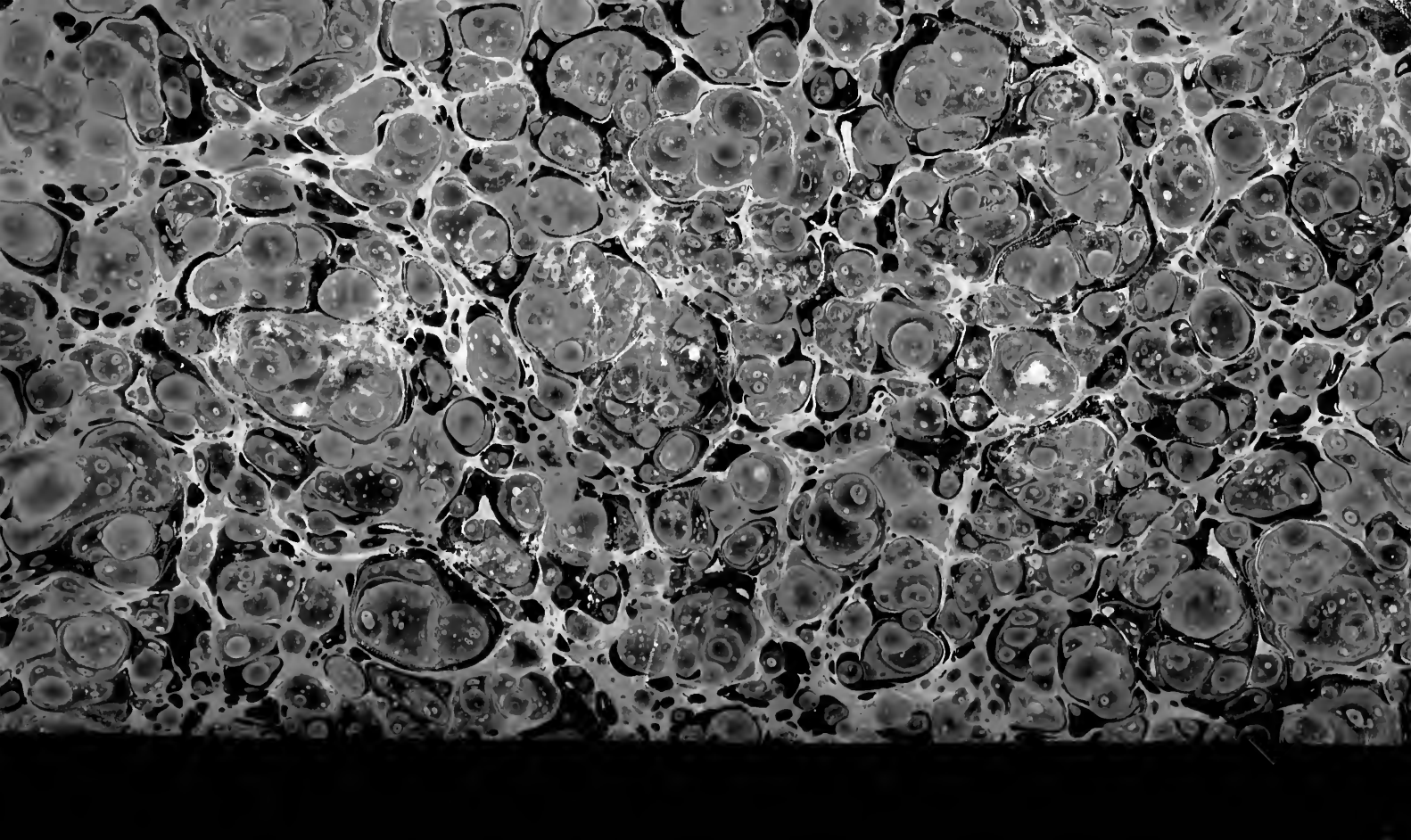

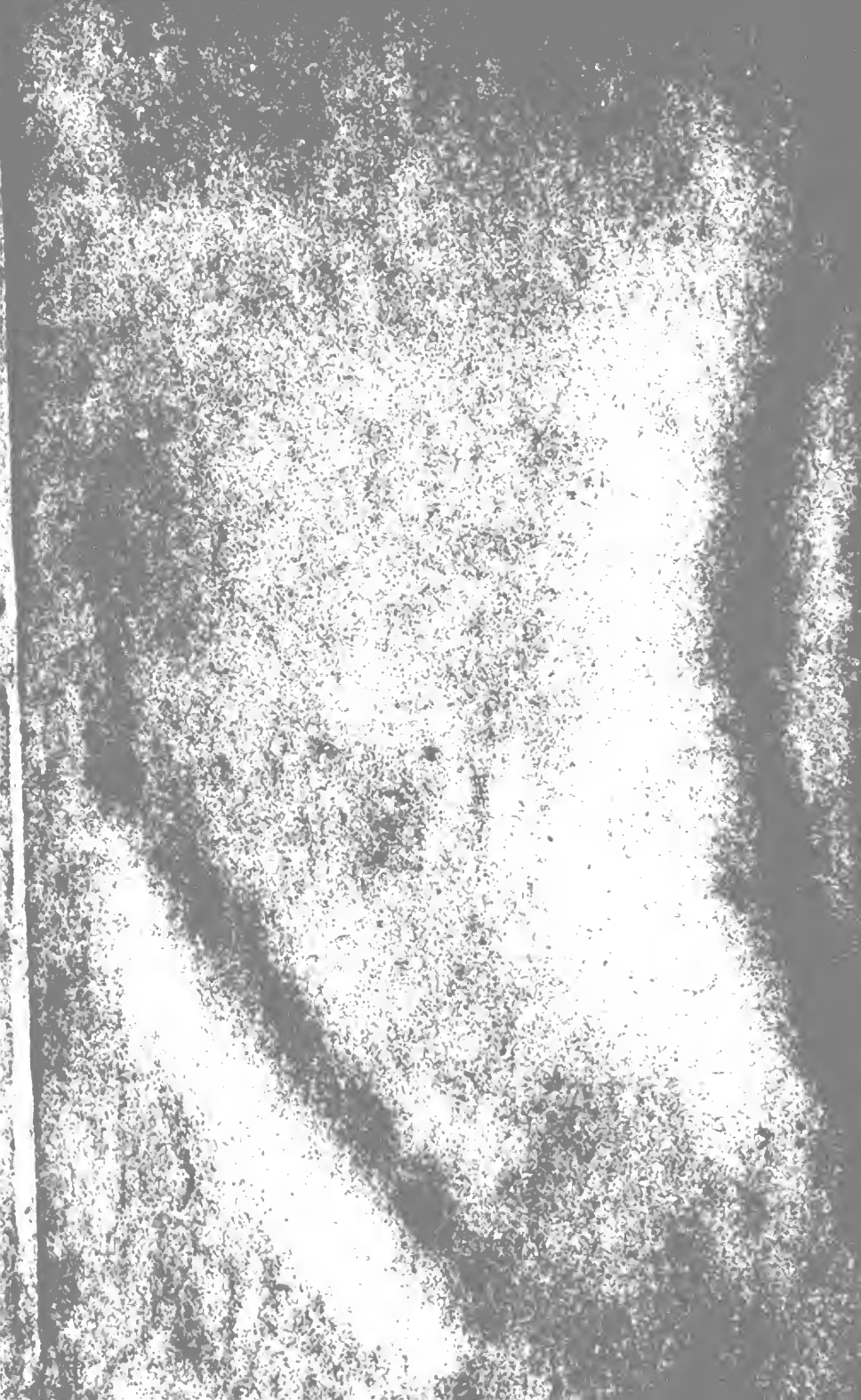

THE

SOUTHERN PLANTER,

A MONTHLY PERIODICAL,

DEVOTED TO

AGRICULTURE, HORTICULTURE AND THE HOUSEHOLD ARTS.

VOLUME VIII.

JOHN M. DANIEL, EDITOR.

RICHMOND:

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1848.

THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

☞ All Communications, concerning the Planter, must be addressed

P. D. BERNARD, *Richmond, Va.*

☞ For Terms see last page.

AGRICULTURAL ADDRESS.

Mr. Andrew Stevenson has lately delivered an Agricultural Address at Charlottesville, which is an interesting one. We give below some extracts, and are sorry that we are unable to publish more of it:

I have already said that the agriculturists, as a class, are depressed and undervalued, and that they have, in a great measure, themselves only to blame for it. Will you excuse me, for one moment, in again impressing this subject upon all who hear me, and would that I could make it reach every man, woman and child, engaged in agricultural pursuits, throughout the State. The remedy, Mr. President, is in elevating the agricultural classes; throwing off the supineness and apathy, nay ignorance, into which they seem to have sunk, and feeling confidence in their own strength and power. It was Sir Robert Walpole, who compared the agricultural classes to sheep, and the other great national interests, to hogs. The first, he said, always came quietly and meekly to be sheared, as often as you pleased; but touch only a bristle of the others and the whole stye was in an uproar. In elevating agriculture we shall moreover be able to cure a great evil which Virginia and the South, generally, labor under, and which will need some remedy. It is the fondness and infatuation of parents to educate their sons, for what in fashionable phrase are called the liberal and learned professions, as the only road to power, honor and wealth. Instead of educating a portion of our youth, and making them intelligent and independent agriculturists, all are doomed to be lawyers, politicians or doctors, to say nothing of the *military* classes. Indeed, nothing is more common than to hear it said, "Well, I wont be at the expense of sending such a one to school or college, as I mean to make him a farmer;" as if that was a calling beyond the pale of education and instruction. Fatal and infatuated policy. The consequence, Mr. President, I need not attempt to impress upon you, on such an occasion, if I had time to do it. It will only be necessary to look around in the world and you will need no admonition from me, as to the effects of this rush of our young men to these professions, already full to overflowing, and more especially those of law and medicine—thousands of whom are wasting their lives in idleness and pleasure, or in fruitless efforts to force through the crowds which block every avenue to profit or employment. Happy would it be for Virginia at least, if the public opinion could be changed on this subject. Happy would it be, if we could impress it especially upon the elder members of the profession, who having become independent, are dragging out their lives in towns, whose health is sinking under dyspepsia, and blue devils, amid the harrassing and vexatious cares of a laborious profession. Let them make room for their younger brethren and fly from the conflicts of law and party strifes to the country, renovate their con-

stitutions, and end their days in peace and quiet. I recommend it to them (and especially some now in my eye who are muster-free at least) as by far the happiest and best life for them, both as it regards present and future happiness. Indeed, among the learned professions and in the eager pursuit of wealth or ambition, who is there (unless a very old and inveterate stager) that does not often flatter himself with the hope, (too often fallacious though, I admit,) of passing his latter days in the delightful employment of cultivating the earth, amidst independence, and plenty, and the safety, and innocence, of the country?

Mr. President, I am, as you know, just essaying to do this myself, but I regret to say that I find few, who seem disposed to cheer me on. On the contrary, if I were to judge in my own case, I should say that the public mind in this meridian, upon this subject, was not in the most healthful state. In retiring from the vehement strifes and agitations of that great arena, in which I labored so long and spent so large a portion of my life, to the more peaceful pursuits of agriculture, I have been told by many of my best friends, and others without number, that I had committed one of the greatest errors of my life, and hazarded my future peace and happiness. Indeed, I hear it continually asked, why, as a matter of choice, any one in my situation (judging, I presume, from the past,) should ever think of settling down in the country, to cultivate and restore *exhausted lands, shear sheep, or fatten pigs*, and superintend the drudgery of a Virginia farm. How often, too, do we hear it asked, what are its benefits, and for what is it prized? What its claim to the gratitude of man? Their own hearts, if they are agriculturists, should answer these questions. They had better examine and see what there is in human nature and human duties; what in interest, in science and in art; what in philosophy, in morals and in religion, that may not be found amongst the cultivators of the soil, in a greater degree, than in any other calling upon earth. What occupation more full of dignity; duties more full of joy, than those which distinguish the husbandman, in all that invests man with simplicity and dignity; with practical sense and enlightened benevolence, and with all that is fair and lovely, intelligent, valuable and disinterested in woman. When was it that man ever rose from a state of servitude and dependance, to proprietorship of land and its cultivation, that he did not learn self-respect and become more elevated in his own esteem? Then it is that an entire change takes place. Then it is, that breathing no low or abject spirit, he reaps from the soil a harvest of virtues. The sobriety of the father; the economy of the mother; the devoted labor of the son; the chastity of the daughter; these, these, are the fruits of glorious agriculture. And this is my answer, to all who decry it. I pity those who know nothing, or are incapable of enjoying that soothing, cheering and unsurpassing influence, which agriculture sheds over the mind and heart of man.

"Oh, friendly to the best pursuits of man;
Friendly to thought, to virtue and to peace,
Domestic life in rural leisure past."

And there is not less the spirit of philosophy, than poetry, in these beutiful lines of Cowper.

Mr. President, it has been justly said that we live in an enlightened and philosophical age.

It is emphatically an age of improvement.

Civilization and refinement were never more in earnest.

A new spirit connected with human improvement is abroad in the world.

Every thing in art and science, seems to be bearing on the interests and destinies of man. And Christianity, enlightened and Godlike, is marching on in triumph and doing good.

And is it at such a time, that Virginia, proud and lofty Virginia, is to falter and give back? Will she alone of all the States in this Union, suffer the paramount interest of agriculture to be dangled at the heels of every other great interest, playing a secondary and inferior part? Is this great interest to be dragged at the

wheels of party, or faction, instead of asserting its rights and maintaining a chariot of its own, leading this glorious and renowned Old Commonwealth, to prosperity and happiness, peace and honor?—There is a redeeming spirit in her people which forbids it.

KEEPING FARM ACCOUNTS.

Let any farmer make the experiment, and he will find it as interesting as it is useful, to know from year to year the actual produce of his farm. Let everything, therefore, which can, be measured and weighed; and let that which cannot be brought to an exact standard, be estimated as if he himself were about to sell or purchase it. Let him likewise, as near as possible, measure the ground which he uses, and the manner in which he applies. The labor of doing this is nothing compared with the satisfaction of having done it, and the benefits which must arise from it. Conjecture, in these cases, is perfectly wild and uncertain, varying often with different individuals, almost a hundred per cent. Exactness enables a man to form conclusions, which may most essentially, and in innumerable ways, avail to his advantage. It is that alone which can give any value to his experience. It is that which will make his experience the sure basis of improvement; it will put it in his power to give safe counsel to his friends, and it is the only ground on which he can securely place confidence himself.

Norristown Herald.

From the American Farmer.

BUTTER MAKING.

Mr. Editor,—The Philadelphia Agricultural Society having awarded to me their first premiums for the best butter for the last two or three years successively, persons are continually applying to me for information, as to my method of producing it, its manufacture, &c.

The Philadelphia market is, you know full well, most highly celebrated for the excellence of its butter, so that the obtaining of this premium every year for the best of the best, is naturally a matter of no small gratification to me; but my real motive in sending this communication for your journal, is to get rid of the trouble of writing long letters to *gentlemen and ladies* I never heard of before they took it into their wise heads to make me pay postage for the *honor* of answering their queries.

I am not aware of anything new or uncommon in my formula, and perhaps my success is more attributable to a well founded system and entire cleanliness than to any other cause; but however that may be here it follows:

About one week before the day of exhibition, I turn all hands that can be spared from other work, into the spring-house to wash, to scrub, to whitewash, &c., in short, to purify and clean the floor, the walls, the shelves, the doors, &c., as perfectly as human means can prevail in extinguishing every thing of a filthy nature or unpleasant smell. Do not suppose from this, that my spring-house is neglected during other portions of the year; on the contrary, it is kept in more neatness and cleanliness than any other one I know of. The *tin* pans are then put into a large boiler, and *boiled* for one hour, then taken out and scoured with *white silver sand and pure hard soap*, then rinsed off in pure, clean water and put away for use. Three days before the exhibition, the cows are brought into a clean pen near the spring-house; at daybreak, their udders are washed with plenty of water and wiped with a clean towel quite dry. Their milk is then drawn into a *tin* pail that has been cleansed as the pans were. The milk is then strained through a perfectly clean muslin strainer into the pans and placed in the spring-house; the same process is to be gone through at night, the next morning and evening, which will make four milkings; on the next morning, the whole of the contents of the pans, *milk and ucream, nskimmed*, is thrown into a churn, (this churn is one of the common barrel kind, it has been rinsed out with boiling water, with about one-fourth of a

peck of *hickory* ashes and *live* coals taken directly from a burning fire. This was stirred about for some time by turning the crank—after which the ashes and water were thrown out and the churn rinsed several times with boiling water;) the cows are then to be washed and milked as before, and *this* milk strained and poured warm into the churn,—the operation of churning is then commenced; it must be performed very, very slowly; the tenacity and hardiness of the butter, depends entirely upon slowness in churning, to produce a first rate article; it should take at least three hours; when the butter has thoroughly come, it should be collected together with a clean wooden ladle and laid upon a clean linen cloth, spread out as flat as possible and not more than two inches thick; then take a *clean*, coarse cotton bag, large enough to hold a half peck or more, fill it with ice, and with a mallet smash it down flat, and about four inches thick; upon this, place the linen cloth with the butter on top, let it remain until quite hard, then place it, if possible, upon a clean white marble slab, add very finely pulverized salt to taste, and then work out the buttermilk with the wooden spoon or ladle, spreading the butter flat again and again, and sopping up the buttermilk with the linen cloth. This operation must also be performed very slowly; when entirely divested of all buttermilk, make it up in forms of pounds or half pounds.

I am well aware that all this is very troublesome, but what good thing can we have in this world without care and attention?

As regards the best kind of cows, I am sorry to differ with most of my agricultural friends, inasmuch as that, after an experience of more than twenty years, I find that the beautiful and stately Durhams, do not produce butter or cream to compare at all in quality with the humble, and I must admit, very mis-shapen and ugly Alderneys. I have had no personal knowledge of Devons or Ayrshires, never having owned one. My Alderneys were imported some years ago by Mr. Sarchette, from the Island of Guernsey,—a different animal altogether from the English Alderney, or rather from the Alderneys that have been imported from England. I have frequently had sweet cream upon my table from these Alderneys, so thick or rich, or whatever you please to call it, that it could not be poured from a small-mouthed pitcher without the aid of a spoon. The milk of one good cow of this breed, will impart a most beautiful yellow color to the milk of four or five cows; they are exceedingly hardy, and stand our climate better than any other imported breed.

Should you deem this communication of sufficient interest to publish it, please correct any inaccuracies, as I have not time to write it over.

I am, very truly, yours,

PHILIP PHYSICK.

Germantown, Penn., Jan. 1, 1847.

N. B.—New milk is the most effectual absorbent of sulphuretted hydrogen gas, "*et id omne genus*," that I am acquainted with, which can be added to old milk and cream for the purpose of purifying it without injury to the butter. This is my reason for adding the last milking quite warm from the cows to the old milk in the churn—I do not require my people to skim our milk, because it is a waste of time, for one reason, and for another, because I think the milk wastes all offensive matter out of the butter; besides the buttermilk is sweet and not sour, as is usual, for I maintain that perfectly pure and sweet butter (let the test be a chemical one) cannot be made from sour cream.

DEEP PLOUGHING.

The use of the subsoil plough is often of no avail, from a neglect of the very essential preliminary improvement of removing (by improved drainage) the water to a greater depth from the surface; and from this neglect the success of perhaps a really valuable improvement is thence at once rendered impossible. It is in vain for the farmer, indeed, to deepen the soil, and thus endeavor to afford the roots of his crops a greater extent of pasturage, if that additional space is pre-occupied by

water. It is also to be well remembered, as some encouragement to the farmer in his efforts to overcome any obstacles that may present themselves to the profitable attainment of this deepening of the soil, that he is in the far greater majority of instances endeavoring to incorporate with the surface soil a greater extent of the same earths or rock from which, by the effect of natural and artificial causes, the surface soil is almost entirely composed; he is, in fact, generally laboring, not to add *new* materials to the land he cultivates, but merely to add to it an increased mass of the same substance of which the cultivated soil was originally formed. The common opinion that a heavy subsoil plough, and the consequent employment of a very considerable horse-power, is needed for the deeper disturbance of the subsoil, is a very erroneous conclusion. It is, in very many cases, only necessary to take off the mouldboard, from the common iron plough, and a subsoil plough is produced, capable of being drawn by only two horses, and yet of penetrating to the required depth. In Scotland they have some time since adopted this plan. Mr. J. Wilson, of Eastfield, has evidently adopted this mode with very considerable success. He observes, "The subsoil plough, from its great weight, I conceive, cannot be expected in many districts to be much used, as it requires a greater number of horses to wield it than is kept on many farms; but as a strong iron plough, drawn by two horses, has been found to answer equally well, at least where the soil is not very tenacious, subsoil ploughing may be performed any where at a trifling expense."—*Bell's Weekly Messenger.*

BOTTLING INSECTS.

The Boston Cultivator states that Mr. S. Pond, of Cambridgeport, practices with success the following plan, for catching insects. He hangs common glass bottles in his fruit trees, filled to the mouth with sweetened water, leaving the mouths uncorked. Wasps, hornets, beetles and moths of various kinds, are attracted by the liquid, and having once entered the bottles, are unable to escape. Transparent glass is said to be better than colored—few insects being found in the latter, but great numbers in the former. It is mentioned that Mr. Ives uses pitchers instead of bottles. They are filled two-thirds full, and are hung by the handle to the branches of the trees.

For the Southern Planter.

VIRGINIA FARMING.

Mr. Editor,—There may be Yankee tricks not so worthy of imitation; nevertheless, in all laudable business matters, if thrift be our object, we shall never err to take a Yankee model. The Yankee farmer rarely thinks of adding to his acres, his object is to improve that which he has. Is it thus with us in Virginia? Nay, verily. The large landholder is ever looking around to see where he can add to this, that, or the other portion of his farm, although too large now by half.—An opportunity soon offers—the small landholders around him, by reason of the excessive quantity of fencing which they are compelled to keep up, often throw their lands into market—they haven't timber enough for firewood and fences. If they plant a crop, it is destroyed by the immense herd of cattle turned upon *the common* to graze, unless those cattle be fenced out. This he cannot do; he has neither the timber nor the ability to do it, and is now obviously in the power of the adjoining woodland owner. None other can buy it. The very reason which induced A to sell it must prevent B from buying and settling upon it. There are several farms in the immediate vicinity of the writer, which if properly fenced in, would not have one tree left upon them. Such lands are constantly being thrown into market, and are most invariably purchased by the woodland owner, hard by. Hence the population of Virginia instead of becoming more dense, as it should be, is continually becoming more and more sparse. Nothing can arrest this great and

growing evil, but the passage of a law requiring every one, under a heavy penalty of some sort, to keep his stock within his own enclosure. There is scarcely a farm in this part of the State, if already under tolerable fence, but has rails enough on it to enclose and re-enclose a sufficient *standing pasture* for the cattle upon it, for the next twenty years. Let the Legislature pass the desired law, and the farmer has only to gather his superabundant rails (which in most cases will be two-thirds) house or stack them in such way as to protect them from the weather, and console himself with the idea of not having another rail to cut or maul for twenty years; and if he be worth a fig, he may now enrich his land to an extent he had never dreamed of. He has now time to gather the leaves of the forest so soon as they fall, (and they are worth thrice as much then as afterwards when bleached by snows and rains.) He can now secure weeds, cornstalks, coarse hay and all other vegetable matter, which can be made to decompose during winter, but which must be done ere they are nipped by frost. Let these be gathered together so long as a load can be found, and hauled into the farm pen, which should be concave and trenched around with a ditch and embankment, so as to retain the juices of the manure. Whenever a sufficiency of this vegetable matter is brought into the farm pen to form a tolerable strata, when trampled down throw over a bushel or more of lime—or, if this be not convenient, then haul in your ditch banks or rich mould, wherever it can be found; this will be a good substitute for lime.—If, however, this cannot be done, clean out your stables, and use this in place of lime or mould; it will aid much in bringing about decomposition. Farm pens should be covered, so as to keep out the rain and snow, but as we have not time now to attend to this *sine qua non* we will give it our earliest attention, after the adjournment of the next Legislature, if they will give us the relief we call for. And I here warn one and all of them, if they refuse it, it will be made a test at the next election, when it may suit the convenience of the fence-ridden farmer to say *you don't suit us.* We now call on our brother farmers, who are the bone, the sinew and life of the State, and who have a right to have things in their own way, to call meetings in their respective counties, pass resolutions and send instructions to their various delegates, to vote against the present fence system, or resign.

At least two-thirds of our Legislature should be practical farmers. Let us interrogate them a little, and see if they be such. We approach the member from G.

Voter. How many hogs have you?

Member. Forty-two.

Voter. How many of them have two ears?

Member. Can't say exactly; some eight or ten, probably.

Voter. How many have only one ear?

Member. Several of the old ones—I would say five or six.

Voter. How many have no ears?

Member. All the old ones and many of the others have lost their ears; can't be particular as to the number.

Voter. Do you keep your hogs on your own farm?

Member. Not half the time; that would be too expensive.

Voter. How do you dispose of them?

Member. They are turned out on the *common* so soon as the grass makes its appearance, where they remain till a fall of snow; we then take them up and feed them. Our fattening hogs are generally taken up somewhat earlier.

Voter. How happens it that so many of your hogs are minus an ear, and yet a larger portion without an ear at all?

Member. Why, sir, the truth is, my neighbors' dogs are death upon a hog.

Voter. Pray what have your neighbors' dogs to do with your hogs?

Member. My hogs frequently leave the *common*, and range up and down the lanes and around my neighbors' fields, in order to get the grass which grows in the corners of the fences; and it sometimes happens that a gate is left open, or is blown open by the wind; or there may be a rotten rail in the fence; or, if that be not the case, to tell the truth, some of the *old*

sows in a dry season, when the grass on the *common* fails, get so light, thin and hungry, that they will easily climb over a fence five or six feet high, and either by one means or another, they are frequently in my neighbor's enclosure, to the great injury of his crops, and *vice versa*, theirs are as often upon my crops. The only chance now is to catch them with dogs; for a hog, you know, when pursued, will never go out the way it came in. It has no idea of permitting its place of ingress and egress to be found out and stopped; but when not pursued will go in and out at the same place all the time. It is in this way their ears are destroyed, being bitten off by the dogs which catch them.

Voter. How many cows have you?

Member. Some thirty or more.

Voter. How many have tails?

Member. Oh, I don't know; you ask me some very queer questions.

Voter. They may be queer, but still I'd like to know.

Member. I believe some five or six have lost their tails, in whole or in part.

Voter. How did that happen?

Member. I perceive you intend taking me over the same route you did with the hogs, and to cut the matter short, I'll just say, it happened to them precisely as it did to the hogs, with this exception, the cows lost only their tails, whereas the hogs in some instances lost both tails and ears. And now I'd like to know your object in making all these graphic inquiries?

Voter. I'll tell you before I'm done, and in the meantime, pray tell me what think you of the propriety of *standing pastures* for our stock, and as a necessary result therefrom, dispensing with at least two-thirds of our fencing, which you know, would give us ample time for making manure, and improving our lands, building houses for our cattle, &c. &c.

Member. All I have to say, in reply, is this: you may make out a right pretty theory on that subject, but it will not do for practice. Our fathers knew it, and, therefore, never attempted it.

Voter. Our fathers had good lands which needed no improvement; good timber, which when made into rails, lasted half a generation, but it is not thus with us; our lands are exhausted, and old field pine rails, (our chief dependence,) will barely last us five years. We are all the time mauling, hauling and putting up fencing, when we should be making manure and building comfortable houses for ourselves, our servants and our cattle. But if your idea be correct, viz: that we are only to do, or not to do, what our fathers did, or did not, then we must continue to drive our sows and pigs, cows and calves, sheep and lambs into the corner of the fence and stick a pine bush or two over them to spend a long Virginia winter, flattering ourselves, meanwhile, that if some of the sheep and lambs die we shall have the more fodder left for our horses; if we lose part of the sows and pigs we'll have the more corn left, and that every cow and calf which dies will furnish us a side of leather. And now, as I promised you, I'll tell you the reason of my many inquiries. I wished before the election, to ascertain whether or not you were, or possibly could make a practical farmer, and I find you think it bad economy to attempt the improvement of our lands.—Indeed, you seem opposed to any and every thing not practised by our fathers, and I must now tell you *I can't vote for you.* Our fathers had many virtues which we should strictly imitate; but at the same time, they had had no experience with *old field pine rails, gullies and poor land*, and consequently, didn't know every thing. B. M., of Hanover, refused to his death's day to substitute the iron trace for his wooden plough shafts, and *his principal reason was this:* "His father never used them!" What think you of the strength of his reasoning? It's just as weighty as yours.

"*Quid rides? mutato nomine de te fabula narratar.*"

R. W. W.

Oak Shade, Goochland, August, 1847.

Money skilfully expended in drying land by draining or otherwise, will be returned with ample interest.

HOW TO GET A NEW VARIETY OF POTATOES.

When the vines are done growing and turning brown the seed is ripe; then take the balls and string them with a large needle and strong thread—hang them in a dry place where they will gradually dry and mature without injury from frost. In the month of April soak the balls for several hours in water, then squeeze them to separate the seed from the pulp. When washed and dried they are fit for sowing in a bed well prepared in the garden.—They will sprout in a fortnight. They must be attended to like other vegetables, and when about two inches high they may be transplanted into rows. As they increase in size they should be hilled. In the autumn many of them will be of the size of a walnut and from that to a pea. In the following spring they should be planted in hills, placing the larger ones together. They will in the second year attain their full size and will exhibit several varieties of form, and may then be selected to suit the judgment of the cultivator.—*Ogdensburgh Republican.*

FRYING.

Frying, as is properly observed by Dr. Kitchiner, is often a convenient mode of cookery; it may be performed by a fire which will not do for roasting or boiling, and by the introduction of the pan between the meat and the fire, things get more equally dressed.

Be very particular that your frying pan is perfectly clean before using it. Never use any oil, butter, lard, or drippings, which are not perfectly free from salt, and perfectly sweet and fresh. As frying is, in fact, boiling in oil fat, it is of the first importance that your fat should be clean, or it will spoil the look as well as the flavor, and salt will prevent the meat from browning.

Good oil is, perhaps, the best to fry in, but sweet, fresh lard, or clarified mutton or beef suet, will answer every purpose, nearly, if not quite as well as the best oil or butter, and, what is of greater importance, at a much less expense. Nice clean dripping is almost as good as anything. After you have done frying preserve your fat, which, if not burnt, will do for three or four fryings; but fat in which fish has been fired will do for nothing else.

If your fat is not of a proper heat, your frying cannot be well done; this is, in short, the great secret in frying, which the young cook ought and must acquire. The frying pan must always be set over a sharp and clear fire, or otherwise the fat is too long before it becomes ready. When the fat has done hissing, or bubbling, that is, when it is still, you may be pretty sure that it is hot enough. It is a good way to try the heat of your fat, by throwing a little bit of bread into the pan; if it fries crisp, the fat is of the right heat; if it burns the bread, it is too hot.

When your things are well done, take care and drain all the fat from them *most thoroughly*, particularly those that have been fried in bread crumbs, &c; if you do not, your cookery will be marred.—Fried fish ought to be quite dry. This depends in a great measure upon the fat in which they are dressed being of a proper heat. If the fish are well done, and are well drained of the fat, they will become quite dry and crisp in a few minutes after they have been taken out of the pan. If this, however, should not be the case, and the fish, on the contrary, should be damp and wet, lay them on a soft cloth before the fire, turning them occasionally till they are dry. They will sometimes take ten or fifteen minutes drying.

In preparing bread crumbs in a considerable quantity, in order to save unbroken the crust, and preserving it fit for the table, cut your loaf into three equal parts, that is, cut off the bottom and top crusts, and use the middle part or the crumb for your frying. The bread should be at least two days old. A good and cheap substitute for bread is oatmeal, which will cost, comparatively speaking, nothing.

It is scarcely necessary to refer the cook to our general remarks upon the above

operation. Frying is preferred by many persons to broiling; and our own opinion is, that steaks, chops, &c., may be dressed with much more certainty and regularity by the former than by the latter method. But plenty of oil, butter, or sweet grease, must always be used, or the frying will be imperfect.—*Sanderson.*

For the Southern Planter.

EXPERIMENT WITH GUANO.

Mr. Editor,—It affords me pleasure to comply with your request, made to me through my friend, Mr. Henry A. Washington, to communicate for the Planter the result of my experiment with guano. I do this the more readily since I perceive by the last number of the Planter, that you and one of your correspondents are disposed to treat with distrust, if not with ridicule, the virtues of this "great fertilizer." Like yourself, I was for a long time incredulous as to the marvellous effects attributed by advertisers and others to guano. But having occasion, eighteen months ago, to visit St. Mary's county, Maryland, where it had been used extensively, for years, I was assured by so many intelligent, and practical farmers, who had used it repeatedly, of the very satisfactory results of their applications of it, that I could no longer doubt its efficacy. I determined to purchase a single ton, at all events, to satisfy myself by actual experiment. I purchased the Ichabod, then selling at thirty dollars a ton of 2,000 lbs. That that the experiment might be entirely fair, I selected a very poor piece of exhausted high land, commonly called "forest land" in Eastern Virginia, which had been cultivated in corn during the year, and produced certainly not more than a barrel to the acre. The land was ploughed for wheat, after the corn was removed, and the guano applied at the rate of 250 lbs. to the acre, on eight acres, and harrowed in. The wheat was then sowed as nearly as could be at the rate of a bushel to the acre, and the land again harrowed and rolled. In addition to the price of the guano, two dollars were charged for freight and drayage, making the cost on the farm thirty-two dollars, or four dollars for each acre dressed. The result was to me entirely satisfactory. The yield of the eight acres was eighty-eight bushels of sound, heavy wheat, or eleven for one, on land that no man in his senses, would have thought of sowing in wheat without manure, and which certainly without the guano would not have produced three bushels to the acre.

Mediterranean wheat was sowed, which is by no means a prolific variety, and the straw reaped, if it had been of any other kind was sufficient to have yielded at least fifteen for one. The land exhibits now marked evidences of improvement. The profit of this speculation is obvious. I have my seed returned, and ten bushels of wheat, say ten dollars per acre over, which refunds the four dollars paid for the guano with four dollars, or one hundred per cent. profit, which leaves the straw, the enhanced value of the land, and two dollars in cash, to compensate for the labor of sowing and harvesting the crop.

