will round at four mile—a wind mill four miles from the starting point.” Then out they circle, and who that has not been there can realize what it means to gather in a “round up” all the cattle on fifty square miles of range. In the course of an hour or two black cattle are appearing in groups on the horizon, the work goes on and by noon what a sight! Enough to swell an *Angus* man until he “busts” the buttons off his vest. Eight hundred shiny black beasts coming in lines from all directions as if they knew what was wanted and were out looking for that particular wind mill. Soon they were all in the bunch and seven cow boys in a circle about them. Bob remarks, “Seeing that horse fellow—the boy with the bunch of 65 horses from which to select remounts for the boys’ afternoon work—isn’t in sight yet we had better kill a beef so we will have something for dinner.” Suiting the action to the word he uncoils his rope and that red calf which ought to have been born black anyway, is soon on the gallop across the plains toward the chuck wagon, making a good deal of noise, I will admit, but game to the last, and doing much better than would most of us in his place. The cook meets him a few rods from the wagon, “falls on his neck” and in fifteen minutes the boys had beef for dinner, and such beef, beef the like of which only an *Angus* knows how to produce and a plainsman knows how to cook. The chuck wagon at about 1 o’clock was one of the prettiest sights the writer ever looked upon. Anyway it appealed to him in a manner to be remembered. The boys seemed to see beauty in it also. By the way they come on the gallop at the signal from Jack, the cook, and Jack can cook. The writer hopes—on account of his health—to never again be tempted with such hot rolls, roast beef, pork and beans, baked yams, boiled potatoes, coffee, etc., as Jack set before us. Take it away, boys, was the signal for every man to get a tinplate, knife and fork, spoon and tin cup, and then—I blush at the memory, and for hours afterward felt for that *Angus* calf. After doing justice to Jack’s dinner the writer’s *real* work begun, as one hundred and twenty top two year old heifers were to be cut out of that mass of eight hundred before night. Cutting individual wild cattle out of a large bunch is no boy’s play. One must select the animal he wants, follow her closely with his horse in and out through the surging mass, grad-

ually work her to the outside, then with a touch of the horse with the spur he dashes between the heifer and her mates, by dodging and whirling manages to run her several rods away, when a couple of the boys give chase and run her to the new bunch that is being formed. This process is gone through with in the case of the one hundred and twenty head, and just at night fall we start them off toward their "bedding ground"—where they are to be guarded for the night, which place is near where the chuck wagon is stationed. The said chuck wagon had been in the writer's thoughts for some time previous and his mind had strayed back to the subject at more frequent intervals for the past hour. We welcomed Jack as a brother and were soon doing justice to an excellent supper, having been joined a few moments before by several of the boys from one of the southern divisions of the ranch. We make a merry crowd. A prize is offered to the man who can tell the biggest lie. In this contest the writer got nearly to the "head of the class."

Soon Bob said it was time to turn in. Each man pulled his roll of bedding from the top of the wagon. A long strip of canvass, 6x14 feet, three woolen blankets and a thin feather "tick" is the outfit for each man. The end of the canvass is laid on the ground, the tick on that, one blanket under the sleeper two blankets the other end the canvass over and the bed is made. Bob and I sleep together. "Better pull that canvass over your head, Alf, it will be d—d frosty before morning." We followed instructions and after taking this precaution found Bob had told the truth about the weather. Along in the night we were awakened by the worst noise imaginable. Inquiring what's the trouble was informed that it is Jack calling us to breakfast. The writer has often wished for a more extensive wardrobe but can truthfully say one pair of trousers was all he cared to have to pull on that cold morning. In about thirty minutes we had dispatched our breakfast, then—by that time it being light enough so we could see the cattle—the bunch was started for the railway, twelve miles distant. There they were rested until the following morning when just before day they were loaded on the cars and the long trip, eighteen hundred and fifty miles, was begun. Eleven days later we arrived at a little station in North Carolina. Borrowing a neighbor's horse the writer unloaded the "blacks" and drove them four miles in a pouring rain. On arriving before a certain house we were greeted with "Papa's come! Papa's come!" and the cow *boy* and *girl* of to-morrow arrived on the scene.

After all, there really is "no place like home."

Rockingham Co., N. C.

A. L. FRENCH.

## THE WORLD'S YEARS BUTTER FAT RECORD BROKEN.

Charmante of the Gron, No. 14442, was imported by Mr. H. McK. Twombly in 1901 from the herd of Mr. E. A. Hambro of Kent, England. She was dropped July 7, 1896, and is registered on the Island as 3944 P. S., R. G. A. S. Her sire is His Majesty 952 P. S., R. G. A. S., known in England as MaCharmante 4890 E. G. H. B. She was bred by Mr. J. Bourgaize, Gron, St. Savior's, Guernsey. Charmante of the Gron is a very well marked cow, of good dairy conformation, with excellent udder, and a great credit to the breed and to Mr. Twombly's choice herd. She dropped a bull calf October 6, 1902, and he is developing into an animal of much promise and is known as Florham King, No. 8401.

Her year's record began October 11th, 1902, and the requirements for her admission to The Advanced Register were 10,000 pounds milk; 360 pounds butter fat. The results of her year's work are as follows:

	Milk. Lbs.	Butter Fat.	
		Per Ct.	Lbs.
October 11-31, . . . . .	693.56	4.9	33.98
November . . . . .	1,194.94	5.3	63.33
December . . . . .	1,142.25	5.4	61.68
January . . . . .	1,121.06	6.1	68.38
February . . . . .	1,019.25	5.7	58.10
March . . . . .	1,108.50	5.6	62.10
April . . . . .	997.40	6.0	59.84
May . . . . .	1,078.20	6.2	66.35
June . . . . .	1,013.00	5.6	56.72
July . . . . .	864.85	5.7	49.30
August . . . . .	769.45	5.7	43.86
September . . . . .	710.25	6.0	42.62
October 1-10, . . . . .	162.05	6.0	9.72

This record was supervised in connection with the New Jersey Agricultural Experiment Station. Not only does the work of the year greatly exceed the requirements of the Register, but it is the best year's record of a cow of any breed in the world, where public supervision has been given same. It is equivalent to 789.2 pounds of butter, or an average of 2.16 pounds butter a day.

Mr. Jos. L. Hope, the able superintendent of Mr. Twombly's Florham Farms gives the following data as to the feed consumed by the cow during the year.

Bran . . . . .	1726 lbs.
Gluten . . . . .	833 "
Cotton seed meal . . . . .	160 "
Linseed meal . . . . .	134 "
Corn meal . . . . .	58 "
Middlings . . . . .	58 "

Total . . . . . 2969 lbs., or 8 lbs. a day.

This record is certainly a credit to the cow and her owner, and to the careful management which Mr. Hope has given her. WM. H. CALDWELL.

## The Poultry Yard.

### GRAIN FOODS FOR LAYING HENS.

With the object of comparing the values of different kinds of grain as foods for laying hens, some interesting experiments have been carried out during the past few years under the direction of the Technical Instruction Committee of the Cornwall Co. Council. Thirty pullets were selected and divided into six pens of five birds each. The nature of the food given to each pen of five pullets and the number of eggs laid is shown in the statement below:

Food.	No. eggs laid in 12 months
Half maize and half oats . . . . .	732
Wheat . . . . .	723
Maize . . . . .	648
Two-thirds oats and one-third maize . . . . .	633
Oats . . . . .	545
Barley . . . . .	447

Broadly speaking, all the pens which received maize held relatively better positions during the last nine months of the experiments than in the first three. The pen fed on wheat laid seventy-one eggs more than either of the other pens in the first three months, but fell to second position with only four eggs more than the pen fed on maize in the last nine months, and eighty-four less than those fed on half maize and half oats. Though wheat lost ground relatively to certain other foods, during the latter part of the experiment, it was considered not improbable that it might generally prove, as shown in the experiment, the better food during the first three months of the year. This point appeared to be of such importance that arrangements were made to continue the experiments in the first three months of 1903, with the three pens Nos. 1, 5 and 6, around which special interest centered. The results of these latter experiments are shown below:

Food.	No. eggs laid in 3 months.
Maize . . . . .	117
Wheat . . . . .	128
Half maize and half oats . . . . .	184

It is held that if the results of these experiments are adverse to the adoption of any theory as to the proper ratios of nitrogenous to non-nitrogenous substance, they throw some light on the question as to the value of the different grains. This is especially true of barley and oats when used alone. Pen 4, with one-third maize substituted for the oats, laid eighty-eight eggs more in the twelve months than Pen 3, fed on oats only, and when the percentage of maize was still further raised to one-half, the difference in the

number of eggs laid in the twelve months was no less than 187, or 34 per cent. in excess of the number laid in the pen fed on oats alone.

Oats, therefore, proved an admirable poultry food when mixed with an equal weight of maize, but the value of this mixture was reduced when the proportion of oats to maize exceeded one-half. The superiority of this mixture over all other foods in these experiments is emphasized by taking the figures for the year ending 31st of March last. In this period, Pen 1, wheat alone, yielded 561 eggs; Pen 6, maize alone, yielded 546 eggs; and from Pen 5, mixture of half maize and half oats, 701 eggs were obtained.—The Farmers' Gazette.

### EGG-LAYING BREEDS COMPARED.

One of the most elaborate egg-laying competitions on record was recently brought off in Australia. In this test, which was conducted under government auspices, over 40 lots of pullets competed. Each lot of birds was provided with a pen of 6 feet by 5½ feet, where the birds were kept and fed for six months. The prizes were offered both for number and weight of the eggs produced; an account was kept of the cost of feeding as well as the market value of eggs.

The 246 hens competing averaged 57 eggs per hen, but the largest number laid was by a variety known as the Imperial, each hen of this breed producing 71 eggs. Six pens of Silver Wyandottes averaged 70; eight pens of Black Orpingtons, 65; and five lots of Buff Orpingtons but a few points below, nearly 65; then followed Buff Wyandottes, White Leghorns, Golden Wyandottes, White Wyandottes, and White Orpingtons, the older breeds—the Andalusians and the Minorcas—coming last with less than 40 eggs.

So much for the breeds, but when we come to individual pens of birds we find that the black Orpingtons took the first place; a lot of six pullets at seven months old at starting laying 548 eggs, averaging 26 ounces to the dozen; Silver Wyandottes at eleven months old laid 519 eggs, weighing 23 ounces per dozen; the remaining breeds producing eggs weighing two ounces each, with the exception of the Anconas, whose eggs weighed 26 ounces to the dozen. It is worthy of notice that throughout the whole of the competition the value of the eggs laid was \$1.56 per hen, which after deducting the cost of the food left a profit of 88 cents each, the winning Black Orpingtons realizing a profit of \$2.18 per head. Nine pens of birds laid less than 400 eggs in the six months; the most productive month being September, followed by July and August, corresponding with our March, January and February.

## The Horse.

### NOTES.

At Montezeuma Farm, the country place of City Sergeant James C. Smith, in Henrico county, near the city, the horses are doing nicely. Trainer M. F. Hanson has them in charge. The stable includes Clarion, 2:15½, b. g., by Russell Rex, d. Helice, by Norval; Estuary, 2:19½, ch. h., by Expedition, 2:15¾, dam Wavelet, 2:24½, by Belmont; Eliza Ingram, 2:20½, ch. m., by John R. Gentry, 2:00½, dam Blondette, dam of Governor Holt, 2:15, by Leland; Hulman, 2:20, br. g., by Quartermaster, dam Winnie D., by Hannis; Miss Thompson, 2:20½, br. m., by Toodles, Jr., dam Primrose, by Hetzel's Hambletonian; Luminant, h. m., 3, by Hummer, dam Lizzie Mills, by B. Homer; Zack, ch. g., 4, by Sidney Prince, 2:21½, dam Thrift, dam Admiral, 2:17½ and of Willie Shaw, 2:29½, by Meander; Dr. Floyd, b. g., 5, by Sidney Prince, dam, the dam of Albert C., 2:16½, by Clay; bay colt, 1, by Toodles, Jr., dam Virginia Cooper, by Bourbon Baron, second dam Virginia Maid, dam of Mosul, 2:09½; Ginger, ch. m., 4, by Guy Fly, dam Virginia Cooper; Ephraim Toodles, b. c., 4, by Toodles, Jr., dam Baby Dean, by Willis, and Flower, bay mare, pony, by Toodles, Jr.



Ephraim Toodles, the bay colt, four years old, by Toodles, Jr., 25291, dam Baby Dean, by Willis, 12223, son of Jay Bird; bred and owned by James C. Smith, is probably held in higher regard than any other trotter in the Montezeuma Farm stable. Mr. Smith has owned and campaigned Mosul, 2:09½; Roster, 2:12½, and a score of others with fast marks, but this scion of the Toodles family on the score of good looks, speed, steadiness and disposition, comes nearer the ideal at Montezeuma than all the rest. Weighted down by a name likely to handicap the average performer Ephraim Toodles trotted the Deep Run Hunt track in 2:20 last season as a three year old and came the last half, which is an uphill grade, in 1:07½, and finished strong at that. C. A. Pusey drove him. The youngster has not been handled this season, but will be jogged regularly during the winter and go into active training again next spring, when if he keeps right much is expected of him. Baby Dean, the dam of this colt, was bred by Mr. Joseph Bryan at Laburnum Farm, as was the second dam Jennie Dean, by King Bolt, son of Lexington, by Boston; and Zopyra, the third dam, by Staunton, son of Red Eye, also, by Boston, while the fourth dam was Jennie Dean, a daughter of Boston.



Baby Dean, the dam of Ephraim Toodles, was rid-

den through the war by Mr. Bryan and was noted for her endurance. Rather a remarkable feature in the pedigree of Ephraim Toodles is that he traces directly to Boston 4 times through his dam, while through the sire, Toodles, Jr., a son of Odin Bell, 1409 and from Kate Flight, by Red Hawk, son of Red Eye, he gets another cross to that famous son of Timoleon. This is breeding which will doubtless be approved by those partial to copious infusions of thoroughbred blood.



George M. Harden, of Raleigh, one of the best known of North Carolina horsemen, has returned home after quite a successful campaign through the Maryland, Virginia and North Carolina circuits of fairs and race meetings. With Petronel, 2:19½, by Expedition, 2:15¾, dam Petrol, by Onward, he won the last six races in which she started and the big chestnut mare is still eligible to the 2:20 class. The bay mare Amyline, record 2:30 this season, purchased not long since of Richard Cromwell, Jr., Baltimore, has trialed in 2:20½ and seems likely to trot fast with further development. She has raised two colts. Amyline was sired by Egwood, 2:18½, dam the great brood mare Virginia Maid, dam of Mosul, 2:09½, etc., by Sam Purdy. The bay gelding Sweet Hector, by Director, dam Sweet Alca, by Alcazar, is being driven on the road. John Trotwood Moore, the Tennessee bred pacer, bay stallion, 4, by Hal Woodriddle, worked a mile in 2:22, quarters in 31½ seconds, but was not started this season, but was kept over and should do to campaign in 1904.



Robert Bradley's stable of runners has done pretty well at Chicago this season, being credited with winning about \$13,000. Racing for the season has ended at the "Windy City" and the stable is now at the Benning track, Washington, D. C., taking part in the meeting of the Washington Jockey Club. Peter Paul, the two year old son of Aloha and Eminence, by imp. Kkyrle Daly, who was such a consistent winner during the early part of the season, is being given a well earned rest and Mr. Bradley looks upon him as the winner of the Chicago Derby for 1904. From Washington the stable will be shipped to the Bradley Farm, Wilcox Wharf, Va., and wintered there. Among Mr. Bradley's yearlings, most of whom are by Aloha, the sire of Robert Waddell, are some prospects and from the lot he looks for several real good ones, probably the equal of Peter Paul.



The Virginia Polytechnic Institute Riding Club

has recently been organized at Blacksburg, Va., and its future outlook is bright. Later this organization will be most likely merged into a hunt club. Dr. J. G. Ferneyhough, the State Veterinarian at Blacksburg, is president; Prof. Bolton McBryde, vice-president; Maj. T. G. Wood, secretary and treasurer. Among those who ride with the club are Professors McBryde, Wilson, Dabney, Moncure, Ferneyhough, Dr. Ferneyhough, Mr. Dabney, Cadet R. E. Ferneyhough, Maj. Wood, Mrs. Rasche and Misses Virginia and Picket Heath, Ethel Lockwood, Susie McBryde and Maude Lacy. Dr. Ferneyhough, president of the club, has recently purchased for a hunter, the handsome thoroughbred gelding by Eric, dam Gipsev Girl, and changed his name from Commonwealth to Tempest.

A very prominent performer on the great Harlem River Speedway, New York, is the chestnut gelding Angelus, 2:12 $\frac{1}{4}$ , a Virginia bred trotter, who was foaled in 1891 and made his record at Cleveland in 1896. This tall son of the dead pacing stallion Whitby, 2:18 $\frac{1}{4}$ , and Winnifred, by Brennan, thoroughbred son of Orion, was bred by the late Thomas M. Hewitt, of North Bend Farm, near Weyanoke, on the James river, and was always speedy from his yearling form up. Neilson, grand dam of Angelus, produced the big bay gelding Roy, 2:30, the only standard performer to the credit of Carlos, the son of Crottendon that formerly headed the stud of the late Col. J. L. Carrington. Neilson was sired by Star of the West, son of Curles, by Revenue, and back of this thoroughbred infusion came a cross of Morgan blood.