On twenty-five acres of the same field immediately adjoining the guano, I expended four dollars per acre, in lime and ashes—about thirty bushels of lime and fifteen of ashes mixed and applied to the acre. The land was in the same condition in all respects, ploughed and sowed at the same time in the same variety of wheat. The result was five and a half bushels of wheat to the acre. The result of my experiment was sufficiently satisfactory to induce me to increase my expenditure in guano this year to one hundred dollars, and many of my neighbors, sensible, practical farmers, have expended considerable sums in its purchase.

My experiment, however, was by no means so striking as one made by my friend, Dr. Austin Brockenbrough, of Tappahannock. He sowed three bushels of wheat on three acres of very poor land, to one of which he applied forty cart loads of well rotted manure, and to the other two, three hundred pounds of Peruvian guano per acre. The wheat on the guanoed land was much superior to the other.

The yield from the three acres sixty-six bushels, or twenty-two for one. This statement I have frequently had from Dr. Brockenbrough himself, who is a gentleman remarkable for his accuracy. He *ploughed* the guano in. He has this year made quite a large purchase of guano.

Let me not be understood as advising the use of guano to the neglect of other manures. On the wheat crop, ploughed in, I regard it as certain in its operation. Upon spring and summer crops, in this warm and dry climate, its effect is, in my opinion, too uncertain to render its use advisable. But for extending the wheat crop upon large fields, all of which cannot be manured from the resources of the farm, it is an admirable adjunct, and at any reasonable price may be applied with profit. But lime (in some form or other) must be regarded as the great renovator of Eastern Virginia, without which no *extensive* and *permanent* improvement can be expected. I have used it extensively (both stone and shell) for a number of years with entire satisfaction, not only in the improvement of my lands, and crops, but what is equally important in the increase of the *nett profits* of my agricultural undertakings. As doubts have sometimes been expressed in the Planter as to the efficacy of lime, I would like, if I had time and you space, to give you a chapter on this subject, and also, to say a word or two in regard to the profits of agriculture in Eastern Virginia, about which there seems to be a singular misconception in the public mind. Our citizens are constantly invited to leave the land of their fathers in search of profits abroad, while they have only to reach out the hand of industry to reap at home. We are advised in a spirit of wild adventure to abandon the finest region on the globe, rather than by the practice of the homely virtues of industry and economy to improve it. I deem it the duty of every patriot to endeavor by every means to repress this spirit, and the most effectual means of doing this is to satisfy our people that they can do better by remaining at home than by going abroad. To this end I may, at a future day, give you an article on the *profits* of agriculture in Eastern Virginia.

WILLOUGHBY NEWTON.

Westmoreland, Dec. 10, 1847.

We most heartily concur with Mr. Newton in the remarks which conclude his letter. If he will turn to the number of the Planter for October, 1847, he will find the same views defended at length in a review of Mr. Bruce's Agricultural Address, (Vol. VII., p. 299.) And if he will look into the January number for the same year, he will find an editorial (p. 16, Vol. VII.) from which he will discover that we agree perfectly as to the causes of the decline of Virginian agriculture. An article upon the profits of agriculture in Eastern Virginia from the pen of one who is able to do it justice is what we have long desired to publish; and we know of no one better able to furnish it than the writer of the foregoing communication.

With regard to lime, we do not recollect any expression of doubt as to its value, in the Planter. We have always regarded it one of the most important renovators of the soil, and should be much pleased to hear from Mr. Newton upon that subject.

UNDER-DRAINING.

Mr. Johnston is of opinion that the winter-killing of wheat is caused by too great a retention of water in the soil and subsoil. In this we may agree with him. To obviate the evil he has resorted to under-draining with tiles, of which he laid seven hundred rods. The tiles are made by Mr. Whartenby, of Waterloo, after a pattern procured by Mr. J., from Scotland. They cost at the kiln twenty cents per rod. The drains are dug about two and a half feet, or so low that the water does not come up through the bottom. The digging costs from eight to ten cents per rod. The tiles appear to be made in the best manner. They are not in the least injured by the weather, even when exposed to the most severe frost. When

the bottom of the ditch is firm, the tiles are placed immediately on it; if the ground is soft, a hemlock board is laid down, on which the tiles are placed.—A little straw is laid over the tiles, and the earth which had been excavated is then thrown on.

The beneficial effects of draining on Mr. Johnston's farm are very apparent.—Places which formerly would bear no wheat, nor indeed scarcely any thing but a kind of sour grass and reeds, are made, merely by draining, to produce the finest crops of every description of grain. He is so well convinced of the advantages of the practice that he has laid four hundred rods the present season, and intends to continue it still more extensively.

For the Southern Planter.

REARING CALVES.

Mr. Editor,—I have some experience in the rearing of calves, and, as I think, every farmer ought to send at least one article a year to his agricultural journal, I will now give you some facts which experience has shown me to be worth attending to, for your Planter, if you think they are worth publishing in it.

When the calf is first produced, it is the natural disposition of the cow to lick it clean of the slimy matter adhering to it. But cows sometimes disown their calves, and when they do so, they generally refuse to perform this natural operation; while on the other hand, if you can induce them to give this first evidence of maternal care, they will generally continue in the proper course of conduct.—Here is my way of doing this. I hold to their mouths a handful of salt, and when they have tasted it, I sprinkle it over the calf. They then rarely fail to perform their duty.

For the sake of the milk I always separate the calf from the cow when it is three or four days old, and feed it on skimmed milk and gruel till it is able to eat boiled turnips and a little hay. When milk is first given them in a bowl or pan, they sometimes do not understand it. To teach them to drink, I place my finger in their mouth, which they, mistaking it for the teat, will begin to suck. I then gently raise the vessel containing the milk so that the hand is immersed in it, and so that the liquid reaches the creature's lip without your withdrawing the finger.—Thus while it sucks the finger, it will get the milk around it. You can then gently pull out your finger and leave the mouth in the milk. After having done this a few times, the calf will drink of itself.

When the weather is good I turn my calves out to run with the cows, and then to keep them from robbing me of my milk, I fix on a leathern headstall with a piece of leather an inch wide passing round the upper part of the nose, in which I have six or seven little iron spikes, sharp-pointed, an inch and a half long, and standing straight up. When the calf attempts to suck these prick the bag of the cow, who will thereupon drive him off in double quick time. Calves are quickly weaned by this method.

From observation I am convinced that nothing is so important if you wish to raise a good ox or a good cow than to feed the animal well when it is a calf. If you stint a calf it will never recover from the effects of that stinting, nor will it ever attain its full growth. It must be a *very* fine animal indeed which will attain even a *tolerable* growth if scantily fed when a calf. Don't spare the provender, or the milk, or the boiled turnips, while it is growing, if you wish to make anything out of it. Give matters a start in the beginning and you will see the effects of it in time.

Calves dropped in October or November are the best for purposes of increase, because the milk at that time is not so much used for dairy purposes and more of it can be given them. They are generally more free from distempers at that time, and will be better calculated to take advantage of the pastures next spring.—Bulls should be put to cows at such times that the calves will be produced in the latter part of the fall.

I castrate my calves when they are fif-

teen or twenty days old, provided, they are in full health. The weather should be moderate, and they should be kept quiet till they get perfectly well. It is of the first importance to keep the air from the wounded parts. Mutton suet, lard and a little beeswax does this very well. But a salve composed of one part beeswax, and two parts of Venice turpentine does still better. These should be melted together, and when wanted for use, a little may be melted in a spoon, and as it requires but very little heat to keep it in a liquid state, it may be then poured over the cut. It gets cold in an instant, and then it completely excludes the air, and destroys the pain. I will mention, Mr. Editor, that this is the very best salve in the world for all wounds and abrasions of the skin upon the human body, and your readers will not be surprised at it when they learn that it is this salve spread smooth by machinery upon a piece of linen, which composes the common "*sticking plaster*," or "*adhesive plaster*," so much in use. A lump of it is easily prepared and should be kept in every family, and when wanted, a little piece may be warmed, spread with a knife upon a rag while warm and then tied round the wounded part.

The facts which I have stated are well known, I am aware, to a great many. But there are still many others unacquainted with them; and it is for the latter class that I write.

William L. D. Smith.

Dec. 11, 1847.

BUCKWHEAT FOR FOOD.

At an agricultural conversation, held at Boston, by the members of the Massachusetts Legislature, two or three years since, there was all but a universal condemnation expressed upon buckwheat for food. The only exception to this condemnation which we now remember, was from Mr. Buckminster, the editor of the Ploughman.

Many were at a loss to account for the fact that so singular an opinion should be so generally concurred in, at that place. But the fact is, that the Yankees, though they know a good many things, do not, or did not, know how to manage buckwheat. We have had some experience, and can say that we never did eat a good buckwheat cake in New England. The article, as seen by us, was universally black, gritty, and heavy. It was common to manage the crop in something like the following manner, in that region, say fifteen years ago. It was suffered to stand till dead ripe, then mowed or cradled, and the gavels raked upon the ground, where they were suffered to lie. A bed was made in the field, and the threshing was also done upon the earth. The grain was then run through a fanning mill—then ground without being cleaned from its dirt, and not bolted. It was merely sifted for use, and the cakes made of it were such as described. It is possible that there are some of our readers who manage it in the same way.

The buckwheat flour sold in this city, where it is an article of general consumption during the winter season, is, when cooked, as white as that of wheat, equally free from grit, and as light; and there is no reason why it should be otherwise.

To make this sort of flour, the grain is cut before it is dead ripe. Instead of the gavels being suffered to lie on the earth, they are mostly set on end, till dry. It is then carried to the barn floor, and threshed like other grain. When taken to the mill, it is passed through the smut machine, and cleaned of all grit It is then ground and bolted like wheat, and is as clean as the flour of that article.

One word as to its cooking. The batter is mixed with good yeast, and suffered to stand over night. In the morning a little sal æratus is added to correct acidity, and the cakes are ready for baking. Now as to the eating.

Let no man think of eating them otherwise than hot. A cold buckwheat cake is not to be endured. One must cook while the rest eat. Then as to the dressing. Do not eat *molasses* upon them. It is execrable Procure syrup, not molasses. The first costs here seventy-five cents per

gallon, while molasses costs fifty, or fifty-six cents.

Many accuse buckwheat of being an unhealthful food. We do not believe a word of it. The eruptions of the skin, attributed to it, are either due to the quantities of butter with which the cakes are eaten, or to the sand and dirt swallowed with them. No wonder that those who eat earth, have eruptions. They should have them, and would be cheated of their dues, if they did not.

A very small quantity of butter, or grease of any kind, is required with buckwheat cakes. Moderation is best, not only for health, but for the taste. The persons who will not relish buckwheat cakes made by the pattern here laid down, are probably few.—*Prairie Farmer.*

For the Southern Planter.

TRANSPLANTING AND RENOVATING TREES.

Mr. Editor,—The following, in my opinion, is the best method of transplanting trees ever invented. Dig a roundish hole *large and deep enough to permit the roots of the tree to be placed in it in their natural position.* Let it be six feet across, if necessary. Pulverize the earth you take out of it so fine that it will pass through a large-sized sand sifter. Mix it up with any good and mild manure—that which you get from old rotted stumps and fallen trees in the woods is the very best.

Then make one man hold the tree in a perpendicular position and with a steady hand, with the roots lying in the hole in their natural position. Cause another man to pour two pailfuls of water in, while a third slowly sifts in the fine soil in such a way as to fill the outside of the hole first, and keep the water about the tree.

The advantage of this method is that it keeps the roots in exactly the same position in which they grew, and, therefore, the removal causes the least possible disturbance to their functions. Trees set in this way get so firmly fixed in their perpendicular position that in a few hours they appear to have grown in the identical spot in which you place them.

I can also give you a method for renovating fruit trees that are, as they say, "run out;" sometimes called "outcasts;" that is, they have ceased to bear as good fruit, or the same quantity which they formerly produced. Dig a trench on each side of the tree, say ten feet long and two feet deep, about eight feet from the trunk of the tree. All the roots you come across in digging this trench you cut off. The earth taken from them should be carried off to a distance from the tree. Then fill these trenches up with fresh earth taken from one of your garden beds where vegetables have been raised, or from some old pasture land. Mix it with an equal quantity of ashes, old rotted dung, or vegetable mould, stirring up the trenches repeatedly with the spade.

The reason why good trees "run out" is that the particular elements in the soil in which they are set have been exhausted. By means of these trenches they are supplied with fresh soil. I got this method from a gentleman of another State. I have tried it and I know it to be the true plan. If any one else should try it I hope they will publish the results in the Planter.

JAMES BURRUSS.

Valley of Virginia.

We believe the plan tried by our correspondent was first pointed out by Mr. Downing.

For the Southern Planter.

THE POTATO ROT.

Mr. P. D. Bernard,—As the potato rot is making such rapid progress I will give my experience with the present crop. I planted largely after I had planted my corn in drills about two and a half feet apart. I put a spoonful of plaster of Paris on each potato that was not cut; all those that were cut I rolled in plaster. I planted both in new land and in old land. In the old land I found many of the largest potatoes had rotted, but in the new land I did not find one that was in the least

unsound. The old land was of a stiff clay soil; the new land was of a dark color, intermixed with many leaves and much old rotten wood. As I dug my crop I spread them out to dry. After they were dry I put them into a cellar room, keeping them spread out as thin as possible until there was danger of their being injured by frost. I then put them into a bulk with straw at the bottom and chaff on top. I have not seen any appearance of rot since I finished digging. I should like to know, through the columns of the Planter, what has been the experience of some of our extensive potato raisers in Virginia. I found more of the rot in my garden amongst my early potatoes, where manure was used freely, than elsewhere. There is much information wanted on the subject of the potato crop; and it is to be hoped that some of our observing farmers will hit upon a mode of cultivation which will check, if not put a stop to the disease. If planting in new ground will answer the desired end, it will be a simple remedy and within the reach of nearly all. Farmers, *try the new ground next spring and give in your success next fall.*

I subscribe, H.

Amherst, Nov. 21, 1847.

From the following extract from one of our Western exchanges, it would seem that they have something very like our own renowned "Virginnny varmint," in the prairies:

DO SNAKES HISS?

The New York Commercial Advertiser has got itself into a question deep and ponderous. The subject of the Commercial's agitation is the caption of this article, Do Snakes hiss? Yes, says "every body," off hand. But on pinning the witnesses down, only one or two can be found who will positively declare the affirmative, and these only in relation to a particular sort of viper or adder—leaving rattle snakes, copper-heads, and all the spotted and venomous brotherhood to rattle and otherwise alarm; but *not* to hiss.

Some people affect to think such questions as these "small potatoes," unworthy of the investigation of sober men. We are of different opinion. This world is made up of small matters, but we consider them nevertheless worthy of being looked after. A few lines tending to settle a question in natural history are as much in place as in settling a question in politics. We have several others of like calibre, which on due occasion we intend to propound. Has any body any objection?

Speaking of snakes—there is a very peculiar serpent found on our prairies, of which we have never seen any account in print. They are commonly met with in pairs in the spring. The snake is from four to six feet long, spotted like a rattlesnake, as fierce as a thousand hyenas, and very lively. The tail is not provided with any rattle, but is tapered off into a horn, or spike, one-half or three-fourths of an inch in length. This is vibrated, with a rotary motion, with a tremendous velocity; and produces a sound as loud and thrilling as that of a rattlesnake. As to their venom we know little, preferring not to let them strike us; a feat which they evince no reluctance to accomplish. The Indians pronounced them, in answer to our inquiries, "no good."

We have also a species of the rattlesnake called by the Indians *Massasauger;* a dull colored, short, thick, stupid *varmint,* ready to rattle, when scared, and to bite when trod upon, but not anxious to go out of his way for it. His bite is death to sheep, dogs, horses, and men—*sometimes;* but yields to remedies pretty easily—being less deadly than that of the large mountain rattlesnake. It is said that the latter also are found in the south of our State. Is this so? How many and what snakes do *you* know of, friend, here in the West?

URINE OF ANIMALS.

The quantity of liquid manure produced by one cow annually is equal to fertilizing one and a quarter acres of ground, producing effects as durable as do the solid evacuations. A cord of loam saturated

with urine, is equal to a cord of the best rotted dung. If the liquid and the solid evacuations, including the litter, are kept separate, and soaking up the liquid by loam, it has been found they will manure land in proportion by bulk of seven liquid to six solid, while their actual value is as two to one.

One hundred pounds of cow's urine afford thirty-five pounds of the most powerful salts which have ever been used by farmers. The simple statement, then, in figures, of difference in value of the solid and liquid evacuations of a cow, should impress upon all the importance of saving the last in preference to the first; let both be saved. If the liquids contained naturally geine, they might be applied alone. It is the want of that guiding principle which teaches that salts and geine should go hand in hand, which has sometimes led to results in the application of the liquor, which have given this substance a bad name.

For the Southern Planter.

INDIAN CORN.

Mr. Editor,—Some time since I advocated a theory of raising corn perpetually from once manuring in a certain way, viz: preparing the land well, as for wheat, sowing rye one peck, and vetches, alias, partridge peas, one peck, and about the 25th of May turn the whole in and plant corn on the back. Having been persuaded to sow wheat, I had, of course, to abandon the theory, much against my will.—This season is the first that I have been able to give a partial trial of it, and I now give the result. The piece of land selected was in good heart, but owing to the dry spring I had to cut off the vetches, and the press of business prevented my attending to the experiment until the 1st July, at which time a second crop of clover, ribwort and some vetches, which came a second time, from being cut before seeding, in all about twelve inches high. I ran a two-horse furrow, and in the bottom of it I drilled the corn quite thick. I then turned three furrows, making the rows stand in the fourth furrow, or about three feet apart; and after all was planted I rolled the ground well and left it. In a few days it came up and grew off very rapidly. As soon as it was six inches high I took out the front teeth of a three-cornered harrow, and straddling the corn once over the row, followed with the hoe, just shaving the spires between the hills. These operations were repeated once when waist high, as before, save that a small harrow, drawn by one horse, ran in the spaces previous. I sowed rye and a few vetches, as many had come up by this time and were destroyed. The corn filled as well as that planted in spring where the distance of three by one was observed. Where it was thicker, it did not ear or fill so well. Here is a clear experiment of my theory, so far as capacity is concerned, for the ground is full of vetches and rye, ready to be repeated, if necessary, *ad infinitum*. Could this experiment have been made thirty days earlier I have no doubt that fifty bushels per acre could be easily raised; whereas I did not average above thirty-five, and that not fit for bread, though fine for fattening. The corn was Mr. Dicken's yellow, which comes three weeks earlier than the gourdseed. It will be perceived that neither plough nor cultivator ever broke a root, and the ground continues even now as mellow as could be wished.

My attention was first drawn to this plant by discovering a few plants in the garden. Next I took off the little soil remaining on a galled spot and laid some vetch vines on it to pop themselves out, and after obtaining the seed left the vines there, where they rotted. This was four years since, and nothing was ever put on the spot to aid it. It is now covered closely with red and white clover, and bids fair to keep on for four or more years without any help, other than rest. Next I looked into the treatise of Arthur Young on that and other plants, and he gives vetches, of which there are thirteen varieties, the front rank in forage. He remarks, that Great Britain could not (at that time) raise as much beef as she did by more than half without the aid of this

rich leguminous crop. He used three varieties only—the gray and black, which are the winter kinds, and a large kind which are sown in spring, as oats, for summer soiling. The two former are abundant on our James river lowgrounds, and the other does not suit our climate.

In the Planter some time since a writer on sheep advocated the theory that legumes were the best feed for sheep, because those plants contained all the constituents of wool. If this be true, what must be the value of vetches in sheep husbandry? for as food they are beyond all comparison the best of their tribe.—Speaking to Mr. Blain (of vegetable memory) about them, he remarked, what a singular food they were; for, says he, even my old mare, so hard to keep along, no sooner begins to feed on them than she fattens up and seems young again. I have tried them against corn and fodder, and corn and hay, and *know* them *alone* to be far superior to both for *mules*. Fed green, they are as good as any thing for hogs. The seed are fine feed for chickens. Arthur Young considers them the best crop to precede wheat which came under his long and varied observation.

J. H. D. Lownes.

JANE DAWSON ON RECIPES.

The readers of the Southern Planter frequently find in its columns recipes for various useful purposes, for cooking and other household affairs, for the cures of diseases, both of the brute and human animal, &c. We wish that they would bear in mind that a large portion of these recipes are extracted from other publications. Some of them will probably fail; but lay not the blame upon our shoulders unless we have given editorial recommendation of them. If we were to publish nothing of this kind but the prescriptions and processes which we ourselves had tried, and of whose efficacy we could give in our affidavit, we would have never published many things which, to our certain knowledge, have done and continue to do a great deal of good. All human knowledge is mixed with error; there is no medical substance or prescription which may not fail; but if we should refuse the advice of others as to the means of restoring health or for effecting economical purposes on that account, we should act a very absurd part. To turn a deaf ear to *all* newspaper recipes because some of them fail is as foolish as to refuse all dinners in future because the dishes of which they are composed have been sometimes cooked in an unwholesome manner.

We are certain that upon the whole the publication of these recipes is a public benefit; and we would suggest that in many cases their failure is as much owing to the careless and inattentive way in which they are applied as to the mistake or ignorance of those who state them. They are also frequently misapplied from misapprehension, resulting from the indefinite way in which such things are too commonly stated. We have before spoken to our correspondents on this point, and we hope all those who send us in future such recipes as they may have tried with success, will be careful to state the exact quantities, by weight and measure, which they used in their experiments. In those which we select we endeavor to take none but such as state definite quantities. Further than this we can do nothing, except choosing those which would be useful, if true, and which at the least bear no signs of absurdity on their face. We must then leave to our friends the testing of their worth or their worthlessless; and we have sometimes the mortification of receiving such epistles as the following:

Mr. Editor of the Southern Planter:

Sir,—I don't know as it exactly becomes a woman to be writin to one of your larnin, but as you choose to publish things belongin peculiarly to housewifes department you will excuse my sayin a few words about a little recete I seen in one of the numbers of your paper. And I want you to onderstand beforehand that I doesn't take the Planter myself, but one of my neighbors, Mrs. Hanson. Her old man takes it and I has been gettin butter of her for sometime, as my old cow don't give hardly enough milk to put in our

coffee. And not bein able to spare the niggers to run on errands I ginrally goes over for it myself. Now, Mrs. Hanson makes the best butter of any body in the county, and her husband makes the best crops. I don't mean the largest, in the main, but for the size of his farm, which a nt over big, but supports his family very well, and both he and she says they has larned more from that little paper of yourn than from the Enquirer or the Herald or any other of them mammoth sheets, as them Northern fellers calls them, put together. Now, old Uncle Zeke takes the Enquirer and neighbor Johnson takes the Whig and the Herald, and their farms aint near in so good order as Mr. Hanson's, who makes the best corn, and potatoes, and oats, and wheat, and his wife makes the best carpets and raises the finest pigs and makes the best butter of any body in this or any other county, and both of them says they larned most every thing they knows from the Planter, and Mrs. Hanson cured her agers twice and her bacon, last winter, out of recetes she got from it. Now the other day the butter gave out and I went over with my little bucket to get some, and while I was waitin for Mrs. Hanson to finish beatin of it, Little Johnny, who they sends to the post office, came in with one of your papers in his hat, and I thought I would look at it while I was a-waitin and see if there was anything that would do me any good, and the first thing I opened upon was a recete for keepin ants out of cupboards and sugar boxes. This was the very thing I wanted; so I determined to try it directly I got home, and I started out of the door without what I come for and should a-gone all the way home hadn't my neighbor called me back. Well, I jerked the bucket out of her hands and like to have fell backwards, but I didn't though, and got over home without any accident, which was a wonder, secin there was a sleet on the ground.

I puts the butter right down in a chair and goes right straight to the chist where the old man keeps two pounds of camphire in a glass jar, which he had bought up to take when he got the colick from eatin vegetables, and takes it out of the jar and sets the lumps about all through the cupboard where we keeps bread, eggs, cheese and sugar and all our groceries, which the nasty little ants had been in the habit of always crawlin over.

Well, Mr. Editor, next morning I got up before day to see what had happened in the cupboard, but was mightily disappointed to see the little varmints as thick and lively as ever. I told the old man, who said I was a fool to suppose they were going to be druv away so soon before the smell of the camphire had time to fill the cupboard, but I determined to wait patiently, and so I did for a fortnight, but there was no difference, unless it was more ants than before, and that warnt the worst of it, the bread and the cheese were so filled with scent of the camphire that even Judy, my spotted sow, wont eat them. And that aint all, for tother day I made the old man some egg-nogg and directly it got to his mouth he pitched it right in the fire and swore I had been sweetenin his egg-nogg with camphire. And then he tuck on in the most owdaciousest way. Yes, sir, he tuck on in a way, which I must say, although he is my husband, he tuck on in a way which is onbecoming to any decent man. After I had given it to him back again as he deserved, we went to see how it was, and found that all my eggs were on the top shelf of that cupboard and the camphire had gone up thare and got through the shells, so my eggs smelt like I had fed my hens on camphire for two years, all because of that dratted recete.

Now, Mr. Editor, I think you owes it to an injured female to publish this letter to let people know what sort of recete that is and not to put any more recetes in your book till you knows more about them.

Staford Kunty. JANE DAWSON.

It is with deep regret that we learn that anything in the Planter could have been the occasion of such disasters. But if Mrs. Dawson will turn to the unfortunate recipe she will find the directions are to place, not two pounds, but a small piece, wrapped in paper, in the way of the ants. If she had have followed

the directions her eggs would have been still good. Moreover, that recipe is not given by any one connected with the Planter. It is extracted from the Ohio Cultivator, to whom it is duly credited. His sins be upon his own head. It has been going the rounds of all the journals for the past year, and we are obliged to Mrs. Dawson for giving us the opportunity for contradicting it. And if any other reader finds in the Planter a recipe which does not fulfil its promises and will send us word to that effect we will be always glad thus to *nail it to the counter*. We must hint to our friends, however, that if they send us communications on small matters they must be short in proportion. The sex and the sorrows of Mrs. Jane Dawson rendered it but just that she should be allowed to spin her yarn to the end. A masculine correspondent cannot hope for the same indulgence.

In a private note accompanying Mrs. D.'s communication she requests us *not* to "alter a single letter or syllabul," as she wishes the "whole truth to come out." Accordingly we have given it in her original orthography, by means of which, though not according to Walker's rule, she is able to make herself very clearly understood.

TO PREVENT THE DECAY OF WOOD.

The "Archives of Useful Knowledge" gives the following method of rendering wood almost indestructible:

"Take twelve ounces of resin, and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train oil. Heat them slowly, gradually adding four ounces of beeswax, cut in small bits. Frequently stir the liquor, which as the solid ingredients are dissolved, will be fit for use. What remains unused, will become solid on cooling, and may be re-melted on subsequent occasions. When it is fit for use, add as much Spanish brown, or red or yellow ochre, or any color you want, first ground fine in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thick as you can. Some days after the first coat is dried give it a second. It will preserve plank for ages, and keep the weather from driving through brick work. Common white paint may be used on top of it, if required, for the sake of appearance. Two coats should always be given, and in compound machinery the separate parts should be varnished before they are put together, after which it will be prudent to give a third coating to the joints or any other part which is peculiarly exposed to moisture, such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all the timber which is near the ground. Each coat should be dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should for the sake of security, be heated in metallic vessels, in the open air; for when the oil is brought to a boiling point, or six hundred of Fahrenheit, the vapor catches fire, and though a lower temperature should be used in this process, it is not always possible to regulate the heat, or to prevent the overflowing of the materials; in either of which cases, were the melting performed in a house, fatal accidents might happen."

For the Southern Planter.

AGRICULTURAL JOURNALS.

Mr. Editor,—I wish to give you a hint of the value of the Farmer's Register and the Southern Planter in this one small neighborhood. Thirteen years ago I was reading the Farmer's Register, about the rocky land in Switzerland; where a very wealthy gentleman, in Switzerland, who was of the opinion, that the very rocky land thereabouts could be made productive and profitable, built several small huts on that rocky land and induced poor families to live in them by giving them a year's provisions, and at the same time requiring them to use their industry to improve the land, and provide for themselves. They were required to bring turf and dirt from the nearest bog; and this they used by

putting one spadeful to each dimple, for potatoes. The writer stated that he ate of the potatoes, and they were very fine. This small quantity of dirt thrown amongst the rocks and producing good potatoes, induced me to believe that much less manure would bring a plant than our forefathers ever imagined. I was so surprisingly struck at this that I hired a lighter and lightered manure from Norfolk, until I had laid out fifty dollars. I applied it to my crop by putting a very small quantity to each and every plant. The neighbors were surprised at my success. I bought manure in this way for years before any person attempted to bring a single lighter load from Norfolk. Now, sir, there is so many buyers that I failed this fall in getting the quantity of manure that I wanted, and was forced myself and one of my neighbors to go to Petersburg and hire an ark—a sailing lighter to bring us a load. This practice of buying manure has enhanced the value of our farms hundreds, and I may say thousands of dollars.—Well, sir, what has made this great change? The few individuals that were readers of the Farmer's Register and the Southern Planter. If you will take the trouble to look in the January number of the Planter, 1845, 1st and 2d pages, you will see the piece that I had put in the Planter on the commencement of this subject that I have been writing on. It speaks volumes for an agricultural paper. I intend to write out some of my experiments next fall, put them in type order, and send them to you for publication. I value the Planter so highly that I expect to be a subscriber for life.

Yours, very respectfully,

WILLIAM GRIMES.

Norfolk Co., Western Branch.

N. B.—I have shown this letter to six of my neighbors, to find out whether either of them would come ahead of my statement in respect of manuring—not one but sanctioned it. W. G.

Corn meal should never be ground very fine. It injures the richness of it.

HOGS OF OHIO.

By a census of the swinish multitude in Ohio, published in the Cincinnati Atlas, that species of population seems to be increasing in the West as fast as the bipeds. The grunting total of Ohio is two millions.

DEEP TILLAGE.

We have noticed with pleasure that most farmers in this section have become converts to the system of deep ploughing and fine tilth. Instead of making their soil mellow only four or five inches deep, as is still practised by a few, the general custom is to plough from seven to ten inches, and thoroughly pulverize the earth to the same depth, with the harrow and cultivator. Experience has taught them that a deep, mellow soil is vastly more productive, other things being equal than a hard, shallow one. We expect soon to see a few enterprising men driving a second plough in the furrow of the one that breaks the surface, and thus secure to their crops a double amount of previous soil, in which a double quantity of soluble mineral elements may feed and bring to maturity a double harvest. Very few fields in Western New York lack vegetable mould. So far as the atmosphere supplies nutritive elements, these are mainly dependant on the large development of roots. A root of corn or other plant which is one-fourth of an inch in circumference and five inches long, presents to the soil the rains, dews, and air of heaven only one-third of imbibing nutrition that it would if ten inches long and three-eighths of an inch in circumference. In a deep, mellow soil and a large growth of roots the husbandman is sure to have corresponding growth of green stems and leaves above ground, to imbibe gaseous food from every passing breeze, the atmosphere can only fulfil its whole great office in support of vegetation, on deep, pervious soils like river bottoms.

If the earth lacks any essential ingredients used by nature in the organization of the cultivated plant, no amount of til-

lage can create the absent element out of nothing. This fact should never be lost sight of.

We have a parsnip in our office three and a half feet long, and we have pulled beans in a field, whose roots ran thirty inches into the ground. To give plants a fair chance in a poor soil, it should be very deep, that roots may travel a good way to get their aliment.—*Genesee Farmer.*

For the Southern Planter.

SALT AND POTATOES.

Mr. Editor,—I feel disposed to commence this communication, rather in a bad humor, by saying that the present age is remarkable for its impertinence, for a neglect of the tolerably good old rule, that every one should mind his own business and let other people's alone. For instance, it seems to me that every philosopher, lawyer, doctor, merchant and loaf—gentleman of leisure, I mean,—when he has nothing else to employ him, sits down and amuses himself by writing for the agricultural papers. They cannot be farmers,

Tho' in the catalogue they go for such,
As hounds and greyhounds, mongrels, spaniels, curs,
Shoughs, water-rugs, and demi-wolves are 'cleped
All by the name of dogs.

It is only in this way that I can explain some of those glaring absurdities, in "theory and practice," which abound in every "Agricultural Department." Oh yes! I know; it *is* the age of scientific research, and "in this enlightened day," old, practical farmers must not be uneasy if every one undertakes to teach them. It is not to the *research* that I am opposed, but I think there are too many at it; they're in one another's way, and some are covering up what had been *dis*covered. I reckon you were never in China, Mr. Editor? Nor you, sir, if you have read so far. Well, I hav'nt been either; but we have all read of the Feast of Lanterns, when every man, woman and child parades the streets with all sorts and sizes of lights from a farthing candle up to Crutchett's national. Do you suppose you can see anything by such a confusion of lights? Dev—, not a bit. Well, my opinion is, that we are living in a *protracted feast of lanterns*, got up expressly for the benefit of us farmers. But my limits admonish me to come to the main point, which will explain why I have got up such a row.

"*Salt* your potatoes," says Agricola.—"Seed potatoes should always be washed in *brine*," says ———, Esq. "Now, it is evident (says Dr. Twigem) that if the potato were immersed in a solution of muriate soda," &c. "From the nature of fungi, and the anti-this, that and the other properties of common salt." Very well, Professor, the theory may be very scientific, but here are the facts. J. L, a neighboring farmer, says, "I brought some potatoes from town (four miles) in a salt-sack, planted them, and none of them came up." W. A. makes a similar statement. John, an Irish laborer, says, "My employer told me to cut a quantity of potatoes for seed and if I saw proper, to plant part of the lot for myself. I did so. My share I put in an ould fish-barrel, after having washed it well, for I knew that salt would kill potatoes. Divil a pitayte came up, (of mine,) barin here and there a *wake stim*." "Augh! I always knew that," says Mr. P., (an English gardener, who was present.) "Didn't Jim Brown's son tell the same thing to our boys. He says he cut his up, in a meat-tub or something of the sort, after having washed it with a broom, for he says he had heard that salt was bad for them; and they never come up." "I thought ev'ry body knowed that salt would spile 'taturs," says my old negro woman. In short, there is but one opinion in the neighborhood, and the above statements are just as I had them from the individuals themselves.—By cross-examination I could elicit nothing else, and am forced to this conclusion—that the vitality of the potato is destroyed by salt, whether dry or in solution, not only from contiguity, but also by proximity.

You can publish as much of the above

as you think useful to the farming community, of which I am a young member.

Yours, very respectfully,

W. H. G.

Frederick Co, Dec. 17, 1847.