Jay Boy, 31144, the big bay stallion by Wilkes Boy, owned by E. A. Woodell, formerly of Danville, Va., but now of Atlanta, Georgia, is in winter quarters near the latter city. Jay Boy trotted a trial in 2:15 $\frac{3}{4}$  in 1902, but trained off and was never able to show his true form in a race. The son of Wilkes Boy, however, made good this fall and won a couple of races during the same week at Birmingham, Ala., in October and trotted to a record of 2:22 $\frac{1}{4}$ . Jay Boy was foaled in 1894 and bred by J. W. Bethell, of Sharp, N. C., who owned his dam Lena Wilkes, a daughter of Jay Bird and Patchena, by Mambrino Patchen, 58.

Mr. A. B. Gwathmey, of New York, has sold to E. E. Taylor, Washington, D. C., the fast trotter Forney, 2:19 $\frac{1}{4}$ ; bred on the Eastern Shore of Virginia, and sired by Sidney Prince, dam by Bendee. When just right this horse can show a half close to one minute and has stepped shorter distance at even faster rate of speed. Mr. Gwathmey was not over anxious to part with Forney, but owning Tiverton, 2:11 $\frac{1}{4}$ ; Senator Mills, 2:12 $\frac{1}{4}$ , king of the Harlem River Speed-

way, and other crack performers, he consented to dispose of the Sidney Prince gelding.

The stable of steeplechase horses, eleven in number, owned by the former Virginians, Messrs. A. B. and J. Temple Gwathmey, father and son, of the Cotton Exchange, New York, who race under the non de plume of "Mr. Cotton," has been sent to Canada to be wintered. The Messrs. Gwathmey's stable includes the well known brown gelding Eophone, 6, by imp. Rigolette, dam Vestalia, by Tom Ochiltree, bred by Robert Neville, Welbourne, Va.

Sidney Clay, bay gelding, 4, bred on the Eastern Shore of Virginia, and sold during the summer from Foxhall Farm, Norfolk, Va., to E. E. McCargo, of Philadelphia, is showing up well in his work, having recently shown miles close to 2:15. This horse was sired by Sidney Prince, 2:21 $\frac{1}{4}$ , dam Miss Clay, by Clay, the son of Walker Morrill. He is highly thought of by Mr. McCargo, who found him very erratic in the beginning, but has now gained his confidence and looks for the gelding to go very fast in 1904.

"West Cairns," the picturesque home of the young authors, students of pedigrees and breeders of thoroughbred horses, Kenneth Browne and H. B. Boone, near Charlottesville, has been leased by its owners for a couple of years. Mr. Browne has removed to New York to continue literary work, and Mr. Boone goes to Italy, where he will study art. Messrs. Browne and Boone own the stallion Chiswick, son of imp. Mr. Pickwick, and some choicely bred brood mares and colts.

White Oak Maid, the high stepping trottingbred mare, with whom Mr. Reginald Vanderbilt captured several prizes at the New York Horse Show, was purchased during the past winter by Mr. Vanderbilt from Jack Spratlev, Dendron, Va. The latter obtained the mare in Kentucky and brought her to his farm in Sussex county, Va.

At the fall meeting of the Los Angeles Racing Association, Los Angeles, Ca., the Virginia thoroughbred sires, Eon and imp. Water Level, were each represented by winners of the races. Eon heads the stud of Capt. R. J. Hancock & Son, while Water Level is premier at the Annita Stud, of A. D. Payne.

The Ellerslie bred filly, Chanterelle, 4, by imp. Charoxus, dam Ada Belle, by Eolus, has won several races at Latonia this fall. Chanterelle started in a number of races during 1903, winning three and finishing second and third in some half dozen others.

BROAD ROCK.

## Miscellaneous.

### THE GREAT ROANOKE FAIR.

*Editor Southern Planter:*

Although rather late a few words should be published in the Southern Planter in regard to the first fair of the Roanoke Industrial and Agricultural Association, which was held at Roanoke, Va., on October 23-24. We had expected the editor of your valuable journal to accompany Governor Montague to the fair, and to have had the pleasure of reading an account of this great exposition of Southwestern Virginia's resources from his smooth-flowing editorial pen. In this, however, we were all disappointed; and then in the following week, after all the accounts and expenses, including premiums, had been settled, it was too late to send a report for publication in your November issue.

It may be said, however, that the fair was a great success in every respect. Certainly, financially, for a profit of several thousand dollars was made. We doubt if a better attended fair was ever held in Virginia. The grounds were thronged every day, and immense audiences heard Senator Daniel, on Thursday, and Governor Montague on Saturday.

The horse display comprised horses for breeding purposes, standard-bred trotters, heavy drafts, saddle horses, coach and carriage horses, light draft, trotting-bred non-standard, dray, express and fire horses, family carriage horses, horses for business and pleasure, saddle horses, roadsters, ponies, mules, jacks and jennets.

Virginia and West Virginia were represented in the cattle department by their choicest specimens of the beef breeds. S. W. Anderson, of Greenbrier county, West Virginia, showed his fine Ingleside herd of pure-bred Hereford cattle, at the head of which was the noted bull, "Van."

Shorthorn, Aberdeen-Angus and Hereford cattle were exhibited by the Agricultural Department of the Virginia Polytechnic Institute, of Blacksburg, Va., through the courtesy of D. O. Nourse, Professor of Agriculture. The thoroughbred bull, "Governor Tyler," which drew first premium over seven herds at the district fair held this fall at Radford, Va., headed the Shorthorns from this institution, which also had on exhibition the thoroughbred Aberdeen-Angus bull, "Fife."

Registered Holstein-Friesian cattle were shown by C. T. Lukens, B. P. Huff and Joseph A. Turner. At the head of the herd of registered Herefords, entered

by Haynes L. Morgan, of Saltville, Va., was the fine bull, "Marmaduke." There were also a number of head of Jersey, Devon, Ayrshire, Guernsey and other dairy breeds on exhibition.

For cereals, root crops, vegetables, fruit, plants and flowers, as also for poultry, large tents were provided, the time having been too short for the erection of buildings. The display in each of these departments was creditable.

In a room, 50 by 150 feet, under the grand stand, were the art and domestic departments. The former in addition to paintings, drawings, crayon work, etc., included needlework and embroidery. The domestic department embraced bread, cakes and pastry, butter, preserves, jellies, honey and vegetables and fruit in glass jars, as also home-made wines and cordials. These departments were in charge of ladies, by whom the room had been most elaborately and beautifully decorated.

Agricultural implements and machinery, farm wagons, plows, traction engines, portable saw-mills, farm gates and fences and miscellaneous farm necessities covered several acres in the northeastern corner of the grounds. The leading manufacturers of the country were represented.

The races—trotting, pacing and running—were very attractive, and the large grand stand, the quarter-stretch, and every advantage point from which the hotly contested races could be seen, were crowded. O. M. C., a Baltimore horse entered by William Nicholson, of Greensboro, N. C., established a track record of 2:15½ for the new course. An unfortunate accident occurred in the seven-eighths mile dash, when the chestnut mare, "Flat Denial," owned by O. E. Jordan, of Dublin, Va., broke a leg and had to be killed.

The ladies' and gentlemen's riding contests were exceedingly interesting events. Eight ladies, of the best families of that section of Virginia, competed in the former. The blue ribbon, which carried with it prizes of over \$100 in value, went to Miss Louise Price, of Botetourt county, a most graceful rider. Miss Verta Phelps, of Cave Spring, took second; and Mrs. Coshy, of Roanoke county, third. Colonel W. W. Berkley, a dashing rider, was awarded the blue ribbon in the gentlemen's contest, with Dr. Bragg second.

The undersigned, who came from Pennsylvania to officiate as manager, had the benefit of the liberality and indefatigable energy of the officers and executive

committee, so indispensable to the achievement of success. It was their perseverance and co-operation that resulted in the equipment of the new fair grounds in the almost incredible time of six weeks. In that time the grounds were enclosed with a 14-foot high fence which measured one and a half miles around; a first-class half-mile track was constructed; a commodious grand-stand, with seats for 1,600 persons built, several hundred horse stables and cattle stalls provided, the box stalls for the trotting horses being especially fine; and macademized walks were laid out all over the place. But, then, the weather was very favorable, there having been rain only twice, and then at night, during the six weeks.

The officers and executive committee who labored so hard to bring about success, and who are deserving of particular commendation, are as follows: President, James P. Woods; Vice-President, Edward L. Stone; Secretary, W. L. Andrews; Treasurer, R. H. Angell, and R. H. Angell, A. L. Sibert, Louis Scholz, J. H. Wingate and Henry Scholz, members of the Executive Committee.

CYRUS T. FOX.

[Pressure of business prevented our attendance at the fair much to our regret. We congratulate the Society on the success achieved and Mr. Fox (a tried old fair veteran) on his excellent management.—Ed.]

## COLD STORAGE ON THE FARM.

*Editor Southern Planter:*

The ice house I shall describe is built in a hillside of such a slope that the first floor is on the level of the surface and the second floor a few feet above the surface at the other side. Where such a situation is not convenient the second floor can be approached by a bridge. The basement is used for storing fruit.

In localities where field stone is plentiful the cellar can be cheaply built by using the stone in cement, making a ground wall. Broad 2-in. planks were held in place by substantial staging to form a box having a width of 18 inches. Into this box the dry stones were placed. Small stones may be shovelled in. After getting a layer 10 inches thick, *thin* mortar composed of good lime and cement was poured in until the box was filled. The operation was repeated, moving the planks upward as the mortar set until the desired height had been built.

Sills 8 inches by 12 inches were placed flatwise on these walls on which studding 2 by 6 inches was toe-nailed. The studding was weather boarded on the outside and lined closely on the inside with inch boards. This constituted an air chamber 6 inches wide around the entire building. Studding 2 by 4

inches was toe-nailed flush with the inner face of each sill and closely lined with 1-inch boards. As the inner surface was being lined sawdust was filled between the inner and middle lining, thus forming another non-conductor of external heat.

The upper story of the building is used for storing ice, thus cooling the air in the top of the building which sinks and in turn cools the rooms below. This is the general principle that governs the construction of all storage houses that depend on ice for the production of a low temperature. This second story is divided into two rooms, one of which is the ice storage room in which the supply of ice is stored and the other is the ice chamber, in which is held the ice that cools the refrigerating room directly below it. A door—there are two doors, one above the other in the partition dividing the upper and lower rooms—in the ice chamber communicates with the outside. This is double, having both air and sawdust chambers, and is flared as are the doors of a fire-proof safe. It is used for unloading ice and is the only outside entrance into the second story. The refrigerating room in the first floor is the compartment in which the temperature is to be reduced and in which perishable products are to be stored. Leading into this room is a cooling room which is to be used as a general purpose storage cellar. A small entrance room protects the doorway leading into the cooling room. This is the only entrance to the first floor.

The flooring is laid tight in the storage room and provided with a slope of 2 inches toward the center. To prevent leakage the floor of this room has a sheet iron covering. In the ice chamber adjoining, the floor is laid with 2 by 4's set on edge with 1-inch spaces between. This provides for air circulation and water drainage. The sloping floor beneath leads the water into a gutter which carries it down and out through the cooling room. The floor structure of the second story must be strong and well braced so as to carry the heavy load placed upon it. Heavy staging carrying 2x12 inch joists will give ample support for the ice chamber and storage room.

The roof to the second story should be built so as to make it as near a non-conductor of heat as possible. Dead air spaces are the cheapest and most easily constructed non-conductors. This is essential in the ceiling as it has the double duty to perform of holding the cold in and keeping the heat out. A large attic is provided, roofed with shingles. Metal should never be used. The ceiling in the second story is provided with ventilator shafts so that perfect ventilation can be secured during cold weather.

Where drain tile can be had what is known as a

V joint in the drain will provide for the escape of water and prevent the ingress of air. A box drain with an opening 2 inches square can be constructed where tile cannot be obtained by any ordinary mechanic. The V-shaped part is constantly filled with water and prevents the ingress of air. The drain is placed at such a slope that when the V becomes full the surplus flows from the ice house.

The ice pond is near the house, almost on a level with the top floor. In filling the ice is pounded so as to have as few air spaces as possible. After melting about 4 inches from the sides of the storage room the space is filled with sawdust and the ice should also be covered on top about a foot deep. In warm latitudes a grove to ward off the intense summer heat is desirable. If there is no grove plant about a dozen North Carolina poplars, a rapid growing tree, on the east, south and west sides. GEO. H. C. WILLIAMS.

*Washington, D. C.*

### CROWN GALL OF APPLE TREES.

The Virginia Experiment Station has been conducting investigation into this disease now common on nursery stock in this State. In the course of the investigation the station has clearly ascertained that trees of the finest vigor yield readily to the attacks of the disease. Observation of recently planted orchards show that it is not usual for trees showing an attack of the disease to form a normal root system. The root system is weak and confined to the surface. Such trees can be readily shaken thus revealing lack of depth of the root system. The Mycologist is also of opinion that badly diseased trees such as are now very commonly found in nursery stock will not ordinarily come into fruiting. The conclusions reached are as follows:

1. The organism which produces the abnormal growth known as crown gall on the apple appears to gain entrance to the apple seedling in the nursery.

2. The diseased seedlings can be detected by inspection. The unusual amount of fibrous roots at and below the crown being the characteristic depended upon for recognition of the trouble.

3. Nurserymen can select the seedlings used so as to largely control this trouble. No one should expect to entirely prevent its occurrence in the nursery now that it has become so wide spread.

4. Persons planting fruit trees should reject with the greatest care all trees which show the cancerous growth about the crown or a sufficiently abnormal development of fibrous roots about the crown to warrant belief that the plants are diseased. One should not

confound the knots caused by woolly aphids with this disease.

5. Apparently, crown gall can be readily inoculated from a diseased plant into healthy ones, hence diseased plants should not be allowed to remain among healthy ones in the orchard. Cultivating the orchard may possibly serve to spread the disease by carrying diseased tissue from one tree to another, but we have not definite date to cite in support of this proposition.

WM. B. ATWOOD,

*Exp. Station, Blacksburg, Va. Mycologist, etc.*

### GOOD ROADS.

WASHINGTON, D. C., Nov. 19, 1903.

Congressman W. P. Brownlow, of Tennessee, to-day reintroduced in the House his well known good roads bill. Acting on the criticisms of opponents and the suggestions of friend, Colonel Brownlow has revised the bill somewhat, but all the important features have been preserved. The new bill appropriates \$24,000,000 to be used as a fund for national aid in the improvements of highways. This sum is made available during the next three years, at the rate of eight millions annually. No State or sub-division thereof can secure any part of this fund without raising an amount equal to the share received. The distribution among the several States and territories is to be made on an equitable basis so as to leave no room for "log-rolling." In reference to the bill, Colonel Brownlow said to-day:

"I think my good roads measure has made wonderful progress during the past year. Conventions all over the country have endorsed it, and a number of State legislatures have adopted resolutions in favor of it. The number of public men who have come out for it has exceeded my highest expectations. In the West and South the sentiment for the bill is especially strong. A large number of Senators and members from those sections have assured me of their willingness to support the measure, and it will also have some strong support from the Eastern States where State aid has paved the way for National aid. I can't see how any man representing a rural constituency can vote for a river and harbor bill and refuse to vote for my bill. And I don't see how any one who wants the rural free mail delivery extended in his State or district can refuse to support a measure to aid in improving the roads, for bad roads are almost the sole obstacle to such extensions. I am hopeful of getting the bill up for discussion in the House early in the regular session."



THE  
**Southern Planter**

PUBLISHED BY  
THE SOUTHERN PLANTER PUBLISHING CO'Y.  
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,  
Editor and General Manager.

B. MORGAN SHEPHERD,  
BUSINESS MANAGER.

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PUBLISHER'S NOTES.

TO ADVERTISERS.

All advertisements and matter  
pertaining to advertising *must*  
reach us by the 25th of each  
month. Please bear this in mind.

Our January Issue.

Our January issue will be as  
usual our annual holiday number.  
It will be gotten up in specially de-  
signed covers, and every depart-  
ment will be full of seasonal and  
interesting matter. In addition to  
this, we are going to make it some-  
what of a biographical number. It  
is our intention to show the faces  
and give a brief sketch of the fore-  
most agricultural leaders and  
teachers of the present day. We  
are sure that it will be very inter-  
esting for our readers to see "what  
manner of men" these teachers are.

As the edition will be quite  
large, it will naturally be a very  
attractive proposition to advertis-  
ers, and we ask all of our friends  
to send us in their ads at the ear-  
liest possible date. Do not wait  
till the last minute, as every year  
we are compelled to leave out a  
goodly number.

IMMUNE HEREFORDS.

We will sell at Auburn, Ala., on Feb-  
ruary 3rd, 1904, 50 head of registered  
Herefords under the management and  
auspices of the Alabama State Experi-  
ment Station. This sale will be held  
in their barns especially fitted for the  
occasion. The cattle have already been  
shipped there for inoculation and can  
be seen there from now on by intend-  
ing purchasers. They are being thor-  
oughly inoculated against the tick  
fever by the State Veterinary Board,  
and will be perfectly immune by the  
sale date.