Our clever correspondent's letter is too witty to be curtailed of its fair proportions. We publish the whole of it, though we by no means agree with him in the first part of his discourse—that is, if we understand what he is after. We think his comparison of the age to a protracted feast of lanterns is anything but derogatory to it. The more light the better. Nor is it possible for too many to engage in researches after truth. Many false facts and unphilosophical theories will appear, but the truth will still come uppermost. This is the sole way in which science can be advanced with speed or certainty. W. H. G. does not write like a man who would have us to place scientific research in the hands of a few learned men shut up in the walls of monasteries, as it was in the middle ages; yet that would seem to be the drift of his first paragraph. For ourselves we would have every farmer in the State, who has eyes, ears, and common sense, do as he has done—not as he has preached. Let him observe the facts which go to prove or disprove any agricultural maxim, write them down, and publish them in his agricultural journal.

From the Maine Cultivator.

IMPROVEMENTS OF A PERMANENT CHARACTER.

Messrs. Editors,—As soon as the latter harvests are secured farmers should be attentive to improvements of a lasting kind.

Fences are to be made, or repaired annually; and all the wood material may be cut, split, mortised, &c, ready to be set as soon as the frost is out of the ground. The broken tools too may all be repaired in the shop, or in the kitchen corner, out of the way of the cook. Hoe handles, rake teeth, axe handles, and various other small matters may be attended to in winter rather than at the time when the tools are wanted for use.

All the farm tools should be kept in a tool house, and hung up and distributed where they may be found at once when wanted The hands should all be called to look at them till they learn the place of each; and when a new hand is employed his first business should be to learn where the tools are kept, and that all must be returned at night, if not at noon, to their proper places.

This arrangement saves a great amount of labor in the course of the year; and much fretting and scolding may be dispensed with when such a system is pursued. All farmers know that ten times as much is lost in hunting for tools, as would be lost in going a few steps, at night, to put them all in place.

In the winter season yokes may be made: and any farmer who has a good axe and a shave and auger may as well make his own yokes as to hire them made. Steers' yokes, particularly, are very soon made, for there needs not much curving in small yokes, and very crooked ones are not suitable for steers.

Steers and colts can be broken and made handy in the winter better than at other seasons. Leisure is needed to train them well. Colts should be halter broken when they are quite young. This is done by putting a halter on and letting them know there is something stronger than they are. They should then be trained to go by the side of the mother when she is in harness. They may be tied to the shaft of the wagon or the chaise and go to mill or to meetings. Colts trained in this way will never be afraid of the wagon or the chaise behind them; even though the bridle breaks and the blinders come off.

So far colts may be broken when they are but a few weeks old. The only objection to handling them so young, is, that boys will attempt to ride them and put them into harness where they may learn vicious tricks. Boys cannot break them properly. Great care and prudence, and judgment should be exercised in training them at first to draw and to carry burthens on their backs. The winter season, therefore, is the time when young animals should be trained.

But the boys must be kept at school through the winter months. Let not farmers' boys be led to think they are not to be educated as well as boys who go into stores and other places of business. Let the boys be scholars through the winter months, and let people who have families be employed during the same time to do the hardest jobs that are to be done in winter.

Other work may be done in winter if farmers choose to have other business than farming on their hands. In many counties in Massachusetts the shoe business is carried on to a great extent by farmers in the winter season. The trade of making coarse shoes or brogans is soon learned; and young farmers will be in better tune for spring work after making shoes through the winter than after a winter of idleness and dissipation.

A day lost is more than the loss of a day's wages—for the expense of the lost day are to be reckoned and added to the first loss. Yet young men are advised not to confine themselves in winter to labor so closely as to have no spare time for reading. No man need to work so many hours that he cannot devote one or two to reading in each winter evening.

W. B.

October 30, 1847.

LARGE CROPS AND FAT ANIMALS.

The profits of crops as well as cattle depend mainly upon the return they make for the food and labor bestowed upon them. The man who grows a hundred bushels of corn, or makes a hundred pounds of meat, with the same means and labor that his neighbor expends to obtain fifty bushels or fifty pounds, has a manifest advantage; and while the latter merely lives, the former, if prudent, must grow rich. He gains the entire value of the extra fifty bushels or fifty pounds.—This disparity in the profits of agricultural labor and expenditure is not a visionary speculation—it is matter of fact, which is seen verified in almost every town. We see one farmer raise eighty bushels of corn on an acre of land, with the same labor, but with more foresight in keeping his land in good tilth, and feeding better his crop, than his neighbor employs upon an acre, and who does not get forty or even thirty bushels. This difference results from the manner of feeding and tending the crop.—*Vt. Chronicle.*

For the Southern Planter.

THE FLY.

Mr. Editor,—There is much complaint of the fly in the wheat in this part of the State, and but very few farmers will make use of the only remedy to check them, which is grazing. Many believe that if wheat is eaten off it will never come again so as to produce wheat. My experience teaches me every year that it is of advantage to the wheat to be grazed in the fall, and in the spring until the first or seventh of April.

Yours, very respectfully,

I. I. H.

Amherst, Dec. 15, 1847.

A VALUABLE REMEDY.

A few days since we were in the company of several farmers in the vicinity of this city. We expressed to them our regret that they did not more frequently communicate to the public the results of their experience in agricultural pursuits and asked the cause of their reluctance to write. One of these gentlemen told us that some years since he and another farmer had published in the Planter a remedy for lice upon cabbages, and to the very next number somebody sent a contradiction. "This," said he, "cured me of publishing, as my feelings revolt from the suspicion of falsehood." We felt sorry that such a thing should have occurred, as our friend is a man of great experience and probity, and as we have found his remedy, by actual experiment, to be correct. It is simply to cover the leaves infested with the lice with a handful of dry earth. We have had cabbages in our own garden with the leaves shrivelled and wrinkled up as much

as they could possibly be, which have been by the application of the earth, reduced to their healthy and natural state and perfectly freed from the lice.

From this gentleman we have obtained the following simple method of treating the colic in horses and cows, which was given to him by the late Claiborne W. Gooch, of Henrico county. Steep a flannel cloth in spirits of turpentine and rub it upon the large veins of the neck and upon those which lead to the flank and shoulders, keeping the cloth wet enough to saturate the hair. In ten minutes this relieves the colic. "This receipe," continued he, "I have tried in three cases, once on a cow, and twice on horses, and in each case have found it effectual. All I ask is, that people will try it before pronouncing it false."

THINGS AT THE NEW YORK FAIR.

KIRK'S STEAM HAMMER.—The invention and patent of Lewis Kirk, Esq., of Reading, Pennsylvania, is worthy of special notice, as promising vastly increased facilities in the manufacturing and working of iron. A water-power in the vicinity of iron mines will no longer be necessary to their being successfully worked, as this hammer, can be set up anywhere that fuel can be had and turn out its products finished for the market. If a blast furnace and forge were erected in the same building, the waste heat of the furnace might be appropriated to the boiler of the steam hammer, and greatly diminish the expense of fuel. The working apparatus of the steam hammer differs but little from an ordinary forge or trip hammer, while the power is applied forward of the pivot or axle by the attachment to the shaft or helve, of the piston of an engine, whose cylinder is placed directly underneath. An engine making a stroke of from three to eight inches with a cylinder of size and strength, suited to the weight of the hammer is all the machinery there is about it. It will be readily perceived that the force of the downward stroke of the piston is added to the weight of the hammer as it falls on the iron, though by a gauge applied to the steam valves, the force of the stroke can be regulated or entirely raised from the iron or anvil.

THE TELESCOPE of Mr. Lewinberg, if it had an arrangement for its advantageous exhibition, would be found an object of the greatest interest. The fact that it is built entirely of American materials, and that it was constructed wholly in this country, speaks much for the enterprise of Mr. L., under whose direction it has been made. The character of Mr. Lewinberg as an optician would be a sufficient warrant for the accuracy and finish of this instrument, to Mr. L.'s acquaintances. But it ts hoped before the close of the fair, some arrangement may be made to submit this gigantic instrument to the scrutiny of experiment by accurate and experienced observers. By the way, we ought to mention that Mr. L. is obtaining subscriptions to a stock company for the purchase of an observatory in the upper part of the city. We notice on his subscription book the names of Mayor Brady, Morris Franklin, Esq., Noah Waterbery, Esq. of Williamsburgh, and several others of our most distinguished citizens.

CACTHPOLE'S CORNSTALK AND STRAW CUTTER is the most efficient and finished instrument in its department, that we have seen. It does its work well, and with great despatch. The only objection to it, is the cost, twenty-eight dollars, being nearly twice as much as that of other straw cutters. But this only shows the confidence of its proprietor, that the public will find it to possess substantial advantages to repay its extra cost. George Catchpole, Esq., of Geneva, New York, is the patentee.

"THE LADIES DELIGHT!"—This is a newly invented *washing machine*, so named by Mr. Thomas Dobson, of No. 13 Morris street, New York, its manufacturer. A rare idea, though, that a *washing* machine should be esteemed the "*delight*" of the ladies However the machine looks *promising*, and its merits are admirably set forth by the gentleman having charge of its exhibition. We think he beats anything on the board, always excepting the

learned lecturers on the points and qualities of stoves.

The Horticultural Department of the Fair, under the supervision of Mr. Bridgeman, deserves especial notice. The centre of the gallery, which is appropriated to his department, Mr. Bridgeman has adorned with emblems and designs, displaying much taste and judgment. A series of magnificent arches, formed of evergreens, extend along the front of the gallery, and under the central arches stand the statues of Flora, Pomona and Ceres, each appropriately decked with the fruits and productions of which they are respectively the patron-deities. Flora has bunches of flowers in her hands, and a garland of flowers on her head. Pomona bears a vase of peaches, apples, grapes and other fruits, with a wreath of cranberries on her head, while Ceres bears a sickle and a sheaf of grain, and her head is wreathed with a garland of oats, and at her feet repose a cow and sheep, surrounded by corn, &c. The horticultural department is superior to that of other years.

We ought to have noticed in our last the appropriate and interesting address on the evening of the commencement of the Fair, by the President of the Institute, Mahlon Dickerson, of New Jersey, whose topic was the encouragement given to American industry by the American Institute.

We cordially invite the friends of improvements in manufactures and the mechanic arts to be present at this exhibition, and feel conscious pride in the excellence and utility of our national institutions under whose influence and fostering care such wonderful progress has been made and is still making in agriculture, science and the arts.—*Farmer and Mechanic.*

SKIPPERS IN CHEESE.

We know that epicures are addicted to what they call "ANIMATED CHEESE;" but we are not epicures. We have not reached that pitch of civilization which would enable us to observe with pleasurable curiosity the active feats of a lump of "Imitation English" upon our plate after dinner. As we suppose the most of our readers have the same tastes with ourselves about it, we will give a recipe which has been recommended to us as a good one. Cut a plug two inches long, and an inch square, from the centre of the cheese, and fill the cavity with best French brandy. When it has soaked in, fill it up again. The operation should be repeated twice or thrice, and the plug replaced. In this way we are informed the cheese will not only be preserved, but its flavor will be greatly improved.

From the Southern Cultivator.

SHEPHERD DOGS.

Mr. Camack,—In Darwin's "Voyage Around the World," Vol. I., chap. viii., p. 191, forming the 10th volume of Harper's New Miscellany, is the following account of the mode in which shepherd dogs are procured in South America. This account I transcribe *con amore* as a small remuneration for the instruction and advantage I have derived from the perusal of the Southern Cultivator, to be inserted in its pages if its editor should deem it eligible.

Your obedient servant,

T. W.

Warrenton, Ga., April 23, 1847.

"While staying at this estancia, I was amused with what I saw and heard of the shepherd dogs of the country. When riding it is a common thing to meet a large flock of sheep guarded by one or two dogs at the distance of some miles from any house or man. I often wondered how so firm a friendship had been established. The method of education consists in separating the puppy while very young, from the bitch, and in accustoming it to its future companions. An ewe is held three or four times a day for the little thing to suck, and a nest of wool is made for it in the sheep pen; at no time is it allowed to associate with other dogs, or with the children of the family. The puppy is moreover generally castrated; so that when grown up, it can

scarcely have any feelings in common with the rest of its kind. From this education, it has no wish to leave the flock, and just as another dog will defend its master, man, so will these the sheep. It is amusing to observe, when approaching a flock, how the dog immediately advances barking, and the sheep all close in his rear, as if around the oldest ram.—These dogs are also easily taught to bring home the flock at a certain hour in the evening. Their most troublesome fault, when young, is their desire of playing with the sheep, for in their sport they sometimes gallop their poor subjects most unmercifully.

"The shepherd dog comes to the house every day for some meat, and as soon as it is given to him, he skulks away as if ashamed of himself. On these occasions the house dogs are very tyrannical, and the least of them will attack and pursue the stranger. The minute, however, the latter has reached the flock, he turns round and begins to bark, and then all the house dogs take very quickly to their heels. In a similar manner, a whole pack of the hungry wild dogs will scarcely ever (and I was told by some never) venture to attack a flock guarded by even one of these faithful shepherds."

MUSTARD.

A correspondent, Mr. Hite, requests us to publish some information about mustard, its cultivation, &c. "Such as we have we give unto him."

There are two species of this plant, the white and the brown seeded or black mustard. The white is used as a salad. It is the black mustard which bears the seed used in commerce and from which the condiment is obtained. Both species grow well in a great diversity of soils, and with little care and labor—mustard being a hardy plant—but of course, the richer the soil, the more careful the cultivation, the more vigorous and profitable will be the crop.

Those who intend entering on its production should use great care in the first instance to obtain good seed. There is a plant very frequently mixed with mustard in the Western States which very much resembles it, but which is unfit for the uses of the manufacturer. Of course this reduces the price when brought to market, and it is the very general presence of it in the American mustard which causes so much of it to be imported from European countries to the United States.

Then there are two qualities of mustard seed, one of which is very small and has a very thick skin. It is not worth half the price at which the good seed are valued.

Before any one attempts the culture of mustard as a considerable crop, he should satisfy himself of two things: 1st. That he has got the best quality of seed. 2d. That the seed is not mixed with that of any similar plant.—Both of these facts he may ascertain by a close examination. If he does not do so, he will not find mustard a very profitable crop; whereas, with good seed it is exceeding profitable.

Its Culture.—A rich but light soil should be chosen and reduced to a fine tilth. The mustard should be sown in drills two feet, or two feet and a half apart, and thin enough to allow working with the hoe. It is also frequently planted in hills fifteen inches apart. Not a weed should be allowed to show itself in the ground during its time of growth. The time of planting is April.

The pods do not ripen all at once. They ripen in succession. But we should not delay the harvest till they are all matured, as the first seed are always the best, and these would be almost entirely lost if they were allowed to remain until the entire crop is ready. Therefore, the best rule is, to pull up or cut off the whole crop so soon as the stems become yellow, carry it to a barn, lay it upon a large cloth, and so let it remain for a month. In that time it will be all ready to be gotten out It should be threshed out on cloths, not with flails, because that would bruise and otherwise injure the seed, but with bundles of rods.—Pass the seed two or three times through the fan and it is finished. The time of harvest is in July or August. The sooner the seed are manufactured and used, the better, as age gradually destroys the strength.

Mr. John P. Webber writing from Massachusetts states that he has raised it at the rate of twenty bushels per acre, sowing it in drills. A gentleman in New Hampshire is stated in the New England Farmer for 1830, to have raised it at the rate of five bushels from thirty-six poles. Another states that he raised on a small piece of ground in his garden at the rate of thirty-five bushels per acre. This, of course, is more than would be obtained by any other than garden cultivation. At the Shaker Village at Canterbury, New Hampshire, they state that their crop is sometimes twenty bushels per acre, but in years of drought, twelve, and one year only seven bushels per acre. Mr. Webber, before quoted, says that he thinks his own crops, one year with another, averaged fifteen bushels.

In the manufacture of mustard some white seed combined with the black is said to make the best. They are ground in a mill and sifted to a fine flour. One of the grand secrets of making it good, is to keep it perfectly dry from the seed to the time of use. The pungency of mustard, the quality by which it raises blisters on the skin and bites the tongue is owing to a volatile oil which is not originally present in the dry flour. It is created by the chemical action of two substances which compose it (known to chemists as *emulcin* and *myronic acid*.) These do not act upon one another until water is added.—When the flour is moistened they quickly form the oil. Vinegar diminishes this change. It is, therefore, a great mistake to use it in preparing mustard. Tepid water is the proper fluid both to mix up the condiment and to make the irritating poultice. As we have before said, the oil is of a valuable character and will after awhile fly away and leave the mustard without strength. It should then be prepared but a few hours before the time when wanted for use.

Why do not our farmers raise more mustard than they do? It is an exceedingly profitable crop and a good price may be obtained in every large town. Good mustard has always brought from three to four dollars per bushel. cash, even when large crops are sold at once, and fifteen bushels may always be raised from an acre of good ground. But why should any man who has a garden ever *buy* mustard at all? To enter upon its production as a crop requires some labor, but every man may have enough to supply his family from a little patch in the corner of his yard. Instead of this, we continue to give, just as we did years ago, seventy-five cents a bottle for a yellow stuff *called* mustard, which the English send over here. This English mustard is a thing fabricated, and, as William Cobbett says, as false as the glazed and pasted goods sent out by the fraudulent fabricators of Manchester. They make the greater part of it of baked bones ground to a powder, some wheat flour, a bright coloring matter, probably ochre, and some drug which gives it the pungent taste. Because it is more pungent and of a brighter yellow than the real mustard we have known many persons so unreflecting as to prefer it because from those reasons they suppose it to be *purer*. But whoever will use it freely will find that it burns his inside long after he swallows it.—Those who labor and have strong digestions can eat it with impunity; but persons of weak and delicate constitutions have the coats of the stomach seriously injured by it. The good mustard does not have this effect, nor is it of that bright yellow. Why should any man who has a garden buy this poisonous stuff? On a perch of ground you may raise ten pounds of mustard and that will be more than the largest family will need for a year. The seed can be either powdered fine in a mortar, or what will be better, ground in a little mustard mill which may be easily and cheaply obtained, and sifted to as fine a flour as what you buy. Your mustard will not be of as bright a yellow, but a slight tinge of brown is just as good a color.

Then we recommend our readers to raise some mustard in their gardens every year.—You *will* save some money, and you *may* save a life by it. The plants do not occupy the ground more than fourteen weeks and they may then be replaced by something else—or by another crop of mustard itself if you like.

Apply camphire to drooping plants.

From the American Agriculturist.

HOW TO MAKE APPLE-BUTTER.

In the December number (1846) of the Agriculturist, you express a wish to know how the best apple-butter can be made, and as I consider myself *au fait* at that business, I have great pleasure in sending such directions as I believe to be the best.

The large copper kettle three-quarters full of new sweet cider, made from sound apples, is set over the fire *before* five o'clock in the morning. I let it boil two hours, and then put in as many apples, which were peeled, cored, and cut up the night before, as will fill the kettle, and at the same time I throw in about two quarts of nicely cleaned peach-stones, which, by sinking to the bottom and being moved about incessantly by the stirrer, prevent the fruit from settling and burning, which would spoil the whole. I take care in selecting the apples to secure a large proportion of sour ones; for, as the cider is sweet, unless this precaution be taken, the sauce will have a vapid taste that nothing can remove; and all the apples must be of kinds that will boil easy to a jelly. On the hearth, around the fire, I place numerous pans and pots of apples and cider, simmering and stewing, which I empty into the kettle as fast in succession as the contents boil away enough to make room for them; but after twelve o'clock I never allow any more to be added to the mass. The boiling must be continued steadily until the whole is reduced to a smooth, thick marmalade, of a dark, rich brown color, and no cider separates when a small portion is cooled for trial.

From the moment the first apples are put into the boiling cider, the whole must be stirred without a moment's intermission, otherwise it will settle and burn; but the handle of the stirrer must be passed from hand to hand as often as fatigue or inclination makes a change desirable.

My kettle holds half a barrel of cider, which, with the first apples in it, begins to boil about nine o'clock in the morning, and the whole is done enough by eight o'clock in the evening, when a sufficient quantity of powdered allspice, cloves and cinnamon, may be added to season it to your taste. The apple-butter must be dipped out as soon as possible when it stops boiling; for, if it cools in the copper or brass, it is in danger of becoming poisonous, as may be detected even by the unpleasant taste imparted by the action of the acid upon the copper. I prefer sweet stone or earthenware pots to keep it in, but where the quantity made is very large, a barrel may be employed.

E. S.

Eutawah.

For the Southern Planter.

WHEAT STRAW AS A MANURE.

Mr. Editor,—I should like very much to see the subject of the comparative value of wheat straw and other cow-food as a manure, discussed in your journal, if put on the land before having passed through the bowels of cattle, or after that process. It was formerly a custom with farmers, when a neighbor was scarce of food, to take his cattle to winter for nothing, believing that the straw, &c., was more valuable, as a manure, after digestion in the animal's stomach than before. I think so yet. They ask pay for it now. The addition of the urine alone, as a fertilizer, must make it more valuable, especially if the manure heap is kept covered from the rains, and the addition of animal matter during the process of digestion.—Of course some of the vegetable matter must be appropriated to the keeping up the animal system, "or wear and tear," I will term it, that is constantly going on in the animal economy during its existence.

Yours, most respectfully,

J. M. Wills.

Chatham, Fluvanna County.

We ask Mr. Wills' pardon for not having published his note before. We placed it in the hands of a friend who had paid considerable attention to this particular subject, and who promised us some statistics which his experiments would enable him to furnish.—But the engagements of his farm having been so constant hitherto as to prevent his prepar-

ing any thing in answer to the inquiries made, we have determined to publish them without farther delay in hopes that some one else may be able to send us the desired information.

Looking at this matter as it would work here in Virginia, we are ourselves of the decided opinion that it is a very expensive and unprofitable method of preparing manure.—Even if it be proved that the dung of a cow is worth more as manure than the straw that she eats, we are still against it. In a country like Belgium, where every ounce of dung and drop of urine is preserved, it may be a good custom. But upon all farms in our part of the world which we have had opportunities for examining, too little care is taken of manure to make this a money-making business. The urine is invariably lost, the dung allowed to lie for days, drying away, before it is placed in the heap. Consequently it is our opinion so long as we farm in the careless manner in which we now do, that this custom of keeping cattle for their manure had better be left alone.

We have heard of one Virginian, however, who made money at this sort of thing. The late Mr. Welford, near Fredericksburg, supplied the livery stables of that town with as much straw as desired, on condition that he might be allowed to carry off all the manure. But by these means he not only got a great deal of that which his straw made, but he got the oats and other grain, which contain large quantities of nitrogen. This more than made up the losses of urine, &c.

VIRGINIA SHEEP.

Twelve months ago under this heading we mentioned to our readers that some of the best stock of sheep with which we had become acquainted, was to be found on the plantation of Col. Josiah Ware, of Clarke county, near Berryville. Since then the information which we published about those sheep has been corroborated from various sources, and Col. Ware's stock is fast acquiring a reputation equal to that of any sheep raised in the North. Last fall we heard of a flock of these sheep, being thirty wethers in all, half of them only yearlings, and the rest but two years old, which were sold to Mr. Philip Otterback, of the Washington City market. Mr. Otterback, as is well known, is a most experienced judge of good mutton, and it is reasonable to suppose that he would not have given more than their worth. He gave Col. Ware three hundred dollars for the thirty, being ten dollars a head, and he states that on getting them to Washington he was offered by another butcher five hundred dollars for them. He sold the carcasses neat of some of them for twenty-four dollars each, and refused five dollars each for the skins to tan with the wool on for carriage and sleigh rugs. Col. Ware's sheep are originally of the Cotswold breed, and he has devoted great attention to their improvement by crossing them, &c. Why should any Virginian send out of his own State to stock his farm? There are those within its borders who can furnish the most superior breeds at a less price than he would have to give for the same quality elsewhere; he would have a shorter journey to carry them, and when he got them, they would be already acclimated to a Southern country.

Since we wrote the foregoing paragraph we have received a package of the finest wool we have ever seen, from this very flock of sheep. It is of different qualities, each lot from the coarsest part of the fleeces from which it is taken, and may be seen by any one at the office of the Southern Planter. It is the sort of wool of which worsted materials are made. Very little of this sort of wool is raised in the United States—nearly all used in the immense factories of such stuffs being imported from Scotland and elsewhere—and it commands a high price and ready sale when none other will sell. We have some of the yarn made from it, and it is as strong as common pack-thread. We invite the inspection of those who are accustomed to such matters. Some of it we sent to Mr. Jones, the Manager of the Virginia Woollen Company, and we have received from him the following note:

Editor of the Southern Planter:

Dear Sir,—I have examined the samples of wool you sent from the flock of sheep belonging to Mr. Ware, of Clarke county, Virginia, and I esteem the wool

as exceedingly valuable and well adapted for worsted goods. Such wool always commands a ready sale at good prices, from the fact that native wools, adapted to worsted fabrics, are always very scarce in the wool markets of the United States.

CALEB JONES, *Agent*
Virginia Woollen Company.

HAVANA TOBACCO.

Persons who are disposed to make an experiment with this species of tobacco can obtain some seed by applying at the office of the Southern Planter.

AGRICULTURE.

Nothing can more fully prove the ingratitude of mankind than the little regard which the disposers of honorary rewards have paid to agriculture; which is treated as a subject so remote from common life by all those who do not immediately hold the plough, or give fodder to the ox, that there is room to question, whether a great part of mankind has yet been informed that life is sustained by the fruits of the earth.—*Johnson.*

HOW TO MAKE MEAD.

To one gallon of water add four pounds of pure honey, and aromatic herbs or not, according to taste. Boil the whole in a copper nearly three-quarters of an hour, and skim well. Then allow the mead to stand in the copper until nearly cold, when it should be bottled up and kept till old enough to drink.—*Am. Agriculturist.*

TO SUBSCRIBERS AND THEIR POSTMASTERS.

With the postmasters of Virginia and the Southern States generally, we have always been upon good terms, having in most cases received from them great kindness and attention; and we have had very little cause of complaint against any considerable number of them until the last year. But during the latter part of 1847, although we have issued every number of the Planter on, or within a few days of the beginning of the month, yet very many of our subscribers have notified us that they are not received until fully two months have elapsed. Why is this? As a specimen of the letters we have received on this subject we insert the following:

Smithville, Powhatan, Dec. 14, 1847.

Gentlemen,—We have received to-day, for the first time for several months, the Southern Planter for December. You will please discontinue our subscription to the same. We were under the impression you had discontinued it until to-day.

Yours, very respectfully,
H. & W. HARRIS.

Letters similar to this we have received from several quarters. We do not yet know where the fault lies, but we shall make it our business to find out, and if continued, we shall be forced by our duty to the subscribers of our paper, to make representations of the fact to the proper authorities.

More than one postmaster has received the Planter for nearly the whole of the past year for persons who are either dead or who refused them. It was their duty when they found it was not taken out, to have notified us of the fact. Instead of doing so, they have received and kept the numbers till the end of the year and then returned them all at once. We would call the attention of these postmasters to the clause in the post office law, which renders them liable for the subscription of any paper which they continue to receive for such a length of time without notifying the proprietors that they are refused.

NOTICE.

In the December number of the Planter we sent out bills to all of our subscribers who were in arrears at the time it was issued.—Since then and *before* the number had time to reach them, some of these have sent in their subscription money. We mention the fact to explain to them why the bills were received after they had paid their amount.

TO THE READER.

During the past year the present editor of this paper conducted it under great disadvantages. Not having the acquaintance of a large number of Mr. Botts' correspondents, he was not able to furnish in every number the usual number of original communications. But we have opened correspondence with many of the most distinguished and experienced farmers in the Southern States, and have obtained from them promises of regular contributions. We hope to add many more to our list, and we shall be able with their help to make the volume for 1848, certainly much superior to that we have just finished, and if our *labor* can make it so, superior to any former volume of the Planter or of any other agricultural journal whatever. It will continue to be, as it ever has been, a journal of practical agriculture, filled with *short* articles written in plain words, unmingled with the phrases of chemical nomenclatures. We intend it as a work for the intelligent farmer, not for the man of scientific reseach, for the planter who is growing corn, wheat, and tobacco on Southern lands, not for the learned professor in a chemical laboratory, and to render it useful to such, we have found it necessary to adhere rigidly to this rule. Under our present arrangements we feel no doubt that we shall be able to make it a periodical which will entitle us not merely to *ask*, but honestly to *claim* the support of this portion of the community.

We have received invitations from our friends and well wishers in many portions of Virginia and elsewhere to visit them at their farms; and as we are anxious fully to inform ourselves on the wants of the planters of the South, we shall devote a considerable portion of our time during the present year to travelling among them. If circumstances permit us we shall traverse this State in various directions, and endeavor to see the well cultivated and the ill cultivated portions of it. In doing so we shall call on some with whom we have as yet no acquaintance save through the pages of the Planter; but we trust that they, and our sincere desire to obtain information calculated to serve those who are engaged in the same pursuits with themselves, will prove sufficient letters of introduction.

THE SOUTHERN PLANTER,

IS PUBLISHED MONTHLY BY

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TERMS.

The Planter, containing thirty-two super-royal octavo pages, is published monthly at one dollar and fifty cents per annum, which may be discharged by the payment of

ONE DOLLAR ONLY,

sent free of postage, within six months from the date of subscription; six copies for five dollars, if sent free of postage.

☞All subscriptions must commence with the volume, or January number.

☞No paper will be discontinued, until all arrearages are paid.

☞All letters on business, connected with the Planter, must be post-paid.

THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

☞ All Communications, concerning the Planter, must be addressed

P. D. BERNARD, *Richmond, Va.*

☞ For Terms see last page.

MEMORANDA FOR THE MONTH.

February is a month which lies, as it were, between the work of the past year and the work of the year to come—at least so it seems to the bad farmer and inefficient manager.—He, therefore, does little or nothing in February. So it does *not* seem to us. Now is the time that the farming year commences in earnest. There are things to be done now which may be as well done in March or April, but which if put off till then will crowd those important months in such a way that much work essential to the crops will not be done at all. He who now does all the farm business which may be done in February has the same advantage over him who contents himself with cutting and hauling firewood and feeding the stock which an early riser has over him who lies till nine or ten o'clock.

FENCES.—So long as the fence law continues, it remains a fixed fact, that no crops will be made by the man who has not good fences round his fields. During the present month every farmer should examine his enclosures with his own eyes—not trust to the reports, of his foreman, but go round and try every panel himself. Every rail of them that is defective, or which promises to become defective in a short time, should be renewed.—By so doing, before the crop is put in, much fretting, much trouble, and more expense may be saved.

FIREWOOD.—As there is much to be done in March towards getting in the corn crops, it is important that the hands should not be called off for any thing else. But as wood for the household is quite as necessary then as it is now, this will have to be done, unless you cut and haul now enough to last the rest of the cold weather.

PLOUGHING.—If the ground is wet, of course it must not be turned; as if ploughed in that condition, it will remain like a parcel of dried mortar for the rest of the season. But if a tolerably dry spell comes in this month, let it not pass unused. Stiff clay lands, especially, are much improved by being subjected to the influence of frosts. All such lands should be now ploughed, if in a fit condition.

WHITEWASHING.—Find some leisure day in this month to put whitewash on all outbuildings, stables, barns, &c. It will change the whole appearance of the place, help to drive away insects, and keep them in a cleanly condition.

FARMING IMPLEMENTS.—Put all your hoes, harrows, ploughs, carts, &c., in order in this month. Do not wait until they are wanted, and then have to send miles to a blacksmith or carpenter's shop just at the moment when you want the work to be pushed on. And when they have come home from being mended see them put under cover.

STABLES, &c.—Clean them out thoroughly during some bad day in this month, and strew the floors with powdered charcoal or gypsum. This absorbs the ammonia of the urine, destroys the smell and at the same time makes a quantity of excellent manure. This is a good time also to clean out the hen-houses. They

should be thickly coated on the interior with whitewash, as also should be the *roosts*.

Horses, Cattle, &c.—All farm animals should be carefully taken care of during this and the succeeding months, as it is then that nature furnishes them the fewest means of taking care of themselves, while the weather is such as tries their constitutions most severely.

Tobacco Beds.—The time draws nigh for their preparation, and as too much care cannot be taken about them, it will be well for the farmer to take a plenty of time to get them ready, and to see to it with his own eyes.

Pasture Lands.—Any one who has a piece of pasture ground which he does not intend to plough up this spring will find it an excellent plan to go over it with a basket or two of plaster, scattering it broadcast. When this is done, keep the cattle out till next May, and the pasture will be worth double as much to you as it otherwise would.

Fruit Trees.—Now is the time to prune your apple trees, your cherry trees, &c., of their dead branches. And when it is necessary to take off a limb, do not let the operation be performed by a negro boy with a dull hatchet. A fine saw is the instrument, and the stump should be cut smooth with a sharp drawing knife. Some tallow and beeswax should be melted together and applied so as to exclude the air from the wound.

Grape Vines.—Now is the time to diminish the redundancies of your grape vines. Unless you do this regularly, they will look very pretty next summer, running all over their frames, covered with fresh leaves, and they will serve to ornament your yard and garden very much; but that is nearly all that they will do.—It is true, they will have an abundance of clusters on them in the early part of the year; but not half will come to maturity, and even those that do, will have but little size and flavor. The reason of this is, that the sap has been exhausted by the growth of young wood and leaves. Therefore, they should invariably have a pruning either in February or November. In fastening them up we have been convinced by personal observation that wooden slats are much to be preferred to the iron wires now so much in vogue. The wires do not afford sufficient substance for the vine which has been properly trimmed to bend around. They are excellent, however, for the young growth.

Water-Furrows.—You, whose grain fields lie upon sloping and low lands, go through them in the latter part of this month and see that the water-furrows are all right. The spring rains will be here soon, and they will be called into requisition.

Clover.—Now is the time to sow clover seed among the wheat fields. A layer of clover will thus succeed the grain crop, and will either serve you as hay, or as a fertilizer of the soil.

Now is the time to do a great many other things, one of the most important of which is to write a good communication and send a new subscriber to the Southern Planter.

NICKING HORSES.

The object of nicking a horse is to cause him to hold the tail up and prevent his pressing it down strong when he may catch the reins beneath it. There are two sets of muscles to the tail—those that are used to elevate and those that are used to depress it. Those to elevate are stronger and more numerous than the others. Those used for depressing soon form tendons, (cords,) which run along on each side, beneath, and attach themselves to the bones at the extremity. If these are cut off, the upper or elevating muscles predominate, and very naturally raise the tail by the action, the resistance to their action, being nearly destroyed.—The arteries which convey blood to the tail, generally lay on the upper side, near the bone, so that there is not so much danger of cutting them in this operation.