We are sending 30 bulls and 20 fe-  
males, which carry the blood of all of  
the leading sires of the day. About  
half of them are sired by the record  
priced Acrobat or are by his best sons.  
The rest are by such bulls as the  
\$10,000 Crusader, the \$2,000 Conqueror,  
the \$1,000 Earl of Carlemont, the great  
Earl of Shadeland 73rd, the prize win-  
ning Beau Rowland, and other such  
noted sires. A few of the females will  
be in calf to our record breaking  
Champion bull Britisher, the greatest  
bull of two continents.

This consignment is a pick of four

WOOD'S FARM SEEDS.

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of the best herds in Kentucky and is the choicest lot of cattle ever sent South both as to individuality and breeding. Experts who have examined them at Auburn, pronounce them a wonderful lot and good enough to be used in any herd in the United States.

Our experience with the Southern farmers convinces us that they appreciate good cattle and the only drawback has been the fearful losses from fever. Even cattle that have been raised in the tick infested districts frequently succumb to the scourge when moved from one place to another. Experience and science have demonstrated that the one absolute preventive and guarantee against this disease is inoculation. The cattle we offer for sale at Auburn, Ala., February 3rd, are immuned from fever by careful and thorough inoculation, by the State Board, and can be seen by those interested, at the Experiment Station, running with tick infested cattle.

The State of Alabama sent Dr. C. A. Cary up to Kentucky looking for pure bred cattle and he was so well pleased with our cattle that we sold him four choice calves. While here Dr. Cary was so impressed with the scale and finish of our Kentucky Herefords that he persuaded us to send this consignment South, as according to his judgment we have just what the Southern farmers need to improve their herds with.

Parties interested in good live stock will do well to note the date of this sale and wait till then for purchases. At that time spring will almost be here and the care and expense of wintering will be saved. Bear in mind that this consignment is not a lot of Southern range bred stuff but the best that Kentucky, which is famous for the best, can raise.

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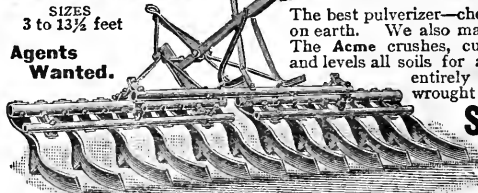
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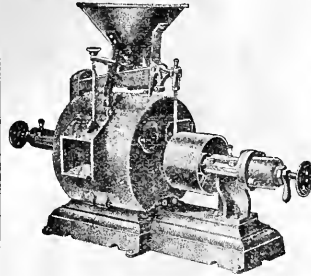
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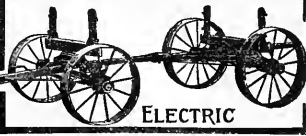
## GERMAN IMMIGRANTS.

Those interested in the development of the resources of the South are, to some extent at least, conversant with the methods employed by the Southern Railway Company in advancing the material growth of the country served by its lines. For several years past that company has made special effort to attract to the South a desirable class of German immigrants. While this work is one that requires time, labor and patience, the results have been fairly satisfactory, and several settlements of that class of people have been established along the lines of the Southern Railway.

The success achieved by the company has convinced it of the wisdom of redoubling its efforts, and it has decided to wage an active campaign, having for its purpose the location of a larger number of thrifty German farmers along the line. There is no better class of emigrant than the thrifty German farmer and such a settlement is always an important factor in the growth and development of the section of country in which it is located.

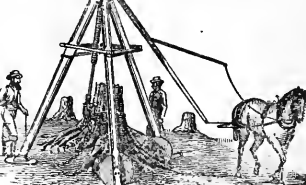
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100 SQUARE FEET \$2.00  
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Easy, perfect working machines of varied patterns and right prices. We also make the famous Freeman Windmills, Corn Shellers, Feed Cutters, etc.

Ask for our catalogue 110

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Built as strong as an anvil. Burrs are of hard white iron. Bore and gey frons furnished with mill. Capacity of mill from 20 to 30 bushels per hour. We are making a special introductory price now. Write for the catalogue and prices on the full line. Corn shellers, planters, cultivators, feed cutters, etc.

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Unhusked corn, husked ears, shelled corn and all grains broken, crushed and ground in one operation by

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The Southern Railway Company will soon publish an illustrated pamphlet in German, the object of which will be to give reliable information concerning each of the Southern States tributary to its lines to all Germans considering the question of change of location. This pamphlet will be followed by other publications giving general information about this territory which it is thought will be the means of attracting the attention of thousands of German to the South.—M. V. RICHARDS, *Southern R. Co., Washington,*

**RICHARD BAXTER.**  
A tale of New England life, time about 1830, is the title of a new novel just issued. This is written by our old friend, the Hon. Edward F. Jones, of Binghamton, ex-Lieutenant Governor New York, but better known to our readers as "Jones, He pays the Freight." This is one of the most entertaining books of the day, and will carry old Yankees back home in their memory. It is brim full of sentiment, humor and pathos. Real characters, not caricatures. We predict for it a wider sale than any novel for many years. It is published by the Grafton Press, New York. 12 mo., 350 pages, 16 illustrations, finely bound, \$1.50. All booksellers, or postpaid by mail.

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It costs nothing. Return at our expense if this mill fails to grind shelled corn, ear corn, all grains or mixed feed on the eastern feeder and better than any other.

**New Holland Mills**  
are the practical, every day mills for every day wants. No other good mill at so low a price. Made in 3 sizes. Adapted to any kind of power. Don't fail to get our free catalogue before buying.


**NEW HOLLAND MACHINE CO.,**  
Box 153, New Holland, Pa.



**See it Work!**  
Any responsible party may try on his own premises for 15 days and return at our expense if not the best.

**MONARCH French Burr and Attrition Mills**  
are farmers' mills. Meal or feed, corn or cob or small grains. Hand grinders, all sizes. Write for free catalogue for particulars.

**Sprout Waldron & Co.**  
Box 202, Muncy, Pa.



**WEBBER'S FEED CUTTERS.**  
Feed all your fodder. By using Webber's cutters, with shred attachment the whole of the nutritious stock is cut, crushed and shelled, and ground evenly. No waste. Animals eat it readily and thrive. Shred attachment costs \$6.00. The model machine cutter. Also make Peas & Beans, Lent, Peas, Beans, Giant and Penna. Turnover. Wood-cut. Feed Mills, etc. Catalog free.

**WEBBER & SONS, 25 Bond St., Ipswich, Pa.**



**WELL DRILLING MACHINES**  
The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

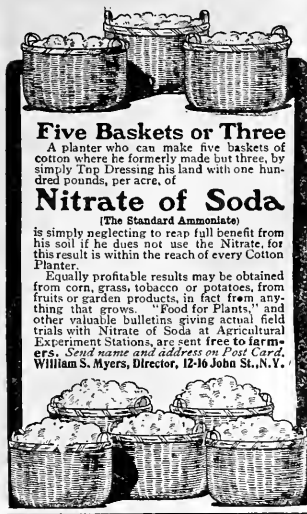
**Loomis Machine Co., Tiffin, Ohio.**

**WARRINER'S CHAIN HANGING STANCHION.**  
CLEAN, SAFE, COMFORTABLE.  
Mfg. by W.B. CRUMB Forestville, Tenn.



**GET ALL THE CREAM,**  
—BY USING—  
The SUPERIOR CREAM SEPARATOR. Does not mix water with the milk. It is the best Separator made. A trial convinces, and every Separator is guaranteed. Write today for Catalogue to the SUPERIOR FENCE MACHINE CO., 291 Grande River Ave., Detroit, Michigan.





**Five Baskets or Three**

A planter who can make five baskets of cotton where he formerly made but three, by simply **Top Dressing** his land with one hundred pounds, per acre, of

**Nitrate of Soda**

(The Standard Ammoniate)

is simply neglecting to reap full benefit from his soil if he does not use the Nitrate, for this result is within the reach of every Cotton Planter.

Equally profitable results may be obtained from corn, grass, tobacco or potatoes, from fruits or garden products, in fact from anything that grows. "Food for Plants," and other valuable bulletins giving actual field trials with Nitrate of Soda at Agricultural Experiment Stations, are sent free to farmers. Send name and address on Post Card. **William S. Myers, Director, 12-16 John St., N.Y.**

ELMWOOD NURSERIES.

**ASPARAGUS**

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for **BAHR'S, PALMETTO, CONOVER.**

**APPLES**

A large general assortment, including **WINEAPPS** and **YORK IMPERIALS.**

**Splendid Assortment of Ornamental, Shade and Fruit Trees.**

**EGGS** from B. P. Rocks, Light Brahmas, Brown Leg-horns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

**J. B. WATKINS & BRO., Hallsboro Va.**

**Strawberry Plants,**

All grown in fresh rich ground, healthy, well-rooted plants that will please you; over 30 kinds to offer. Raspberry plants and Peach trees also; see us before you buy. Our stock has been thoroughly inspected and found free from any disease. Address **JOHN LIGHTFOOT, Sherman Heights Tenn.**

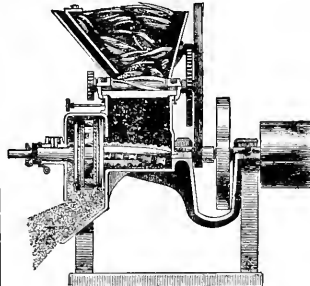
UNLIMITED QUANTITIES **RAW FURS** wanted For London January Sale. Opossum, Muskrat, Mink, skunk, Raccoon and others. Highest cash prices paid. Write A. E. Burkhardt, Main & 2nd, Cincinnati, O.

**THE AMERICAN CREAM SEPARATOR.**

There are several things which make it advisable for intending purchasers to consider carefully the American Cream Separator advertised in our columns. First, is its reasonable price. A man with but two or three cows will find it worth while to own it and may soon get his money back. It is not only the cheapest of all good separators, but it is simple in the extreme, and easy to run and keep clean. Last, but not least, it is a clean, close skimmer. It gives such universal satisfaction, that the manufacturers, the American Separator Company, of Bainbridge, N. Y., will place it in any responsible party's hands for free trial, with no obligation to buy unless perfectly satisfied. Consult the company's advertisement elsewhere.

**KELLY DUPLEX GRINDING MILL.**

Rapid grinding is one of the characteristics of the Kelly Duplex Mill here shown. But it is only one. Most mill makers advertise mills to grind ear or shelled corn. This mill grinds both, and you may leave the husks on without fear of choking.



The illustration will show that it is not one of the flimsy, unsubstantial kind. In reducing ear or unhusked corn, there are three processes, breaking, crushing and grinding, reducing the feed to any degree of fineness at the pleasure of the operator, and all in one operation. It grinds smaller grains, as oats, rye, etc., equally well. It has a feed regulating device and its grinding is always uniform. It is made in four convenient sizes, adapted to the needs of any feeder and suited to any power that may be desirable to use.

It is manufactured by the O. S. Kelly Co., Springfield, Ohio, (O. S. Kelly Mfg Co., Iowa City, Iowa.) who will be pleased to send you catalog fully describing it to any one writing for it.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Mention the Southern Planter when corresponding with advertisers.

**GRIFFITH & TURNER SEEDS**

**A Dollar's Worth For Every Dollar**

No state packet bargain offers. All fresh, plump, quick starting, every kind grown in the climate which matures it best, North, South, East, West.

**Our General Supply Line**

Includes tools, appliances, etc., for Farm, Garden, Dairy and Poultry. The varied lines keep our large force busy all the year and make attractive prices in our large general catalogue. Every standard appliance for the farm is included. Write us your wants. Be sure you get General Catalogue No. 10. It's FREE for the asking.

**GRIFFITH & TURNER COMPANY,**  
205 N. Paca Street, Baltimore, Md.

**Peach and Apple Trees,**

**BONAVISTA NURSERIES, Greenwood, Va.**  
We offer a fine lot of choice trees for Fall and Spring planting  
Our apple trees are the best—Wine Sap, Mammoth Black Twig, York Imperial and Albemarle Pippin, all perfect and well grown trees.

Our peach trees are the standard sorts, Stump, Elberta, Bileyeu (s Comet,) Wonderful, Champion, Globe, Piquet's Late, Albright's Winter, Crawford E. & L., etc.

We send out none but good trees and have never had a complaint made by any purchaser of our stock. Order soon, especially Peaches, as good trees will be very scarce this season.

**CHAS. F. HACKETT, Manager.**

We offer all kinds of : —

**..Nursery stock.**

**STRAWBERRY PLANTS** at reduced prices; 1 doz. rooted **GRAPE VINES** of **CONCORD, NIAGARA, WARDEN,** etc., at \$1; all healthy stock and fumigated before shipped; grown on ideal land for fine roots and smooth bodies.

Send for Special Price to Planters.

**EMPORIA NURSERIES EMPORIA, VA.**

No. 1 Agents wanted. We refer to any business house here as to our honesty.

**TREES! TREES!!**

I offer a fine lot of whole root trees. **Apples, Pears, Peaches, Cherries, Plums, Grape Vines, Raspberries, Etc.**

Save agent's commission by sending your orders to the nursery.

**CATALOGUE FREE.**

All Stock Inspected and Fumigated.

**WERTZ'S NURSERY, Salem, Va.**

## A Golden Rule of Agriculture:

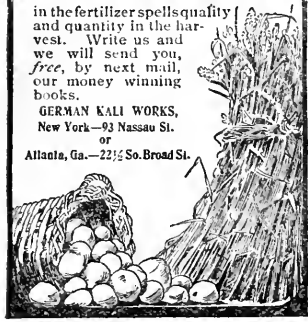
Be good to your land and your crop will be good. Plenty of

# Potash

in the fertilizer spell quality and quantity in the harvest. Write us and we will send you, free, by next mail, our money winning books.

GERMAN KALI WORKS,  
New York—93 Nassau St.

of  
Allaha, Ga.—227 1/2 So. Broad St.



## SAN JOSE SCALE

and other insects can be controlled by using  
**GOOD'S CAUSTIC POTASH WHALE OIL SOAP No. 3.**

It also prevents Curl Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide. 50 lb. Kegs \$2.60; 100 lb. Kegs \$4.50. Half barrels, 200 lbs., at 3 1/2 cts. per lb.; barrels, 425 lbs., at 3 1/2 cts. Large quantities, special rates. Send for circular.

JAMES GOOD,  
PHILADELPHIA, PA.

939—41 N. Front St.,

## Defender Sprayer

All brass, easiest working, most powerful, automatic mixer, expansion valves, double strainer, Catalogue of Pumps and Treatise on Spraying free.

AGENTS WANTED.  
J. F. Gaylord, Box 52 Catskill, N. Y.

## Book of Bugs Free.

Send us your name and that of your druggist and we will send you free of charge a copy of our Book of Bugs, illustrating and describing the destructive worms and insects that damage your crops. The edition is limited, and you must write for it to receive it. Very valuable as a book of reference. **THE PROTECTO COMPANY, 129 West First Ave., Monmouth, Ill.**

## Best Fruit Paper 25c. year.

Send 25c. and names of 10 farmers who grow fruit and you will receive for a year the "Fruit-Grower," best fruit paper published, reg. price 10c year. Fruit-Grower has 16 to 24 pages monthly, illustrated, clean devoted entirely to fruit culture. Prof. Price, Dean Ohio Hort. College, says "Fruit-grower is best fruit paper we have, best of West." D. H. Hale, Connecticut, says "Fruit-grower is a mighty good paper—one of the very best." For sample, etc., address

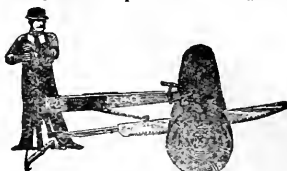
FRUIT-GROWER CO., 312 S. 7th Street, St. Joseph, Mo.

## Hunters' & Trappers' Guide \$3.00.

300 pages, cloth bound, illustrating all for animals. All about trapping. Trappers' secrets, all kinds of traps, snares, &c. Special Price \$2.50 for shippers postpaid. We buy Raw Furs, Hides. Price List free. ANDREW H. BRUNS, Dept. 817, Minneapolis, Minn.

## THE WOOD CUTTER'S MACHINE.

The man who follows the time honored custom of sawing wood will find a piece of machinery that will save him great labor in the Folding Sawing Machine pictured here. It is manufactured by a company of the same name in Chicago and is regularly advertised in our columns. This machine takes the place of the old time



cross cut saw. It can be used in any situation where the cross cut can be used, and its great value is seen in this, that one man can saw more wood with it than two men can with the old cross cut saw. It has a record of nine cords of wood in a single working day by one man. It is not only adapted to sawing felled trees, but to sawing down trees. It is so adjusted that the operator is not at all discommoded whether working on the fallen log, the standing tree, on the hillside, etc. When through with one job it can be folded up in compact form, "like a jack knife," placed on the shoulder and carried off to other work. Any one interested should consult the advertisement elsewhere for correct address and write to the company for catalog and full information.