Formerly the operation of nicking was performed by cutting across the under side of the tail, so as to divide the tendons completely, and by keeping the tail elevated, the two ends were separated, and a callous was formed between them, filling up the gash when healed. This is not a good method. In the first place it

is longer healing, and in the next place, there is more danger of inflammation and mortification. The mode now followed is to cast the horse and secure him, and then run a long slender knife in near the margin of the hair, on the outside, *under* the cords, and cutting outward until the cord is separated, but not cutting through the skin. This is done in two or three places on a side. In this way there is no visible wound, except the small hole where the knife entered, and the skin being preserved whole over the cut tendons, conveys the necessary fluids, and causes it not only to heal faster, but prevents much trouble and inflammation by keeping out all foreign matter. As soon as the tendons are separated the tail should be turned forcibly back, in order to draw the ends of the cords from each other, and the horse may be suffered to get up and be loosed. The hair at the end of tail is then looped, a pin put through to which a string is placed, attached to weights which pass over pulleys above in the stall, by which the tail is kept elevated two or three weeks, until the wounds have healed.

These pulleys are in general use, but we have seen a much better mode adopted. The objection to the pulleys is that by the motions of the horse in the stall they are often made to have an unequal tension, and do not always keep the tendons sufficiently apart.

The plan which we allude to is the following. Pads may be made like the pads of a riding-saddle, or what would be better, a wooden saddle may be made so as to fit the rump of the horse, just back of the hips. On the top of this is fastened firmly a piece of wood which is grooved so as to just let the tail, when it is turned back, lie snugly in it. Holes may be made in the sides of the grooved wood, through which to pass straps or pieces of webbing which may be used to lash the tail firmly but with not too great pressure in the groove. The tail being thus turned back and fastened into the groove, the machine or saddle must then be fastened firmly, so as to keep the tail in its place. To do this, the following plan may be adopted—a pad or small wagon-saddle be put upon the back of the horse, which is to be held in its place by a girth going around his belly in the common way, and another from the front part of the saddle around the horse's breast. A strap like the crupper strap goes from the back part of the saddle, along the back, and is attached to the machine as it is to the crupper. Another girth may be attached to one side of the machine, and pass diagonally across the flanks of the horse, down and forward to the belly girth to which it is fastened, and then back on the other side of the horse up to the opposite side of the machine, where it is buckled. In this way the machine will be kept in its place, and the tail also, let the horse put himself in what position he may.

Some dock the horse, if it has not been done before, at the time of nicking; others wait and let the tail heal somewhat before the docking is done.

Care should be taken to avoid inflammation, for the hair in such cases, will come out, and the wounds are much longer in healing.

Take the tail down every two or three days, and bathe in warm vinegar, and if the hair begins to come out, bathe it in tincture of myrrh, and give the horse something of a laxative nature.

After a week has elapsed let the horse stand without the machine a few hours, and also ride him about for exercise, and to see how he will carry his tail.

From the Prairie Farmer.

CHEESE.

Herkimer county is the greatest cheese county in the State, and probably in the United States. Almost every man who has land enough keeps cows and makes cheese. They have some important improvements, that every man should know who makes cheese to any extent any where. One of the most useful articles I will undertake to describe. It is a tin vat. The first one I saw belongs to John Everett, Esq., of Litchfield. It is made

of tin, two and a half feet wide, six feet long, and nineteen inches deep. This vat sets inside of a wooden vat, four inches larger than the tin vat, which leaves a space of two inches between the vats, so that the tin can be surrounded with water. Mr. Everett has thirty cows. At night he fills the outside vat with cold water; this surrounds and chills the tin vat; the milk is then strained into the tin vat, and is chilled and kept from souring before morning. In the morning the milk is strained in with the night's, and then with a small boiler steam is introduced into the water between the vats, until the milk is heated to about eighty-four degrees, which is ascertained by a thermometer. They then put in the rennet, and as soon as the curd has set, they break it up, and then introduce the steam, as before, to scald the curd, which they heat to one hundred and four degrees; they then elevate one end of the vat a little, and take a plug out of the lower end, and set in a tin strainer; the whey then runs off, while they stir and break up the curd. The whey is conducted from the vat to the cow-barn, in a small trough, and is then fed to the cows. Most cows eat it greedily, and they think it is a greater benefit to feed it to cows than to hogs. The cheese from this dairy weigh from sixty to ninety pounds, and is marketed to be delivered on the canal monthly, at six and a half cents.—*Letter of Mr. John Gage.*

USEFUL HINTS ABOUT BED-ROOMS

Their small size and their lowness render them very insalubrious; and the case is rendered worse by close windows and thick curtains and hangings, with which the beds are often so carefully surrounded as to prevent the possibility of the air being renewed. The consequence is, that we are breathing vitiated air during the greater part of the night; that is, during more than a third part of our lives; and thus the period of repose, which is necessary for the renovation of our mental and bodily vigor, becomes a source of disease. Sleep, under such circumstances, is very often disturbed, and always much less refreshing than when enjoyed in a well ventilated apartment; it often happens, indeed, that such repose, instead of being followed by renovated strength and activity, is succeeded by a degree of heaviness and languor which is not overcome till the person has been some time in purer air. Nor is this the only evil arising from sleeping in ill-ventilated apartments. When it is known that the blood undergoes most important changes in its circulation throughout the lungs by means of the air which we breathe, and that these vital changes can only be effected by the respiration of pure air, it will be easily understood how the healthy functions of the lungs must be impeded by inhaling for many successive hours the vitiated air of our bed rooms, and how the health must be effectually destroyed by respiring impure air, as by living on unwholesome or innutritious food. In the case of children and young persons predisposed to consumption, it is of still more urgent consequence that they breathe pure air by night as well as by day, by securing a continuous renewal of the air in their bed rooms, nurseries, schools, &c. Let a mother, who has been made anxious by the sickly looks of her children, go from pure air into their bed room in the morning before a door or window has been opened, and remark the state of the atmosphere, the close, oppressive, and often fœtid odor of the room, and she may cease to wonder at the pale, sickly aspect of her children. Let her pay a similar visit some time after means have been taken to secure a full supply and continued renewal of the air in the bed rooms during the night, and she will be able to account for the more healthy appearance of her children, which is sure to be the consequence of supplying them with pure air to breathe.

FOOD ON AN ACRE OF LAND.

Allowing wheat at 15 bushels to the acre, 900 lbs. of food are produced. One acre of potatoes at 300 bushels, produces 18,000 lbs. The wheat at 75 cents the

bushel, is worth $11 25. The potatoes at 10 cents the bushel, $20. A farmer in Illinois says that potatoes delivered two miles from the digging at 6¼ cents a bushel, is more profitable than wheat at 75 cents, if carted, as most of it is, from sixty to one hundred miles.

MANAGEMENT OF HONEY BEES.

Swarming.—The cause of swarming, in all cases, is an excess of population, the bees not having room for all to work to advantage. When bees are placed in very large hives, or when they are quartered in an open room, as is sometimes done, they never swarm. Swarming may also be prevented by affording additional room, either at the bottom, top, or side of the hive, during the swarming season.—As a matter of profit, in the increase of stock, bees should never be placed in rooms, or in hives larger than twelve inches square. If we should hive two swarms, the one in a hive *two* feet square, and the other in a hive *one* foot square; or in hives of the same contents, though differently shaped, the result of the increase of each, at the end of five years, would be, with good management, about as follows, viz: the swarm in the larger hive would about half fill it with comb the first year; the second year it would be complete, but no new swarm. The following spring would find the hive full of comb, but only half full of bees; and it would require the third year to replenish, and so it would continue *ad infinitum* yearly replenishing its lost population, and at the end of fifty years you would have no more bees than when you commenced!

The other hive would be plumply filled the first year; the second year a couple of prime swarms might be calculated on; the third year, we will say, only one swarm each, (a very low estimate,) we now have six swarms; the fourth year we will double to a certainty, and the fifth year the same,—making twenty-four swarms, while the larger hive "stands alone in its glory," if not entirely annihilated by the ravages of the moth, the more probable result of the two. In each hive there is but one queen, which is the source of all the increase. The eggs are laid by her. A hive one foot square is as large as she can use. In such a hive all the workers that she desires to carry out her ends can be fully accommodated. Ten thousand bees to a hive in the spring are all-sufficient—more would be but an incumbrance; hence we find that though there be one hundred thousand in a large hive during the breeding season, the following spring finds them departed to that "bourne whence they never return."

The principal laying of the queen depends much upon the mildness of the spring and much upon the strength of the stock. I am fully satisfied that many of my stock are in progress of breeding through the entire winter, to some extent. Indeed that such is the case with any populous stock we have abundant proof, in cases where the stock has been destroyed in the heart of winter, as an experiment to test the fact. Where such is the case, there is not that diminution in the number of the bees from fall to spring that ordinarily occurs. In weak stocks, the internal heat necessary for the manuring of the young brood cannot be produced, and we find that such stocks are compelled to await the approach of warm weather.—Here we have the basis of prosperity in a nut-shell. If we cannot so manage that our hives will be populous to their greatest capacity, we may as well give up the idea of perfect success at once.

If the hive be well filled, the queen is fully aware that a large portion of her increase, which the laws of nature compel her to give, must leave her domicil; and she also, through instinct, learns that each swarm must be provided with a queen-regent, like herself, in order to perpetuate their species. These queens, or rather princesses, are produced from the common egg from which issue the workers, or from a common worker-grub, in its primary stages of advancement by a particular treatment. This fact is shown by the mode of artificial swarming, now practised to some extent; the philosophy of which is this: If a piece of comb, con-

taining the young brood of different stages of maturity, be attached to the top of an empty hive, and a quantity of bees be placed therein, having no queen, they will select a certain aged grub from the comb afforded them, and by a particular process of nursing and feeding (the nature of which never was nor never will be known by us) they will produce a perfect queen, and proceed in their avocation as usual. Without this piece of comb no power or ingenuity of man could cause the bees to perform a single day's labor.

As each swarm requires a *princess* from the old stock, from two to six are generally produced every spring, and such as are not wanted are immediately put to death, as it is entirely out of the question for more than one to exist in the same hive, unless it be during the short period awaiting the issue of a swarm. A very remarkable circumstance occurs in the development of these young princesses; they are so timed in their maturity as to issue from their cells respectively just as they are wanted to take their departure with the swarms. That is, giving them a short period after quitting their cells to gain strength for the journey, say forty-eight hours. It must be borne in mind, that where there is sufficient room, as in very large hives, the queen sees no necessity of swarming, and consequently takes no measures to furnish the young princesses.

Indeed it often occurs that she neglects to do this in cases where the greatest necessity exists for them, and as a swarm never leaves in such a case we find many of our hives loaded with bees, clustering around and below during the entire warm season, which we watch with anxiety from day to day, or hour to hour, wondering what can keep them spell-bound to their tenement! As the needle invariably points to the north pole, and no human power can change this law of nature, so is the queen-bee the loadstone that draws every bee to her. The broiling rays of a summer-sun, famine, nay, the prospect of a certain death cannot move them. But when a young queen sallies forth on the wing of uncertain destiny, she is the magnet that draws after her a goodly portion of the animated mass. Whither she goes they follow, and as she would gather her subjects around her, preparatory to the journey, she selects a slender branch or some small tree and alights. The bees at once commence clustering around her, perhaps some few minutes before the last has left the hive. Whether the bees ever select a habitation before leaving the hive is a matter of doubt with me. They sometimes do take at once, after issuing, to some suitable tenement, such as a decaying hive, or some hole in a building, or perhaps they may cluster for a few minutes, and then rapidly take their flight to the forest. All of this may be, and probably is, corrected after swarming. In confirmation of this, I once had a swarm issue from the hive in which the day previous it had been lodged, and after revolving a long time in the air, settled down upon the very hive from which they had just issued. Now here is an instance where a particular location is fixed upon while on the wing. What caused this singular operation I cannot say, unless it was that they took some dislike to the hive, and afterwards concluded to try it again. In order to remove such a difficulty, I took another hive, and as soon as they had fully clustered set it upon a table, and also set the hive with the bees upon its side near it; then with a dusting brush swept them gently down upon the table, and they quietly entered the new hive, and did well.

The number of bees produced from April to July, in a strong stock, may be estimated at from 20,000 to 30,000. The first swarms I have generally found to be the largest, though some consider that in general the second are. The third are usually small. The period between first and second swarms is nine days; between second and third, six or seven, and if yet another, the next day or two. The time, however, is dependent upon the weather. If we have hot, sultry weather, the bees mature more rapidly, and are increased in numbers, and consequently throw off swarms faster, but we need never look for a second swarm sooner than a week,

and if the weather be cold and wet, it may be delayed fourteen days.

There is a catastrophe attending a rainy spell of weather during the swarming season, that many persons may not be aware of, which is this: The queen, in laying the foundation of new princesses, calculates upon their maturity at certain periods; when, if the weather does not permit, swarms would be ready to issue, according to her principles of the science; but as she cannot foretell the weather, she is often caught with three or four of royal scions on hand, and the weather does not permit the issue of a swarm for several days, as fine weather for such an operation alone will do.

As these princesses ripen in maturity, a spirit of jealousy begins to be engendered, that sets the whole hive in an uproar. Here is a sad dilemma! The old queen expects to go off with the first swarm, in person, as soon as the weather becomes fine; in the meantime there are several young expectants for assuming the reins of goverument, who begin to show a spirit of revolt as they grow in strength and age. If this state of things last for a week, through rainy weather, their jealousy becomes so furious that a general fight of extermination takes place, and the one that finds herself alive last assumes the reins of that stock; and if all the princesses have matured, there will be no more swarming that season.

This is another reason why bees do not swarm, when we think they do not know what is for their own interest; but I assure the reader, that when they do not send off swarms, it is for a good and sufficient cause, though we may not be able to comprehend it.

IRON FENCES.

Iron wire is now used in the construction of fences, and the Westminster (Md.) Carroltonian gives the following description of the manner of its application to this purpose:

"The posts are about one-half the ordinary size, planted firmly at the distance of ten feet apart, with nine strands of wire drawn tightly through an half-inch auger hole, and tightly plugged at each hole; the wire is of the size of that used for the handle of the Yankee bucket, and to combine them more firm, wire of a lighter description is wound through the middle, which prevents the hogs from separating and creeping through. The whole expense of this fence does not exceed twenty-five cents per panel of ten feet; and for neatness and durability, cannot be surpassed by any thing in timber."

For the Southern Planter.

PLAN OF BERKELEY FARMING.

Mr. Editor,—As you have requested your subscribers to contribute something to the Planter, I have thought the plan pursued by one of our Berkeley farmers would not be uninteresting to some of your readers. He prepares his land by breaking it up from four to five inches deep with a common bareshear plough; then harrows and lays off the rows four feet each way with a single shovel plough. He then plants the corn by dropping from four to five kernels in a hill, covering it with a single shovelful of fine decomposed manure, previously prepared by piling it up in the barn-yard the spring before and hauled out in the latter part of autumn in large heaps in the field. The advantages of this plan of using manure are, first, the large amount of land that can be manured in this way with a small quantity of manure, it taking but two or four loads to the acre; second, the increase of the crop of corn at least twenty bushels to the acre—he has frequently raised from forty to sixty bushels to the acre on land from which, without manure, twenty-five bushels would have been considered a good crop; and, third, the corn always comes up well, and as no other covering is used but the manure, it does not bake as our heavy clay lands do—it also stands the drought much better; fourth, the same field may be continued in corn four years in succession with increased crops, leaving the field highly improved. I have treated

a field in this way for four years, and in the fifth year made an open fallow and sowed it in wheat, which yielded a crop averaging upwards of twenty-six bushels to the acre, being an increase of at least fifteen bushels to the acre over any wheat crop on the same field for the last forty years.

The foregoing, Mr. Editor, are facts; and although the crops here cited are not large, in comparison with others, yet the improvement and the method of effecting it is worthy the attention of our farmers.

A Berkeley Farmer.

AGRICULTURAL PAPERS.

Reading agricultural papers may be said to be the first step towards improvement. This reading insures the becoming acquainted with the experience of farmers. It is much to be desired that more of this class of farmers could be induced to give their views. There is too frequently a reluctance to writing This reluctance should be overcome. It is not to be expected that plain farmers should always frame sentences in the style of literary writers, nor is this necessary. Give us the *facts* in an intelligible manner. Any man that can give his ideas to his neighbor in conversation, can do this, and this is all that is necessary. But many excuse themselves on the ground that they have no time to write. What, we would ask, have they to occupy their time these long winter nights? What do they *do?* Do they read and study their Bible? do they read and study agricultural books and papers? do they instruct their children? do they give life and happiness to the domestic fireside, by well studied and well ordered conversation? or, do they sit, and drink, or dose, or fret and scold at wife and children for their own lack of prudence, industry or economy? Could they not find time, by omitting some one or all of these duties occasionally, (except the first four,) to write a short letter to the printer, once a month, communicating to their brethren of the same profession their views and experience on some branch of the important science of agriculture? If any one thinks he can't, let him try it once; and if he fails, why, let him "try again." It will give variety to his employments, improve his mind, increase and render more available or ready for use his stock of knowledge, and render him tenfold happier in this world and double his chances for good living in that which is to come. But what shall be said of those who have no such excuses as those above enumerated—lawyers and other literary men skilled in farming—who obstinately refuse to write? We know not; but an awakened farmer, at our elbow, says, "there is no hope for them, neither in this life nor in that which is to come."—*North Carolina Farmer.*

For the Southern Planter.

SOUTH OREGON CORN.

Mr. Editor,—Any improvement in the various kinds of grain, and any improved variety of the same, successfully tested, is, I consider, a subject of much importance to the agricultural community generally, and when any thing has been successfully effected in this way, it cannot be too generally disseminated. Thus having in the early part of last winter read of the great superiority which the South Oregon corn possessed, both in point of yield and size of grains, shelling, &c., as represented by Capt. H. R. Smeltzer, of Maryland, in a letter of last year, to the Commissioner of Patents at Washington; as also by the further statements of Gen. Harrison, who raised, or first introduced this variety of corn, in 1839, and stated that its yield was thirty per cent. more than any species of corn he ever planted before, whilst Mr. Smeltzer being, perhaps, a more enterprising and practical farmer, gave this variety a much higher per cent., say forty, from the fact, no doubt, of its great increase—having raised in some year 121 bushels of shelled corn from the acre from several acres of one end of his field. And from those flattering statements and results I was in-

duced to obtain this seed, which I did, and from ordinary land, (such as I never knew to produce more than three or four barrels, at the most, per acre,) and with the usual working, I gathered from five acres thirty-five barrels of good sound corn, besides, I think, nearly a barrel of rotten corn. This I consider a very great increase—somewhat over Mr. Smeltzer's estimate of per centum. But such is, nevertheless, the fact, and some may think this land is rich; but to such who may think so, I would tell them it's the general rule in calculation among the farmers of my neighborhood, and myself also, that if we average one barrel of corn to the one thousand hills, which is two barrels to the acre, (the rule we generally plant or use,) the crop through, we think we make a fine crop, and we oftener fall under, than come up to two barrels per acre, our lands being so very poor. Those five acres which I cultivated in this stock of corn, were not without their inconveniences and losses. On one portion of this lot there was an apple orchard growing until after the fruit was killed by the frost. On one side this lot was shaded by a large old piny field, (not my property,) whilst in the fall of this year, just before gathering the corn a dozen head of cattle got in on two occasions. Also during the fall I put in five sheep and five spring calves, which destroyed and broke down quite a number of stalks; whilst all things considered, I made a much larger crop from those five acres than I ought, or could by any means calculate upon, and since shelling out a part of this corn I am still much better pleased with it than I was with the original seed. The grains are from a half inch to three-fourths, and I dare say, some may be found to measure one inch in length. Mr. Smeltzer stated that perhaps this corn would shell seven and a half bushels per barrel.—Whilst I have no direct way to measure a barrel correctly, other than by a flour barrel, I am sure from my measurement in this way, that it will certainly shell more than six bushels of shelled corn to the barrel. This stock of corn grows a thick stalk, well eared, does not shoot very high, imbeds its roots deep in the earth, thereby resisting any drought that may present itself. It has a small red cob, the ears large as commonly to be found, with from eighteen to twenty-four and twenty-six rows on the ears. From the above description, its product on my poor land, its advantage in shelling, length of grains, &c., it will be readily acknowledged, that it certainly is deserving the attention and cultivation of every agriculturist desirous of receiving the largest possible return for his labor, and I think is much better adapted to our soil than the kind we generally plant. I obtained the original seed from Mr. Smeltzer, of Maryland, at a cost of three dollars per bushel, and feeling desirous that it should be more extensively cultivated for the especial benefit of the farmers, South, whose interest is like unto my own, I am disposed to let off what I may have to dispose of, and not spoken for, say fifty or seventy-five bushels, at two dollars the bushel. Those persons who live at a distance had better make application as early as possible, and their orders will be punctually attended to.

I am, sir, most respectfully,
Your friend, &c.
A. G. Woody.

Smithfield, Dec. 23, 1847.

N. B.—All orders addressed to A. G. Woody, Smithfield, Isle of Wight county, Virginia.

PROPAGATION OF THE YELLOWS IN THE PEACH.—ITS PREVENTION.

For many years the peach tree has been subject to a disease known as the yellows. This disease seldom makes its appearance before the tree has arrived at maturity, as its great vigor and rapid growth appear to preclude the development of the disease previous to the tree fruiting. Much time, labor, and research have been spent in fruitless endeavors to eradicate this disease after it has made its appearance in orchards, and the only result arrived at is the necessity for replant-

ing new trees, to take the place of the old ones at short intervals of time. Many applications to trees have been recommended, and potash, lime, tobacco, banking up trees in winter, &c., have had their advocates. Although individual cures may have been effected, or decay for a time arrested by the remedies, yet such instances are extremely rare; and when applied on a large scale are shown to be without value. The disease, a true consumption, still continues, and will continue, unless some radical method is adopted to eradicate it. From my own observation and experience I am led to the belief that this formidable disease has been much aggravated and spread throughout the country by budding from trees containing in themselves the seeds of incipient consumption, not yet externally developed. A bud may be taken from a tree apparently sound, but after a time both trees will be affected and decay, and so on *ad infinitum*. The only remedy appears to be to bud from trees which are known to be entirely sound, and in which no disease has appeared for several generations. By taking this precaution growers may rely upon having trees that with ordinary care will live and bear fruit for many years, and in time eradicate this evil. That the disease, however it may have originated, has not its origin in either the soil or the climate of this latitude is pretty evident. Natural trees can now be found in great numbers, of many years' growth, alongside fences and other neglected situations, perfectly sound, and likely to remain so. These are the trees to propagate from; and although the fruit is generally of an inferior quality, yet a cultivation of a few years will render it of superior flavor.

From the Germantown Telegraph.

CHEAP BEDS.

It is highly important to practise economy in all things, and especially where it conduces to health and longevity. In this country, beds are all generally composed of straw, hair and feathers; but in Spain and Portugal, as well as in many other countries the materials used for their construction are of a character far more cheap and healthful. In Spain, feather beds are but rarely seen. The same is also the case, to a great extent, in Portugal, in both of which countries the husks of corn are used as a substitute for feathers, and are prepared, and sold by the peasantry to those who purchase, at a merely nominal price. As soon as the corn is ripe, the husks are selected, in a bright, warm day, and dried in the shade. None but the finer and more flexible are taken, and those that are nearest the corn are preferred as they are generally found to excel in these qualities. As soon as the humidity is expelled the hard ends are detached by means of an instrument purposely prepared, and the husk is then drawn through a hatchel, or comb, which divides it into strips of the requisite fineness. This is all that is necessary, so far as the preparatory process is concerned, after which they are ready to be placed in the sacks, or formed into mattresses. Their durability is such, that with proper care and attention, they will endure for years. I have known beds—(under beds)—of this description, to last ten years, and have frequently heard of instances in which they have endured a much longer period.

For the Southern Planter.

POTATO ROT.

Mr. Editor,—Your correspondent, 'H.,' from Amherst, "would like to know through the columns of the Planter what has been the experience of some of our extensive potato raisers in Virginia," as to the effect of soil and mode of planting on the soundness of the Irish potato. Although not an "extensive potato raiser," I venture to give "H." my experience in the premises, and am very sorry to say that it differs widely from his own.

Selecting my seed of a productive and hardy variety, and of unsuspected soundness, I tried my fall crop in two modes.

1. About two-thirds of an acre was cleared, grubbed, and coultered only once, merely to aid the grubbing; the rows, about two feet wide, were laid off as shallow as possible with a shovel plough; and the potatoes, *cut* and *not planted*, were dropped about a foot apart; and the whole completely covered about six inches thick with leaves, having brush, supposed to keep them in place. The land was not touched again until the potatoes were gathered. I had seen this plan ingeniously recommended as producing a degree of coolness and moisture which would amount to an artificial climate, such as the potato delights in, combined with a porousness, said to be best suited to its habits. The result, in point of product, fully justified my expectations. The potatoes were unusually large and very abundant, the best crop, judging by the eye, I ever saw. But they were badly injured by what I took to be rot. They were in all stages of a decay, which seemed to commence in a concentric ring of a light color, becoming darker as decay progressed. Others were much speckled with the white fungous growth, which, I am told, characterizes this singular disease.

2. I planted about half an acre in a piece of new ground, partly the site of several tobacco plant beds a few years ago. This land was well ploughed, and kept in good tilth and in a very light, friable condition the summer through. The potatoes were planted as above, and yielded well, though nothing like the other, either in quality or size of tuber. But the quality of the crop was equally bad. The whole was gathered about the 10th of November.

I have been informed that a gentleman in Charlottesville, who made an extraordinary crop after the first plan I have mentioned, lost the whole in about two weeks by rot. His were gathered before frost.

Having heard that when diseased they would keep better out of the ground, I covered mine with straw in a tobacco-house, and hope to preserve enough for seed and family use. The defective ones I have, from time to time, picked out and boiled for hogs, with no injurious effect that I could perceive.

The soil was in both instances the warm, dark-colored, gravelly clay loam of a mountain hollow, well exposed to the sun.

FRANK G. RUFFIN.

Shadwell, Albemarle, Jan. 13, 1848.

TEA AND COFFEE.

There are probably few things for which we ought, as regards the means of health, to be more grateful to Providence than for the introduction of tea and coffee. As civilization advances, the man of wealth and rank uses personal exercise less, whether in walking or on horseback, and prefers the luxurious carriage as a means of transporting himself from place to place, keeping pace with the progress of civilization, is the number of the thinking and the studious increased, a class of men which is proverbially, and with few exceptions, sedentary, tantamount to the increased number and importance of our commercial relations, is a larger number of men drawn from the fields, and the health-fraught toils of agriculture, into the pent-up and close atmosphere of a town, and have their time occupied in sedentary, or almost sedentary, employmen and in these ways there has arisen a daily increasing number, of all classes, who. taking less exercise, could bear less food, could assimilate, consistently with health, a less amount of nutriment; who could not eat with impunity the meat and beer breakfasts, the heavy and substantial food to which their fathers had been accustomed; and, as if to meet this, tea and coffee have been introduced, and supply the desideratum: a diet which is palatable, only moderately nutritious, and, if not abused, quite harmless. It has been the fashion of late years for the professors of certain new guises in which quackery has presented itself—arrayed in one case in the assumed garb of facts and experience; in the other, in that of mystical and fanciful reasonings, to contend against the harmlessness of these great beverages of daily use; and to advise their discon-

tinuance, unless in occasional, and probably infinitesimal doses, and for directly medicinal purposes. The experience, the comfort, the temperance, and the well-being of civilized man, are all happily adverse to such a view as this; and, like most of the other errors of these quacks and visionaries, it hardly influences the many, and cannot long continue to influence even the few.—*Robertson on Diet and Regimen.*

PREPARATION OF HEMP AND FLAX.

This is a branch of agricultural industry which we are sure may be, and ought to be, largely increased. We have an abundance of cheap and fertile soil congenial to these plants, and their fibre may be produced so cheaply as to rival and supersede, to a great extent, the production of cotton. All that has thus far hindered the extensive cultivation of hemp and flax in this country has been the defectiveness of our processes for rotting and dressing them. Dew-rotting destroys half the value of hemp—water-rotting is expensive and unhealthful; while the rude and wretched processes of flax-dressing hitherto tolerated, rendered the cost of such dressing equal to the value of the product, and so rendered the culture to an extent hopelessly unprofitable. But all this is now to be changed. There has been invented in the West during the last five or six years, various improvements in the mode of rotting and dressing hemp (applicable to flax also) which diminish the cost immensely, and greatly improve the product both in quantity and quality. Of these inventions, three at least have come to our knowledge, all professing to combine surpassing celerity with cheapness, both in rotting and dressing, and to obviate all objection, to water-rotting on the score of health. One of them professes to perfect the rotting process in about twelve hours; the longest time required by any of them is not over two days. Some of these processes require rather expensive machinery; others are completed at a very moderate cost. But we speak not of their relative merits, wishing merely to call the attention of the farming interest to the fact that such improvements have been made, and that the value of many a township may be nearly or quite doubled by introducing them. We surely ought not to go to Russia for hemp, nor to Ireland for flax, and need not, if our farmers will look intelligently to their own interest, for we are confident that this is the greatest country in the world for growing hemp, and we need but direct attention to its cultivation. We know one large factory at Troy, New York, that manufactures some goods containing a considerable portion of linen yarn which has all to come from Dundee, Scotland. The broad canvass for oil cloth all comes, too, from Dundee.

The water-rotting of hemp is a new branch of the hemp business with western farmers. In the beginning many mistakes were made, which experience has pointed out. A better article is now produced, improvements are still making and the quantity increasing. A full supply of the article for the United States Navy, equal in quality to the best Russia, will in a short time be furnished, and all the demands of commerce met.

Appended is a report from the Superintendent of the United States Ropewalk at Charlestown, Massachusetts, where all the cordage for the Navy is made, showing the great strength of American water-rotted hemp; a rope of $1\frac{3}{8}$ inches in circumference supporting a weight of 4,716 lbs.—being more than 500 lbs. above proof.

Test of a sample of American water-rotted Hemp, sent by the Hemp Agent of Kentucky (hackled.) Rope $1\frac{3}{8}$ inches in circumference, made of yarns:

Untarred, No. 20, three trials,	4,431 lbs.
Tarred, No. 20, three trials,	3,893 "
Untarred, No. 40, three trials,	4,716 "
Tarred, No. 40, three trials,	4,488 "
Proofs required to be	4,200 "

The St. Louis papers state that hemp is being purchased in that market for Montreal. It goes by the way of the Ohio river and canals to Kingston.

THE SOUTHERN PLANTER.

From the letter of a friend in Rappahannock we make the following extract:

"I hope the farmers of Virginia will encourage the Planter with that liberality which it so highly merits, and that every one who is an owner of land will spare his dollar for the purpose of gleaning information from its pages. As the Planter about a year since came out irregularly I fear you, on that account, lost many subscribers; if so, I hope the punctuality of its appearance in future will add many new ones to your list. As I am fond of reading the Planter I will venture a suggestion which I think if you could carry it out, would make the Planter more interesting, and probably in a few years be the means of swelling your list of subscribers.

"Call upon those who write for it to send their communications to the Planter early enough for its readers to take advantage of any information they reap from it the present season. Such an arrangement would make it more interesting to me at least, and I think to many others. Frequently communications appear in the Planter, telling how to prepare our land for corn, wheat, &c, after all are done planting and sowing. Now if such pieces would appear in time many would follow the advice, and probably be greatly benefited—but when they have to wait a year, before they can try it, it is forgotten and altogether neglected. You will readily perceive that there is reason in what I state, and I believe if you could adopt such a course that not only the farmers would be benefited, but yourself, also.—For I am convinced that if we would practise the lessons we learn from reading it, we should be gainers—and when those who read the Planter are gainers, it will be the means of converting their neighbors to become book-farmers, consequently, your list will be enlarged.

Yours, respectfully,

G. H. Brown."

We have frequently made the request of our correspondents which the foregoing writer recommends, and we take this opportunity of repeating it. And, as a case in point, we would mention that all who have anything to say about Indian corn and its culture should speak *now*. A word in season is worth a hundred out of it. Send us whatever you wish to say on this important subject in time for the March number of the Planter.

KILN-DRYING INDIAN CORN.

At the meeting of the State Agricultural Society, held at Saratoga Springs, on the 3d inst., a description was read of a new apparatus for kiln-drying Indian corn, recently erected by Col. John H. Tower, of Clinton, in this county. Those who have seen the operation of this method, have no doubt of its entire success. It is thus described:

"A frame work of brick is built, arched at the top, enclosing a sheet iron cylinder, made up of separate tubes about two inches square, coupled together by iron castings. An iron shaft passes through the cylinder, sustained by a support at each, end, and over a pulley at one end of this shaft, runs a belt from some of the machinery of the mill, which thus forms the motive power of the machine. The grain runs from a feeder into the head of the cylinper, thence into the tubes, and as the cylinder revolves, one end of it being elevated, the grain has a revolving motion, gradually passes forward and through into a receiver at the other end. A small furnace or common stove in the bottom of the kiln, with pipes passing from it under the cylinder, furnishes the heat, and the rapidity of the drying process depends upon the fire and elevation of the head of the cylinder, both of which can be regulated at pleasure.

"A kiln of this description with a cylinder thirteen feet long and sixteen inches in diameter (which will require about twenty tubes) will readily dry from three to four hundred bushels per day, consuming not over half a cord, requiring no attention except to regulate the heat, and the whole cost of the machine cannot exceed one hundred dollars.

"Its capacity can readily be increased by increasing the size of the cylinder, or what probably would be preferable, by placing several in the same arch, and a trifling increase of expense will furnish a machine which will dry one thousand bushels per day.

"The great advantage of the invention is, that the corn (and other grain can be dried in the same manner) has a constant rotary motion, and therefore is not burned on one side before it is dry on the other. Thus, the corn comes out as bright and yellow as when it left the ear, and an article of meal is furnished for market altogether superior in appearance and value."

Utica (New York) Democrat.

For the Southern Planter.

MULTICOLE, OR POLAND RYE.

Mr. Editor,—In the December number of the Southern Planter there is an extract from the British American Cultivator, in which mention is made of "Multicole, or Poland rye." I first noticed (in an extract from a Paris journal) in 1832, an account of this grain, and from that period made efforts occasionally until 1845, to procure it, when I succeeded in obtaining half a gill. This I sowed the first day of September of that year, on thin, red land that had been a standing pasture for twenty years. The ground was not manured, though otherwise thoroughly prepared, and the rye sown very thinly broadcast, chopped in with a hoe and raked perfectly with an iron-tooth rake. It came up thinly, stood the winter well, as it also did the spring, retaining a keen, bright, blue green blade throughout May and June, 1846, notwithstanding the immense and continued rains that fell during these months, when the common rye rusted and blighted, as did the wheat. It filled uncommonly well, ripened with a beautiful bright yellow straw, was harvested on the 25th of June, and yielded an exact bushel.

The bushel I sowed on the 22d of September, 1846, on an acre and three-fourths of very ordinary (fallowed) gray land, that would yield not over four barrels of corn to an acre, and much infested with running briers. The rye came up, and wintered well—was much retarded by an uninterrupted drought of forty-three days in March, April and May, 1847, which gave the briers a great advantage. It, however, filled well, ripened beautifully, and yielded forty-five and a half bushels of nice, clean, plump, heavy grain, while the common rye, sown on as good, and better land, produced less than four bushels to one sown, and that extremely inferior. The forty-five and a half bushels of Multicole, I sowed the latter part of the past October, on about seventy-five acres of corn land.

New things frequently excite false expectations, which may be the case in this instance; but should the Multicole rye hold on as it has commenced with me, it must prove an incalculable acquisition to all the rye-growing region of Virginia—the common rye having ceased to be valuable. I have sown none in June, as is recommended in Europe, nor have I much confidence in that period, for sowing here. I am, nevertheless, strongly inclined to think that August or early September sowing is preferable to October or November. The straw has not proved to be much over six feet long with me, nor have the ears been from ten to eighteen inches long, but they have been from five to nine inches long, and surprisingly full of heavy, plump grain. The grains I first sowed were very plump and very small; it has, however, very perceptibly increased in size, being now more than half the size of the old-fashioned rye. Five-eighths of a bushel per acre is enough to sow, as it tillers (or branches) amazingly.

Hoping to be able to give a good account of it next summer,

I am, your obedent servant,

WILLIAM MASSIE.

Pharsalia, Nelson, Dec. 15, 1847.

Obtain good seed, prepare your ground well, sow early, and pay very little attention to the moon.

From the American Farmer.

THE BLACK WEEVIL.

Dear Sir,—In the last number of the Farmer I notice a remedy for the black weevil, by Mr. James C. Atlee, of Carroll county, which is, to "wet the walls of the building infested by weevil with *strong brine*."

This will, doubtless, prevent the weevil where it already exists from going into a barn or garner thus washed with strong brine; but it will not prevent the egg from being hatched there.

I believe the egg is deposited in the grain of wheat while in the field, and when hauled into the barn and there heated to a certain degree is hatched, first appearing like a small white worm, but soon changes into the black weevil.

This opinion is based on the following facts:

1st. As soon as I had hauled in my grain last harvest, I threshed out about one hundred bushels of Mediterranean wheat and put it in a garner before it had gone through a sweat. In eight or ten days afterwards I went in to examine it, and found it looked well over the top, but running my arm down I discovered it was very warm, and when I drew it out my hand was covered with flour. This I thought very singular, as I saw no weevil about it. I went into it and threw it up with a shovel, and found it below, where it was heated, to be full of small white worms, some out of the wheat, others just with the point of their nose or snout, as you may please to call it, sticking out, and others I found, upon close examination, had not yet broken the bran. In the course of ten days or two weeks this wheat, which now had no weevil in it, was literally alive with them, and the worms had all disappeared. In the adjoining garner there were eight or ten bushels of the same kind of wheat put in near the same time, but this did not heat on account of the smallness of the bulk; no worms appeared in this, and it remained uninjured by the weevil.

2d. A neighbor of mine, a few years since, cut a piece of wheat very green, and hauled it in before it had dried, but not wishing to mix it with his other wheat, he put it in a shed attached to his barn. This heated very much in the straw, and the weevil destroyed almost the whole of it. His other wheat which was put away dry, was unimpaired.

3d. A gentleman but a few days since stated in my presence that he took some wheat that had not a weevil in it, and put it in a bag, and set it in his house where no weevil could get to it, and yet filled it with weevil.

When I was a boy, the farmers would never think of cutting wheat until it was thoroughly ripe, and then there was very little complaint about weevil. Now it is thought to be more profitable to cut it in the *dough state*, and some aiming at this state cut many portions of their fields in the *milk state*, and this is frequently removed away before it is thoroughly dry, and, therefore, heats sufficiently to hatch the egg which ultimately produces the weevil.

The remedy then is, to never cut your wheat until it is ripe; or if cut in the *dough*, or *milk state*, when, of course, the straw is quite green, do not haul it in until it is *thoroughly dry*, and I apprehend there will be no necessity for a war of "extermination" against the weevil, for there will be but few, if any, to exterminate.

W.

Clear Spring, Md., Nov. 14, 1847.

TIME OF PUTTING COLTS AT WORK

The common practice on this point is pretty generally wrong. It is not unusual to find colts put to harness at two years; and at three, many consider them fully fit for steady work. A colt is not fitted for this at four; and his strength should never be tasked at three. The breaking process should be commenced before he is weaned, by accustoming him to the halter, and to handling. This should never be intermitted; but the animal should always know and be accustomed to his master. If this is attended to, he will

never be otherwise than gentle, and will never give any trouble in breaking.

If he is not put to work too young, with fair usage, the horse will be as good at twenty years of age as he is commonly at fifteen. One year's delay of work when a colt will be compensated by three or four when a horse.—*Prairie Farmer.*

For the Southern Planter.

PARTRIDGE PEA.

Mr. Editor,—Mr. J. H. D. Lownes thinks the partridge pea will enable him to cultivate corn forever by using it as a green manure. I am sorry he did not go more into details, particularly on one subject, viz: the identity of the partridge pea with the *two* varieties, which he calls the gray and black. Will he be good enough to establish the fact? and also to prove that they are not a pest? I make the request because I am interested in the answer, and would be much obliged to him or any one else to give it. I know that it abounds on James river lowgrounds. Can no one, acquainted with its habits, make them known, and state its capacity for grazing?

Yours, respectfully, R.

TREATMENT OF A CONTRARY HORSE.

When a horse gets in the way of being contrary and will not go forward at all, it is common to apply the whip freely Solomon says "a whip for the horse," but he may not refer to cases of this kind.—At any rate it is often where thus used of no benefit, only the gratification of the enraged driver. A method which we have known more successful is to treat the animal very kindly. His contrary disposition is usually the result of having been fretted in some way, and kindness may overcome it. Make much of him at all times. Speak gently to him and so often that he will become accustomed to your voice. When he stops when attached to the carriage or a load and will not move, approach him in the same gentle manner. Stroke the mane and pat the hand frequently on his head. Means of this kind will have a powerful tendency to overcome his stubbornness, as brutes feel the power of kindness. We believe from what we have seen that young horses especially in nine cases out of ten may be successfully cured of contrary habits in this way, while the application of the whip would only increase the difficulty.—*Exeter News Letter.*

For the Southern Planter.

QUERIES.

Kind Sir,—You will oblige a subscriber by inserting the following queries:

1. What will destroy the army worm, which has proven so destructive to our young corn of late years?
2. What will destroy vermin on swine?
3. Will mares lose their foals by grazing on clover?

Will the Editor or some of his subscribers give an answer to the above? By so doing, they will oblige many who have not much experience in such matters.

FARMER.

The army worm has generally been most troublesome to cotton; and the only method in use among cotton growers is to cut off the bolls infested with them and burn them. We know of no method whatever by which corn could be effectually rid of them. If any reader of the Planter has seen any plan for it tried, we would be glad to publish whatever he can tell us about it. This species of vermin has been much more troublesome and destructive of late years than formerly, but it is not probable that they will long continue in its present numbers. Nature has arranged the economy of the animal creation in such a manner as to preclude this probability. We find every species of animal has some other species which preys upon it; and when from any accidental cause one kind increases to such a degree that it acquires an undue balance in the scale of being, those which live upon it soon begin to increase with still greater rapi-

dity, and quickly reduce it to its proper numbers. We frequently read of insects, reptiles, &c., increasing in particular localities till they become a real plague; but they always disappear after a short time. The invasion of the army worm will quickly draw after it the swarms of enemies which feed upon it, and reduce the tribe to its proper dimensions.

To the second query of our correspondent we are happy to be able to furnish a satisfactory answer. Lice, like all other insects, breathe through holes in their sides. The most easy and effectual method of ridding your cows or your swine of them is to give their hides a thorough greasing. The grease is retained on the hair; and the vermin moving through the hair fill their breathing holes with it, and are thus suffocated. The easiest method for greasing cattle is to pour lamp oil along the ridge of the back. Thence it will run over the greater part of the body—or at least the lice will get their full share of it in their attempts to pass from one part of the back to the other. But it is well to pour a considerable quantity behind the ears and on those portions of the belly which are protected by the legs. We have tried this method of destroying vermin on swine repeatedly, and know it to be quick and effectual.

Fat hogs and fat cattle of all kinds are but little troubled with lice, while they swarm upon the lean animal. The simple reason of this is, that the bodies of well fed cattle have a supply of extra fat which exudes through the pores of the hide, keeping the hair sufficiently covered with oil to render it an unhealthy lodgings for Messrs. the vermin.

With regard to the third query of our correspondent we can say nothing save that it is a generally admitted fact that feeding the horse on the *rowan*, the after-growth or white clover, is one cause of the disease known as the slabbers, and that this disease commonly brings on, or is the symptom of a general bad state of the system. In this way it may cause the loss of the foal. We are not aware, however, of any direct effect. If the experience of any one can furnish further information upon this or the other topics of our friend's note, we will publish it with pleasure.

IMPORTANCE OF DEEP TILLAGE.

However skilfully and philosophically we may carry on our saving and application of manures; however well we may select our seed, and choose our seed-time, without deep tillage we can by no means receive the maximum result. Drained land, deeply stirred, and thoroughly pulverized, becomes a kind of regulator of the weather, for itself, it is not soon soaked in wet, and it forms a store-house of moisture in dry weather. It is a bad conductor of heat, and is, therefore, not easily overheated; but on the other hand, it is not soon cooled, and so keeps up an equal temperature by night and by day, in cloud and in sunshine, in the highest degree favorable to the healthy development of plants.—*Farmer's Herald.*

"HINTS" WHICH TELL LIES.

It is common to see strings of "hints," in newspapers, which profess to lay down rules, or tell truths of some importance, in a very short compass. This is a convenient way of impressing valuable facts on the mind, as such things will often be remembered, when they would otherwise be forgotten.

But it is important that these hints state *real* facts instead of false ones—that they tell the truth in fact instead of telling lies—a thing which they are not always careful to do. We have lately seen several long strings of them of perhaps fifty items, out of which there were not half a dozen which were not either false or questionable.

There is a little list now lying before us rather better than that, but still very striped indeed:

"Tomatoes make excellent preserves."

True as a book.

"Toads are the very best protection of cabbage against lice."

Is that so?

"Pears are greatly improved by grafting on the mountain ash."

A whapper, decidedly.

"Sulphur is valuable in preserving grapes from insects."

Sulphur will preserve grapes from mildew sometimes; but as for insects, it is no sure protection! The question may be asked, What sort of insects?

"Lard never spoils in warm weather, if it is cooked enough in trying out."

Mighty doubtful. See direction for trying lard in another column.

"Rats and other vermin are kept away from grain by a sprinkling of garlic when packing the sheaves."

Who knows that?

"Three strawberry leaves eaten green will cure a diarrhœa."

They will do no such thing.

"Lime sprinkled about where rats live will drive them away."

Sometimes it will and sometimes it will not. Rats are not fond of fresh lime; but they will not quit a cellar at once, because there is lime "sprinkled about."

"The potato rot is caused by a white worm with a red head."

Probably not.

"Mowing off the tops of potatoes is a sure preventive of the potato rot."

It is not good manners to contradict, but the reader will please understand that we shake the head.—*Prairie Farmer.*

SOWS DEVOURING THEIR PIGS.

We have seen some pork raisers who were much troubled by a disposition in their sows to devour their own offspring. It is general when a sow does this once, to regard her as good for nothing as a breeder, and to have her fattened and killed as soon as possible. But in our opinion a single instance of this practice does not prove that a sow may not make a good breeder, nor that she will ever do it again. In nearly all the cases into which we have inqured, we have found that there had been a disturbance of some of the essential habits of the animal—either they had been removed from their companions, or into a new pen, or there had been some change in her treatment, to which she had not been accustomed. We have known a sow to do it which had never been guilty of such an unnatural act before, from having a large quantity of straw put into her pen; and perhaps in the majority of cases something might be found, upon examination, which caused the animal to feel ill at ease. It is, therefore, unwise to have an otherwise valuable breeder killed for the first instance of this kind.

We have seen almost as many cures recommended in the journals as articles upon it.—And perhaps each writer found his own plan good in the few instances which came under his observation. One directs "to separate the sow from the rest of the swine six or eight weeks before her bringing forth, that she may become accustomed to her pen. Care should be taken to keep her pen dry and well littered, always giving them litter enough, so as not to be obliged to give them any for six days before the time; for nothing disturbs a sow so much as an abundance of litter at the time she first gets it, and this, in my opinion, has a great tendency to make her destroy her offspring. If a sow is with the other swine until a few days of her bringing forth and then separated, she will not get accustomed to her pen, and being disturbed, she will be pretty sure to destroy the pigs."

Raw salt pork cut in small pieces given to them while the pigs are very young, is said to prevent their eating them. A writer in the New England Farmer, (Vol. XI. p. 298,) says, "I have been careful for about a week before my sows were to farrow to give them some butcher's refuse meat, which does not cost much; if easy to be procured, give them a plenty, and I will venture to say they will not eat their pigs." Perhaps they will not; but is not this gratifying, and thereby increasing the vitiated taste which sometimes leads them to the habit itself? Although we would not put to death a sow of valuable breed for devouring the pigs once, (because, as we said, that may be owing to an accidental cause,) if she repeats it, we would regard the fact as proof of some natural defect, and would get rid of her as soon as possible.

Never keep your cattle short; few farmers can afford it. If you starve them, they will starve you.

BOILED FLAXSEED—LINSEED MEAL.

The following paper, on "Linseed, Linseed Cake, and Meal, for fattening Cattle and rearing Calves," is by Messrs. M'Adam & Co., general millers, Douglass street, Belfast, (Ireland,) who have for some years seen it practised with the best results:

"Almost every person in the habit of feeding cattle for the butcher is acquainted with the fattening qualities of linseed cake, but rearing calves with linseed meal has only been introduced in this neighborhood within the last three or four years; it is now quite established, and a great saving is the result.

"Half a pound of this meal is sufficient for a calf daily, and this costs from one-half-penny to three farthings; while a quantity of milk, containing the same proportion of nutriment, would cost eightpence to ten-pence per day; a saving would thus be effected of at least six-pence a day on each calf, which is 3*s.* 6*d.* per week for one calf, and £3 10*s.* per week for twenty calves; and this for three or four months, amounts to a sum worth saving.

This linseed meal is the cake ground; the best way of using it is to steep at the rate of a quarter of a pound for each feed, in cold water, for twenty to twenty-four hours; then to dilute with warm water to the temperature of new milk, making a gruel about equal in bulk to the milk usually given—if any milk be added, a pint at each feed is quite enough.

"The general report of our farmers and dairymen, who have continued the use of this meal for rearing calves during the last three or four years, is, that the calves are more healthy when fed on it, than formerly when fed on milk, and that there are fewer deaths; it is very nutritive, and at the same time keeps the stomach and intestines in a cool and wholesome condition."

HOW TO MAKE GOOD TEA.

Boil rain water and pour upon your tea, letting it steep from one to two minutes, if you wish to realize the true taste of the "plant divine." Well, river, or spring water, in many parts of the country, is strongly impregnated with lime, which acts chemically upon the tea-leaf, and greatly deteriorates, or destroys its fine aromatic flavor. In fact, water, containing lime, or much vegetable matter in solution, has more or less effect upon all kinds of cookery. Besides it is highly injurious to the health of some persons.

American Agriculturist.

For the Southern Planter.

CAMPHIRE AND ANTS.

Mr. Editor,—I have tried camphire to expel ants, and with perfect success. A lump as big as a nutmeg was broken into a dozen pieces and placed on the shelves of a press four by seven feet. The ants had been very troublesome; but in two days they vanished utterly. One or two of the articles kept in the press tasted for a day or so of the camphire, but this was better than eating ants.

Truly, yours, F.

PUMPKINS.

We have before noticed the following method for preserving pumpkins. We, however, commend the letter below to the notice of our agricultural friends, which we copy from the Maine Farmer.

Large quantities of this vegetable are annually produced on most farms, and while sound and good, are relished by most kinds of domestic stock, especially by cows and swine. They last, however, but a short time, and when desired for culinary purposes, are generally dried in the same manner as apples. This is unnecessary, as by adopting the following very simple method, pumpkins may be preserved during winter and even late into the following spring perfectly sweet and sound:

Deposit, in some convenient place, from a foot to eighteen inches of clean, well dried wheat, oat, or rye straw, and place

thereon a layer of pumpkins—the best and fairest of the crop—then another *stratum* of straw, and so till you have stowed your entire crop, or so large a portion of it as you may consider necessary for winter use. A gentleman in one of the midland counties of Massachusetts, writing to us under date of March 16, 1845, says:

"I am now feeding my milch cows and other stock on pumpkins of last year's growth. They were carefully packed in straw as soon as harvested, and are in a state of fine preservation. The butter produced from the milk is of the finest quality and richest color, and the animals themselves are in much better condition—more active and healthy than I have ever known them when restricted to dry and unsucculent food."

As the pumpkin crop, this year, promises in most sections to be an abundant one, those of our agricultural friends who have not already adopted the above plan, and who may feel desirous of securing their vegetables for winter feeding, will do well to give it a trial.

From the Maine Farmer.

SPONTANEOUS COMBUSTION.

Mr. Editor.—I had a fire kindled in my cellar yesterday in a cask of ashes that were three or more months old. As all your readers may not know that cold ashes will sometimes take fire, I will relate the circumstance as it occurred.

A half hogshead was carefully placed in one corner of the cellar, where it might be consumed without burning any thing else. When it was filled, I fixed some pieces of board around the top and piled the ashes above the tub against the stone wall. On examination, after the fire broke out, I found a board that laid one edge to the wall and partly over the tub with ashes above it, to be the seat of the fire. All that part that laid over the tub was charred to dust and fire rapidly kindling on the edge of the tub; the ashes above and near the fire were quite damp and very hot; towards the bottom of the tub drier and not so hot. Now the philosophy of the matter seems to be this: the ashes absorbed moisture from the frosty stone wall, which caused a rapid condensation, and carbonic sufficient to produce ignition was evolved. What elements to fire a dwelling! *Cold ashes and a frosty stone wall.*

I have now stated what actually did take place. I will now mention what might have occurred, and doubtless has many times. A cask of ashes may be placed very snugly under the cellar stairs. From some cause they may become partially wet, or in an out-building exposed to snow or rain, combustion ensues, slowly but certain. The staves of the cask are charred, on a bitter night the piercing Northwester searches every crevice—the flames burst out, and the elevated dwelling is wreathed in flames, while the wretched family escape, half naked and frozen, and the fire is supposed to be the work of an incendiary. A.

Readfield, January, 1847.

We recollect reading, in Silliman's Journal, we think it was, some years ago, a statement respecting the firing of ashes that were some months old, caused by moisture.

It was thought by some to be caused by the evolution of potassium, which is the basis of potash, and will take fire by coming in contact with the air. The fact is an important one to be known, in order to induce people to be exceedingly careful where they put their ashes.—*So. Cult.*

For the Southern Planter.

CATCHING HAWKS.

Mr. Editor,—Thinking it my duty to contribute any thing which I think would be of service to my brother farmers through your valuable paper, I will hereby inform you how we may protect our partridges, chickens, turkeys, &c., from the depredations made by the hawks on our farms. I some time back sent to Richmond and purchased two small steel traps at the cost of one dollar, and by setting them on

stacks, fences, stumps, &c., baited with small birds, have destroyed or caught some ten or a dozen hawks.

Yours, respectfully,

THOMAS A. HOPE.

January, 1848.

ROADS.

"Let us survey," says Abbe Raynal, "the whole earth, and wherever we find no facilities for travelling from a city to a town, or from a village to a hamlet, we may pronounce the people barbarians." It is at least certain, that there can be no such thing as a high state of cultivation, or great wealth and prosperity in any country unless they have good roads in that country. They are the veins and arteries through which all improvements must flow. As through the veins and arteries of the human body the blood circulates in every direction, diffusing life, health, and vigor through the animal system, so do good roads carry on the internal commerce of the country, and preserve its agriculture in a healthy and vigorous state. And as an obstruction in a vein of the human body, even in the remotest part, checks the circulation, and thereby causes that part to become useless and sink into decay, so do bad roads in any particular district cause the farms there to deteriorate in value, and the lands to diminish in fertility. If it takes several days and an additional team of horses to carry your produce to the next market, or to the next railroad or shipping place, of course you must sink from the profits of that produce just the amount which you might otherwise have made from the labor of your negroes and horses during the days in which they were slowly travelling over the soft and uneven roads.—And if the cost of hauling manure to your farm be twelve per cent. on its original price, while the improvement of that manure upon your land will be only nine per cent. on its original price, of course you cannot manure the land. So farms in a country thus situated, must get poorer every year, while the crops raised upon them are worth less than the same crops raised elsewhere, because of the large slice which transportation must take out of the price they may be sold for.

Unfortunately, by far the greater part of Virginia and Tennessee is in the situation above mentioned. Where the lands are level and the soil sand and gravel, the roads are tolerable—because they could hardly be otherwise on such a soil. But wherever the soil is clay, as is the case in a large portion of the country, the roads for many months of the year are absolutely impassable. Nor upon any road on which we have travelled in these States, except a few turnpikes, do we recollect a hill which has been levelled or a single natural obstruction removed.

It is at this season that they are in their bad condition, and, therefore, we take this opportunity for reminding the community of the absolute necessity under which we lie to do something for our roads. Money laid out in making good roads, if applied judiciously, is a most profitable investment. It is true, we are poor; we have little money and we have little time to spare, because we have to work hard to keep our heads above water. But that is the very reason why we should be willing to make an expenditure on our roads. *We are too poor to have bad roads.* We have too many uses for the profits on our produce to spend a large part of them in going to markets and in passing from place to place on necessary business. Our farms are now in that state in which they *must* be manured or their cultivation, in many places, altogether given up.

The present plan of working a few hands one day in the month on the roads, filling up a few washed places with brush and dirt, does no good. People should be employed who understand the business of road making by the legislature or by the courts of the counties, to *remodel* the principal roads entirely. When this country was settled and the existing roads laid out, the population was too thin to justify this. But the welfare of the agricultural portion of the State has long since required, and and now requires combined action to give us what we have never had, good roads.

As we have said, these are not to be made by mending the old ones. In the tracts of clay, such as those in Albemarle, Fauquier,

&c., the roads never will be tolerable until an artificial foundation is made, either of gravel and broken stone, or of corduroy. Nor will the roads either in the clay lands or anywhere else, ever be good, or keep in order, unless more judgment and industry are used in draining them. How often are they merely gutters for the adjacent fields. If good roads are desired, at all, especially in places where it sometimes rains—as is the case, we believe, in a large portion of Virginia—the ground on which they are made must be raised: deep ditches must be dug on both sides, and parallel with the road. From these there should be outlets at frequent intervals. In England and in some of the Northern States where they know it is their interest to spare no pains and expense to have good roads, they have subterranean drains similar to the plan of under-draining described in the November number of the Planter. They are formed by digging to the depth of from four to eight feet, and by placing a layer of brush at the bottom; above this is laid stubble or turf, and the whole is covered with a layer of earth. These aqueducts are generally two feet wide, and will last twenty years.

But it is not our object at present to suggest plans of improvement, as to persuade the people of the State *to do something*. It is easy to make good roads if sufficient money and labor are only expended upon them. The best treatment varies with different localities.

We should be happy to make this paper the means of comunicating the knowledge necessary for the improvement of any particular neighborhood. Only do *something*—resort to some system of combined action to get rid of the intolerable roads which now run through the greater part of this and the neighboring States.

EXPERIMENTS.

There is no way of making improvements in farming, but by experiments.—If the farmer is informed of, or has conceived, a different and better method of culture or management in any branch of his farming, he is to test the goodness of that method by experiments; and, if these prove successful, he may congratulate himself on having performed an act which is serviceable to his country and honorable to himself.—*Farmer's Assistant.*

PRESERVATION OF THE GRAPE.

Mr. P. B. Mead, in a communication to the American Agriculturist, remarks, "Last winter I sent a communication on this subject to the New York Agricultural Association, which was read before that body by Dr. D. P. Gardner, and seemed to excite not a little interest. In February I showed some grapes to Dr. G. which were perfectly sound, though ripened under very unfavorable circumstances, and which had been left on the vine until they were frozen as hard as bullets. Some of these grapes I kept until May, when the last of them suddenly disappeared down the throat of a friend.

"As the grape season is at hand, a description of my method of preserving this most luscious fruit may not, perhaps, prove uninteresting to many of your readers, and will, no doubt, be appreciated by some of them at least. The process is so simple that few words are necessary to describe it, and it will be easily comprehended by all. I first take a common unglazed flower pot, and place over the hole in the bottom a small clam shell (or a piece of broken pot) with the convex side down, to drain off surplus water. I then pour in clean, white sand, to the depth of about an inch; next I select a bunch of ripe grapes, perfectly sound, and firmly attached to the peduncle. These I hold in the pot in such a position as they do not touch its sides, and then fill it up with sand, covering the grapes about an inch and a half in depth. This being done, I set the pot aside in a room of from forty to fifty degrees, or sixty Fahrenheit, and water it about once a week, or as often as it becomes dry, with a watering pot having a finely pierced rose attached to it. I will just add, that the pot may be larger or smaller, and that one or more

bunches may be put in each pot according to circumstances. When the grapes are eaten, the sand must be washed off in clean water."

PROPERTIES OF EGGS.

Eggs are popularly supposed to be so much alike, that what can be said about one egg is thought applicable to every other laid by the same species of bird, the common hen, for example; but there is nearly as much distinguishable difference between the units in every egg-basket which is carried to market as there is between the faces in a crowd of men, or the hounds in a pack. To every hen belongs an individual peculiarity in the form, color, and size of the egg she lays, which never changes during her whole lifetime, so long as she remains in health, and which is as well known to those who are in the habit of taking her produce as the hand-writing of their nearest acquaintance. Some hens lay smooth cream-colored eggs, others rough, chalky granulated ones; there is the buff, the snow-white, the spherical, the oval, the pear shaped, and the emphatically egg-shaped egg. A farmer's wife who interests herself in the matter, will tell you with precision, in looking over her stores, "this egg was laid by such a hen"—a favorite perhaps—"this one by such another;" and it would be possible that she should go on so throughout the whole flock of poultry. Of course the greater the number kept, the greater becomes the difficulty in learning the precise marks of each. From a basket of thirty eggs, gathered in a farm-yard as they came to hand, eleven, laid by one or two hens whose race we were desirous to continue were selected in about two minutes by the friend who supplied us with them.

REMARKABLE DISEASE IN SHEEP.

A farmer in Ruthwell, Dumfrieshire, lost about half a score of sheep, and, on an examination being made of the cause of death, it was discovered that the intestines contained a number of loch or horse-leeches. These animals had probably been swallowed by the sheep when drinking, and appeared to have eaten through the coats of the stomach until they reached some of the vital organs whereby death was produced.—*Selected.*

For the Southern Planter.

RALSTON'S PLOUGH.

Mr. Editor,—Taking as much interest as I do, in all labor-saving implements, tools and machines, it was with much pleasure that I read the article on Ralston's Corn Plough, extracted from the Scottsville Times, and republished in your August number. If Agricola has not placed too high an estimate on the merits of this plough, which, from his description, must be the *ne plus ultra* of ploughs for the cultivation of corn; and if the patent right to it has not expired by lapse of time, it would be a profitable speculation to some Virginia mechanic, no doubt, to purchase the right for his State, and to manufacture them. I wonder that no allusion has been made to this implement by our leading agricultural journals; at least I have seen none.

Believing that this plough, from the description, would suit me as well as many others, Mr. Editor, I am induced to ask if you could not lay your readers under obligation by obtaining from Agricola, from Mr. Ralston, or some one else, a drawing of it, accompanied with a fuller description than was given by Agricola. I would like to know, for example, the construction of the diamond winged hoes, their distance apart, whether they are of cast or wrought iron, the form of the frame, the soils to which it is adapted, &c.

Agricola says "he has witnessed the performance of this plough." Should this meet his eye, will he say whether it works well and deeply on stiff land and on grassy land?

He says, further, that the hoes can be drawn by one horse in smooth land, completely working a row of four feet in

width. By smooth land, Agricola means, I suppose, light land; as stiff, clayey land may be smooth; and I presume that scarcely any plough, drawn by only one horse, could cut the ground well and thoroughly for four feet in a stiff soil. This is an uncommon width in light land.

These remarks are by no means, Mr. Editor, to question the statement made by Agricola in the Scottsville Times, but merely to seek further information as to a plough, which, I have no doubt, is a very valuable implement, and one which, to use the language of Agricola, "the farmer would find it greatly to his interest to procure," and for one at least, I acknowledge my obligation to him.

I would advise all persons, Mr. Editor, recommending implements as valuable, to state where they can be procured, and at what price; and I would thank Agricola to say where, and at what price, this Ralston plough can be had at this time.—Should this plough be adapted to the land which I cultivate (it being mostly clayey) I would esteem this article to be worth the aggregate of subscription to the Planter, from its inception down to the present time.

I doubt, therefore, Mr. Editor, whether you could insert anything in your interesting paper that would prove more acceptable to your readers than a further account of the Ralston plough, accompanied with a drawing, if you can obtain one.

We farmers, with limited means, stand greatly in need, Mr. Editor, of cheap, yet good and labor-saving implements. We are by far the more numerous class who support your paper, and we invoke you to aid us as much as is in your power.

Have any of your readers tried Grant's fan mill? If they have, will they be good enough to inform their brother farmers whether it realizes what is said of it.—Does it remove the cheat, cockle and wild onion, by passing the wheat through it once only? The onion is becoming such a pest, I would be satisfied to get rid of that at the expense of two operations

I see Smith's straw-cutter advertised at ten dollars, which, it is alleged, will cut as much provender in the same time as the more expensive cutters. What is the principle of its construction? and can we not have a drawing of it in the Planter?

Does any one, in Richmond, manufacture a portable threshing machine on the principle of the inclined railway, and of easy draught for two horses? If so, are they simple, durable, and what quantity of wheat will they thresh per day? What, also, is the price of them?

Respectfully,

A FARMER.

Greene County.

P. S.—As winter is the time for preparing implements for use, it would be desirable to learn something about the Ralston plough as soon as it may suit the convenience of Agricola or any one else, to make a communication on the subject?

A. F.

If either Agricola or Mr. Ralston choose to furnish the information desired by our correspondent the Planter is open for a *short* communication on the above mentioned plough. We should be pleased to furnish answers to his other inquiries if we can obtain them from those who have experimental knowledge of the implements to which they refer.

HAY.

Hay in England is scarcely ever put in barns. It keeps well in stacks, made up as they are in the neatest manner, and carefully thatched with straw. Nothing can be more beautiful and workmanlike than the manner in which they are made up; and for hay, the long stacks are decidedly preferable to those of a round form, as it is cut down for use, in such case to more advantage. The formation of a stack, which is often done by women, is a work of much skill, which is the fruit only of practice; the thatching of a stack in the best manner, requires both art and experience, and there are men who make it a profession. When well executed, the hay is for years impervious to wet. During the formation of the stack, which, when intended to be large, must sometimes wait for several days the progress of hay-mak-

ing, the most careful farmers have a large tarpaulin or canvass covering to suspend upon poles over the stack in order to protect it from rain. I refer to those minute circumstances, to illustrate the extreme carefulness with which many of the operations of husbandry are conducted. When the hay is to be used, a whole stack is never removed to the stables at once, but is carefully cut down as a loaf of bread might be cut, and always done up and bound in trussss, intended to be of fifty-six pounds, and in that way carried to be distributed to the animals. This requires some extra labor; but the farmers find their accounts in it.—*Colman's European Agriculture.*

For the Southern Planter.

INFORMATION WANTED.

Mr. Editor,—With your permission I will inquire of the farming public, with the hope of being answered through the columns of your invaluable paper, if there is any antidote for the weed commonly called dog-fennel. Many years of experience have convinced us that it cannot be destroyed by the usual mode of cultivation in this country—which is the five shift system. We should be *really glad* to know if there be any means of getting rid of it. It is a common saying in this neighborhood, to wit: that the *Methodist* and *dog fennel* are taking the country by force. We should at least be glad to get rid of the latter.

A Subscriber.

White Post, Clarke Co., Jan. 21.

WASH FOR FRUIT TREES.

Lime wash, or whitewash, is not considered as good for trees as potash wash. The latter is made by dissolving potash in water at the rate of one pound to a gallon. It may be applied with a brush, in the spring, or at any other season, and will, by one or two applications, render the bark smooth and clean. For old trunks, with thick and rigid bark, Mr. Downing (in the *Fruit and Fruit Trees of America*) recommends a wash of soft soap. He thinks it better for this purpose than potash, "as a portion of it remains on the surface of the bark for some time, and with the action of every rain is dissolved and penetrates into every crevice, destroying the insects and softening the bark itself."

EXPERIMENTAL FARMING.

Pork is now in great demand and farmers can well afford to bestow extra attendance on their fattening swine. Grain of all kinds is high, but it has cost the producer no more than usual to raise it. Grain of the various kinds must be our chief dependence for fattening, though great additions of cheaper matter are advantageously mixed up with it.

Indian corn is the best article. Oat meal renders the dough more palatable, and a little rye meal is good. For buckwheat we may be allowed a single word, for pigs never turn up their noses at it, though some modern feeders do. In our own hog-pen we have found buckwheat meal quite equal to Indian meal in proportion to its weight.

Good pumpkins boiled, sweeten the mixture, and refuse potatoes are worth a fourth or a fifth as much per bushel as meal or corn. But turnips of all kinds are better for neat stock than for hogs. Those who have the proper conveniences for boiling, put parsnips into the kettles. And parsnips are a good article in this way, as they render the whole mess sweet.