## A FEED MILL GUARANTEED.

The New Holland Cob and Feed Mill, manufactured by the New Holland Machine Works, New Holland, Pa., is one of the mills that depends on its own work to sell it, and is therefore, freely sent forth to responsible parties on trial. With the opportunity to make test of its worth at the buyer's own home goes a remarkable guarantee of the manufacturers, which shows the faith they have in its adaptability and superior working qualities. This guarantee says that it may be tested freely on ear corn, shelled corn, small grains and all feed stuffs, and that it must establish the fact to the proposed buyer's satisfaction that it will do the work "easier, better and faster than any other mill." Failing to sustain such a broad challenge, it is no sale, and the mill can be returned at the company's expense.

This broad guarantee covers most satisfactorily just those things required in a feed mill. It does not seem possible for one to go wrong with the added opportunity to put it to the test. It is made in three sizes, and is adapted to the use of any kind of power.

Anyone contemplating the purchase of a feed mill, should at least send for this company's catalog and make investigation before placing an order.

## UNION LOCK POULTRY FENCING



HAS BEEN FULLY TESTED AND FOUND SUPERIOR TO ALL OTHERS.

Will fit uneven ground without cutting. Every part can be stretched perfectly. Made of high grade galvanized steel wire. All horizontal lines are cables, making it stronger. Has fine mesh at the bottom for small chicks. We also make extra heavy for gardens, lawns, etc. The largest poultry farms are using this fence—over 700 rods by Lakewood (N. J.) Farm Co. We pay freight and collect every one or no sale. Can ship from N. Y., Chicago, or San Francisco. Write for free catalog of Farm, Lawn and Poultry Fencing.

CASE BROS., Box 340, Colchester, Conn.

## Genuine Spiral Spring Wire FENCES AND GATES



If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO.  
Columbus, Ohio.



## Just As Soon As

you get through experimenting, you'll be using PAGE Fence. Our lithographed catalog tells why PAGE MOVYER WIRE FENCE CO., Adrian, Mich.



## LAWN FENCE

Many designs. Cheap as wood. 22 page Catalogue free. Special Prices on Grass and Chicken. Address COLLEGE SPRING FENCE CO., Box Q, Winchester, Ind.

## SENT ON TRIAL

A Fence Machine that will make over 100 Styles of Fence and from 50 to 200 rods a day AT ACTUAL COST OF WIRE. Home-made, Bull-tongue, Pig and Chickens-light. Wire at Wholesale Prices. Catalogue Free. Kitzelman Bros., Box 185, Muncie, Ind.



## FENCE! STRONGEST MADE.

Bull-tongue, Chickens-light, Pig and Chickens-light. Sold to the Farmer at Wholesale Price. Fully Warranted. Catalogue Free. COLLEGE SPRING FENCE CO., Box 58, Winchester, Indiana, U. S. A.

## ROOFING TINS

Iron and paper roofing, nails, builder's hardware, sash, doors, etc., carriage and wagon goods, paints and oils, cook and heating stoves, guns, pistols, rifles, "Robin Hood" loaded shells. Do you use any of the above? Write us.

HARRIS HARDWARE CO., 409 E. Broad, Richmond, Va.



## Krauser's Liquid Extract of Smoke

Stomachs meet perfectly in a few hours. A tonic from the wind. Delicious flavor. Clear, bright. No smoking necessary. Write for sample. KRAUSER & BROS., Milton, Pa.

A neat Binder for your book numbers can be had for 25 cents. Address our Business Office.

**Free Holiday**



**Games**  
60 different games—one in each package of

**Lion Coffee**

## The Southern Planter.

If troubled with any form of nervousness or Dyspepsia, Palpitation of the Heart or Sleeplessness, Rush of Blood to the head or General Debility

Can Be Cured By

DR. DUGNAL'S

**FAMOUS NERVE PILLS.**

40 DOSES BY MAIL, POSTPAID, 50c.  
DUGNAL REMEDY CO.,

P. O. Drawer No. 52. Dept. J.  
NEW HAVEN, CONNECTICUT.

**FRAZER**

**Axle Grease** Best in the world.

Its wearing qualities are unsurpassed, actually outlasting 3 boxes any other brand, Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.

**THE KEELEY INSTITUTE GREENSBORO, N.C.**

For the treatment of THE LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

**WANTED**


Shippers of POULTRY of all Kinds, Dressed HOGS, GAME, etc., to write to

**E. W. EVANS & CO.,**  
1313 E Cary St., RICHMOND, VA.  
For prices before shipping elsewhere.

**HOW TO FEED AND BREED HOGS**

is of importance to swine growers. A practical, clean, common-sense swine paper for farmers can be had from now to January, 1905, by sending 10 cents in silver at once to

**BLOODED STOCK,**  
Oxford, Pa.



### HANDSOME FRUIT PAPER.

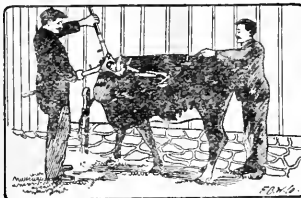
In this issue appears the advertisement of "The Fruit Grower, St. Joseph, Mo., one of the very best fruit papers published. Indeed, Prof. Price, dean of the Ohio Agricultural College, says it is the very best fruit paper published, East or West. The advertisement tells how the paper can be secured at half price. Look it up and send for this paper.

### HANDY LOW DOWN WAGONS.

The Electric Wheel Company of Quincy, Illinois, has perhaps done more than any other one institution to popularize the low wheel and handy wagon. Their "Electric" Steel Wheel is the kind that is made to last. An item that has multiplied the number they are constantly sending out is that they are made to fit the skein of any make of wagon. The wheels being the first to give way in the wooden felloe high wheel style of wagon, a great many farmers take advantage of this fact and procuring the "Electric" wheels, convert their old wagons into Handy Wagons. In most cases the running gears are good and with little expense they secure a wagon as good as new, with all the conveniences which the use of the low down Handy Wagon carries with it. If any reader of this finds his old high wheels giving away, he will do well to send to the above company for their catalog and learn what their low steel wheel will do in the way of giving him practically a new wagon at but very slight cost. It must not be forgotten that the company makes the best Handy Wagon complete where parties desire it.

### THE PHILLIPS DEHORNING KNIFE

The dehorning knife has come to be almost a stable necessity to the dairyman and cattle feeder. There are several knives on the market and perhaps Pomeroy, Pa. Its great point of advantage is that it cuts from all four



sides at once, and thereby secures a clean, clear cut that is all cut and no breaking or crushing. Several of the government experiment stations have given it unqualified endorsement. The acting Director at Cornell University commends especially its "ease of operation and durability," and describes it as "the best instrument of its kind that we have ever used."

Mr. Phillips advertises the dehorner regularly in our columns. Any one interested should write him for a copy of a little descriptive book he sends out free.

**Cheap eggs are as good as cheap lamp-chimneys.**

**MACBETH.**

If you use a wrong chimney, you lose a good deal of both light and comfort, and waste a dollar or two a year a lamp on chimneys.

Do you want the Index? Write me.

MACBETH, Pittsburgh.

## WANTED

By a married man, a POSITION as manager on stock, dairy or general farm. Thoroughly competent, and best references. Box 41, Espy, Pa.

POSITION WANTED AS FARM MANAGER or Superintendent of large estate by a middle-aged single man, with practical and educational experiences in farming, dairying, cattle, sheep, swine, horticulture and poultry culture.

EUGENE BAYER,  
Charlottesville, Va.

WANTED A GOOD, SETTLED MAN WITH small family to attend to 5 or 6 cows, make butter, and attend to family garden. Must understand cultivation of flowers. Place open until December. Address,

MIRADOR, Greenwood P. O., Va.

## THE PEACH GROWER

Fruit Culturist and  
Trucker's Magazine

Published Monthly, Atlanta, Ga. Is indispensable to growers of fruit and truck. Best horticulturists in the land are regular contributors, Handsomely printed and illustrated. Send 25 cents and names of 25 fruit growers, for a year's subscription. You can't afford to miss reports of Georgia experiments now being made on peach orchards.

## WANTED!

ALL KINDS OF

**LIVE WILD BIRDS AND ANIMALS**

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Bob White Quail, Grey Squirrels, Bear, Etc.

CECIL FRENCH,

718 Twelfth St. N.W., Washington, D. C.

NO MORE BLIND HORSES—For Specific Ophthalmia, Moon Blindness and other Sore Eyes. BARRY CO., Iowa City, Ia., have a cure.

## HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.  
C & O Main St. Depot. Richmond, Va.

## ..To Homeseekers..

### "THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.  
W. B. BEVILL, PAUL SCHERER, Agt.,  
G. F. A., Lands and Immigration,  
Roanoke, Va.

I HAVE A LARGE LIST OF

## FRUIT, POULTRY and TRUCK FARMS

Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also,

## GRAIN AND STOCK FARMS

From 100 to 1,000 acres at low prices—all the way from \$5 to \$50 per acre. Write for Catalogue.

J. R. HOCKADAY, Richmond, Va.  
Box 287.

## IF YOU WISH TO SELL

—OR BUY—

## VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.

R. B. CHAFFIN & CO., Inc.,  
No. 1 N 10th St., Richmond, Va.

## 2 GOOD DAIRY FARMS,

Vicinity of Washington FOR SALE. Electric railway through one and near the other. For particulars, address

L. E. WALT, 745 7th St., S. E.,  
Washington, D. C.

## I Can Sell Your Farm....

If located in one of these Virginia counties: Prince George, Chesterfield, King William, Gloucester, New Kent, King and Queen, Hanover. Send best educational advantages. For further information, address  
JOHN JELINEK, 1116 Pine Alley,  
Braddock, Pa.

## FINE FARMS

In the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address

ALBEMARLE IMMIGRATION CO.,  
BANK B. WOODS, Pres Charlotteville, Va.

# Go South.

For full particulars write  
A. JEFFERS,  
Norfolk, Va.

## FERTILIZER CHEMICALS.

Quotations furnished by Edmund Mortimer & Co., of New York, on agricultural chemicals commonly used by farmers. These prices are those at which the goods can be purchased in lots of one ton or over, in original packages, delivered f. o. b. cars at New York City, and are for cash. In all cases carload lots of any one of the materials can be purchased for less money, and, if possible, farmers should combine and order in round lots.

### AMMONIATES.

	Per ton
Nitrate of Soda, containing about 16 p. c. of Nitrogen, in bags, weighing about 200 pounds....	\$45
Sulphate of Ammonia, containing about 20 p. c. of Nitrogen, irregular weight packages .....	65
Dried Blood, containing about 10 p. c. of Nitrogen, irregular weight packages .....	40
Tankage, containing about 8 p. c. Nitrogen and 10 to 12 p. c. Phos. Acid .....	35

### POTASHES.

Muriate of Potash," containing about 50 p. c. of Potash, in 225 pound bags .....	40
Sulphate of Potash, containing about 50 p. c. of Potash, in 225 pound bags .....	45
Kainit, containing about 12 p. c. of Potash, in irregular weight packages .....	12
Nitrate of Potash, containing about 45 p. c. Potash and 13 p. c. Nitrogen (Ammonia).....	70

### PHOSPHATES.

Acid Phosphates, containing 14 p. c. Available .....	12
Containing 16 p. c. Available....	13
Bone Meal, containing about 3 p. c. Nitrogen and 20 p. c. Phos. Acid .....	22
Peruvian Guano, containing about 20 p. c. Phos. Acid, 34 p. c. Nitrogen, 4 p. c. Potash, in 200 pound bags .....	30

### MIXED.

"Everybody's Magazine" tells a little story which shows the mixed feelings with which the Southerner regards Booker T. Washington. An old Florida colonel recently met Booker T. Washington, and in a bibulous burst of confidence said to the negro educator, "Suh, I'm glad to meet you. Always wanted to shake your hand, suh. I think, suh, you're the greatest man in America."  
"Oh, no!" said Mr. Washington.  
"You are, suh," said the colonel; and then, pugnaciously, "Who's greater?"

"Well," said the founder of Tuskegee, "there's President Roosevelt."  
"No, suh," roared the colonel. "Not by a jugful! I used to think so, but since he invited you to dinner I think he's a blank scoundrel."

QUARTZ and MICA grinding mill for sale on railroad; list of 500 customers. Close to millions of tons of quartz, feldspar and mica section.

G. G. TEMPLE, Danville, Va.

## VIRGINIA FARMS

\$3 PER ACRE AND UPWARDS.  
EASY PAYMENTS. CATALOGUE FREE.  
GEO. E. CRAWFORD & CO., Richmond, Va.  
Established 1875.

### "In the Green Fields of Virginia."

Homes for ALL; Health for ALL; Happiness and Independence for ALL. ALL sizes of FARMS at corresponding prices, but ALL reasonable.

MACON & CO., Orange, Va.

## VIRGINIA FARMS

All prices and sizes. Free list on application.

WM. B. PIZZINI CO., RICHMOND, VA.

### ••• VIRGINIA FARMS •••

Nice little poultry farm, 100 acres, good house and orchard, \$500.00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATSBY, Louisa, Va.

## "Crop Growing and Crop Feed ng."

BY PROF. W. F. MASSEY.

383 Pp. Cloth, \$1.00; Paper, 50c.

We offer this splendid work in connection with the SOUTHERN PLANTER at the following prices:

Southern Planter and Cloth

Bound Volume, \$1.25.

Southern Planter and Paper

Bound Volume, 80c.

Old or new subscriptions.

## The RICHMOND, FREDERICKSBURG and POTOMAC R. R. and WASHINGTON SOUTHERN R'Y

Form the Link connecting the

Atlantic Coast Line R. R.,  
Baltimore and Ohio R. R.,  
Chesapeake and Ohio R'y,  
Pennsylvania R. R.,  
Seaboard Air Line R'y  
and Southern R'y.

Between all points, via Richmond, Va.

Fast Mail, Passengers and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.



# FARMS FOR SALE!

No. 16.

130 acres—20 acres hardwood, balance in good state of improvement, and a splendid quality of red clay subsoil; 50 acres in wheat and timothy; 20 acres in meadow, balance is new land, and will be for corn next spring. Situated in excellent neighborhood of refined people. Twenty-two miles from Washington, 5 miles from Herndon Station. Fronts on pike. Comfortable 4-room house and all buildings. Farm watered by large branches. Price, \$20.00 per acre. Terms, to suit purchaser.

No. 17.

80 acres—15 acres in hardwood, balance in grass, except 20 acres for corn. Fronts on pike; 5 miles from railroad station. Watered by large branch. All in good state of cultivation. No buildings. Price, \$18.00 per acre. Easy terms.

No. 18.

385 acres in lower Loudoun county, only 23 miles from Washington; 40 acres in hardwood, balance in good state of cultivation, divided into 8 fields, with running water in all; well fenced; adopted to grain and grass. Two good cattle barns, a good, comfortable 7-room dwelling, with a large, bold spring within 50 yards, an all necessary outbuildings. Situated 4½ miles from Sterling Station. This farm has 137 fine stock sheep and 21 fat cattle weighing 1,200 pounds now; 80 acres sown in wheat and rye; 50 acres in meadow and balance of fields and pasture. If bought within the next 60 days the wheat and sheep will go with the farm. Price, \$3,000, on easy terms. Write for full description.

No. 19.

215 acres in upper Fairfax county, 20 miles from Washington; 6 miles from railroad; fronts on pike; near village with stores, post-office, churches and shops. Splendid brown chocolate clay soil. Seven fields, watered by branches and springs. A good 6-room frame house and all necessary farm buildings; 60 acres sown in wheat and grass; 25 in rye and grass; 30 in meadow, balance in pasture and for corn—all in good condition. Price, \$25.00 per acre; one-third cash, balance on 6 years' time, if desired.

No. 5.

Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and

hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

I have a number of other good farms for sale, both large and small. Write for description and state just what you want, and will be glad to serve you.

W. E. MILLER, Herndon, Va.

## LIGHT ON A DARK SUBJECT.

"I see by the newspaper," says Smith, "that the whale that swallowed Jonah was recently killed in the Mediterranean, and in its stomach they found, written on parchment, the diary that Jonah kept during the three days—"

"You can't make me believe any of that stuff," interrupts Brown. "In the first place, how could Jonah see to write his diary?"

"Why," says Smith, "don't you suppose the whale had pains in his stomach?"—*November Lippincott's.*

## CANT-HOOK VS. STEAM.

Before the introduction of the steam log turner in its practical application to the portable saw mill, the owner of such a rig worked at a very serious disadvantage as compared with the larger mill and its labor-saving devices.

There has been one cause of wasted time and labor in the operation of the portable mill that has heretofore been unavoidable. This was the necessity of waiting at every occasion for turning the log on the carriage, while anywhere from one to three men "wrestled" it over with cant-hooks. In the meantime, the engine was running idle. However, the perfection of a really practical log turner has been accomplished by the A. B. Farquhar Co., makers of the celebrated Farquhar Portable Mills and the Ajax Centre Crank Engines. This is the only device of its kind that can be used with a portable mill. By increasing the daily output without the necessity for an increase of power and at an actual decrease in operating expense, it very materially swells the net profits. Any mill man interested in the most recent and up-to-date improvements in engines and saw mill machinery should write the A. B. Farquhar Co., Ltd., York, Pa., for further information and free catalog. It pays well to keep posted.