Some farmers use carrots also, and though not so palatable as parsnips and pumpkins, they aid to increase the nutriment of the pudding. Hogs are pleased with variety, and with all the above ingredients at hand their food may be varied from day to day. Oats are now high and will not be much used for fattening. It is said that many are purchased and sent off to feed horses in the army.

When oats are not used and no sweet pumpkins are on hand, farmers have sometimes made use of molasses to sweeten

the pudding for pigs; and pork is now high enough to justify the use of cheap molasses for this purpose. If molasses tells well as an economical article in family bread, why not in dough that is mixed for the hogs?

Molasses is now higher than it was through the summer, and corn is not so high as we sometimes find it. Yet we incline to think that a little molasses will now be found an economical article to sweeten the food of fattening hogs.

A good tender of these animals will not forget the medical branch of the business of feeding. Brimstone is found to be an excellent article for the bowels, and charcoal is the best regulator of the stomach. Let them have free access to this article, and to bits of wood when your trough is so hard they cannot gnaw it.

In regard to the conclusions which chemists come to, on analyzing the nutritive matter in the different articles of food, we have only to say we have no confidence in their correctness. In the first place, we find they materially vary from our experience in the matter; and secondly, they vary materially from each other.

We hold that experience is the only true test in matters of this nature. Every theory that contradicts long experience should be received with caution. Young farmers ought to treasure up as gold the knowledge they may acquire from an intelligent and careful experimenter. They will then steer clear of the dogmas of the obstinate, who will not examine both sides of a proposition; and of the theories of the unpracticed whose fancies are at variance with facts.

PUMPKIN BUTTER.

The following preparation is said to be positively delicious. We copy it from one of our exchanges for the benefit of our readers: "To one barrel of sweet cider boiled down about one-third, take two bushels of pumpkins cut in pieces like apples, they being peeled and cored, and add them to the cider gradually, stirring all the time, until the whole is boiled down to about twelve gallons, and just before taking them off add half pint of ground cinnamon and spice it to taste.—This makes an excellent table dish, one fit for either king or countryman, only the latter deserves it most."

EFFECT OF DRAINING—IMPROVEMENT OF WET LANDS.

We have for years been endeavoring to impress our readers with the great benefit which would result to them, in a pecuniary point of view, were they to underdrain their wet lands, or otherwise relieve them from their superabundance of water. We have always been of the opinion that many fields which are now intractable clays, and which yield stintingly, might, by this process, not only be transformed into good loamy soils, but be made to bear abundant crops of an improved quality. We are, therefore, gratified at being able to present the following brief paragraph from *The Mark Lane Express* before our patrons. Brief as it is, it embodies a series of facts which, to the reflecting agriculturist, will present subjects for a volume of comments. And under the hope that it may set them to thinking, and that through their thoughts, they may be induced to *act* so as to improve their estates, we commend the article to their favorable consideration:

"The Mark Lane Express gives an account of the improvements made on the farm of Lord Stairs, in Wigtownshire. One part was drained, subsoiled, limed and thoroughly pulverized and then produced 40 bushels of wheat to the acre, where only 12 were raised before; the carrots, turnips, and mangelwurtzel on the land averaged 23 tons to the acre. A morass, a part of which had been cut over for peat for 30 years, was drained, pared, limed, burned, manured and ploughed and sown to oats. Crop, 40 bushels to the acre. Next year top dressed with gravel and sand, limed, manured, ploughed and two acres sowed to turnips, Hybred Dale's; some of them weighed 15 lbs. each. The crop was 40 tons per Scotch acre.—[4

Scotch are 5 English.] Seven acres planted to potatoes produced 576 bushels per acre. Previous to improvement 16 acres of this land was barely sufficient to pasture two cows and their calves"

It will be seen that subsoil ploughing, in the cases stated, was combined with draining, and that the improvement produced in the productive capacity of the land was such as to excite universal surprise, inasmuch as previous to the application of draining and subsoiling, it produced but 12 bushels of wheat to the acre, and required 16 acres for the pasturage of the cows, while the same soil immediately subsequent yielded as stated above, 40 bushels of wheat, 23 tons of mangelwurtzel and 40 tons of turnips to the acre.

We do not entertain the slightest doubt that there are hundreds of thousands of marsh lands in this country, which is susceptible of being drained and rendered dry, that might by similar process of melioration, be made equally productive, or, at all events converted into prolific sources of profit to their owners, as reclaimed marshes, when properly managed, are uniformly distinguished for their fertility.

LIME IN ROANOKE.

We beg leave to call the attention of the Directors of the Railroad between Petersburg and Gaston to the letter which we give below.

Different soils are peculiarly benefited by different manures. Lime is well known as a most powerful and permanent renovator of almost all kinds of exhausted lands. But on soils of some kinds its effect is almost magical, doubling its worth at once, and preserving it in a fertile state for long periods of time. The land in and about Roanoke has been found to be of this character. Lime on that portion of the country has been found to be of most extraordinary and unusual value. Having settled this fact by repeated experiments, the farmers there are anxious to go very largely into its use; but they find it impossible to do so at present on account of the enormous price they have to pay for the lime before they get it upon their farms. Lime at the wharf in Petersburg costs from twelve to fourteen cents; on the farms in Roanoke it costs twenty cents. Thus the cost of transportation on the Petersburg and Gaston Railroad swallows up the profits of the adventure to such an extent as to render it scarcely an object of consideration.

The farmers of Roanoke are, therefore, anxious to get the Directors of this Road to let the lime come to them on much cheaper terms. The grounds on which they put their request are there. It is a fact very well known and easily comprehended that a railroad, the chief business of which consists in transporting to market the stock, grain and tobacco raised in the country through which it runs, is a much more profitable concern when it passes through a country which produces a great deal of these articles than when it passes through one that is poor and unproductive in these articles. Now all the produce which comes to market from the district under consideration must come by this railroad. If the Directors, therefore, could by any means double the amount of corn, wheat and tobacco to be transported from Roanoke, it would be very much to their advantage. But this they can do by letting lime go free to Roanoke; and it would, therefore, seem *a wise liberality* for them to grant the request of these gentlemen.

We go farther than Dr. Jones does in the following letter. He thinks that lime should be allowed to go with a duty only sufficient to pay for loading and unloading. But there are always an abundance of idle hands about railroad depots, and if the railroad should determine to favour the scheme at all, we cannot see why any charge should be made for the small amount of occupation which the hitching together of a few more cars than usual would give them.

Lime might be carried to Roanoke at seasons when the railroad had no great press of business and lodged in a warehouse at Gaston till wanted. Thus it would cost them scarcely anything to speak of; while in the end they would be paid double and treble as much as they now get on the small quantity they have to transport up there by the enormous increase

of freight *from* Roanoke in the shape of produce. One thing at least is certain; that if the railroad will not carry it there on these terms, very few barrels will ever be carried there at all. Here follows Dr. Jones' letter:

To Mr. H. D. Bird, President of the Petersburg and Roanoke Railroad Company:

Dear Sir,—In this country we have two agricultural clubs called Hole and Corner Clubs, composed of intelligent and independent planters, who feel great anxiety by their united efforts to improve the worn-out and exhausted lands of this section of the State, and thereby advance its agricultural interests, and quiet the spirit of emigration which, to a great extent, prevails with us. Each club is composed of twelve members who meet at each other's farms alternately once a month, ride over and particularly examine into all the operations of the farm, search into every hole and corner, (hence the name of the club,) and a committee appointed by the President, reports minutely on its condition and management at the next succeeding meeting. On the days of meeting after riding over the farm we assemble at the homestead of its owner and partake of a social and substantial dinner, and during the remainder of the evening we freely and unreservedly interchange sentiments and opinions on the various subjects of agriculture, give the result of our experiments, different methods of cultivation, &c. We find that our meetings and free intercourse have cultivated and improved our social habits and excited a laudable enthusiasm and energy in our agricultural pursuits which have already resulted in some improvements of our farms. However the nature and component parts of our soils, (ascertained by analysis,) the result of our experiments, and the information which we derive from the highest agricultural authorities all serve to convince us thoroughly, that the most important article necessary for the permanent and speedy improvement of our soil is *lime* and its compounds. We are lamentably so distant from the nearest points at which that article can be obtained, that we have been almost totally denied its use for agricultural purposes on account of the high price and cost of transportation. By a resolution passed at the last meeting of our Club, I, as their Corresponding Secretary, was required to communicate with you on this important subject. We argue, that as *all* our market produce passes over your railroad on its way to market the Company could afford to take our back loading of lime and plaster without, or at any rate, at a charge that would compensate them only for the labor of loading and unloading, (taken at convenient seasons when not pressed with business,) inasmuch as we may reasonably calculate that by a free and judicious application of those articles, our unproductive and exhausted lands would be so renovated and fertilized that their increased production in a few years would amply remunerate the Railroad Company by the transportation on their road of double, perhaps treble, the amount of produce which it now receives from the valley of the Roanoke and its adjacent country.—If we can obtain those articles, viz: lime, plaster and guano at a price which we can reasonably afford, we have determined to commence their use earnestly and with zeal and activity; and should we be rewarded for our enterprise in the wonderful manner reported by agriculturists of known skill and experience, it will constitute a new era in the agricultural improvements in this section of our State; for should our experiments result favorably, they will be fully and extensively reported and our example imitated throughout this part of the country; its condition improved by its increased products of all kinds, your railroad burthened with loading to market, and the farmers thereby enabled to give to it a greater amount of return loading in groceries and other necessaries from our market towns and continually give prosperity to both the country and Railroad Company.

I earnestly beg, sir, that you present our wishes and views in this matter to the Railroad Company, and we sincerely ask your aid and influence in furtherance of our enterprise should you think favorably of it. I am, also, instructed to cor-

respond with a lime company on the Hudson River, New York, to ascertain at what price they will deliver loose lime in Petersburg, which I shall do by the next mail. You are aware, as well as ourselves, that but a small quantity of either lime or plaster is brought out on your road for this part of the country, and *that* by a few enterprising gentlemen of wealth, only for the sake of experiment, and those of them of my acquaintance make favorabe reports, yet feel discouraged in using them extensively on account of the enormous price which they cost to get them here.

Be so kind, sir, as to reply to this communication at your earliest convenience.

I am, yours, &c.

FINGNAL JONES.

Mecklenburg, Jan. 23, 1848.

AGE OF CATTLE AND SHEEP.

It is generally supposed that the age of cattle and sheep can be accurately determined by the teeth, till after they are five years old. These animals, as nearly every farmer knows, have at their birth, or shortly afterwards, eight incisor or front teeth in the lower jaw, called *milk teeth*, which at various periods fall out and are replaced by others called *permanent* teeth. The common theory in relation to this change is, that the two centre teeth are dropped soon aften the animal is a year old, and are followed by two permanent teeth which reach their full size about the time the animal is two years old; that two other milk teeth, (one on each side of the two permanent teeth which first appear,) are dropped each succeeding year, and are followed by permanent ones, till all the milk teeth are gone, and the animal becomes "full mouthed," as it is called, at five years old.

Observation long since convinced us that this rule does not afford a sure criterion of the age of these animals. We have known several instances where cattle and sheep were, from their teeth, supposed to be from one to two years older than they really were. The circumstance has frequently led to difficulty, especially in awarding premiums, the idea being entertained that there was some mistake or intended deception in regard to the age.

A few years ago, an individual in the State of Ohio, purchased of a highly respetable breeder in New York, a fine three-year-old Durham bull. On his arrival in Ohio, he was exhibited at a cattle show, where he was examined by many persons, several of whom, on looking at his teeth, declared him to be five years old. It was in vain that a certificate, in the handwriting of the breeder was shown, stating him to be but three years old—it would not satisfy the critics, who insisted that there had either been collusion in regard to the bull's age, or else the purchaser had "*got Yankeed.*" Yet the testimony of the breeder, we presume, would have been regarded as sufficient in a court of law, to establish the fact of the animal being but three years old; and there was nothing, except the appearance of the teeth, to indicate that he was older.

Cases of the same kind might be cited in regard to sheep; and several farmers and breeders have assured us that good or bad feeding will frequently cause a variation of a year in the appearance of their teeth.

A French veterinary journal has lately brought out some valuable facts in relation to this subject. It appears that on the 15th of April, 1846, an agent of the Government purchased a two-year-old Durham bull, at the dairy of the Royal Stud, at Pin. Shortly after the purchase, the bull was exhibited for a premium, but the judges refused to award him the prize, it having been specified that the animal should be but two years old, and they, believing this one to be four years old and upwards, as he had all his permanent teeth. The decision, as may well be supposed, created some stir, and to settle the point in dispute, letters were addressed respectively, to the Directors of the Royal Dairy at Pin and Poussery, containing the following questions:

"1. Are there in the dairy over which you preside, cows or bulls which have

cut the whole of their permanent teeth prior to their fifth year, and how many?

"2. Are there any which have cut all prior to their fourth year?

"3. Are there any which have cut their teeth earlier?

"4. At what medium age, according to your personal observation, do Durham oxen, bulls especially, shed the whole of their milk teeth?"

The answers to these questions by each of the Directors, showed that in each of the Royal Dairies there were ten animals, viz: at Pin, one bull and nine cows, and at Poussery, two bulls and eight cows,—which had cut the whole of their permanent teeth prior to their fifth year; that in the latter case all the animals had their permanent teeth prior to their *fourth* year, and that in the dairy at Pin, there were seven animals—one bull and six cows—in the same case; that at Pin there were four cows, and at Poussery one bull, which had cut all their permanent teeth before they were three years old. A case of a cow at Poussery is mentioned, which at two years and seven months old, had six permanent teeth, and two months after, that is, at two years and nine months, had put out her corner teeth, making the full number of permanent ones. The date of the birth of most of these animals is given, copied from the registers kept at the establishments, so that there is hardly a possibility that there could be any mistake. The Directors further state that the cattle of the Durham breed, kept at the dairies under their charge, usually shed the whole of their milk teeth between their third and fourth years.

The variation in the time at which cattle and sheep shed their first teeth, is attributable to two causes—the natural constitution of the animal, and the manner in which it has been fed and reared. Some animals, from these causes, reach maturity much sooner than others, and their dental organs, sharing equally in the precocity of the system, exhibit the condition which belongs to those of older animals, which are longer in arriving at their full growth.

We respectfully commend the above remarks to the attention of breeders of animals, confident that observation will fully confirm the correctness of the conclusions put forth.

INFLUENCE OF RAILROADS.

Hon. John M. Niles in his late address before the New Haven County Agricultural Society, makes the following judicious remarks in relation to the influence of railroads:

"It has been supposed by many that the system of railroads and canals, by bringing the products of the West into competition with those of the Atlantic States, would operate injuriously to the agricultural interests of the latter, and reduce the value of land. But on a full development of that system, the result will be otherwise. Were agriculture and commerce the only great interests of our country, this consequence might have followed. But manufactures, the other great interest, supply local markets for the farmer; and the railroad system is already exerting a powerful influence in establishing manufactures in the interior, at points remote from tide water; and thus creating local markets for those products of the farm which would not justify transportation to our commercial cities on the seaboard. Whilst railroads bring the great staples of the West into competition with those of the Atlantic States, they enable the latter to send to market at a good profit, a great variety of products, which could not otherwise be done, and which will not bear transporting from the Western States. And this system, by its influence in evolving the various resources of the country, and increasing its wealth, exerts a favorable influence on agriculture generally, and more especially on sections contiguous to our commercial towns and manufacturing districts. Whilst it brings the flour and provisions of the West into the market on the seaboard, it enables the farmers in the Atlantic States to avail themselves of the markets, where local ones do not exist, for hay, milk, vegeta-

bles, fruit, and various articles, which, were it not for those facilities, would bear transportation a few miles only."

MINCE PIES.

Take stoned raisins, currants, sugar, and suet, of each two pounds; Sultana raisins, boiled beef, (lean and tender,) of each one pound; sour or tart apples four pounds; the juice of two lemons; the rind of one lemon chopped very fine; mixed spice one-quarter of a pound; candied citron and lemon peel, of each, two ounces; brandy one gill; and chop the whole very fine. The preparation may be varied by adding other spice or flavoring, and the addition of eggs, or the substitution of chopped fowl or veal, for beef, according to fancy or convenience.

NEW PUBLICATIONS.

From Messrs. Murray & Harrold, we have received "The Complete Farmer, by Thomas G. Fessenden," which is a compendious account of the most important details of agricultural and rural economy. It is a useful book. Harrold & Murray usually keep a good assortment of agricultural books, at No. 147, Broad Street, Richmond.

"Downing's Horticulturist" received. We have before commended this very elegant rural magazine to our readers.

We have received the first number of "The Edinburgh Phrenological Quarterly," edited by the celebrated George Combe, an American republication of which has been commenced by Messrs. Fowler & Wells, of New York. Phrenology seems destined to play such an important part in modern science that it is highly important to know something of its doctrines. We can mention no source from which this knowledge can be obtained than from this celebrated quarterly. It is very beautifully printed on fine large paper, and the price is only two dollars. Each number contains 100 pages, and it appears four times a year. Messrs. J. W. Randolph & Co. of Richmond, are Agents for this part of the world.

We have received a new edition of Liebig's Chemical Letter, a presentation of his discoveries in a familiar form. Pamphlet, price twenty cents: Fowler & Wells, Nassau Street, New York.

Provide good shelter and proper food for all animals.

REVIEW OF THE MARKETS.

We are pleased to announce that we shall hereafter have it in our power to publish a regular review of the markets from the gentlemen whose names are appended to the note which we give below. Messrs. Bridges & McKinney are extensive and talented merchants; their wide correspondence gives them the best means of information; and anything from them is of authority.

To the Editor of the Southern Planter:

Sir,—In accordance with your request we give below a short sketch of our views in regard to the Richmond tobacco and grain market.

The impression generally prevails that the crop of tobacco for inspection the present year is less than an average one, say about 45,000 hogsheads, (the average number inspected in the last ten years, exclusive of the year 1838, when it only amounted to 28,502 hogsheads, being 51,059,) and although we do not expect *extreme* high prices, yet we think that the article will command such as will compensate and give general satisfaction to the planter. At present the general sales are for lugs $2 to $3, and for leaf $3 50 to $7 50, according to quality. No really fine of the new crop has yet been received.

With regard to the grain crop, owing to the constant fluctuations abroad and the pressure in the money market, we can give no opinion as to the future worthy of attention. Present prices of wheat $1 20 to $1 25; corn 60 cents, and flour $5 75 to $5 87½, and dull.

Respectfully, &c.

BRIDGES & MCKINNEY.

Jan. 31, 1848.

CONTENTS OF NUMBER II.

To Subscribers and Postmasters.

All orders for change of office or discontinuance of the paper, must specify the post office to which the paper has been sent.

THE SOUTHERN PLANTER,

IS PUBLISHED MONTHLY BY

P. D. BERNARD, 165 MAIN ST. RICHMOND, VA.

TERMS.

The Planter, containing thirty-two super-royal octavo pages, is published monthly at one dollar and fifty cents per annum, which may be discharged by the payment of

ONE DOLLAR ONLY,

sent free of postage, within six months from the date of subscription; six copies for five dollars, if sent free of postage.

☞All subscriptions must commence with the volume, or January number.

☞No paper will be discontinued, until all arrearages are paid.

☞All letters on business, connected with the Planter, must be post-paid.

THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

VOL. VIII. RICHMOND, MARCH, 1848. No. 3.

P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

☞ All Communications, concerning the Planter, must be addressed

P. D. BERNARD, *Richmond, Va.*

☞ For Terms see last page.

MEMORANDA FOR THE MONTH.

It behooves all who intend to make a crop in this year of 1848, to be up and doing in the present month. During February it *is possible* to let the farm-labor alone, and yet make a tolerable crop. But no man who is idle in March and April will have well filled granaries next December. We have had mild weather through the winter and we may now be paid for it in snow and sleet. But if the season is tolerable, every farmer who knows anything about his business will strive with all his might to get ahead.

MANURE.—This is one of the great works of this month In opening the manure heaps when you commence their transportation to the field, it is an excellent plan to sprinkle a bushel or so of ground gypsum or plaster over them. One of the most powerful ingredients in all manures is a substance known to chemists as ammonia. This substance is exceedingly volatile, and when separated from organized bodies by their decay, it quickly flies off. It is retained in the manure while in the heap because it is not exposed to the air. But when you attempt to cart it away and spread it out on your field, a great deal of it will escape, unless you resort to some means for retaining it. Now it has been found that this stuff has a great affinity for lime in all its forms, particularly for gypsum. Therefore, by sprinkling powdered gypsum on the manure, the ammonia which would otherwise be lost in the air, forms chemical union with it, and is thereby retained, much to the advantage of the poor lands on which you scatter it.

PLOUGHING.—This is another of the great works of March, and no one can do too much of it if the weather will allow him to do any. There is no land which will not be wonderfully improved by being turned up and exposed to the frosts, rains, and winds of March.—There is no land which will not be the better fitted for the corn which will have to be planted so soon by being ploughed a week or two in advance. And while on this point, let us endeavor to persuade the reader to give some small field the advantage of a subsoil ploughing, and send to this paper an account of its produce as compared with some other field of equal quality ploughed only in the usual way. We know many persons are making experiments in subsoiling and we would be obliged to them if they would favor the public with their results. But from some letters lately received, we find that a very erroneous idea of the process has got abroad in Virginia.—Many seem to regard it simply as *deep ploughing*. But subsoiling means the running of a subsoil plough in the fresh furrow made by another plough which precedes it; thus turning up a portion of the earth which is never touched by common cultivation. If the deep bed of broken earth thus procured be manured, we have no doubt on our own mind but that it would prove far superior to any land ploughed and manured in the common manner. Some agree with us, others differ with us, on this matter. We should be glad to publish any experiment which would set the matter forever at rest.

Oats.—Every judicious farmer will endeavor to get his oats in the ground so soon as the frost gets out of it. The earlier they are sown after the winter is gone, the heavier will be their heads and the more luxuriant their straw. We do not insinuate, however, that simply putting in the oats at their proper time will make them good. If your land is poor, so will be your crop of oats, unless something is done to furnish them with materials for their growth; and one of the best methods of doing this is to sow along with them a bushel of ground gypsum or plaster, to the acre, with about the equal quantity of ashes. The ashes will furnish in large quantities the materials needed for the growth of straw. The gypsum from the quality we before remarked, of uniting readily with ammonia, procures food for the plant from the air; for immense quantities of that substance are always combined with the atmosphere.

Clover.—This is the best season too to put this very important manure on your clover fields. A bushel to the acre is the usual quantity, and a damp, cloudy day is preferred for sowing it. The influence of gypsum on clover, when thus applied in the spring, when the leaves have been somewhat developed, is singularly great. Its influence in bringing it out on fields where it was scarcely discernible before is almost incredible. You may witness the peculiar effect which it has upon this plant by strewing a few handfuls over any grass plot in which there is a sprig or two of clover.—Wherever the gypsum falls, you may see the clover springing up in rank luxuriance, overtopping and smothering the other grasses.

Orchards.—During this month there is much work to be done to the fruit trees. The turf beneath them should be well broken up, the decayed and dead branch taken off with a sharp knife. Now you may transplant the young trees; and when you do it, let the hole in which the roots are placed be large enough to allow them to lie in the position they occupied in the ground from which they were taken. This is one of the great secrets of successful transplanting.

Shade Trees.—Let not the whole of your attention be occupied by the peach, the cherry and the apple trees. Those which furnish shade to your yard and ornament the scene on which the eye rests when you approach your home are not of less value than those which bear fruit. Unfortunately, the people of Virginia do not seem satisfied of this fact. How many dwellings are there in this State which look as desolate and as uncomfortable as a city warehouse, or an old field fence for want of a few noble trees clustering around them. We have hewn down the great forests which once grew over the land; and we have either *nothing* around our houses, or a few Otaheite mulberries or Pride of Chinas in their place. These are better than none; but when you do plant trees, why not plant some of a nobler and more enduring quality along with these swift growing strangers? Why not the Linden, the locust, the tulip poplar, and more than all, the *oak*, which will furnish its shade to your posterity, and remain a monument of your good taste, even unto the tenth generation? We do not disapprove of a few Lombardy poplars either, when they are placed where their long roots may not reach the garden. When their tall heads are seen in the distance waving in the winds, they have an exceedingly graceful appearance.

Roots.—The rot has rendered the potato crop an uncertain one; the best thing, therefore, which the farmer can do is to plant fewer of them than usual and in their stead, bring on other roots in greater force. The beet, the parsnip, and the carrot will make very good substitute for potatoes. They are not so simple a crop as the potato, but they are scarcely less profitable. It costs very little more to raise them, and their yield is greater.

For the Southern Planter.

FENCE LAW.

Mr. Editor,—I send you a conversation between two contiguous landholders respecting a subject which is beginning to excite a proper interest and which ought to be fully and freely discussed. As the reported conversation will make a tolerably long article in the Planter, I shall not

add to its length by any explanatory remarks.

Mr. Bradley was walking through his field of corn, evidently in search of something or somebody, and presently was met by his head-man.

"Well, Jake, have you found the hogs?"

"Yes, masser—we found thirteen shoats and three ole sows, an we got em out arter so long a time—they blong to Mr. Glasby, sir—theys the same ones we got out last Friday."

"Did you find out how they got in?"

"Yes, sir; the dogs run em to the low end of the field and thare at the plum nusry they had a hole in the fence big enough for your ole boar to git through. I looked at the rails and seed where one was chawed most in two and then broke, and I spose the old sows kep a pushin and a workin till they got the hole big as they wanted to."

"Why, that part of the fence was done up last spring—I ordered you to do it well?"

"Yes, masser, and so I did. Most all the rails was good as new, and the whole fence was one rail higher than the measure you giv me—but them ole sows could git through creation when they hongry, an Mr. Glasby's man tole me he done stop feedin em—'his corn done giv out.'"

"Very well—go around the field and see that every panel of fence is in good order—I'll step over to see Mr. Gillespie."

Scene 2d.

"Good morning, Mr. Gillespie. Well, I've come over to talk with you about your hogs, again; they were in my corn field last night, and Jake told me this morning he had got out some dozen or more. He found the place they had got in at, evidently by their own efforts. Now I do not believe there is a better fence on your farm or mine, and it seems impossible for us to keep your hogs out. I have come to see if we can't put a stop to this thing, for really it is past all endurance. Couldn't you put your hogs in another field?"

"No, indeed! my dividing fences are all so ricketty that they would be in my wheat or corn in twenty-four hours."

"But you could turn them out in the woods till you haul up your wheat."

"Why, they *were* out till week before last, and they got into Wilson's field several times, and three of my best hogs were killed there; and once they got into the old widow's truck patches and used them up so that she begged me to keep them from getting in again; besides, you know the rogues take so many when they are running out. I'm sorry for it, neighbor, but I see no help for it. Last year I suffered by your hogs, and now you suffer by mine; so 'tis as broad as it's long."

"Well, suppose you put your old sows in a small lot or a pen."

"Did you happen to look through my corn crib as you passed just now—why, I can't spare a feed of corn for my horses—how could I feed the hogs?"

"Well, neighbor, we wont quarrel about it—but is there no remedy for this state of things? It's a general evil. Almost every man is complaining every summer about his neighbors' stock, and last week Jim Smith and old Wilson had a fight about it, and I heard that the Parson was carrying his gun with him every day to kill Capt. Martin's mules, if the old man should let them jump over the line fence any more. What is to be done?"

"All that's bad enough—but that isn't half. All of us lose more every year than would feed our hogs, and fatten them, too. Last spring your pigs got into my field and staid there from Saturday, I suppose, till Monday. We went there to weed corn, and behold, about four acres of that splendid flat down there were rooted up. They had taken it by rows, and turned them up from end to end, and instead of weeding we had to go to *planting* again; then the drought kept half from sprouting, and the other half was so late it didn't make good corn. I suppose the piece ought to make forty barrels, it didn't make ten! And, then, when hogs get into wheat or oats before harvest, nobody can guess what damage they do; and when they get in a corn field they destroy five times as much as they eat. But the

worst of all is that the mean white people and the free negroes actually turn their lean cattle in our fields. Why, sir, I have actually caught Jeff Snigger's boys driving the old man's cows into my corn field at night, and several times I have seen places where my fence had been pulled down and put up again, with cattle tracks going in and coming out of the field."

"Yes, yes; I know something of that too—I've seen plain signs of *slip-gaps* many a time in the fences, and once I set the dogs on a parcel of hogs in my corn field and they ran straight for one of these places. I was satisfied somebody had let them in there. 'Tis too bad, neighbor, that when we have worked hard the whole year any scamp is able to injure us so much by just throwing down one panel in a long fence—or even an old hog or a cow may throw down a rail or so, and spoil our crops. It's really too vexatious to be borne. If I could, I'd sell out and go West."

"Fair and easy, neighbor! fair and easy! When I was trying to get up a petition, last spring, to send to the Legislature for altering the *fence laws*, you opposed it, you know; that's the only remedy, and if you wont take that you can't get any."

"I did oppose you then, but I'd join you now, if I could only see how the Legislature could be brought to alter the law—but it seems to me they don't care a straw for us, except about election times."

"I can tell you *how*—the landholders are the real office holders; I mean we can give offices to whom we please, and the way for us to make the Legislature give us a good fence law is for us all to let the *candidates* know that if they wont promise to do what we want, we wont give them our votes. Now, you're a Whig and I a Democrat—I don't see what good party has done for you and me—but if we would lay aside all this party feeling and test our candidates by their ability and willingness to promote our real interests, as farmers——there comes Higgins," (his overseer,) "he seems terribly out of sorts.—Well, Mr. Higgins!"

"I'll be dratted, sir, ef I was you ef I wouldn't kill them ar cattle of Mister Wilson's—theys gone and pushed down the fence on the big road, and jumpt over in our wheat patch, and I spose they got in soon to-day, fur theys been into nigh on to fifty shocks and has tored there insides out—clean out."

"Well, Mr. Higgins, we wont kill the cattle—it is very hard, but we can't help it"—

"Can't help it, sir? ef you wont lem me kill em up, sir, can't you take the law out er Mister Wilson—he's sponsible nough."

"Oh, yes! he's *able* to pay—but the question is, can I get any hold upon him; can you prove that the cattle broke through my fence, and that the fence was a lawful one?"

"To be certain I ken! Warnt the fence ten rails high, staked and rided, and didn't I see his cattle on the wheat shocks myself?"

"Aye! but you can't prove that the cattle *made* the gap they got in at; maybe something else, or some person, had knocked off a couple of rails just before Mr. Wilson's cows got to the place: you're no lawyer, Higgins!"

"No, sir, and, drat it, ef thats law, I wants nothin to do long it—drat seeh a law!"

"You must take things fair and easy, man: suppose I *should* go to law against Wilson—here is Mr. Bradley come over to tell us that our hogs have been in his corn again—and you know it isn't long since they paid a visit to Mr. Wilson and old Mrs. Woodson—don't you see the law is rather dangerous?"

"All I got to say erbout it, sir, I wouldn't stan it—*I'd shute*—drat *me* ef I would'nt."

"Well, others could shoot, too, you know. No, Mr. Bradley, as I was saying, our only remedy is to have the fence law altered—make every man keep up his own stock: and the only way to effect this change is for us to make our *candidates* toe the mark—tell them plainly we will not vote for them unless they promise to vote for us. I'm in earnest—this county is Whig, and Mr. A. is a clever young lawyer and wants to represent us

again. Now, if he will come out for changing the fence law I'll agree to vote for him"—

"And I swear I'll not vote for him if he don't, and the Democrats may bring out who they please, and I'll vote for *him* if he'll do what we want, Democrat or no Democrat—and I'll do all I can for him with my friends, too."

"That's the thing, neighbor!—get up that spirit among the farmers and we'll soon have the right fence law. Well, Mr. Higgins, you're a voter—what do you say—will you join us?"

"I'll join in anything thats gwine to to stop them things from eatin up my sheer er de craps, sir; but my way 'ood be to *shute* em."

The conversation was continued as the three walked on to the wheat field on the "big road." A gentleman was riding by who proved to be lawyer K.; the subject was mentioned to him, as it was thought he might be the Democratic candidate, in the next election. The lawyer took the right side and let out largely in its behalf; alleging that the old law was enacted when a different state of things existed in the country—when settlements and clearings were scatted—forests large and frequent—durable and good timber abundant, &c.; and that the law was admirably adapted to that state of things. It was every man's interest then to let his stock range the wide forests, and fence in his cultivated ground. But things had changed. It was a maxim with lawyers that when the reason of a law ceases the law also should cease, and he applied the maxim to the present case, and added besides that a fundamental principle of justice requires every man to refrain from doing injury to his neighbor, and that the legitimate extension of the principle equally requires him to restrain all under his control from doing such injury; for, said he, what it is wrong for a man to do by his own act, it is equally wrong for him to do by another, &c. Much more of the same sort he uttered, and our worthy farmers listened with joy, and when he had finished, volunteered to give him their votes next spring if he would "come out" for the county.

Yours, very respectfully,

J. B.

CULTIVATION OF TOBACCO.

The culture of tobacco in the valley of the Connecticut, has, within a few years, become an object of considerable importance. The variety here produced is known in the market as "Connecticut Seed-Leaf," and it usually brings double the price, or more, than the tobacco grown in Virginia or Kentucky. To give a profitable crop it requires pretty rich land—though the sandy soils, manured at the rate of ten to twenty common two-horse or ox loads per acre, produce well. With good management the usual yield is from 1,500 to 2,000 pounds per acre, of marketable tobacco, and the average price may be said to be seven to eight cents per pound.

Mr. Sargent, of Springfield, and Messrs. Wells and Paoli Lathrop, of South Hadley, are considerably engaged in the tobacco culture. The former had seventeen acres the past season. At the above rates of yield and price, which it will probably equal, it will give an average return of $105 to $160 per acre.

With the course that is here pursued, tobacco is by no means an injurious crop to the soil; on the contrary it is found to be an ameliorating one. The liberal manuring and clean cultivation which it is necessary to bestow on the tobacco, fits the soil admirably for other crops; and it is found that wheat and other grains and grass flourish better where tobacco forms a part of the rotation, than where that plant is not cultivated. Messrs Lathrop mentioned an instance of their having put $36 worth of manure on an acre and a hundred rods of land, which they planted with tobacco. They got a ton of tobacco, which sold for $160. Then sowed the land to wheat and got thirty bushels.—The next crop was hay, and gave, at two cuttings, four tons.

The stalks of tobacco, after the leaves have been taken off, are scattered over the ground and ploughed in, or placed in the manure heap to rot. It is thought they possess considerable fertilizing properties. It is known that the ashes from them contain a large proportion of potash. We are told that where two or three stalks are left on grass-ground, their effect is very visible in the rank growth of the grass around.