Mention the *Southern Planter* when corresponding with advertisers.



**VICTOR BOOK**  
tells you our machine is preferred by users and all about artificial ink-calculation. There's pointers that may mean dollars to you. We pay freight. Guarantee goods as described or money back. The book is free. Write for it to-day. Postal will do. GEO. ERTEL CO., Quincy, Ill.



### EASY MONEY

is made by installing a Hawkeye Incubator. Little cost, little expense, results sure, profits large. \$0 Day's Free Trial. Catalogue free. Mention this paper—Hawkeye Incubator Co., Box 49, Newton, Iowa.

## CHICKS THAT LIVE

get strong and healthy—gain steadily in weight, are chicks hatched in Reliable Incubators.

### The Reliable

provides automatically a constant current of odorless, warm air at a uniform temperature—chicks pip, hatch and thrive under its nature-like condition, and 10 cents and out our 20th annual catalog—full of poultry information. Reliable Incubator and Brooder Co., Box 8-11, Quincy, Ill.



## BUILT TO LAST

Never outclassed—Sure Hatch Incubators. Built better than your house. No hot centers; no chilling draughts on sensitive eggs. Every cubic inch in egg chamber at uniform, blood temperature of fowl. It's a continual pleasure to hatch nearly every fertile egg with a Sure Hatch. Free catalogue. D.S. with pictures tells lively story.

**SURE HATCH INCUBATOR CO.**  
Clay Center, Neb. Indianapolis, Ind.



**PINELAND** INCUBATORS hatch greatest number of finest chicks. BROODERS have never been equalled.

## FIDELITY FOOD

—FOR YOUNG CHICKS—

Used everywhere by practical poultrymen and specialist fanciers with unflinching success. Insures perfect health and promotes rapid growth. Concise catalogue from

Pineland Incubator and Brooder Co., Box M. Jamesburg, N. J., U. S. A.

## Little Chicks

thrive when fed on our

### BABY CHICK FOOD.

A perfect balanced food. Send for free sample and our large illustrated catalog of POULTRY SUPPLIES.

INCUBATORS and BROODERS.

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517-519 West Broad St.,  
Richmond, Va.

EVERYTHING FOR THE FANCIER.

**CHARLIE BROWN,** Cartersville, Va.  
BREEDER AND SHIPPER OF HIGH-CLASS—  
Mammoth Bronze Turkeys, Barred Plymouth Rock Chickens, Embden Geese and Pekin Ducks. Young stock FOR SALE. My strains consist of the best blood that money can buy. Satisfaction guaranteed.

**EDGEWOOD STOCK FARM.**

Scott Collies. White Wyandottes-COLLIE PUPS ready, all with full, white marks, sables and blacks. Beautiful! Both parents trained. Best blood in America. Order quick. \$10, \$7.

WHITE WYANDOTTES—Best strains for laying and beauty. White Wyandottes are prettiest chickens on earth. We offer Cockerels and Pullets. You rarely find such Pullets for \$1. Get ten pullets and cockerel at special offer.  
H. B. ARBUCKLE,  
Maxwellton, W. Va.

**OAKSHADE B. Turkeys**

and Hugenot W. Wyandottes,

—: FOR SALE :—

Raised on 400 acre blue grass farm—the best I have ever seen. Eggs from White, Buff and Partridge Wyandottes in season  
Address Huguenot Poultry Yards,  
... Dublin, Va.

**FINE TURKEYS. "BRED FOR BREEDERS."**

The Mammoth Bronze is the finest specimen of turkey in the world. I do not hesitate to say that I have the finest birds in Virginia. If you will file your orders now you will get choice ones out of a choice flock. I also have a few Barred Plymouth Rocks for sale. My fowls are all thorough bred. Write for circulars and rates.

PIEDMONT-POULTRY PLACE,

Miss E. Callie Giles, Prop. Whittle's Depot, Va.

**FIRST CLASS FOWLS**

—FOR SALE, CHEAP.—

Barred, Buff and White Plymouth Rocks, White Wyandottes, Light Brahmans, Buff and Partridge Cochins, Black Minorcas, Black Langshans, Brown and White Leghorns.

Now is the time to secure bargains.

OAKLAND POULTRY FARM,

C. J. WARINER, Mgt., RUFFIN, N. C.

**FOR SALE.**

Pure BARRED PLYMOUTH ROCKS, MAMMOTH BRONZE TURKEYS, TOULOUSE GEESE AND PEA FOWLS. Will exchange for good Berkshire or Poland-China pigs. MRS. W. F. JACKSON, Olga, P. O., Amelia county, Va.

**COCKERELS, (Wyckoff Strain.)**

S. C. WHITE LEGHORNS.

To make room I will sell at \$1.50 each. For prize winners write to

C. G. M. FINK, Rosneath Road,

Henrico county, Va.

**BROWN LEGHORNS.**

Young stock for sale in

Fall. Prices reasonable.

White Plymouth Rocks.

R. W. HAW, Jr., Centralia, Va.

**Bargains in FINE COCKERELS,**

\$1.50 each for a short time to make room—82 best varieties. Large, illustrated Catalogue free for stamps. Write to-day.

VALLEY POULTRY FARMS.

J. E. HEATWOLE, Propr., Harrisonburg, Va.

**THE PEST OF SPARROWS.**

The government has again been giving some attention to the English sparrow and, while at this writing no definite statistics are obtainable, it is roughly estimated that there are upwards of a hundred million of the little feathered creatures in this country. The sparrows have long ago been voted a pest, but it was not until recently that strenuous efforts have been made toward their extermination.

"Equip the boys with the Stevens rifle," says a well known Washington official, "and the sparrow question won't be a matter of doubt very long."

This thought is right in line with the ideas that the J. Stevens Arms & Tool Co., of Chicopee Falls, Mass., the well known firearm makers, have been advocating for some time. The Stevens people have been urging the use of the small caliber rifle on farms where not only the sparrow, but woodchucks, squirrels, crows, hawks are also sources of nuisance.

As a general proposition it does seem reasonable to believe that a man or boy, armed with a "Stevens" and instructed in its use, could soon rid the neighborhood of the living crop destroyers at a small outlay and have a lot of fun himself while doing the work.

The clothespress is a swell affair for garments nice and neat; the hay press is a good machine and does its work complete; the cider press is lovely with its juice so red and sweet, but the printing press controls the world and gets there with both feet.

**LEHMAN CARRIAGE HEATER.**

The recent spell of keen weather has probably made many of our readers wish for some means of keeping their buggies warm, thereby adding to the comfort of enforced travelling. Lehman Bros., of New York, have solved this problem exactly in their Lehman Heater. This is a simple and cheap device, and serves the purpose for which it was intended most admirably. Look up the advertisement and send for catalogue and prices.

"It is said, though there is no evidence to substantiate the assertion, that a restaurant in Philadelphia alternates Scriptural texts with business epigrams, and that the result is something like this: "The Lord giveth and the Lord taketh away;" "Watch your hats and overcoats;" "Man shall not live by bread alone;" "Try our hamburger steak with onions, 20 cents;" "Take no thought for your life, what ye shall eat or what ye shall drink;" "Welsh rabbit and Lobster a la Newburg to order;" "The wind passeth over it, and it is gone, and the place thereof shall know it no more;" "We positively cannot be responsible for umbrellas or personal property."—*Ex.*

**White Wyandottes, Buff Leghorns, Bronze Turkeys.**

I can supply a few trios of White Wyandotte Cockerels and Pullets. Immediate delivery. Fine layers.

Buff Leghorn Cockerels of extra fine laying strain ready for delivery in November.

Bronze Turkeys in pairs or trios. All at reasonable prices.

One U. S. Separator in perfect repair. Capacity 350 pounds milk per hour. Cost \$125. Price, \$50.

A. R. VENABLE, Ja.,  
Milnwood Dairy Farm.

P. O. Box 147, Farmville, Va.

**Barred and White****PLYMOUTH ROCKS**

Single and R. C. B. Leghorn, S. L. Wyandottes, Light Brahma and B. Minorca Cockerels for sale. \$1 per single bird; a trio for \$3.

J. B. JOHNSON, Clover Hill Farm,  
Manassas, Va.

**SILVER-LACED; WYANDOTTES.**

New blood, choice specimens, strong and healthy birds of fine plumage, ready for shipment at \$100 each. Also pure-bred POLAND-CHINA EGGS at \$5.00 each.

Dr. H. H. LEE,

Lexington, Va.

**3 M. P. D. 5**

The above stands for

**TRIO MAMMOTH PEKIN DUCKS**  
\$3.00 as long as they last.

**PERFECTION POLAND-CHINAS, PROTECTION DUROC JERSEYS,**

Only the best is bred at The Cedars.

THE CEDARS,  
P. & S. Farm.

W. L. G. OWENS,  
Midlothian, Va.

**FOR SALE**

11 B. Turkeys, Pekin Ducks, White Wyandottes, S. C. B. Leghorns (the great White layers) and B. P. Rock chickens. Order Now, and get the best. Miss CLARA L. SMITH,  
Caroline Co. Croxton, Va.

Pure bred B. PLYMOUTH ROCK hens and pullets from a good laying strain. Also young Black Minorca Roosters.

MISS, S. M. HITER,  
Eillsville, Louisa Co., Va.

**PURE-BRED**

M. BRONZE TURKEYS, GOLDEN and SILVER PENCILED HAMBURG and BARRED PLYMOUTH ROCK Chickens. Eggs in season. For sale by T. J. WOODBRIDGE,  
French Hay, Va.

**MAMMOTH BRONZE TURKEYS**

FOR SALE Apply to

R. E. CREE Crozet, Va.

**ANGORA GOATS** are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Clifty, Ky.



### BLACKMAN'S MEDICATED SALT BRICK

The only guaranteed Tonic, Blood Purifier, Kidney and Liver Regulator and aid of Digestion for all stock. A sure hit on worms. Ticks cannot live. No dosing, no drenching, and no waste of feed. Your horse his own doctor. Endorsed by thousands

Full descriptive circulars, testimonials, etc. address

Blackman Stock Remedy Co.  
220 Highland Park, Chattanooga, Tenn.



Save the animal—save your hardware every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use

Fleming's Lump Jaw Cure  
No trouble—no hit on. No risk—no moderate but if it ever fails. Used for seven years by nearly all the big stockmen. Free book tells you more.

### Spavin and Ring-bone

Once hard to cure—easy now. A 45-minute treatment does it. No other method so easy—no other cure so good.

Fleming's Spavin and Ringbone Paste cures even the worst cases—none too old or bad. Money back if it ever fails. Free illustrated book about Lump Jaw, Spavin, Ringbone, Scurf, etc. Spavin and other stock ailments. Write for it.

FLEMING BROS., Chemists,  
282 Clinton Stock Yards, Chicago, Ill.

A medicine which makes sick animals well, the diseased whole, the weak strong and the thin fat. It will restore lost Appetite, expel Worms and cure Chronic Cough, Hoarseness, Influenza, Distemper, Hind-bow, Indigestion, Constipation, Flatulency and all Stomach and Bowel trouble.

The finest of all animal medicines and tonics and the only one which increases the coefficient of digestibility of protein.

Get the Complete and used in Pamphlet No. 1 Free. Sold by All Dealers.

25¢ PER POUND  
100 POUNDS \$100  
250 POUNDS \$250  
CHANG'S PAID

USE  
**FOUTZ'S  
HORSE  
AND  
CATTLE  
POWDER**

DAVID E. FOUTZ  
BALTIMORE, MD.

DEATH TO HEAVES Guaranteed

NEWTON'S Heave, Cough, Dis-temper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strong recommend. \$1.00 per can. Dealers. Mail or Ex. paid. Newton Horse Remedy Co., Toledo, Ohio.

### WITH THE ADVERTISERS.

H. F. Coleman & Son, Mulberry Gap, Tenn., are offering some choice Aberdeen Angus cattle in this issue.

M. T. Thompson, Rio Vista, has for sale 1,000,000 cabbage plants and 50,000 dahlia and canna bulbs. Look up his ad.

C. E. Clapp, owner of the Rosemont Herefords, has a special announcement in this issue. He is offering some splendid young stock at bargain prices.

The Bowmont Farms have some choice Yorkshire pigs for sale. There are some 48 about ready for shipment. Look up the ad and send in your order at once.

H. Armstrong is offering Dorset sheep and Hereford cattle in another column. Some good stock at reasonable prices can be had here.

Wilson Bros. are advertising a splendid bone mill in another column.

C. E. Jones, Carysbrook, Va., has a splendid offering of Aberdeen Angus cattle.

Some splendid farms in Piedmont Virginia can be bought of W. E. Miller, who has a large ad on another page.

The Smith Manure Spreader is being offered to our readers again this season. Look up the ad.

The Huguenot Poultry Yards are offering some excellent stock at present.

The Sure Hatch Incubator ad makes its appearance in this number, this being its second season with us.

Mr. Wm. S. Myers, director of the Chilean Nitrate Works, has an ad in this issue, which will interest many of our readers.

Several parties are advertising for farm managers and several farm managers are advertising for positions in this number.

Mr. F. G. Hogan, the well-known Kentucky breeder, has a card in this number. Look up his ad.

Rosedale Stock Farm is advertising Aberdeen Angus in another column.

The Star Pea Huller is offered our readers in this issue. Look up the ad and write for prices.

The Newton Dehorner is advertised by the H. H. Brown Mfg. Co.

The Achme Harrow is offered to our readers again this season. Mr. D. H. Nash, manufacturer, would like to send one out on trial to any one interested.

Look up the ad of the Cyphers Incubator Co.

Dorset Sheep and Collie Pups are advertised by H. B. Arbuckle. We invite attention to these ads.

Another new ad in this issue is that of E. W. Evans & Co., commission merchants, Richmond, Va.

Mr. Charlie Brown, Cartersville, Va., a new advertiser in this issue, won first prize on Bronze Turkeys, Embden Geese, and Pekin Ducks at the Richmond Poultry Show, now in progress.

Mention the Southern Planter in writing.

### Horse Owners! Use



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all treatments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Guaranteed to produce clear or blind. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

### Mammoth Bronze Turkeys, Poland-China Pigs,

from best prize winning stock. Special prices for December.

### Red Polled Cattle, Shetland Ponies.

A good saddle horse; fine jumper.

### Arrowhead Stock Farm, SAM'L B. WOODS, Prop., Charlottesville, Va.

THOROUGH-BRED...

### Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, GUYS, Q. A. CO., Md.

### FOR SALE.

### Large English Berkshire Hogs, Barred Plymouth Rock Chickens

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. 47 EGGS IN SEASON.  
JOHN P. FOSTER, Noreek, Ohio Co., Ky.

### Berkshire Pigs.

M. B. Turkeys from prize winning strains. Barred and White Plymouth Rocks. W. F. FLANAGAN, Christiansburg, Va.

### BERKSHIRES.

A Few Boar Pigs For Sale.

By Mason of Biltmore II, (65348) Registered sows—nothing but Biltmore blood in my herd. ROBERT HIBBERT, Charlottesville, Va.

Poland Chinas, Chester Whites and Mammoth Bronze Turkeys at Farmers prices

S. M. WISECARVER,  
Rustburg, Va.

**HIGH GRADE ANGUS CATTLE.**

Lucre of Glenside, 66156; Jetson 2nd of Clear Lake, 57994; Imp. Brignoll of Ballandalloch, will make herds famous.

Also other young stock for sale, suitable for beef breeding.

JOHN T. & G. B. MANLOVE,  
MILTON, Ind.

**ANGUS BULL CALVES**

SIRED BY THE

**Champion Bull BARON IDA.**

These calves are choice individuals.

ENGLISH SETTER PUPS.

Sire and dam prize winners.

**WARREN RICE, Winchester, Va.****H. F. COLEMAN & SONS,  
MULBERRY GAP, TENN.,**

—BREEDERS OF—

**ABERDEEN-ANGUS CATTLE.**

JANNET'S KING, 48271, greatest son of *Vallant Knight II*, 29331, first prize bull at all three of the International shows, heads the herd. Visitors and correspondence invited. Young things for sale.

**FOR SALE a Farmer's Prices**

A Choice Lot of Pure-bred

**ABERDEEN - ANGUS**

male calves from 6 to 9 mos. old, sired by a bull weighing over 2,000 lbs.

If you want to breed good beef cattle, you can make no mistake in getting the **ANGUS**. They can beat the world on long or short grass. Also 2 Angora buck kids at \$7 each crated and delivered at my depot. **C. E. JONES, Carysbrook, Va.**

**ANGUS CATTLE FOR SALE**

Low Considering Quality.



1 Reg. Bull, very fine, 10 mos. old. 1 Reg. Bull, 6 mos. old. 1 Reg. Bull, 4 mos. old. Lot of 3 grades bull calves. 1 bull calf out of a Hereford cow by Reg. Angus bull 5 mos.

The above stock are as fine as can be found in Virginia, and will be sold reasonable.

**W. M. WATKINS & SONS,**  
Saxe, Charlotte Co., Va.

**MAGAZINES.**

The Christmas Issue of the Century is one of the finest ever sent out by the publishers. The subject matter of the number and the illustrations are alike good. The Century Magazine is an old favorite with those who know it and those who do not, but do not know what they miss in the way of entertaining reading and high class literature in not taking the magazine. We can supply it in club with the Planter at a saving in the cost. See our clubbing list.