For the Southern Planter.

DEEP PLOUGHING.

Mr. Editor,—Many practical men oppose deep ploughing, imagining that it must injure their soils to turn up any clay; and while they entertain this idea, they go on, just scratching the soil, year after year, until nothing is left for them to scratch but the clay. Last winter I had commenced ploughing my corn land when my agent came in, and he was decided in his opinion that I was turning up too much of the dead soil—he believed it would ultimately improve the land, and that it would wash away less; but he was firmly persuaded it would lessen the first crops. I desired him to have the whole field broken as deep as it could be done by good two-horse ploughs, and he complied faithfully. It was the best ploughed field I ever saw—broken, generally, from seven to nine inches. It was a very thin *old* field, and all my neighbors, but one, said I would regret the deep ploughing. It made the best crop of corn I ever saw on the field.

We tried an experiment on a smaller scale, to test the benefit of deep ploughing. We laid off a piece of thin high land into four beds—four rows to each bed. One bed was *trench ploughed*, about fifteen inches deep. The next was ploughed like the field, say about eight inches deep. The third was trenched, and so on. By mistake one of the trenched beds was laid off with five, instead of four, corn rows—all the beds being of equal width—and the corn on this bed was the best. All had the same treatment in every respect, and I believe, from previous experiments, that if the summer had been a dry one, the difference in favor of the deepest ploughing would have been much greater. My agent is now an advocate of deep ploughing.

Yours, respectfully, T.

January, 1848.

BREEDING ANIMALS.

Joshua R. Lawton, Esq., in his late address before the Berkshire County Agricultural Society, observes, "What a wonderful triumph of human reason and power, that the animals given and subjected to man by the great Author of Agriculture, can be moulded and fashioned to his liking, as the clay is fashioned by the potter! Form and figure, size and power of bone and muscle; adaptedness to the peculiar service required; kindness and docility of disposition, and even agreeable countenance and expression, by patient and skilful breeding, can be successfully attained."

In relation to the same subject, Mr. S. B. Colby, in his address, published by the Washington County (Vermont) Society, says: "It has been, and perhaps still is, the belief of many, that *care* and *keeping*, are the true sources of improvement in stock. That the qualities of the animal are determined more by the food that supplies the stomach, than the blood that flows in the veins. That keeping, care, and climate, influence the individual, is true, and in the course of centuries, characterize the species; but it would be weak policy to decline the use of standard specimens of animals, which by selecting the good and rejecting the bad, for a long time, are now offered to your service, already finished to a high degree of perfection. Who can hope to transform our native cattle into Durham, Devon, Ayrshire, with their perfection of form, deep chest, straight limb, and majestic proportion, with the mere instrumentality of turnips and clover? And who expects to create the peculiar compact shape, comeliness and strength of the Morgan horse,

by even the most bountiful allowance of *hay and grain?* As well by diet and education may the 'Ethiopian change his skin, or the leopard his spots.' "

For the Southern Planter.

SCRATCHES AND COLIC IN HORSES.

Mr. Editor,—I have never failed to cure the worst cases of colic, by drenching the horse with about half a pint of good hop yeast. The yeast may be diluted with an equal quantity of warm water. And a half pound of gunpowder well mixed with about the same weight of hog's lard, will cure the scratches.—Wash the part clean with soapsuds, and rub in the mixture several times daily, for a few days. I have applied it, as a poultice, by tying on with a strip of cloth.

T. T. T.

CULTIVATION WITHOUT FENCES.

The attention of a person not acquainted with the customs of Massachusetts, is attracted by the large amount of land in some neighborhoods, lying as "commons," or unfenced. Along the Connecticut, between the intervale or "meadows" and the hills, on each side of the river, there are tracts varying from two to six or eight miles in width, called *plains*. The soil is sandy, but varies in lightness from that which is blown about by winds to that which is called sandy loam. The natural growth varies with the soil, being in some instances only scrub-oak and small bushes, in others white and pitch pine, and in others chestnut and other hard wood trees. A large portion of this land is unenclosed, yet there are thousands of acres under cultivation, and some of it produces fair crops of rye, Indian corn, buckwheat and potatoes. A law of the State prohibits live-stock of all kinds from running at large; and so strictly is the law observed, that not an animal is seen in the highway unless under the care of a keeper; and crops grown on the common are considered equally as safe as though they were surrounded by the best fences. We passed many pieces of corn and other crops, which had received no injury, and it was evident that none was feared.—*Albany Cultivator.*

For the Southern Planter.

EXPERIMENT IN IRISH POTATOES.

Mr. Editor,—In the spring of 1847 I spread a quantity of stable manure upon a piece of land which was originally poor and had been in cultivation forty-three years. I ploughed the land after this so as to mix the manure with the soil, but not deep enough to bury it. I left it in this situation for about six weeks; then opening trenches about four inches deep with a small Cary plough, I placed Irish potatoes in the bottom, laying the pieces, as cut for planting, about eight inches apart. I then filled the trenches with a mixture of decayed oak leaves and the dust of charcoal which had been washed from a number of coal-hearths and lodged. After getting the trenches thus filled, I drew over the whole a small portion of the soil. This was done early in May. The springing of the potatoes was quite rapid, and as soon as the tops were from four to six inches high I worked the land well, (deep,) drawing a little earth to the young plants. While fresh worked I covered the land about six inches deep with wet oak leaves, having had them raked up and left in heaps while wet to have them ready when needed. These were weighted with a thick layer of cornstalks to prevent the wind carrying them off.—Care was taken that the buds were not smothered by the leaves. In the month of October I took the new crop of potatoes from the trenches and measured at the rate of 707 bushels to the acre.

It was high land, that is, on a hill, and at a considerable distance from any stream of water; the soil a dark red, with no sand, but containing a few pebbles of flint and small pieces of slate. The subsoil is a stiff, compact, red clay.

Your, truly and respectfully,

GEORGE A. WRIGHT.

Appomattox, Feb. 1, 1848.

MILKING STOOLS MADE LONG.

Mr. Editor,—There is a convenience connected with milking cows which I have adopted for several years past, and your readers may do the same if they are so disposed. I take a meal box twelve or fifteen inches broad and about six inches high, and turn it bottom upwards under the cow, on which I set my milk pail.—In this way the bottom of the pail is kept clean—the milk scatters less upon the floor and upon the clothes of the milker, and the pail is more secure if the cow is disposed to kick.

It is necessary that there should be a piece of strap or rope nailed to the edge of the box and another upon the edge of the stool, forming a sort of loop, something like that of a carpet bag, so that one hand can take the box and stool, while the other hand takes the pail, and all are carried about together.

COW MILKER.

Walpole, Jan. 3, 1848.

From the London Gardener's Journal.

BONES AS MANURE.

The researches of the chemists and the practical testimony of the farmer having more fully established the value of bones as a manure, not for turnips only, but for various other crops, it behooves us to ascertain whether they have been employed in gardening as extensively as they deserve. If we find they have not, we ought to lose no time in making use of them. The great obstacle to the more general use of bones in gardening, as well as in farming, is their undergoing a decomposition so very slowly. But this difficulty is got over by dissolving them in sulphuric or muriatic acid. This plan, however, though excellent as far as turnip culture is concerned, must be defective, inasmuch as it confers no lasting or permanent benefit on the land. Professor Way prefers using only two parts of the bones undissolved, on the principle of their more continued and permanent benefit, I would, however, very particularly direct attention to a sort of bone manure not in general use, (perhaps owing to its limited supply,) which being very fine, requires no digestion with sulphuric or muriatic acid, and which is both immediate and permanent in its effects. The bone manure is the saw dust of a button factory. When I lived, in 1839, at Lehigh-court, in Somersetshire, the late P. J. Miles, Esq., had, from a button factory in Bristol, a large quantity of dust for his turnips, and its effects were astonishing. The progress of the plant after the first shower of rain, was extraordinary; so great, indeed, that it induced Mr. Hatch (who was then gardener there,) to try it on many things in the garden, and with favorable results. Among other things he tried it on pine plants, and the effects produced were wonderful. In 1842, Mr. Spencer, gardener at Bowood, used the same bone dust for pelargoniums, and with good results. The roots were emitted into the soil containing the bone dust, were as large as moderate sized goose-quills; and the plants in consequence of their having such strong and vigorous roots—powerful absorbents of food—grew to a size almost incredible. And not only were they large, but they were strong and vigorous enough to support their trusses consisting of twelve, thirteen and fourteen flowers each. The plants had only a few sticks at the commencement of their growth, merely to keep the branches at regular distance from each other. The flowers were half as large again as usual. I well remember Mr. Brown, late of Slough Nursery, who happened to call at Bowood while the pelargoniums were in bloom, expressing his surprise at the number of flowers on each truss, he never in his life saw anything like them. Some of these plants kept up a succession of flowers from four to six months. A few that were spotted were put in soil containing the bone dust, and in ten days, they had put on so many young leaves as to completely hide the spotted ones. This dust was purchased cheap at the factory in Bristol in 1839, but its value being soon ascertained, in 1842 the price was more than doubled, and the dust inferior. I do not know

what quantity of dust is to be had annually in this country, but this I do know, that if we could reduce our bone manure to the finely divided state of this dust, we should then have a most valuable fertilizer without additional labor or expense.

For the Southern Planter.

PEACH TREE.

Mr. Editor,—It may not be generally known to the readers of the Planter that the peach tree can be propagated from sets or buds in nearly the same manner and with almost equal success as the morus multicaulis, and as I think a dozen good peach trees are worth all the morus multicaulis trees in the State, you will oblige me by giving this communication an insertion in your paper.

In the spring, insert short portions of the twigs or branches into the ground about three or four inches deep, leaving about two eyes or buds out, taking care to press the soil very compactly around the sets. Nothing more is then necessary than just to keep them clear of weeds and grass; in doing which it is very important that they be not moved in the least. They should be watered when the weather is very dry. I have at this time two sets from an "Old Miron" growing in my garden which were set out late last spring, with shoots twenty inches long.

Very respectfully,

BOLLING JONES.

Surry Co., Jan. 24, 1848.

DISINFECTING FLUID.

It will be of advantage to farmers, nurses, and every body else, we presume, to know that Sir William Burnett, of England, has discovered a very simple liquid which has the property, when properly applied, of destroying the disagreeable and sometimes dangerous odor of the room where the sick are confined, as well as where any putrid or offensive matter is.

It has been effectually used in the Haslar hospital, in the close stool of patients, sick of dysentery—in the water closets and cess pools, and also in the wards where the air was tainted with purulent expectoration or discharge from sores, with the effect of immediately removing the offensive odors.

The substance used is merely the chloride of zinc, dissolved in water. Any chemist or apothecary can prepare it easily. The method of using, as adopted in the above named hospital, is to supply the nurses with a bottle of the diluted solution, and direct it to be used whenever occasion may require, by sprinkling it over the floors.

In a concentrated state it is corrosive, but when properly diluted, in the proportion of one part to four of water, it has been applied to foul ulcers with great advantage, and wounds that had dead and mortified parts, separating and sloughing off, have been rid of their fetid odor.

It has been made useful in vessels, where the bilge water is very offensive; and it is stated that if applied to any putrifying body or flesh, it arrests the progress of putrefaction. In the wounds and some diseases of animals, upon the farm, it must oftentimes be very useful.

CHEESE MAKING.

In the Southern Planter for July, 1846, (Vol. VI., p. 145,) there is a very interesting communication from a gentleman in Prince William who signs himself "S. B. H.," giving an account of the cheesery of Mr. Look, of that county. We then requested our correspondent to extend his favors so far as to procure from Mr. Look particular and exact directions for the making of cheese; and we understood that we should hear from him again. We now repeat our request. The letter of which we speak has already attracted much attention, and a second communication has been looked for with interest. We would be glad if he would inform us of the cost of keeping cows in the plight necessary for the making of good cheese. In the meantime we condense

the following article upon the subject from Stephen's Book of the Farm, which will show the reader the method pursued by the best farmers in England:

"On a farm of mixed husbandry, as much skimmed milk cannot be procured every day as to make a cheese of ordinary size, but there may be one made every other day. To save skimmed milk from souring in warm weather till the next day, it is necessary to scald it—that is, to put it into a furnace pot, and heat it sufficiently, and then let it cool. The fire should be a gentle one, and the milk should be so carefully attended to as neither to burn nor boil, nor be made warmer than the finger can bear. After being thus heated in the morning, the milk should be poured into a cheese-tub, to await the cheese making of the following day. The skimmed milk of next morning is poured into the same tub, except about one-third of it, which is put into the furnace or another pot, and made warm for the purpose of rendering the entire milk of the tub sufficiently warm. The heat is applied slowly to the pot; the milk occasionally stirred with a stick, and made as warm as the finger can hardly bear. This warm portion is then poured into the tub, the contents of which are thereby made as warm as new milk—that is, about 110° or 112°. The various degrees of heat here referred to are in rather vague terms, but I believe no specific degree of heat is required in scalding, provided the milk is not allowed to burn at the bottom of the pot, and is prevented from boiling; for, if it boil, the milk will coagulate instantly, and be useless for cheese making, because the cheese will then be hard or flinty; and, so far as these two points are concerned, the ready and practical test of the finger is sufficiently accurate. On the contents of the tub being mixed by stirring, the rennet or earning is added to the milk, which is allowed to stand some time to coagulate, with a cloth thrown over it, to keep the proper heat.

"In the meanwhile, I shall describe the method of preparing the *rennet*, or *reed*, or *earning*. A calf's stomach is usually recommended for this purpose; but as calves' stomachs are not easily obtained in districts where calves are reared, a pig's stomach, which can be easily obtained on every farm, will answer the purpose equally well—and, indeed, many believe that it makes the strongor earning of the two. When the pigs are killed for hams in winter, their stomachs should be preserved for rennet, and they are preserved in this manner: Let the inside skin of the stomachs be taken out; the operation is somewhat troublesome, but may easily be done by an experienced dairy-maid. Any curdling in it is thrown away, as being unnecessary, and tending to filthiness; and the skin is then wiped clean with a cloth, not washed. It is then laid flat on a table, and rubbed thickly over with salt on both sides, and placed on a dish for four days, by which time it has imbibed sufficient salt to preserve it. It is then hung stretched over a stick near the fire to dry and won, and in the dried state is kept for use as rennet by the next season. Some people place a layer of clean wheat straw on the skin, after it is salted, and roll the skin over it to keep it open—tie a piece of paper around it, and then hang it up near the kitchen fire to dry and won. This plan is good enough, but not better than the other. When the rennet is to be used, a strong brine of salt and boiling water, sufficient to float an egg, is made and sieved through a cloth, and allowed to cool, to the amount of three imperial pints to each skin. One skin is allowed to remain in that quantity of brine in a jar, with its mouth covered with bladder, for three or four days, when the coagulating strength of the brine is tested by pouring a drop or two into a tea-cupful of lukewarm milk; and, when considered sufficiently strong, the brine is freed of the skin, bottled and tightly corked for use. The skin is again salted as before, and spread over a stick to dry and won, and is again ready for use when required. Half a tea-cupful of this rennet will coagulate as much milk as will make a fifteen pound cheese.

"When the milk is sufficiently coagu-

lated, which it will be in half an hour, the curd is cut in the tub with the *curd-cutter*, which consists of an oval hoop of copper, nine inches long and six inches wide, and one and a half inches deep, embracing a slip of copper, of the same depth, along its longitudinal axis. The stem of round copper rod rising from each side of the oval hoop unites, and after attaining in all eighteen inches in length, is surmounted by a wooden handle, nine inches in length, but six inches would be enough, by which it is held either by one or both hands, and on the instrument being used in a perpendicular direction, cuts the curd into pieces in the tub. Some people break the curd at first with the hand, but this instrument cuts it more effectually. On being cut, the curd lets out its whey, which is drained off by means of a flat dish being pressed against the curd-cloth, linen of open fabric, spread upon the curd. As much of the whey is removed in this way as practicable, and the curd will be left comparatively dry, when it receives another cutting with the cutter, and the whey again expressed from it. The curd is then lifted out of the tub, and wrapped into the curd-cloth, which, in the form of a bundle, is placed upon a drainer lying across the mouth of the tub, and the whey is pressed out of it by main force. This is the laborious part of the operation, and to save both time and labor in large cheese dairies, the bundle of curd is placed in a large cheese-vat, and subjected to pressure in the cheese-press to get quit of the whey. The curd becomes very firm after this pressing, and must be cut into small pieces by some instrument before it can be put into the cheese-vat. In most small dairies, I believe that the hand alone, or a table knife, is employed to divide the curd, but a simple implement, effects the purpose with comparative ease and sufficient minuteness. The curd, being made small enough, is salted to taste with salt ground fine.—In some parts of the country, such as in Cheshire, and in Holland, cheeses are salted by being floated in a strong solution of salt in water, which no doubt penetrates the new formed cheese, but it seems an uncertain mode of giving any desired degree of saltness. After being salted, the curd is put into a cheese cloth, spread over a cheese-vat, and firmly packed into the vat higher than its edge, and on the curd being covered with the cloth, the vat is placed in the cheese-press and subjected to pressure, upon which a quantity of whey will probably exude by the holes in the bottom of the vat. In a short lapse of time, two hours or more, the cheese is turned out of the vat, a clean and dry cheese-cloth put in, the cheese replaced into it upside down, and again subjected to increased pressure in the press. Should whey continue to exude, the cheese must again be taken out of the vat, and a clean cloth substituted; in short, a clean cloth should be substituted, and the pressure increased, as long as any whey is seen to exude; but if the prior operations have been properly performed, the exudation should cease in about twelve hours, after which the pressure is continued until the press is wanted for a new cheese on the second day.

"After the cheeses have been sufficiently pressed, they are put into the cheese-room, which should not be exposed to too much heat, drought, or damp, as heat makes cheese sweat; drought dries them too quickly, and causes them to crack; and damp prevents them hardening and wonning, and causes them to contract a bitter taste. Cheese being exposed to a cool, dry, and calm air upon the shelves, will dry by degrees, and obtain a firm skin. The skin becomes harder by being dipped in hot water, but I see no benefit to be derived from such a practice. They should be wiped with a dry cloth, to remove any moisture that may have exuded from them, and turned daily. To expedite the process of turning and rubbing, a cheese-rack, such as is figured below, has been in use in England, and found to answer the purpose. New cheeses, as they are made, are set in the rack, while as many of the oldest are removed from it and placed upon the shelves. Some cheeses burst, and throw out a serous-like fluid, which accident happens in consequence of the whey which was left in it

fermenting, and which should have been pressed out. Any cheese that changes the shape which the cheese-vat gave it, should be suspected of some organic change taking place within it; but if such a cheese does not crack, so as to admit the air into it, it may soon become ripe and mould, and prove of fine flavor. The inconvenience of cracks in cheese, is the facility afforded to the cheese-fly to enter and deposit its eggs; and to prevent their egress, the cracks should be filled up every day with a mixture of butter, salt, and pepper, made to a proper consistency with oatmeal.

"But the casualties which I have mentioned are less likely to befall skimmed milk cheese, the making of which I have been describing, than new or sweet milk cheese. These are made exactly in the same manner with the milk as it comes from the cow. One day's milk being insufficient for a cheese, the fresh morning's meal is mixed with the meals of the previous day, the oldest part of which will have thrown up a covering of cream, which is mixed through the milk, and the entire gatherings are heated with a portion of the morning's milk. The rennet is applied in the same manner, but in rather larger quantity. Greater difficulty will be found to squeeze the whey entirely from the curd than with the skimmed milk, and it is the difficulty of expressing all the whey out of them which renders sweet milk cheese more liable to ferment, and burst and lose their shape.

"I have said nothing of employing *annotto* or *arnotto* for dyeing cheese, because I think it a very useless piece of trouble which cheese-farmers impose upon themselves. It is employed in Gloucestershire to the extent of one ounce of arnotto to one hundred weight of cheese; and in Cheshire, eight pennyweights to sixty pounds of cheese, and it costs from 1*s.* to 1*s.* 6*d.* per pound. Arnotto is a precipitate from maceration of the pulp which covers the seeds of the *Bixa orellana* of Linnæus. It is manufactured in two forms, one in *flags* or *cakes* of two pounds or three pounds each, of a bright yellow color, soft to the touch, of good consistence, and comes from Cayenne wrapped in banana leaves, and is much used in giving an orange tint to silk and cotton goods, but which is not permanent; and the other kind is called *roll* arnotto, which is small, not exceeding two ounces or three ounces each, hard, dry, and compact, of a brownish color outside and red within, is brought from Brazil, and is the kind used in the dairies. The duty on the roll kind used to be £5 12*s.* per hundred weight, and is now 4*s.* When employed it is put into the milk before the earning, and it is prepared by rubbing down the requisite quantity in a bowl of warm milk. All the quantity employed is said to impart no peculiar flavor to the cheese, and this being the acknowledged case, of what utility is it? for as to the appearance of cheese, I suppose it will be allowed that Stilton and Dunlop cheese look as well on a table as that of Gloucester and Cheshire. Marigold flowers, saffron, and carrots, are also employed to give color to cheese."

LIFE PRESERVER FOR THRESHERS.

Tear a piece of the finest sponge, large enough to cover the mouth and nostrils, hollow it out so as to fit closely; tack a tape string around the outside, long enough for the ends to tie over the top of the head; soak the sponge in soft water and squeeze the water out with the hand, then when ready to commence work tie it on tightly and evenly so as to cover the mouth and nostrils completely. You can breathe and talk through the sponge almost as freely as without it—(though it will trouble those who use the "filthy weed")—and you can thresh where the dust from the machine rises like a dense fog around the head, and the lungs will be as free from harm as if you were hoeing corn. I have threshed with a machine for the past four years, and always suffered much from the dust inhaled into the lungs, until last year, when I tried the sponge; and I can truly say it has been a life preserver to me.—*Correspondent of the Ohio Cultivator.*

MILK-HOUSES.

A word or two on *cleanliness*. Unless the milk-house is kept *thoroughly* clean, in its walls, floors, and shelves, the milk will become tainted; and in order to keep them clean, the floor and shelves should be of materials that will bear cleansing easily and quickly. In most farm-houses the shelving is of wood, and floor of pavement or brick. Wooden shelves can be kept clean, but are too warm in summer. Stone shelving is better, but must be *polished*, otherwise cannot be sufficiently cleaned; and to be kept clean, requires at times to be rubbed with sandstone.—Marble shelving is the best of all for coolness and cleanliness, and they are not so expensive as many imagine. Polished pavement makes a more durable, easier cleaned, and cooler floor than brick.—There should be ample means of ventilation in the dairy when required; the principal object, however, not being so much a constant change or a larger quantity of air, as an equality of temperature through summer and winter. To obtain this desideratum, the windows, which should face the north or east, should not be opened when the temperature of the air is above or below the proper one, which, on an average, may be stated at 50° Fahrenheit. The milk-house should be thoroughly *dry;* the least natural damp in the walls and floor will emanate a heavy fungus-like odor, very detrimental to the flavor of milk and its products. The utensils should all be kept thoroughly clean, and exposed to and dried in the air. Some dairy-maids are so careless in this respect, that I have seen seams of green and yellow rancid butter left in the corners and angles of churns, and a heavy smell of dirty woollen rags pervading wooden utensils. However effectual wooden scrubbers may be in removing greasiness left by milk and butter on wooden articles, they should never be employed in a dairy, but only coarse linens, which should always be washed clean in hot water without soap, and dried in the air. All the vessels should be quickly dried with linen cloths, that no feeling of clamminess be left on them, and then exposed to the air. In washing stone-ware dishes, they should not be dried at that time, but set apart singly to drip and dry; and they should be rubbed bright with a linen cloth when about to be used. If dried and set into one another after being washed, they will become quite clammy. The great objection to using stone milk-coolers is the difficulty of drying them thoroughly before being again used. No milk-house should be so situated as to admit the steam rising from the boiler which supplies hot water for washing the various utensils; nor should the ground before its windows contain receptacles for filth and dust, but be laid out in grass, or furnished with evergreens. It is said that the odor from the blossom of the common elder, *Sambucus nigra*, in summer is a complete muscafuge, if I may be allowed to coin a word.

APPLE ORCHARDS.

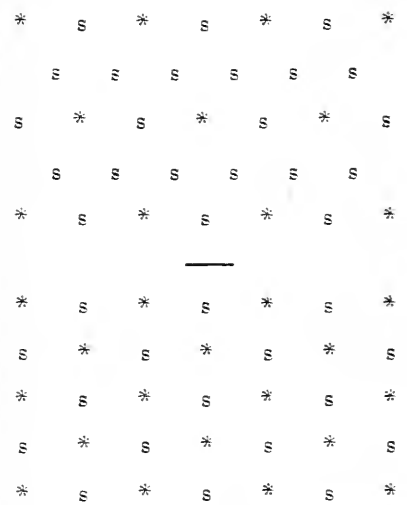
The most common form of planting trees in an orchard is in rows running at right angles with each other (or the square form, as it is called,) precisely as corn is planted when it is desired to plough both ways between the rows. This mode is convenient for cultivating the ground in other crops, while the orchard is growing, and even afterwards. Another mode has, however, some advantage over this—we refer to what is called the *quincunx* form, so named by the Romans. The meaning of the term is a form made by *five*—dots, trees, or any thing else. This form is complete when four dots are placed one at each corner of an oblong square, with one in the centre between them. The two modes will be understood by the diagrams below:

QUINCUNX FORM.

SQUARE FORM.

The advantages of the quincunx form will be readily understood. It places the trees in such position as that each one obtains the utmost amount of sun and air. There can also be one eighth more trees set on an acre in this, than in the square form. If, for instance, the rows planted in the square form are forty feet each way, each tree will be just forty feet from each of its four next neighbors; but if the rows in the quincunx form are forty feet apart, each tree will be fifty feet from its neighbors.

If apple or any other trees are planted thirty feet apart, forty-eight will be required to the acre; consequently ten acres will bear 480 trees, and twenty acres 962 trees. For a permanent orchard of apple trees, thirty feet is too near. The roots of trees run much farther than their branches, and there should be no lack of room for them. The shape of a tree is also determined by the space given it. If trees find themselves too near together, they struggle upward into tall conical heads; but if space is given them, the branches push out horizontally, and a wide low head is the result. That this latter form is the one to be preferred in all fruit bearing trees, no observing man need be told. If trees with perpendicular limbs bear fruit at all, it is always smaller in quantity and poorer in quality than that borne on those with horizontal limbs.—Browne, in his "Trees of America," states that an apple tree with a hemispherical head, fifty feet in diameter, will have twenty-five times as much fruit bearing space, as one of the same form with ten feet diameter. This statement every mathematician can demonstrate in a few minutes. Trees in an apple orchard, if planted from forty to sixty feet apart, will prove more profitable than those planted nearer together. If they are forty feet apart, 27 will be required to the acre: if 60 feet apart, 12 only will be wanted to the acre. The ground in such cases need not be useless while the trees are growing. The standard trees may be planted at the proper distances, and in the broad intervals between the peach trees, or dwarf pears, or even dwarf apple trees, may be planted, to come into immediate bearing; while the standards are growing, to be cut out as they are found to trespass on the main orchard. This matter will be understood by reference to the diagrams below, in which the standards are represented by stars, and the supernumeraries by the letter s.



Prairie Farmer.

INVIGORATING FRUIT TREES.

The papers often contain notices of the advantages of applying ashes, salt, cinders, charcoal, lime, soot, &c., to fruit trees, to increase their growth; these are often beneficial in moderate quantities, and occasionally eminently so in certain conditions of the tree or soil; but the treatment

which is most strikingly beneficial, and in the greatest number of cases, is to make the soil deep and rich, and to keep it clean and mellow by constant cultivation.—Hence the selection of stony ground or side-hills is bad policy.

RENOVATION OF WORN-OUT LANDS.

An interesting discussion has been going on for the last year or two past between Colonel Capron and other gentlemen of Maryland, in a correspondence which has been published in the American Farmer. In such discussions there is always a deal of irrelevant matter; but in the present instance there is also much that is worth hearing. We shall endeavor to separate the wheat from the chaff, and condense what is valuable into the following article:

Col. Capron states that in 1846 he purchased 365 acres of bad land which he resolved to improve. To satisfy himself as to the cost of their improvement, he first made experiment of an old field consisting of twenty-six acres. In 1845 this field had been in corn, and brought a crop of something less than five *bushels* of corn to the acre. This was the average crop of the neighborhood.

Col. Capron says he first "peppered thick and strong" this poor land with stable manure. He then put in his plough and flushed the whole up deeply, following in the clay portions with the subsoil plough. He then spread on each acre one hundred bushels of bleached ashes, which cost him, delivered on his land, ten dollars per hundred bushels. The ashes he mixed well in with the land by the judicious use of the harrow. He then sowed two and a half bushels of oats to the acre, and harrowed again. He sowed one peck of clover seed to the acre, and followed with the roller. When the oats were well up, he dressed over all the spots which appeared not to have their fair share of the preceding manures with guano. He applied the guano at the rate of two hundred pounds, mixed with one bushel of plaster per acre; the spots to which he gave it amounted in all to about two acres.

The oats produced forty-five and a half bushels to the acre, making in all 1,217 bushels, and were followed by a magnificent crop of grass, which furnished him with both pasture and a quantity of excellent hay. The result of the experiment was as follows:

Debit.

2,600 bushels ashes,	$260 00
50 wagon loads of manure,	50 00
400 pounds of guano,	8 00
58 bushels seed oats,	23 40
6 bushels clover seed,	32 50
Ploughing, seeding, harvesting, &c.	100 00
Total,	$473 90

Credit.

1,217 bushels of oats,	$486 80

Thus the crop sold paid back all the *money* which had been paid out. The nett profit of the adventure consisted in the land itself, which was, of course, doubled and trebled, and more than trebled in value for years to come. And besides the 1,217 bushels of cleaned oats, there was an abundance of straw, and pasturage for all his cattle for the entire year—seventy head of horned cattle, thirty-five head of mules and horses, besides sundry sheep, hogs, &c. &c. "Night before last," says the worthy Colonel, "when my house was shook to the very foundation by the raging elements without, I sat by a cheerful fire and listened to the pelting of the pitiless storm of snow and rain against my windows—it was a pleasant reflection, that out of all my stock, there was not one, even to the suckling calf and pet lamb, but was sheltered from its fury, and were ruminating upon beds of clean straw." A very comfortable reflection certainly; worth even more than the 1,217 bushels of good oats to a humane and right feeling man.

It may occur to the reader that although the experiment was a successful one, Colonel Capron went it rather strong on the manures—that he laid it out in a way which few farmers have the capital to emulate. True. But as he observes in one of his letters, there are few large farmers who have not a half dozen or so of worthless colts, who eat their heads twice off every year "to say nothing of hogs and horned cattle, which might be disposed of for one hundred dollars, which would perma-

nently improve ten acres of land with bleached ashes—or they might borrow one hundred dollars for twelve months with the certainty of returning it from the products of the first crop.

A gentleman who signs himself "A Learner" replied to Col. Capron. He admitted the certainty of improvement on Col. Capron's plan, where the materials he used could be so easily obtained as they can in the neighborhood of Baltimore; but objected, that at a distance from cities, the expense of transportation would swallow up all possibility of profit.—The sole means of improving farms which lie far in the country, and away from water courses, is by the slow and skilful management of the manure produced on the farm itself. By continual perseverance this may be done. On the 153d page of the Southern Planter for 1847, (the May number of the last volume,) the reader will find an example and description of this method.

Col. Capron in his reply states the impossibility of improving lands by the application of manure, green crops, &c., raised upon them in any reasonable length of time; because poor land will, under the most judicious hands, produce very little material for manure. In answer to the objection made by the "Learner," viz: the cost of transporting manure through a country of bad roads, he suggests guano, bone-dust, poudrette, &c., as manures which take up so little space that they can be transported with little difficulty. He also declares, what is certainly the truth, that if the farmers would devote themselves to the improvement of the roads, they would be able to transport all sorts of manure to almost any distance without having the profits swallowed up in the expense of transportation. We have again and again endeavored to impress this truth upon our readers, that the best way to improve their farms is to improve their roads. The following extract from Col. Capron's letter is much to the point:

"I will give you the result of my observations whilst making a short trip through the neighborhood of Sandy Spring, a few days since. After a ride of about ten miles through a barren waste of old fields, we immerge suddenly from a thicket upon full view of their advance guard, fields of clover and other grasses; luxurious wheat, oats and other grains appear like magic before you; the green fields, the white house and fences, every thing around wears a cheerful and improving aspect. My first involuntary exclamation was, here lives a Brook or a Stabler, and sure enough, after a ride of about a mile along the road which skirts his farm, I found Mr. Caleb Stabler, the owner, engaged with a strong gang of the stalwart sons of the neighborhood, rounding up the roads, with scraper and plough, and putting them in order for hauling their crops to market this fall, and their *bought manures back* as return loads. After considerable chat, on the subject, I put the question for a direct answer, *yea* or *nay*, 'will the improvement of these worn-out lands by the use of bought manures pay.' Yes, was his reply, *the improvement is a clear gain*, and there is no other way to improve them. I refer you, Mr. Editor, as also 'A Learner,' to a communication from Mr. Stabler on this subject published in your May number, page 334. Mr. Stabler (not being blessed with a 'plethoric,') this year borrowed $159, with which he purchased 3¾ tons guano, and applied it to a field of twenty-five acres, now in wheat; this ground would not have produced two bushels per acre this season, without aid. He inquired of me if I thought the crop would pay back the money borrowed, and leave him the clover set, and a fair start for further crops. My answer was, I will pay the money, take the crop, and take my chance for making a handsome profit upon the year's investment. This farm is ten miles from the Washington Railroad, over a very rough country road, (which by the way, wont be so long,) and twenty miles of railroad, making thirty miles to the city of Baltimore, and yet this gentleman finds it for his interest to borrow money at twelve months, and transport his bought manures this distance, with almost a certainty of returning his money and making his improvement clear."

The "Learner" rejoins, reiterates his disbelief in the practicability of making anything

by borrowing money to buy and haul manure thirty or forty miles; cautions the farming community generally against trusting too much to the use of "bought manures;" asks them to rely more upon the resources of the soil for its own improvement, and questions the necessity of great agricultural skill and experience for the raising and application of such manures. He intimates his fear that reports of the astonishing results of the application of these manures in particular localities may induce the temporary neglect of the surer and more legitimate means of improving the soil. He recommends the farmers who live at a distance of towns to stick to the old plan of spreading all the stable and other manure raised on their plantations, and all the straw and spoilt hay they can raise over the land, instead of risking their ruin by speculations in manures.