Lippincott's Magazine is always a welcome visitor where it is taken. Each number contains a complete novel by some well-known writer or by some new writer whose ability has commanded the attention of the Editor.

The Review of Reviews is unique as a magazine. It deals with the current events of the day all over the world and keeps its readers posted on all questions of public interest the world over. It also publishes what other magazines have to say on these subjects.

Cosmopolitan. This is one of the best cheap magazines, and it is always finely illustrated.

Don't forget that whatever magazine you may select for yourself for the coming year, St. Nicholas for young folks belongs somewhere in your family. No home with children is complete without it. It is the best magazine of its kind in the world. No better magazine can be published. Send to The Century Co., Union Square, New York, for a free specimen number and see if you are not convinced that it is a necessity in your family. \$3 a year. Less than one cent a day. Is the right kind of reading for your child worth it?

The Century Magazine—"The best in the world"—a strong statement, but a true one. The Century has led American magazines for more than thirty years; it publishes articles that make people think, stories that entertain and are literature, pictures by the world's greatest illustrators. Its illustrations in color are unsurpassed. The Century is not cheap in any sense; it costs \$4 a year, and it is worth the price. Try The Century this year, if you are not already taking it. The Century Co., Union Square, New York.

The Century will publish during the coming year a daring and unique piece of historical writing—namely, The Youth of Washington, told in the form of an autobiography by Dr. S. Weir Mitchell, LL. D., author of "Hugh Wynne." Dr. Mitchell, in whose famous "Hugh Wynne" General Washington appeared as a character of the novel, with general acceptance, and whose address in Philadelphia on February 22, 1903, showed strong imaginative sympathy with his subject, has made an exhaustive study of the heredity, circumstances, and events which fitted the son of a Virginia planter for one of the greatest careers in history. Dr. Mitchell imagines Washington sit-

—: REGISTERED :—

**SHORTHORN CATTLE.**

Special prices on bred cows and cows with calf at foot and bred again. These calves are by and the cows bred to the great winning bull, Valley Champion. Some grand young heifers and bulls always on hand and for sale. Registered Duroc Jersey hogs.

**IDLEBROOK FARM,**

FRANK G. HOGAN, Box D, O'Bannon, Ky.

Geo. C. Hardy, Manager.

**PURE BRED****Short Horn Calves**

from fine Stock. Also

**Yorkshire Pigs**

of very Prolific Breed.

**JAS. H. HOGE, Hamilton, Va.**

**SPRINGWOOD SHORTHORNS.**

SPECIAL OFFERING.

4 yearling bulls, sired by Verbena's champion No. 12881. One two-year-old **POLAND CHINA** Boar, a fine breeder, recorded bred in Ohio, sired by Guy Wilkes.  
Good 8 weeks' old **POLAND CHINA** Pigs, \$5.00 each. Pedigrees furnished with all stock sold. Inspection invited.

**WM. T. THRASHER, Springwood, Va.**

**ELLERSLIE FARM**

**Thoroughbred Horses  
AND SHORTHORN CATTLE,  
Pure Southdown Sheep  
and Berkshire Pigs.**

For SALE. **R. J. HANCOCK & SON,**  
CHARLOTTESVILLE, VA.

**COOK'S CREEK HERD**

**Scotch-Topped  
Shorthorns**

Herd Headed by Governor Tyler, 1685 48. Young Bulls for sale. Inspection and correspondence invited.

**HEATWOLE & SUTER, Dale Enterprise, Va.**

**.. WOODLAND DORSETS ..**

Won 6 first with 8 possible at Columbus, O., 7 out of 8 at Pontiac, Mich., and 6 out of 8 at Grand Rapids, Mich., with strong competition at all three places. Our Fall Lamb crop from Imp. Flower Ram is the finest quality we ever raised.

**J. E. WING & BROS.,**  
Mechanicsburg, Ohio.

**DORSETS AND HEREFORDS.**

Some Exceptionally Rare Bargains to Quick Buyers.

My herd bull, bull calves and Dorset bucks. Registered stock.

**H. ARMSTRONG, LANTZ MILLS, VA.**

## REGISTERED IMMUNE HEREFORDS.

Sale of 60 head at AUBURN, ALABAMA,  
February 3, 1904.

Under the management and auspices of the Alabama State Experiment Station. This consignment is a pick of four of the best herds in Kentucky. Bulls and Females of ages to suit all. IMMUNE to Southern fever by INOCULATION.

For particulars and illustrated catalogues address GILTNER BROS., Eminence Ky., or Auburn, Ala.

We have a choice lot of cows, bulls and heifers for sale at our Kentucky Farms. Prices are reasonable. Write us before buying elsewhere.

# V. P. I. Farm Bulletin

We are now offering some choice young  
Bulls of the following breeds:

Shorthorn, Hereford, Aberdeen-Angus.

Write at once for pedigrees and prices.

**D. O. NOURSE, Prof. of Agr.**  
Blacksburg, Va.

Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

**JERSEY BULLS  
AND HEIFERS.**

None better bred in the South. Combating closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$35; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

## ESSEX PIGS.



Some fine ones, not related, from recorded stock; also 30 South-down and Hampshire-down Lambs, address

L. G. JONES, Bethania, N. C.

HAWKLEY STOCK FARM

Offers some very fine

**BERKSHIRE PIGS;** also choice young BOARS. Nothing but Tors sold. A few fine S. C. B. LEGHORN Cockerels left; from extra fine layers. J. T. OLIVER, Ailens Level, Va.



**O. I. C. PIGS**

FROM REG. STOCK.

FOR SALE. PRICES RIGHT.

F. S. MICHIE, Charlottesville, Va.

- FOR SALE

A half SHROPSHIRE RAM in fine condition, will exchange for grade POLAND-CHINA Pigs.

R. A. MAPP,  
Jacksondale, Va.

ting down at Mount Vernon in his old age and recording, solely for his own eye, the story of his "youthful life and the influences that affected it for good or ill." The author has so fully entered into the habit of mind of Washington that it is impossible for the ordinary reader to separate in the text the passages taken out of his actual writings from those which Dr. Mitchell imagines him to write. No one can read this record without obtaining a new and vivid sense of the personality of Washington and of the remarkable experiences which made him the man for the hour and for all time.

"The tinted illustrations . . . testify to the steady progress of an art which must in the end make the magazine of more permanent and vital interest."

### THE INFLUENCE OF THE YOUTH'S COMPANION.

The gospel of good cheer brightens every page of The Youth's Companion. Although the paper is nearly seventy-seven years of age, it does not look back on the past as a better period than the present.

The Companion believes that the time most full of promise is the time we are living in, and every weekly issue reflects this spirit of looking forward and not back.

To more than half a million American families it carries every week its message of cheer. Its stories picture the true characteristics of the young men and women of America. Its articles bring nearly three million readers in touch with the best thought of the most famous of living men and women.

Annual Announcement Number fully describing the principal features of The Companion's new volume for 1904 will be sent to any address free.

The new subscriber for 1904 will receive all the issues of The Companion for the remaining weeks of 1903 free from the time of subscription, also The Companion Calendar for 1904, lithographed in twelve colors and gold.

THE YOUTH'S COMPANION,  
144 Berkeley St. Boston, Mass.

### REPORTS.

U. S. Department of Agriculture, Washington, D. C. Bureau of Animal Industry. Nineteenth Annual Report, 1902. This is a most valuable report, and ought to be in the hands of every stock keeper. Apply to your Senator or Congressman for a copy.

Farmers' Bulletin, No. 181. Pruning. Bureau of Plant Industry. Bulletin 44. The Bitter Rot of Apples. Arizona Experiment Station, Tucson, Arizona. Bulletin 46. The Underground Waters of Arizona. Bee Products in Arizona. Kansas State Board of Agriculture, Topeka, aK.N. Report for the Quarter, September 30, 1902. Modern Dairying. This is one of the most useful reports yet issued

# BERKSHIRES

ANNEFIELD HERD

Represents the

## Finest Blood Lines

in England or America.

Stock for sale at all times.

Correspondence Solicited. Inspection Invited.

EDW. G. BUTLER, Annefield Farms,  
Briggs, Clarke Co., Va.

## ANGORA GOATS.



A few pairs for sale—High grades, \$15; Registered, \$40 per pair.

JEREMY IMPROVEMENT CO.,  
SAXE, VA.

### 150 Jacks, Jennets and Mules.

Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell 2 Percheron Stallions at close figures.



BAKER'S JACK FARM,  
Lawrence, Ind.

## Knight & Jetton,

Breeders of and Dealers in  
Jacks, Jennets, Stallions.  
Durham and Hereford  
YEARLINGS.  
Send stamp for Catalogue.  
Murfreesboro, Tenn.



### Jacks, Jennets and Stallions

FOR SALE. FINE JACKS A SPECIALTY. When writing state exactly what you want or come and see our stock.

W. E. KNIGHT & CO.,  
Route 5, Nashville, Tenn.



by this Board, and ought to be in the hands of every dairyman. Like every report sent out under the hand of Mr. Coburn, the able secretary of the Board, it is worthy of the highest praise. The Kansas Board, under the direction of Mr. Coburn, is one which never requires to justify its existence. Its works do this for it. Would that we could say the same of all other Boards.

New Mexico Experiment Station, Mesilla Park, New Mex. Bulletin 47. Shade Trees and Other Ornamentals.

Ohio Experiment Station, Wooster, O. Bulletin 141. The Maintenance of Fertility.

Tennessee Experiment Station, Knoxville, Tenn. Bulletin, Vol. XVI., No. 3. Corn, Wheat and Soy Bean Meal for Pork Production.

Bulletin, Vol. XVII., No. 4. The Influence of Climate and Soil on the Composition and Milling Qualities of Winter Wheat.

Virginia Weather Service, Richmond, Va. Report for October, 1903.

Washington State College Bulletin, Pullman, Wash. The Dairy Cow—Nature Study.

Imperial Department of Agriculture for the West Indies, Barbadoes, W. I. Agricultural News.

#### THE KING'S PLAN.

A story is told of an attempt made by a Swedish missionary to obtain a foothold in Abyssinia. No sooner had he begun to preach than he was brought before King Menelek, who asked him why he had left his home in Scandinavia in order to come to Abyssinia. The missionary promptly replied that he had come to convert the Abyssinian Jews, who are regarded as fair game for the outside propagandist.

"Are there no Jews in your country?" asked Menelek.

The missionary admitted that there were a few.

"And in all the countries that you have passed through did you find no Jews or heathen?" the King continued.

Jews and heathen, the missionary admitted, were plentiful.

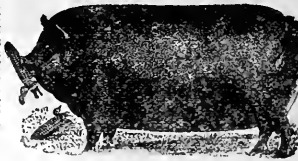
"Then," said Menelek, "carry this man beyond the frontier, and let him not return until he has converted all the Jews and heathen which lie between his country and mine."—*Argonaut*.

Noah was the first man to advertise. He advertised the flood and it came all right. The fellows who laughed at the advertising got drowned and it served them right. Even since Noah's time the advertiser has been prospering, while the other fellow is being swallowed up in the flood of disaster.—*Ex.*

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

# HOG BOOK FREE

A copy of my book, "HOGGLOGY," revised and enlarged, will be sent Free to any hog raiser who mentions this paper when asking for it. A few of the many important subjects that are thoroughly covered in this valuable book are: Descriptions and illustrations of the leading breeds of swine; swine-record associations; best location for hog-raising; selecting a breed; what constitutes a good hog for the farmer; value of a good boar; value of a pedigree; breeding; care of the sow; rearing fall pigs; fecundity of sows; practical foods; the runt pig; when to market; inbreeding; anatomy of the hog (fully illustrated); diseases and treatment, etc., etc.



TRADE-MARK.

## I Insure Hogs and Pay for All That Die

When my Remedy is used as a preventive. Write for plan. This Remedy is a MEDICINE especially for hogs, and must not be confounded with cheap "stock foods." '27 years unequalled success and the biggest money maker for hog raisers known.

PRICES:—25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid; pkgs., \$2.50, \$1.25 and 50c. each. None genuine without my signature on package or can label.

JOS. HAAS, V. S., Indianapolis, Ind.

# LARGE YORKSHIRE HOGS

THE COMING BACON BREED—  
THE MOST PROLIFIC BREED—

48 pigs from four litters, ready for December delivery—our Fall prices always the lowest.

INDIAN GAMES, the fashionable table fowl.

WHITE LEGHORNS, the greatest layers.

WHITE WYANDOTTES, the best all round fowl. Also

JERSEY BULLS and HEIFERS from cows with recorded butter tests of 18 to 24 lbs. in 7 days.

## BOWMONT FARMS, Salem, Va.

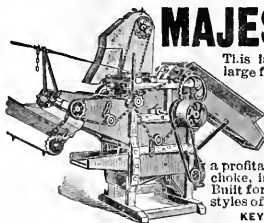


## BERKSHIRES.

I have just added to my herd, 2 new imported and extremely fancy BOARS: 1 bred by J. A. Fricker, Burton Moare, Wiltshire, Eng., and the other from the herd of R. W. Hudson, Danesfield, Eng. Imported Sir John Bull and Uncle Sam are still in my herd. I made a large shipment of pigs Nov. 17th, having orders from New York to Mexico. I never was as strong on boar pigs as NOW. Both pigs and price will suit you. Be sure to start with a new boar for Spring litters.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

Remember me when pricing SHORTHORNS (Durhams). I also offer 4 cars of bright timothy hay.



## MAJESTIC SELF FEED SHELLER.

This labor-saving machine meets the imperative demands of large farmers, feed stores, mills and elevator men. It is furnished either mounted or unmounted with wagon box elevator or double sacking elevator as illustrated. Its capacity is

### 75 to 100 Bushels An Hour.

The mounted sheller is peculiarly adapted to carrying on a profitable neighborhood business in custom shelling. It will not choke, is perfect working in sacking and feeding attachments. Built for long, efficient service and fully guaranteed. We make 20 styles of shellers, both hand and power. Ask for free catalogue.

KEYSTONE FARM MACHINE CO., 1554 N. Beaver St., York, Pa.

# THE IMPERIAL .. FRUIT and POULTRY FARM ..

OFFERS FOR A LIMITED TIME ONLY AT \$1.00 EACH:————

400 Barred Plymouth Rock Cockerels and Pullets.

100 S. C. Brown Leghorn “ “ “ .

50 White Leghorn Pullets.

30 “ Wyandotte Cockerels.

30 “ Plymouth Rock Cockerels.

76 Silver-Laced Wyandotte Cockerels and Pullets.

10 Black Minorca Cockerels.

This stock is well-bred and will give satisfaction. Also offer 25 BARRELS of WHITE FRENCH and JERUSALEM ARTICHOKEs at \$2.00. Try them now so you will be ready when it is time to plant.

P. H. HEYDENREICH, Prop., : : : Staunton, Va.

## *BILTMORE FARMS, = Biltmore, N. C.*

Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❀ ❀ ❀

**GOLDEN LAD'S SUCCESSOR.** First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

**SPECIALTY.** Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



BILTMORE POULTRY YARDS.



**SPECIALTY.** Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO *BILTMORE FARMS, BILTMORE, N. C.*

## EMILY'S CHARGE.

A Serial Tale by Mary Washington.

## CHAPTER VI.

About the time Walter was fifteen, to Emily's great relief, a way was opened for him to go on with the studies which she no longer felt competent to teach him. The clergyman of the parish, who was an accomplished scholar, made up a class of boys to teach in those branches, three times a week. He had two little daughters whom he was anxious to have instructed in music, so Emily proposed an exchange of lessons, and as the clergyman willingly acceded to this arrangement, Emily had the happiness of securing for her brother those advantages which she had feared would be out of his reach. The clergyman proved a kind and helpful friend in many ways. Amongst others, he lent them many valuable new books and periodicals, introducing them thus to many fine writers who had entered the field of letters since they had ceased to have means to buy new books, or subscribe to periodicals. As Emily had been almost entirely debarred from periodicals for several years, it was a great enjoyment to her to have access to them again. It is a kind of literature that cannot be supplied by any books, however fine, and to persons living in an isolated situation it is especially important, if they wish to remain at all in touch with the outside world with its mighty onward rushing current of spiritual, intellectual and material activities. Walter, from not having had many advantages, learned to prize such as came within his reach in a way that would have surprised more favored boys who are apt to think they are conferring an obligation on their parents or teachers when they deign to avail themselves of the educational advantages lavished on them. He was studious and quick, so he kept apace with the other boys who were preparing for college, though there seemed no prospect of his ever going there, himself. But his mind was so receptive of knowledge that Emily felt no uneasiness now about his being an ignoramus, even if he should never enter the doors of a college. He had changed and developed very much and very rapidly since they had lived at the cottage. He was naturally of an easy, careless, pleasure loving temperament, but the circumstances under which he was growing up had done much to counteract this natural bent and to bring out nobler traits. These simple and innocent modes of life, the necessity for him to exert and deny himself, his love for his sisters, and theirs for him, all these things had conspired to early develop the careless boy into a manly and thoughtful youth. Already he was beginning to assume a tone of protective tenderness to his sisters, and Emily felt that the day was not very far distant when he and herself would reverse positions, and she would begin to lean on and look up to him.

## Bargains in CATTLE.

Having sold my farm, I offer a splendid lot of cattle at very reasonable prices. I must sell them as I have no place to winter them.

22 3-yr. old **Angus Heifers**,  $\frac{3}{4}$  pure).

2 3-yr. old Grade **Shorthorn Heifers**.

All of these heifers to have their second calves next year by a **Reg. Angus Bull**.

18 calves from above **Angus Heifers** by a **Reg. Angus Bull**.

1 half-bred yearling **Angus Heifer**.

1 6 mos. old half-bred **Angus Heifer** calf

1 Registered 2 yr. old **Angus Bull**.

I would like you to come and see these cattle. Come to Danville, Va., and take the D. & W. cars to Oak Hill, Va.

**W. D. BETHELL, Wenoda, Va.**

## ABERDEEN-ANGUS CATTLE..



The best breed in the world for grading up purposes.

Pure-bred bulls from 3 mos. to 4 yrs. old. Prices \$50 to \$150 according to age and quality.

None but good individuals sent out.

Call and see them, or write for what you need.

**ROSDALE STOCK FARM, Jeffersonton, Culpeper Co., Va.**

### SUNNY HOME HERD OF

## ABERDEEN-ANGUS CATTLE.

BARON ROSEBOY 57666 by the great GAY BLACKBIRD, heads the herd.

Our motto, "QUALITY first, last, and all the time." Our aim, to produce the best cattle possible. Prices as low as is consistent with first quality. Write for what you want to

**A. L. FRENCH, R. F. D., Byrdville, Va.**

Depot and shipping point Fitzgerald, Rockingham Co., N. C., D. & W. Railway, 24 miles southwest of Danville, Va.

**WE OFFER** a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young **Berkshire** boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

**M. B. ROWE & CO., - Fredericksburg, Va.**



But neither "the course of true love" nor any thing else in this mortal life is destined to run smoothly, always, and this fact, the orphans experienced in the fourth year of their sojourn at the cottage. That summer being an unfortunate one for fruit and vegetables, they scarcely realized any thing at all from these sources. Emily looked forward, however to relieving their little fortunes by means of her school. In the autumn, Judge then, what was her dismay when the School Trustees informed her (which they did very reluctantly) that it was against the regulations to locate the school at the same place, that year as it had already been located in one place as long as it was allowable to do so consecutively. They now had to remove it to another locality, quite out of her range, so during the ensuing session, she had to eke out a scanty living by teaching a small private school. I may anticipate the course of my narrative, however, by saying that her school was given back to her next session to the great rejoicing of the children and neighbors around her. The neighbors had become so much attached to the orphans that during the term when Emily was deprived of the public school, they took care, in many kind and thoughtful ways, to do all they could to fill up the breach, sending them many substantial proofs of kindness, in the shape of suppers. During this time of straitness, Emily could not help having at times a heart sinking fear lest after all, their little household might have to disband, and she might have to give up the undertaking that was the cherished object of her life, but she was enabled to weather the storm by the kindness of her friends and neighbors, the pittance she got from her few pupils, and the proceeds of a silver urn and ladle she had kept for extremities. These were old fashioned pieces of silver that were heirlooms in her mother's family, and their kind friend, the clergyman effected the sale of them to a friend of his who was an enthusiast about old fashioned silver and articles in general. When she heard the history of the orphans, she being wealthy and generous, as well as kind hearted, added \$25.00 more to the already liberal sum she had agreed to give for the silver so the fund from this source was of very great assistance in maintaining the orphans. They had been living at the cottage about five years when, one day, a visitor was announced whose name was dimly familiar to Emily as a memory of her childhood. It was that of a man who had formerly been a friend and neighbor of the Henningshams, but who had gone West, several years before the war.

He told her he had recently returned from the West and had just been to his old neighborhood where, said he, "I felt disposed to quote Moore's lines,

"I feel like one who treads alone  
Some banquet hall deserted."

Established 1828.

75 Years.

## BUIST'S GARDEN SEEDS.

**OUR SPECIALTY** is the growing of Garden Seeds from Selected Seed Stocks. The great importance of following this system for the production of Seeds to insure fine vegetables is familiar to all gardeners; if vegetables from which seeds are grown are inferior or impure, so must their product be.

**IF YOU HAVE** a Garden, send for **Buist's Garden Guide** for the South; edition for 1904 now ready.

**IF YOU ARE** a Marked Gardener, send for **Our Wholesale Price List for Truckers**, now ready.

**IF YOU ARE** a Country Merchant, send for **Our Wholesale Trade Price List**, now ready.

**ROBERT BUIST COMPANY,  
SEED GROWERS,  
PHILADELPHIA, PA.**

## Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

**Reg. BERKSHIRES** From noted strains, Imported Headlight, Lord Highclere and Sunrise.

—DORSET SHEEP—

## B. PLYMOUTH ROCK CHICKENS,

N. &amp; W. and Southern R. R.

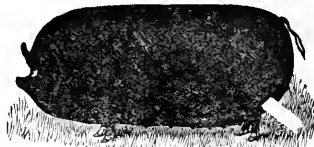
T. O. SANDY, Burkeville, Va.

Hill Top Stock Farm.

## BERKSHIRE HOGS and SOUTHDOWN SHEEP

—A Specialty.—

S. Brown Allen, who succeeds H. A. S. Hamilton & Co. in the ownership and management of this celebrated Stock Farm, with increased facilities, will make a specialty of breeding Berkshire Hogs and Southdown Sheep, without regard to coat, from the purest and most royal strains of imported blood.



## My BERKSHIRE PIGS

For this Fall delivery will weigh 100 pounds at 12 weeks of age, and for INDIVIDUAL MERIT cannot be excelled in the United States. They will make show hogs against any and all competitors and are being engaged every day.

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)



## ABERDEEN ANGUS BULLS

FOR SALE.

"Every Bull a Show Bull."

The choicest lot of young bulls in Southwest Virginia, all out of prize winning families at low prices. Do you want a bargain? If so, come and see us, or Address W. P. ALLEN, Prop of Glen Allen Stock Farm, WALNUT HILL, VA.

So changed was the dear old place. Not the least sad of the changes was to find that your father was dead, and his children no longer owning his old home. I not only wished to see him on account of our friendship, but I had some business to transact with him. I have sought you out as his representative."

"What is the business you speak of?" asked Emily.

"It involves a little history of which I will tell you. Many years ago I fell in to such business difficulties that nothing remained but for me to wipe out and start fresh. I had a notion to try my fortunes in the West, but the journey and contingent expenses, together with some little debts I had to settle before starting required about \$1,000. Your father who was very prosperous at the time, volunteered to lend me the sum, and declined to take my bond for it, saying, 'I know you will return it, if you are ever able, and if not, you may accept it as a gift.' I need not say this generous confidence bound me more strenuously than any legal form could have done to return the loan whenever it was in my power. I did not arrive at any sudden and fairylike prosperity in the West. Few people do. Then our communication with the East was cut off during the war, so I could not have returned the money then, even if I had had it. Since the war, I have had my ups and downs, and have only attained anything like reliable prosperity in the last year or two. But the delay seems to have been providential, for had I paid this score sooner, it might have been swallowed up in the general wreck of your father's fortunes. As it is, I hope it may prove of some service to his children."

With tears of emotion, Emily thanked her kind friend. She had known nothing of the transaction and there existed no proof of it except on his memory.

"That money was loaned me," resumed he, "long enough ago to have doubled itself, if I had borrowed it from a regular money lender. Therefore I consider it only just to return it to you double," and so saying, he handed her his check for \$2,000.

Emily protested against this. The transaction, she reminded him, had been a purely friendly transaction, and should not be conducted as with a money lender.

"The money your father lent me, my dear young lady, has benefitted me at the time far more than many times the same sum would do now. It gave me a start, and now I am both willing and able to return it with interest, and it is only just I should do so." So saying, he took his leave.

She then hastened to tell Walter and Alice of their good fortune.

"What a windfall!" exclaimed Walter, in boyish glee.

"Nay," said Emily, reverentially raising her eyes towards heaven. "Not a windfall, but a God send."

Our readers may imagine the state

# Black Leg Vaccine

## PASTEUR VACCINE CO. CHICAGO SAN FRANCISCO.

### ROSEMONT HEREFORDS.

HEADED BY THE FAMOUS ACROBAT 68460,

SPECIAL NOTICE! 10 nice, well-bred heifers, safe in calf to Acrobat, will be sold at very reasonable figures.

C. E. CLAPP, Berryville, Clarke Co., Va.



### VIRGINIA HEREFORDS.

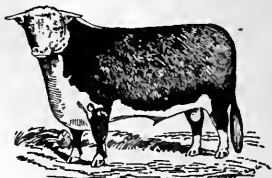
Herd headed by the Champion

PRINCE RUPERT, 79539.

Correspondence Solicited. Inspection Invited.

EDWARD G. BUTLER,

Annefield Farms. BRIGGS, Clarke Co., Va.



PRINCE RUPERT. 79,539

### Bacon Hall Farm.

# Hereford REGISTERED Gattle

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.

## REGISTERED HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083), a grandson of the famous Grove 3d 2490, and a descendant of the world renowned Lord Wilton 4057 from the 4th generation.

Snowball, the dam of Salisbury, is now in the herd of His Majesty King Edward VII.

Lars, Jr., is by Lars of Western fame and his dam is Judy out of a Sir Richard 2nd cow. This makes a great combination of the Grove 3d, Lord Wilton, Anxiety, Peerless Wilton and Sir Richard 2nd strains. No better breeding in the world today.

FOR SALE—Yearling bulls by above sires. WANTED—Reg. Hereford heifers, 18 to 24 months old, not bred; will exchange bulls for heifers of equal quality.

Extremely low prices to close out this bunch; only a few left. Write your needs or call and make your own selection.

MURRAY BOOCCOCK, Owner, Keswick, Alb. Co., Va. KESWICK IS ON THE C. & O. RY., near Charlottesville, Virginia.



When corresponding with our advertisers always mention the  
Southern Planter.

of pleasant excitement into which this treasure trove threw the orphans. Emily's first impulse was to give Walter a collegiate course with the money, sustaining Alice and herself still by her school. Walter was now in his 18th year, a tall, fine looking, manly youth, the joy and pride of his sister's heart. He had already begun to judge and decide for himself, and sometimes more wisely than his first impulses suggested.

"No, sister," said he. "This cannot and ought not to be. It would be like eating up seed corn. I never mean to go to college, unless I can first earn the money myself. I will not use for this purpose money that ought to be so invested as to contribute to your and Alice's support."

They called in their kind friend, the clergyman, for consultation, and one or two of the other neighbors, in whose judgment and good wishes, they felt an especial confidence. After a long consultation as to how the money could be invested so as to yield the best and most lasting results, the general opinion was that it would be wisest to invest it in a small grazing and fruit farm, reserving enough of the fund to get a small flock of sheep, a few head of stock, and enough young fruit trees to set out a good sized orchard.

What gave additional weight to this advice was the fact that a small farm suitable to their purposes, was actually on the market, very near their present location. They already had the nucleus of a good orchard, and had acquired some knowledge and experience in the line of fruit culture, and so it seemed wisest for them to go on from this starting point, especially as this was a section peculiarly well adapted to the cultivation of orchard fruits. In the course of a few months, they carried into effect the plan proposed by their friends, and though I cannot startle my reader by any recital of how the sheep, cattle and fruit trees proved invulnerable to accident and disease, and marvelously remunerative, still under Walter's careful tendance, they thrived very well, and year by year, increased and improved as he gained greater experience and skill in the care of them. These resources were sufficient to yield the orphans a comfortable support, together with Emily's school.

Walter, meanwhile, did not neglect to keep up his studies under the clergyman, and to read, as much as he had an opportunity to do, and owing to this, as well as to the refining influence of his sisters, he escaped being awkward and rustic. He looked forward now to attending an Agricultural College near him, a session or two, as he had gotten things in sufficiently good shape to justify him in leaving them on Mr. Wheeler's hands during his absence.

(To be Continued.)

CHAPTER V.

("Dandy little bouquets" should read "Dainty little bouquets.")

## ARMOUR'S BLOOD MEAL Cures Scours in Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

**PREVENTS weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.**

**A Potent Food for Work Horses, Dairy Cows, Poultry.**

Write us for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

**THE ARMOUR FERTILIZER WORKS,**

Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

## FOR SALE BERKSHIRE PIGS

of choice breeding, and to make them more desirable, they are fine individuals, properly fed; therefore they develop well. Write-

**Forest Home Farm,**

Purcellville,

Virginia.

## CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

G. S. LINDENKOHL, Keswick, Albemarle Co., Va.

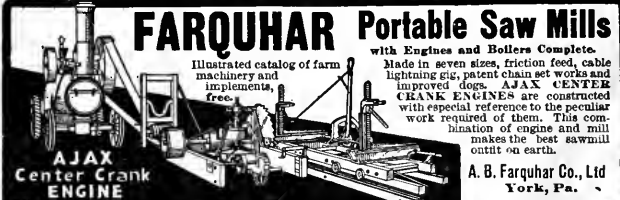
## ... EDGEWOOD STOCK FARM ...

### DORSET SHEEP.

Breeding DORSETS our business for 12 years. We can now offer Dorsets of high quality. Our ewes lamb in the fall. We have fall lambs now ready. Last season these lambs weighed 135 pounds in June. Allow us to insist that you buy only GOOD SHEEP when you buy Dorsets. Dorset sheep have a special place in Virginia. No other breed can take their place in the early lamb business. Write us for facts to prove this. We ship our sheep on approval.

J. D. ARBUCKLE, Greenbrier County.

H. B. ARBUCKLE, Maxwelton, W. Va.



## FARQUHAR Portable Saw Mills

with Engines and Boilers Complete.

Made in seven sizes, friction feed, cable lightning gear, patent chain set works and improved dogs. AJAX CENTER CRANK ENGINES are constructed with especial reference to the peculiar work required of them. This combination of engine and mill makes the best sawmill outfit on earth.

A. B. Farquhar Co., Ltd  
York, Pa.

### IMPORTED BERKSHIRES AT BILTMORE FARMS.

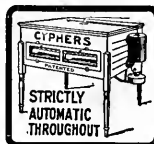
In addition to the large and choice importation of brood sows which the Biltmore Farms selected during the last summer and bought out in June, they have just received by "S. S. George" four young sows—the prize winning pen of pigs at the English Royal in 1903. They were bred by His Royal Highness, Prince Christian, and were bought almost as much for the blood lines represented through sire and dam as for their winning at the Royal, and they are certainly a good example of like producing like, and may safely be counted on to produce themselves. Being by Handley Cross, a son of History, and out of Highclere Gem VI, they are full sisters to the first prize aged sow and reserved for championship at the Royal, and also by the same boar as Lord Lyon, a young boar that was selected by Biltmore Farms as being the best young boar that they could find in England. This last lot has added to the offering of imported sows which will be sold in February on the Farms, making 70 head in all. These sows themselves are of the very richest breeding and the best individuality that could be found in all England. All are either prize winners themselves or are out of prize winners, and are being bred to the very best of boars after careful study of the blood lines, so as to select the best possible nicks. Among these boars are the following:

No. 1. Danesfield Warrior (a son of that sire of many prize winners, Manor Favorite), champion and winner of first in class at the English Royal in 1902, and many other firsts at leading shows, including the Royal the year before.

No. 2. Lord Lyon, a son of Handy Man, and consequently a half brother to the first prize pen of sows at the Royal, and was described by Mr. Chapman (a prominent breeder) as one of the best young boars that had ever left England. He combines style and finish with unusually good hams, extreme length and typical head to a remarkable degree.

Then there are two young boars (full brothers), out of the great prize winning sow Danesfield Huntress, called Danesfield Hunter and Danesfield Huntsman 1st. One of them was shown and proved quite a winner, whilst the other was kept at home for service on the noted herd of Mr. Hudson's. The dam has made a great name at the leading shows as a producer, and also as a producer of prize winners. In fact, this Huntress blood is one of the strongest and best strains that can be found in England. In addition to the above, all the great boars now in Biltmore herd, such as Loyal Lee II, champion boar of America, the Duke, etc., are being used, and their litters out of these prize winning English sows should make great continuations.

The catalogue of this offering will be gotten out in the usual full and detailed manner of the past offerings.



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backed by every dollar we have in the world is made to you, personally. It says that YOU will hatch a larger percentage of healthy, vigorous chicks, with less oil, less attention, less trouble and more satisfaction, in a genuine, patented  
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Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



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REFERENCES: Hamilton Trust & Savings Bank; N. Dietzen & Bro., Chattanooga; Dunn's Mercantile Agency; Southern Planter.

and breeders should write for it if only to get the list of the English prize winners.

Any breeder who attended our last sale professed that it would be impossible to find a better lot or even as good again as the offering of 1902, which went at such a record breaking price, but breeders who have examined the present lot acknowledge that they are much better and decidedly more uniform. They ought to be, for nearly 20 per cent. more was paid for them as a whole, and a long time given for searching through England, and more agents kept in the fields looking out for desirable animals. In fact, nothing was left undone, and whatever the results of the sale, whether the public buy them in at their value or secure them at a bargain, the Farms at least have distributed a lot of animals of tested blood lines and whose influence is bound to be felt in the future.

**AGRICULTURE FOR BEGINNERS.**

By C. W. Burkett, Professor of Agriculture; F. L. Stevens, Professor of Biology; and D. H. Hill, Professor of English in the North Carolina College of Agriculture and Mechanic Arts. 12mo. Cloth. 267 pages. Illustrated. List price, 75 cents. Ginn & Co., Publishers, New York.

The authors have prepared this little book in the belief that there is no line of separation between the science of agriculture and the practical art of agriculture, and that the subject is eminently teachable. Theory and practice are presented at one and the same time, so that the pupil is taught the fundamental principles of farming just as he is taught the fundamental truths of arithmetic, geography, or grammar.

The work is planned for use in grammar school classes. It thus presents the subject to the pupil when his aptitudes are the most rapidly developing and when he is forming life habits. It will give to him, therefore, at the vital period of his life a training which will go far toward making his life work profitable and delightful. The text is clear, interesting and teachable. While primarily intended for class work in the public schools, it will no doubt appeal to all who desire a knowledge of the simple scientific truths which lie at the foundation of most farm operations.

The 218 illustrations are unusually excellent and are particularly effective in illuminating the text. The book is supplied throughout with practical exercises, simple and interesting experiments, and helpful suggestions. The appendix, devoted to spraying mixtures and fertilizer formulas; the glossary, in which are explained unusual and technical words; and the complete index are important.

In mechanical execution—in the attractive and durable binding, in the clear, well-printed page, and in the illustrations—the book is easily superior to any other elementary work on agriculture.



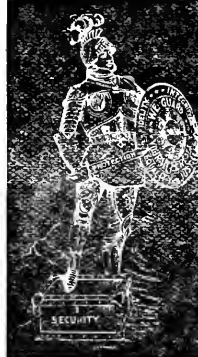
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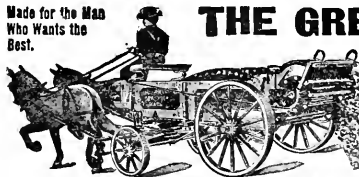
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## DOMESTIC RECIPES.

## PUMPKIN PIE.

One cup (pint) stewed pumpkin, one-half cup sugar and sweet cream to make consistency of thin batter. Beat two eggs and sugar together and add to pumpkin. Season with powdered cinnamon. Line pie plate with flaky crust and fill with pumpkin batter and bake in a quick oven.

## ENGLISH PLUM PUDDING SUFFICIENT FOR TWELVE PEOPLE.

Chop fine one pound beef suet, mix it with two pounds of sifted flour, two pounds of bread crumbs, a little salt three teaspoonful of baking powder two pounds stoned raisins, two pounds cleaned currants chopped, add spices (nutmeg, ground cloves, or any mixed spices to suit the taste) one pint brandy or good wine, one dozen eggs well beaten. Mix all ingredients well. Flour your pudding cloth or bag, or mould and boil 10 hours. If served at once pour one-half pint brandy over and just as served touch with a lighted taper and send to table blazing. This will keep for months and can be reheated.

## GREEN TOMATO SWEET PICKLE.

Slice green tomatoes and onions, alternate layers, in a stone jar, and sprinkle lightly with salt, let stand one night, drain off all the water next morning, and put one pound brown sugar, and one ounce of ground mixed spices and one quart of good vinegar to one gallon of the tomatoes and on ions and boil until onions are done. Put in stone or glass jars and cover with vinegar.

## DRESSING FOR TURKEY (ROAST.)

To one pint of sifted corn meal, add one-half pound lard and a little salt make into a loaf or cake, with cold water and bake done. Then break into fine pieces, crust and all and season with black pepper, one egg, a pinch of sage, an onion chopped fine, and liquor in which turkey has been cooked, to make it stick together and stuff. Sage may be omitted, oysters may also be added.

Grape jelly is nice with fowl.

MRS. N. K. GUTHRIE.

## OLD VIRGINIA HAM.

Select ten fresh pork hams of ten pounds each, rub over the flesh side of these a mixture composed of two pounds of brown sugar, ½ pound of salt petre, ½ pound of black pepper and ½ pound of red pepper. Salt enough to cover the hams, about three quarts to the 100 pounds. Pack in a tub or box with the skin downward. Let them remain six weeks, then hang by a string and smoke with green wood,

## Something good for Christmas

During the holiday season, when good cheer everywhere prevails, there is nothing nicer to have in the house than a little good whiskey, and besides, your physician will tell you it is excellent in many cases of sickness. But you must have good whiskey, pure whiskey. You don't want to drink poor whiskey yourself, much less offer it to your friends, while as a medicine, poor whiskey, adulterated whiskey, may do you decided harm.

HAYNER WHISKEY goes to you direct from our own distillery, with all its original richness and flavor, and carries a UNITED STATES REGISTERED DISTILLER'S GUARANTEE OF PURITY and AGE. When you buy HAYNER WHISKEY you save the enormous profits of the dealers and have our guarantee that your money will be promptly refunded if you are not perfectly satisfied with the whiskey after trying it. That's fair, isn't it?

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We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, express charges paid by us. Try it and if you don't find it right and as good as you ever drank or can buy from anybody else at any price, send it back at our expense and the next mail will bring you your \$3.20. Could any offer be fairer? This offer is backed by a company with a capital of \$500,000.00, paid in full, and the proud reputation of 36 years of continuous success. We have over a quarter of a million satisfied customers, proving conclusively that our whiskey is all right and that we do exactly as we say. Shipment made in a plain sealed case, with no marks or brands to indicate contents.

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FREE With each four quart order we will send free one gold-tipped whiskey glass and one corkscrew. If you wish to send an order to a friend, as a Christmas present, we will enclose with the shipment an elegant souvenir card, with both your names neatly printed thereon.

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hickory is preferable, a few hours each day, for a period of ten days. Rub over with hickory ashes and leave them hanging for three weeks, after which wrap in paper and put in bags. They are best from one to two years old.

Hams cured as above, being unsurpassed in quality and flavor, need to be boiled in water only. To cook the ham, soak in cold water six or eight hours; washing and scrape thoroughly, put in a closed boiler nearly full of cold water, boil slowly allowing twenty minutes to the pound. When done let the ham remain in the liquor till cool; then remove the skin, spread over with brown sugar moistened with sherry wine, cover with cracker dust, put in a hot oven a few minutes till a nut brown. Serve on platter garnished with parsley.

Mrs. B. B. HILL.

No. 3 Victoria Flat, Washington, D. C.

#### CATALOGUE.

DeLoach patent saw mills and high grade mill machinery, Atlanta, Ga. This is a fine and complete catalogue of the products of one of the most reliable and largest makers of saw mill machinery.

EBEN HOLDEN REDIVIVUS AND A PIE.

"I remember once," said Uncle Eb, "I praised a woman's pie. We were over in Canada buyin' cattle. The woman she asked me if there was anything I'd like to hev fer my dinner. I told her that I was very fond o' berry pie, so she made one. It came on the table in a pan. I didn't know what 'twas, er mebbe I could hev made an excuse an' got away. Suddenly the woman began to cut it.

"I've made that pie you asked fer," she said. "It took me a long time, but here 'tis, an' I hope you'll like it."

"The pie was about three inches thick, an' there was only jest a leetle streak o' red stain through the middle o' it where the berries oughter be."

The old man paused a moment.

"Wall," he continued, with a sigh, "o' course I hed to eat that pie. It was the greatest obstacle I ever encountered. Fer a minnit I felt as if I was ketched in a bear-trap. But I looked as pleasant as possible, an' went to work on that piece o' pie. I no sooner got through than it went to work on me. There wa'n't much left o' me next day. I lay there sick abed, an' the good woman she brought up another pie. She wanted to please me, an' I hedn't the heart to tell her what I thought o' her bakin', but she pressed it on me."

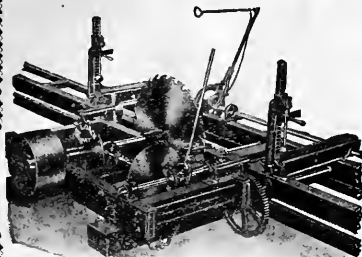
"No more, thank you," says I.

"I thought you said it was good," says she, with a look o' disappointment.

"Madam," says I, "the pie is good, but I ain't good enough to eat it. I ain't even joined the church yet. Give me a leetle more time fer preparation."  
—Irving Bacheller, in *Leslie's Monthly*.

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**GUSTAVUS F. SWIFT'S MOTTOES.**

Gustavus F. Swift, the late head of the great packing house of Swift and Company, Chicago, left an estate worth over seven million dollars. Perhaps Mr. Swift did not enjoy all the pleasures of life; in fact, he was known to have missed many that even money can not buy, and, perhaps, there are people who believe that his mode of life was not ideal, but he left to the young men of the country—and some old ones as well—a greater legacy than can be measured by wealth. He left the example of his life and the original maxims which were his guide in building a great business. All of these maxims have been collected, and are presented herewith, complete, for the first time:—

No man, however rich, has enough money to waste in putting on style.

The richer a man gets the more careful he should be to keep his head level.

Business, religion and pleasure of the right kind should be the only things in life for any man.

A big head and a big bank account were never found together to the credit of any one, and never will be.

No young man is rich enough to smoke twenty-five-cent cigars.

Every time a man loses his temper he loses his head, and when he loses his head he loses several chances.

Next to knowing your own business, it's a mighty good thing to know as much about your neighbor's as possible, especially if he's in the same line.

The best a man ever did shouldn't be his standard for the rest of his life.

The successful men of to-day worked mighty hard for what they've got. The men of to-morrow will have to work harder to get it away.

If the concentration of a lifetime is found in one can of goods, then that life has not been wasted.

No man's success was ever marked by the currency that he pasted up on billboards.

When a clerk tells you that he must leave the office because it is 5:30 P. M., rest assured that you will never see his name over a front door.

The secret of all great undertakings is hard work and self-reliance. Given these two qualities and a residence in the United States of America, a young man has nothing else to ask for.

**AGE BEFORE BEAUTY.**

"Yes," said the old man, addressing his young visitor, "I am proud of my girls, and would like to see them comfortably married; and as I have a little money, they will not go to their husbands penniless. There's Mary, twenty-five years old, and a real good girl. I shall give her five thousand dollars when she marries. Then comes Bet, who won't see thirty-five again, and I shall give her ten thousand dollars, and the man who takes Eliza, who is forty, will have fifteen thousand dollars with her."

The young man reflected a moment or so, and then inquired, "You haven't one about fifty, have you?"

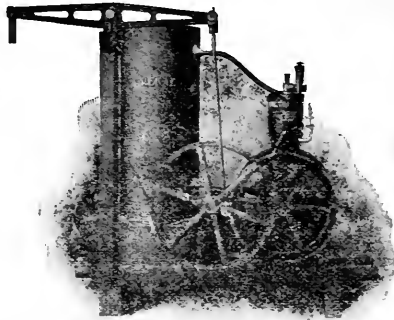
Uncle Sam, in the person of 10 of his government officials, has charge of every department of the Hayner Distillery. During the entire process of distillation, after the whiskey is stored in their warehouses, during the seven years it remains there, from the very grain they buy to the whiskey they get, Uncle Sam is constantly on the watch to see that every thing is all right. They dare not take a gallon of their own whiskey from their own warehouse unless he says its all right. And when he does say so, that whiskey goes direct to you, with all its original richness and flavor, carrying a United States registered distiller's guarantee

of purity and age, and saving you the dealer's big profits. If you use whiskey, either medicinally or otherwise, should read the offer of The Hayner Distilling Company elsewhere in this paper.

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Best Irish Potatoes, bushel.....	75c	New Loose Raisins, pound.....	10c
Best Meal, bushel .....	70c	New Sultana Raisins, pound.....	12 $\frac{1}{2}$ c
3-pound Crocks Preserves .....	18c	New Seeded Raisins, pound.....	10c
Pride of Richmond Flour, barrel.....	\$4.75	New Citron, pound.....	15c
Or, per sack.....	30c	New Mixed Nuts, pound.....	12 $\frac{1}{2}$ c
Try-a-Bita, 10c package, or 3 for.....	25c	Almonds, pound .....	15c
3-pound Pails Apple Butter.....	18c	Filberts, pound .....	12c
Mother Oats, package.....	9c	Brazil Nuts, pound .....	10c
Quaker Oats, package.....	10c	English Nuts, pound .....	15c
Silver Leaf Lard, pound.....	10c	Pecans, pound .....	12 $\frac{1}{2}$ c
Butcher's Lard, pound.....	10c	Cocoanuts, each .....	4c
Good Lard, 3 pounds for.....	25c	Old Crow Rye, per gallon.....	\$3.00
California Hams, pound .....	9c	Old Keystone Rye, per gallon.....	\$2.50
Regular Hams, pound .....	16c	Old Excelsior Rye, per gallon.....	2.00
Best Salt Pork, pound.....	10c	Old Capitol Rye, per gallon.....	1.50
Good Salt Pork, pound.....	8c	North Carolina Corn, per gallon.....	2.00

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**HIS BESETTING SIN.**

Ephraim was a man of importance, being an elder in the Baptist Church and much given to exhortation, prayer, and song. His cabin was the scene of many a "revival," and the powerful prayers offered by Ephraim on these occasions were the wonder and admiration of the colored population.

With all his religious ardor, however, there were times when the pleasures of the world appealed strongly to him. Seeing him approach one morning with downcast eyes and an air of general dejection, Colonel Snead accosted him thus:

"Hello, Eph! you look as if you were going to your own funeral. What's the matter?"

"Well, Kunnel, I feels bad, sub," replied Eph; "de 'casion am a ser'ous one, sub. You know de young folks done hab a party at Nick Finney's de nder night, an' as I's been a wrastlin' in pray'r fer de salvation ob Nick's soul for a pow'ful long time, I done thought I'd 'cept de invertation an' go, an' maybe I mout drap a word or two dat would tech his heart. But dey was mighty leetle chance ter talk ter Nick 'bout 'ligion, fer dat nigger will dance whenever he hear a fiddle. Well, sub, I went, an' now dey claims as how I was a-dancin', an' I's ter be tried ter-day an' *put outen de chu'ch.*"

"Well, Eph., that's pretty hard luck, but they ought to know that an elder

of your standing would not indulge in anything so worldly as dancing," replied the Colonel with a twinkle in his eye, well knowing that Eph.'s besetting sin was not tripping the light fantastic.

"I hopes so, Kunnel, I hopes so," rejoined Eph. in a tone of utter despair as he trudged on towards the town.

Late the same afternoon Colonel Snead heard a voice singing lustily "I's gwine ter jine de band," and recognizing Eph., he asked,—

"How did the trial go, Eph.?"

"Dey cl'ar'd me, Kunnel, bress de Lawd! dey cl'ar'd me."

"Cleared you, did they? that's good. Then you proved you'd not been dancing," said the Colonel.

"No, sub, Kunnel, dey proved it on me all right, but dey 'lowed I was drunk an' didn't know what I was doin', so dey cl'ar'd me, Kunnel—bress de Lawd!"—FRIDENCE BAXTER, in *November Lippincott's*.

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There is a story, still current in Illinois, which says that an old farmer friend of President Lincoln's, who used to correspond with him, complained on one occasion of his poor health. He received the following reply, which is quoted in Illinois as "Lincoln's prescription:" "Do not worry. Eat three square meals a day. Say your prayers. Think of your wife. Be courteous to your creditors. Keep your digestion good. Steer clear of billousness. Exercise. Go slow and go easy. Maybe there are other things that your especial case requires to make you happy; but, my dear friend, these, I reckon, will give you a good lift."

This advice is doubtless applicable in its entirety to many Americans in every state of the Union to-day. There are parts of it which apply to us generally—as a nation. "Do not worry. Keep your digestion good. Go slow and go easy." It would be difficult to find an American who has not some-

thing to amend on these points. Worry and dyspepsia have assumed the proportions of national evils, and they are both more or less the results of undue haste. There is no surer way to promote dyspepsia than to be in a constant state of hurry, and nothing will so surely give one the "blues" or incline one to worrying and fretting than dyspepsia. Our native institution—the "quick lunch" restaurant,—is responsible for a large proportion of the physical ills of business people in large cities. Eating hastily—"bolting" one's food, as it is popularly expressed,—is enough to ruin the digestive organs of an ostrich. A man would better eat half as much as usual at the midday meal,—which is usually the most hurried,—and take time to masticate properly what he does put into his stomach. Better still would it be if he would give himself ample time to relax and eat a light lunch without allowing any thought of business to intrude on this necessary period of relaxation.—Success.

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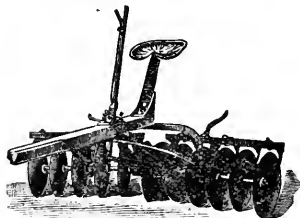
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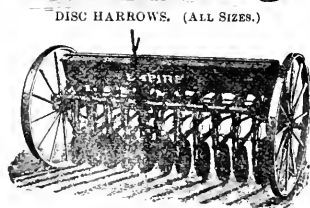
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