Another writer entered the controversy, who agreed with the "Learner" as to the impracticability of carrying out Col. Capron's "high pressure" system, and advocated the improvement of the worn-out lands by a great use of green crops.

To this, Col. Capron replied that although there might be particular localities which justified it, yet that he had never seen such a one. In ascertaining the expense of turning in a green crop, most persons proceed on a wrong method. They estimate the number of days' work in ploughing and seeding, together with the cost of the seed. This is wrong for two reasons. In the first place, if a man should charge to his account of farming simply the number of days' work of his hands and teams upon his different crops (in ploughing, harrowing, &c.) he would find a large balance unaccounted for, in the way of lost time, general repairs, &c., items not fairly chargeable to any particular crop. In the second place this method is wrong in principle. The cost should be charged at what the matured crop would be worth in market, after paying expenses of harvesting, threshing, carrying to market, &c. Taking this standard, Col. Capron challenges any man to produce a well authenticated instance where the benefit either to the succeeding crop or to the fertility of the soil justified the expenditure; whereas it often proves the entire loss of the crop turned under. He also calls attention to the fact that not a sprig of clover will rise from these old fields at all, unless they first receive plaster; nor will any green crops come from them until they receive manure of some kind. For so bad are the lands known as "old fields," that to gather in even the scanty crops which they produce, the cradle has to come the "grab" system over it. Most people in Virginia unfortunately know too well what the "grab system" means; but for the advantage of those who have never lived in the neighborhood of old fields we will give Col. C.'s explanation. The cradler makes a sweep with the cradle from right to left, and as the cradle rises out of the grain, he "grabs" it with his left hand, and lays it down carefully upon the ground in a bunch to enable the binder to find it. Those who rely upon the "self-renovating" principle on old fields must say where that system is to start from. If from stable manure raised on the farm, how is that manure to be raised, when the farm will not produce a green crop sufficient to feed the cows and horses which are to produce the stable manure?

There were several other letters, which we have not noticed at all, because they contain nothing essential to the matters of controversy. The result of the whole seems to be a sort of compromise. It is impossible to carry out the "high pressure" system, to its full extent, any where but in the neighborhood of cities, but it is also impossible to make land renovate itself without the aid of extraneous manure. Some must be obtained, though at a loss, to enable the ground to produce a crop and to fatten stock enough to go on in the work. It would seem, that greater use should be made of guano, lime and other manures, which are more easily transported, when the distance from markets is great.

CLEANSING THE TEETH.

Take a stiff tooth brush, without any kind of wash or powder whatever, and rub till you bring about a thick, frothy saliva, which is the best solvent for the

teeth that can possibly be made. By the constant use of this two or three times a day, the teeth will assume a beautiful pearly whiteness, and at the same time all disagreeable odor will be removed from the breath, and a pleasant taste left in the mouth.

The above is from the lectures of Professor Dudley, of Lexington, Kentucky, the utility of which, all who have tried it can attest.

From Downing's Horticulturist.

CULTURE OF THE PEACH TREE.

BY A PENNSYLVANIAN.

As I deem the result of experiments in horticulture of more general interest than the promulgation of theories, I venture to send you some brief notes of my experience in the cultivation of the peach tree.

In your most valuable standard work on fruits, you have, I think, proved very plainly that the disease of the peach tree, called the yellows, is caused by bad cultivation in a light or poor soil. I am very well convinced that other maladies to which this fruit tree is subject are the result of the same causes. It is the common and popular belief that the peach tree should always be planted in a light, sandy soil; nay, that a thin, sandy loam is the best for it. I suppose this opinion has arisen from the circumstance of the low price at which many tracts of land in New Jersey, Delaware and Maryland, can be turned into peach orchards, and that, too, *profitably*.

But it is well known that these peach orchards are short-lived. From three to five years is their average duration, and most planters do not expect to get more than one or two crops of fruit from their trees. They then give them up as diseased or worn out, and plant new orchards.

It is well known, also, that such is the natural duration of the peach tree that, in the deep soil of Ohio the trees bear and grow well from ten to twenty years; and the natural existence of the peach tree in our climate is at least a dozen years of fruitfulness.

What I gathered some years ago from this reasoning is, that we make a mistake in this part of the Union when we plant orchards with the expectation of raising the *finest fruit*, or *healthy*, *long-lived trees* on *light*, *thin soil*.

It is my own belief, based on some little observation and practice, that no soil will grow the best peaches, i. e., the largest and finest flavored, except it is good *wheat land*.

I have some land in this county of the character usually selected for peach orchards, and I have grown a limited orchard for many years past, with the usual success, viz: tolerable fruit and short-lived trees. About eight years ago, after visiting a neighbor in the upper part of New Jersey, where the soil is good strong wheat land, I determined to change my plan of raising them altogether. I considered that we mistook the nature of this fruit tree; that it really requires more generous culture.

Choosing a tolerably good field on my farm, I set about preparing it for an orchard. This was in October. It was on a fair sandy loam, rather light, on a subsoil of gravelly loam.

My idea was to deepen and enrich the soil of this field before planting the trees. It is not, I believe, considered well to subsoil where the underlayer is gravel. But I made the experiment, nevertheless; as it was, I thought, my only chance for decided success.

The trees in this orchard were to be planted sixteen feet apart. As labor and manure were both of consequence to me, I determined to make my first experiment by subsoiling only half the area to be set out with trees.

This I did by ploughing and thoroughly subsoiling straight strips across the whole field, eight feet wide. The subsoil plough followed after the common plough, and had two yoke of cattle to draw it. By this means I loosened and stirred up the gravelly substratum to the depth of sixteen inches; it became, also, considerably mingled with the top soil. The land was

in tolerable good order, but I had it dressed with a strong lime compost, (lime and peat) just before the subsoiling was begun.

The remaining strips of the field were simply ploughed in the common way and the whole harrowed together.

I then planted the rows of trees, as nearly as I could, in lines running through the middle of the subsoiled strips. This gave them a prepared surface four feet wide on each side, and sixteen feet in the row from tree to tree.

The trees grew more vigorously the first season after transplanting than I ever saw any do before. Here and there I saw a sickly looking one; during this and the next two years, I immediately took it out and filled its place with another of healthy growth.

The result of my experiment has been most satisfactory. The orchard is in excellent health and a good bearing state, though it has been in bearing now to the sixth year. The flavor of the peaches raised in it is much finer than I have ever raised otherwise in the same soil. And a small orchard set a year since on a joining farm, in a soil quite like my own, but planted in the ordinary way, that is, in thin, light soil unprepared, bore its two crops of fruit, then failed, and had to be rooted out.

There is no doubt my success would have been more complete, if I had subsoiled the whole of the land. This I could not afford to do at the time, but those having capital would of course do so. I remarked during the first three years when I raised root crops in my orchard, that the growth of the crops was a great deal finer, and the yield nearly a third more on the strips that were prepared or subsoiled, than on those that were only surface ploughed.

Your readers may draw their own conclusions. I will add, before finishing my letter, that, after some little practice, I am strongly in favor of the mode of *shortening* in the peach, which you have so strongly urged upon all cultivators of this fruit. It appears to me to be a great improvement upon all other modes of pruning the peach tree.

Your friend, S.

Bucks Co., Penn., September, 1847.

Note.—Having practised planting trees upon land prepared with the aid of the subsoil plough, as above stated, I fully concur with the writer in recommending its use, not only in planting peach, but apple trees, particularly in clay or compact subsoil.

Some years since I planted a peach orchard upon land of but moderate quality, and gave it a thorough preparation with the common and subsoil plough. I took the trees from the nursery *in the bud;* that is, the spring after they were budded, or when they were *one* year old from the seed, and just as the inserted buds were swelling. Some of these trees, notwithstanding their removal, made a growth, by the close of the season, of the main stem, of nine feet. When peach trees are to be removed but a short distance from the nursery to the orchard, it is decidedly the best time to plant them before the inserted buds put out, as the roots will necessarily be more or less mutilated in taking up; and as the top is to be shortened down to the bud, the growth is less affected at this period than at any other.

The *shortening in* here alluded to by S. applies only to bearing trees, and is simply cutting from *all* the branches about one-half the length of the previous summer's growth. It should be recollected that the fruit is produced only on the shoots of the last season's growth, and by removing *one-half* of this you consequently take with it a portion of the fruit buds, thereby reducing the fruit in numbers, which tends greatly to cause the increase in size, and much improve the quality of what remains.

This operation is performed in the latter part of winter, or in early spring. In shortening and pruning, attention should be paid to giving a well formed, equally balanced head to the tree.

H. P. Byram.

Oakland Garden and Nurseries.

THE POTATO ROT.

If the reader will turn to the Planter for June, 1847, (Vol. VII., p. 166,) he will find a review of all the prevalent theories and our opinions upon those of Dr. Smee, in particular. We regard them as the most plausible of any; and the following synopsis of his researches we re-publish from the Farmer's Monthly Visiter:

"Not having seen the researches of Mr. Alfred Smee, of London, re-published in our country, relative to the malady in the potato plant, I shall send you some of his discoveries, which were published in the Illustrated London News, of June 12, 1847.

"Mr. Smee has ascertained, that the disease in the potato plant, which has heretofore baffled the investigations of the potato growing world, is occasioned by a species of aphides, to which he has given the name of vastator. The animal feeds on the under side of the leaf at first, and may be found, in almost every potato field in our country.

"Mr Smee's investigations are certainly correct, as they agree precisely with all the observations made in this section of the north.

"The little depredators feed on the under side of the leaf, until the juices are exhausted; then on the stalk, until the fatal gangrene is generated. Our own experience proves, that the vastator operates with more effect on highly manured and moist lands, than on others of a different character.

"Our own observation has ascertained beyond controversy, that new grounds are more likely to escape the depredations of the vastator than those which have been long cultivated, and that some kinds of the potato are more likely to be ravaged than others.

"The vastatar may be seen with the naked eye, in the larva state, in myriads, on the leaves of the potato plant, which are just beginning to be affected with what is commonly called the rust. He is remarkably active when manured, and prolific; one individual producing millions in a single season, and 'the wonder of all wonders' is, that all men, who have been investigating this disease for many years, have never been able to see the multitudes of the vastator, when they can now be seen without a microscope by very bad eyes.

"Mr. Smee, after a multiplicity of observations on numerous kinds of aphides, and upon a diversity of plants, has developed the following laws of the effects which they produce:

"1. Aphides feed on living plants.

"2. Aphides come first upon healthy plants.

"3. Aphides suck the juices after having pierced the cuticle.

"4. Aphides, by sucking the juices, impair the qualities of the sap.

"5. The sap, being injured, no longer performs its proper functions.

"6. The injured sap, cannot perfectly nourish the plant.

"7. Unnourished or imperfect tissue is apt to die.

"8. Partial death, following the attacks of aphides, may be local at the part affected, or remote, that is to say, at a distance from the attack.

"9. The total death of the plant may arise from the death of a part necessary to the whole, which would cause its total death.

"10. Wild plants, or plants in a condition well calculated to develop fibre, will resist the attacks of aphides.

"11. Highly cultivated plants, or plants not under circumstances favorable to the formation of fibre, ill resist the attacks of aphides.

"12. Plants are most injured by aphides at that period of their growth when they are required to deposit most fibre.

"13. Plants having their tissues damaged from aphides are apt to propagate diseased tissue in all their future growths.

"14. The injury to plants hastens the transformation of aphides.

"15. The attacks of aphides are most invariably followed by growth of fungi.

"In obedience to these laws, (Mr. Smee states) the aphis vastator feeds on the living potato plant; comes first upon

healthy plants; sucks the juices after having punctured the cuticle; impairs the qualities of the sap, which then cannot perform its proper functions; and the formation of fibre and starch is retarded.—The imperfect tissue is apt to die, either locally, at the part attacked, or remotely at the collar, underground stems, or roots; which death at the collar may separate the leaf from the root, and thus destroy the greater part of the plant. The reputed wild potato plant, and plants growing in a poor soil and dry atmosphere resist more than the highly cultivated varieties and those growing in a rich soil and a moist, cold and dark place; and the injury takes place principally when the starch is being deposited in the tubers.

A set from a former diseased plant is liable to manifest the disease in all its future growths. When the potato plant begins to perish, the larva become perfect insects, and fly away to commit ravages elsewhere. The injured potato plant has a vast number of parasite fungi growing upon it."

A few years ago, a friend of ours, sometimes raised thirteen hundred bushels of potatoes in a season, and turned them into his cellar through a trap door in the kitchen; his wife (who has made him rich by her economy) was surprised to find a very disagreeable effluvia in the cellar, in the early part of winter. She requested her husband to ascertain the cause; he discovered nothing, until he opened the trap door in the kitchen, when millions of small flies, resembling cheese flies, only smaller, rushed from the cellar, darkening the windows, and almost filling the rooms above. Nearly the whole bin of potatoes was found to be a mass of gangrene, and was hastily carried to the barn yard for manure. Other instances, on a smaller scale, can be cited, but the observation of any critical farmer will demonstrate the foregoing theory.

I have no data by which to account for vastators in the cellar, as it is a well established fact that the animal does not operate directly on the tuber but through the medium of destroyed leaves and stalks.

The potato crop in this vicinity will probably fall short fifty per cent., as most of the crops were some time ago destroyed by the vastator, and a fatal gangrene is now manifesting itself on the tubers.—It is stated that where vast quantities of aphides collect on a large plant, that honey dew will cover the plants or earth beneath. The honey dew is sugar excreted by these by these creatures, which is one of the most marvellous and interesting facts in natural history. Is it the manna of Arabia? If so, a small quantity may be collected under my plants at this time.

J. W. W.

Lancaster, N. H., Sept. 16, 1847.

IMPROVE WET LANDS.

The winter is a convenient time for removing wood, trees and bushes from wet lands, and for hauling sand, gravel, loam and manure on to them. Where there is a large quantity of peat or mud, gravel is preferable to sand or loam, and sand is the next best ingredient. Gravel and sand contain a large portion of silex, which is necessary to give firmness to the stem of grass or grain; they are necessary even if there is an abundance of vegetable mould and manure. Without gravel, sand, or loam containing a large portion of sand, grass and grain will not have sufficient firmness to stand upright, but will fall to the ground.

COMPOSITION FOR SHOES.

Two parts of tar, two of beef's tallow, and one of beeswax, make a good composition for boots and shoes. Apply it quite warm, and warm the leather that it may penetrate. As farmers are frequently exposed to wet, they should be careful to keep their feet dry and warm, for on this their health and comfort in a great measure depend. There are various compositions that are good to resist water and preserve leather, and the proportion of the above may be varied. Tar and tallow will answer alone, so will tallow and beeswax.

For the Southern Planter.

FENCE LAW.

TO THE LEGISLATURE NOW IN SESSION.

An Act to repeal all laws relative to the enclosures of lands, by lawful fences, for the protection of crops.

Be it enacted by the General Assembly of Virginia, That from and after the year 1850, all laws now in force in this State, requiring farmers and all other persons owning lands, to keep up fences of a certain description for the protection of their own and their neighbors' crops from the depredation of stock, shall be and the same are hereby repealed.

And be it further enacted, That all owners of stock are hereby required to keep such stock confined on their own premises, in such manner as to them shall seem best, provided no depredation be by them committed on their neighbors' *unenclosed* crops; in the event of which they shall be subjected to a penalty equal to the injury sustained, to be ascertained and assessed by disinterested persons mutually chosen by the parties concerned.

This act shall commence and be in force from and after the 1st day of January, 1850.

From the prospective operation of the proposed or similar law, the people of the State would have full time to determine as to the propriety and expediency of its being enforced, and could petition the Legislature accordingly.

If the people beyond the Blue Ridge, or any other boundary, should consider such a law as a grievance, inasmuch as they labor under no scarcity of timber, and should not wish (for the Eastern portion of the State, where there is so little timber) to be deprived of the facilities they now have for stock ranges, &c., then let the law designate some line beyond which it shall not operate, and require those living on the western frontier of that line to establish such fences thereon as will secure the eastern side from injury by their stock. The passage of the contemplated law will at least cause the people to shake off their apathy on this important subject, if they are opposed to its going into effect. This law, in the opinion of the writer, will do more good, if it should go into operation, than all the hole and corner clubs (to which, by the bye, I am not opposed) will ever do for the improvement of the condition of the middle and lower classes of society; *their* efforts being mainly directed to the rich and such as have the means of availing themselves of the advantages to be derived from learned researches into the science of farming. By the way, this book knowledge is excellent; but it has proved injurious, I think, to some very learned farmers in their practical operations. A farmer's experiments on new discoveries, be they ever so plausible, should be on a small scale at first.

Some fifteen or more years ago, there were sundry pieces written and published in the Richmond Whig, making various calculations as to the expense of fences, and in which many other things were stated that would probably furnish some useful hints to those now engaged in writing on this very important subject. I would recommend to the gentleman of Oak Shade particularly to procure a file of the Whig of the date referred to, which I have no doubt may be obtained at the office in Richmond. The pieces were under the signature of "Peter Stoner" and "Philo-Peter Stoner," I think.

A Small Farmer.

February 20, 1848.

FOUNDER IN HORSES.

A writer in the S. W. Farmer says that he rode a hired horse ninety-nine miles in two days, returning him at night the second day. In the meantime he had been deeply foundered, but so effectually cured that the owner would have known nothing of it, if he had not been told. In other cases he was nearly as successful. This is his method of cure: Bleed him immediately in the neck, according to the severity of the founder—in extreme cases, as long as he can stand. Then draw his head up, and with a spoon put back on his tongue salt enough till he

has swallowed a pint. Let him drink moderately. Then anoint the edges of his hoofs with turpentine, and he will be well in an hour. The salt operates as a cathartic and with the bleeding arrests the fever.

TO REMOVE INK SPOTS.

Spots made by black writing ink on the pages of a book, may be removed by washing them with a solution of oxalic acid in water. The spot must be afterwards washed with clear water. In this way the writer has easily removed fresh ink and left the page white, and old spots have been nearly obliterated.

For the Southern Planter.

CERTAIN PREVENTION AND CURE FOR GAPES.

Mr. Editor,—In conversation with my brother of Dinwiddie a few days since, on that most fatal disease of the chicken, called gapes, he informed me that he had at last found a certain prevention or cure for that disease. If you think it worthy of a place in the Planter, you can insert it for the benefit of those who are unable to raise chickens and turkeys on account of that fatal disease.

Take lard and pod red pepper, equal quantities, and stew them together a few minutes, until well mixed. As soon as the young chickens are out of the nest, before they have taken any food, pull a small feather from the hen's wing, dip it in the lard and pepper and run it down the young chicken's windpipe and turn it around two or three times; then withdraw it and drop one or two drops in their mouths. After this operation they should not be allowed to go in the hen house until they are able to fly on the roost. They should be kept in hovels at night. He also informed me that he had a hen with fourteen chickens upon which he did not try the above preventive, and eleven died out of the fourteen with the gapes. The three remaining ones also had the gapes. He took one of the three which he thought had it the worst and applied the above remedy, and in two three days it was perfectly well. One of the others died in a few days; the remaining one recovered partially in about a week, but finally died.

A Subscriber.

Battersea, Feb'y 22d, 1848.

BUTTER AND CHURNING.

In some of the middle States it is a common practice to churn the milk soon after it comes from the cow, adding something to curdle the milk a little; but this is not the best way to make butter, for it requires too much labor to churn.

The labor of churning is much diminished by bringing the cream to a proper temperature at the commencement of the process. About sixty degrees is the mark which should be indicated by the thermometer. Some make it a little warmer, sixty-five degrees. Sixty-two degrees will answer well, and every one should have a thermometer at hand when butter is made.

If the cream is too warm, then butter comes too quick and too soft, and it is quite difficult to separate the milk from it. If the cream is too cold, the labor of churning is great, and the quantity of butter is small. The cream should be set very near a fire when it is cold. A gradual warming should take place, and on a cold day the cream may stand half a day in a room of the right temperature as shown by a thermometer hanging near the churn. But a surer way is to dip the glass into the cream to determine its warmth.

While the cream is in the pots waiting for churning day, it should be stirred thoroughly at least once a day, as this prevents its moulding and makes the churning easier. The cream must not be rapidly warmed when it is too cold, for some of the particles will melt and injure the butter as well as increase the labor of churning.

As soon as the butter is well gathered the buttermilk should be turned off and pure water should be turned in to take its

place. The churning must now be resumed for a few minutes and then the water must be turned off. This should be repeated till the water ceases to look milky. The butter may then be salted as high as one ounce to the pound, for on the second working of the butter the salt is partly lost in the milky matter that is worked out.

The labor of working over the butter to separate every particle of milk from it, is arduous, as the butter is now hard and unyielding. A brake, therefore, something like the brake that bakers use in working bread, should be kept in all large dairies. The cost is not great. A stone platform is best, and the lever may be fastened at one end to a staple in the stone.

It is now agreed that butter may be worked over so much as to injure it; yet it must be worked long enough to rid it of the milk. When it is well washed in cold water, if there are any liquid particles left, they will not putrify as milk will, for the matter will be brine rather than salted milk.

Many object to the use of water, and think the flavor of the butter is injured by it. But we can see no good reason for the objection, and we know that water does not spoil it, for water-washed butter obtains the highest premiums as often as butter unwashed. Water does not mingle with oily matter.

Some years ago we suggested the propriety of using a brake to work butter. We now hear that they are common in some places.

We advise beginners not to be in too much haste in the commencement of churning. If the cream is agitated violently at first, it foams and prevents the proper jostling of the particles together. Begin slowly and you will have the more weight of butter.

GREASING CARRIAGE WHEELS.

The best composition that can be prepared to relieve carriage wheels and machinery from friction, is composed of hog's lard, wheat flour and black lead (plumbago.) The lard is to be melted over a gentle fire, and the other ingredients—equal in weight—may be added, till the composition is brought to a consistence of common paste, without raising the heat near boiling point. One trial of the paste will satisfy any one of its superior quality.

HOW TO MAKE SAUR-KRAUT.

Take as many drum-head cabbages, or any other kind having a firm head, as you wish to preserve, tear off the outer leaves, quarter them, cut out the stalks, and chop the remainder into small pieces by hand or with a machine. Then, to every one hundred pounds of cabbage take three pounds of salt, one-quarter pound of caraway seed, and two ounces of juniper berries, and mix them together in a dish or bowl. Then procure as many clean casks, strongly hooped with iron, as may be required, and fill them with layers of the chopped cabbage, about three inches thick, sprinkling each layer, as it is pressed in, with the mixture of caraway seed, juniper berries and salt. When each cask is full, lay over it a coarse linen cloth and a wooden follower or lid, just fitting within the mouth of the cask, upon which must be placed a stone or weight sufficiently heavy to prevent it from rising, and allow it to ferment for a month. The cabbage produces a great deal of water, which floats around the sides of the casks to the top of the follower or lid. This must be poured off, and its place supplied with a solution of lukewarm warm water, whole black pepper and common salt, taking care that the cabbage is always covered with brine. In order to keep the kraut fresh and for a long time, the casks should be placed in a cool situation as soon as a sour smell is perceived.

Uses, &c.—Saur kraut is not only a wholesome vegetable, but one of the best preventives of the sea scurvy that we have. Consequently, no vessel bound on a voyage, particularly through hot climates, where the common potato will not keep, should sail without a full supply of this healthful food. It may be served up

for the table, prepared in a similar manner as fresh cabbage; or it may be washed in soft water, and then stewed in a stove or oven for three hours, with sufficient water to cover it, with the addition of a little butter, taking care to stir it now and then, or it will burn. At the end of two or three hours put some sausages, pork, bacon, or any kind of meat you like, but corned pork is generally used.—If any be left it is equally good warmed over. Served up in this way, it forms a very nutritious dish, and is much relished by those who have been long accustomed to its use. As this is the true "saurkraut" of the Germans, it may not, on the first trial, prove agreeable to the olfactories of all our American readers; but it hardly need be said, that it is a standing winter dish at the tables of the rich in Germany, cooked either by the process of slowly stewing, with a little water alone, or with a small piece of bacon or corned pork, and sent to table in the same dish.—*Amer. Agriculturist.*

For the Southern Planter.

SHEEP-BREEDING—DOG FENNEL, &c.

Mr. Editor,—In your number for January, I find the following which may lead your readers to erroneous conclusions about breeding sheep: "Colonel Ware's sheep are originally of the Cotswold breed and he has devoted great attention to their improvement by crossing them," &c. From this could be drawn a conclusion that my sheep were improved by crossing with other breeds; this would make them mongrels and of no particular blood. Many, I know, (particularly in the North,) consider a buck thorough bred, when got by a full bred buck of one breed out of a full bred ewe of another, when, in fact, he can only be half bred—as well may a mule be called a full bred horse, when got by a full bred jack out of a full bred mare. To avoid all misunderstanding, whenever I have sold *part bred* ewes or wethers, I have been most particular in having it so understood by the purchasers. I never part with a *part bred buck* and do not breed from any other breed than the Cotswold in its purity.—My system of breeding and crossing is very simple and, I think, judicious: never to breed from an inferior buck or one that is not of undoubted purity of blood, or one related to the ewes—in fact, I breed of the same blood, but of different families. My sheep are of different families, and marked in that respect, to prevent the possibility of error. I get a new buck every two years to prevent the possibility of incestuous intercourse—no buck ought to go to his own lambs.

Again you say: "Why should any Virginian send out of his own State to stock his farm? There are those within its borders who can furnish the most superior breeds at a less price than he would have to give for the same quality elsewhere; he would have a shorter journey to carry them, and when he got them, they would be already acclimated to a Southern country." I agree with you. Why should not Virginia encourage the enterprise of her own sons, when equal quality and purity of blood, as well as the other advantages mentioned in the above paragraph, can be obtained by doing so? Coupled with this idea, I take the liberty of enclosing you some specimens of fine wool from the stock of Spanish Merinos owned by Mr. Samuel F. Christian, near Greenville, Augusta county, Virginia. I have no doubt his sheep are very fine and will compare *advantageously* with any flock of fine wooled sheep in the United States. I have never seen them, but am credibly informed, they are "almost as handsome in carcass as Southdowns—ewes weighing alive from 110 to 125 pounds, and giving an average of near 5 pounds of washed on the back wool." Here would be a better chance for any of the readers of your most valuable journal who prefer the fine wool sheep to supply themselves with breeders. He will sell them no doubt at moderate rates, of most undoubted purity. He is an energetic and judicious breeder and most particular in keeping the blood in its purity. He is now beginning to raise the Cotswold,

having purchased of me during the past fall a buck and a few ewes of the pure Cotswold blood. His design is, I believe, to keep each blood separate and pure.

I see also in the same number an inquiry made by a White Post, Clarke county, farmer about destroying dog fennel. I fear, Mr. Editor, I am neither able enough as a farmer nor writer to interest your readers; but is it not the duty of farmers to aid each other with information in plain farmer's terms? Believing so, I will suggest his mowing it closely when in full bloom, immediately preceding the formation of seed, raking it into a pile and burning it. Then plough up the roots. If the land breaks up in clods, pulverize them with a heavy roller, and let it lay until the fall. Should any of the seed which may have been in the ground vegetate, stir it in the fall, sow it in wheat, and in the spring thick with clover. If any should then remain, save that field for mowing, and probably he will not be troubled there again. If he follows this particularly, and succeeds, he can speak feelingly of the benefits to be derived from supporting a farming journal; and as true patriotism requires that every man should do his part towards improving his country, I must require him, in return for the benefit he may have reaped, to exert himself to send you three good additional subscribers—and, surely, no Virginian will shrink from his duty.

Another farmer asks, "Will mares lose their foals by grazing on clover?" In this part of the country the main crop is wheat. Consequently clover is almost exclusively the grass raised by our farmers, as far as they can keeping their fields covered with it, rarely permitting the fields to lay long enough for other grasses to root it out. This country has been successful in breeding and raising colts. I also notice that the German and Quaker farmers, besides being among our best farmers, as well as the most successful breeders and raisers of fine horses, are famous for their clover fields and fat horses. This contradicts the idea that poverty is necessary for impregnation in a mare (as entertained by some) or that clover will make a mare lose her foal. Their care of their mares is probably the secret of their success. I have heard the statement before, but never knew any proof of it. I have had hundreds of brood mares under my control and superintendence, and I have come to this theory, that if clover has any evil effect upon a brood mare, (I say *if*, for I have seen nothing to convince me of the fact,) it is to put her system in such a state as not to quicken the seed when deposited. It strikes me that if a mare's system is in a proper state when she goes to the harem, she is easily impregnated; if not, the object cannot be accomplished until a change has taken place in her system. Is not salivation the most likely way to cause that change? Being under that impression, when I find difficulty in having mares impregnated, I put them on fields most likely to accomplish my object, (the clover fields.) After being well salivated, I put them upon grain and then upon grass.

Surely you will excuse my plainness. I ask no favors about the length. Use your scissors or your expunging pen as freely as you please; or, if not worth the space it takes, make your hearth cheerful by a brilliant blaze. For the good of our old Virginia, as well as for your own gratification, I trust your paper will flourish, until both farmer and editor will reap profits a hundred fold, amply remunerating both the plough and the press.

Most respectfully,

JOSIAH WM. WARE.

Clarke County, Feb. 22, 1848.

Accompanying this letter was a very fine specimen of wool from the flock of Mr. Christian, which may be seen at our office.

IMPROVED HORSE COLLAR.

The Providence Journal describes a horse collar which has been invented in England, which must be regarded as a very great improvement. It consists of a tube of India rubber or other suitable substance, inflated with air like a life preserver. Its advantage is that it fits the

horse exactly, easily, and without undue pressure upon any part, and leaves the breast and the joints of the fore legs free from galling and sudden pressure to which the common collar subjects them. "The merciful man is merciful to his beast," and we hope that this improvement will be generally adopted.—*N. Y. Farmer.*

MERRIMACK AGRICULTURAL SOCIETY.

Report on Butter.

The beneficence of the Creator is manifest in so disposing our tastes, and so adapting these to the varieties with which we are surrounded, as to make life a scene of enjoyment, instead of a burden. It might have been that necessary food would have been noisome, as it is sometimes to the diseased stomach, had it not pleased the Creator to have ordered it otherwise. Bread is the staff of life, but butter is given to make it slip down easier and with a better relish. But it depends something on who makes the butter whether it answers this purpose. Butter made in Joe Bunker's family needs to be eaten in the dark; then, to make it pass well, one or two other senses should be laid aside—while that made by his brother Jonathan may be eaten in the full blaze of noon; you would wish your neck as long again, that you might have the pleasurable sensation of swallowing prolonged. Perhaps a bit of the history of their better halves will explain the whole matter.

Joe's wife was Sally Sly. When a small girl she was sly—she would not half wash the milk pail and sly it away and let it sour. She was sly at school and did not half get her lessons, but would have her book in sight when reciting: but as she grew older she learned that to get well married she must appear well, and so she bent all her cunning to get a superficial education in every thing, from roasting a potato to playing the piano. Poor Joe fell in love with her, and "love has no eyes,"—so he married her. But soon after she entered on housekeeping his eyesight came, and he saw his fix that it was "for better or worse;" and he thought it was all for worse. Like a true philosopher he concluded to endure what he could not avoid nor cure, and got along tolerably well only when he came to her butter—for his mother was a real butter-maker. Every time he saw or tasted of Sally's butter he felt the horrors. Her manner of making butter was something as follows: she thinks it of no consequence whether the milk pail is sweet or sour—sets the milk in a warm room, because it is easier than to go to the cellar; and if some dirt should blow into the pans, she thinks every man must "eat a peck of dirt," and no place will it slip down easier than in butter. She let the cream pots be open, and when she churns forgets the poke; leaves the cream nearly at blood heat that it may come quick. When she takes it out of the churn she picks out the bodies of all flies and spiders—the legs and wings are so small they can be swallowed. She works out half the buttermilk and sets it away in a warm place for use. Poor Joe has seen so much butter of this kind that he declares butter does not agree with his health, and will not taste it. Yet his wife wonders he does not try it, and marvels why he does not keep a dairy and make butter for market.

Jonathan was a younger brother of Joe, and he had had occasion to eat at his brother's enough to know why he could not eat butter; and he declared he never would marry without knowing what his bread would be buttered with. Following the bent of his fancy, he made several attempts at matrimony, and Julia Juniper almost caught him, for there was always good butter on the table at tea; but he was determined to know who made it. On enquiry, she says, "La! me! mother makes the butter: I take lessons on the piano." "Well," says Jonathan, "I want a wife that takes lessons on the churn—I shall look further." After several unsuccessful attempts, and just ready to despair, he started in pursuit of stray cattle before breakfast, and wandered across the forest into the corner of the next town, and

weary and hungry called at a decent looking house and asked for some refreshment, which was most cordially granted, for the family was what are called Scotch Irish—in religion Presbyterian, and in hospitality boundless. Here he found the butter exactly right—though the weather was hot, the butter kept its shape as well as beeswax. He catechised the old lady about her housewifery—for the bread was as right as the butter. The old lady said her health was feeble, and Jenny had the whole management. He made some round-about enquiries concerning Jenny, and learned she was a hearty, black-haired, black-eyed lass, of about two and twenty; had never seen a piano nor attended a ball—but knew the Assembly's catechism; could sing Old Hundred to a charm, spin flax and darn stockings, and was then gone to town with butter. He lingered, but she was delayed, and when his excuses for staying were all exhausted, he started. He could not get the good butter out of his mind; and how it happened I know not, he soon found his way there again, and the result of his adventure was, he made a wife of Jane McKean. And now one lump of his butter is worth more than all Joe's wife would make in a month. There's no trouble in going to market—the keepers of genteel boarding houses in the neighboring village send and take it at the highest market price.

Now the main difference in these two women arises from their manner of training, though there is no difference in natural dispositions. Old Madam Sly never looked on to see that Sally done up her work right, but suffered her to sly off her work as she chose, and though a good housekeeper herself, was altogether too indulgent, and like some other mothers, thought more of getting Sally well married, than of making her fit for a wife—while old Madam McKean was determined Jenny should be fit for any man's wife, whether she got married or not.—Perhaps there is no more certain criterion by which to judge of a woman's general character for neatness and good housekeeping, than by the quality of her butter. Find on the farmer's table a good, solid, properly salted, well worked slice of butter, and you need not fear to eat the pancakes or hash; but if you see a splash of half worked butter—salt in lumps and a sprinkling of hair and flies' legs, you may be sure, if you board there long, death will not be obliged to wait for you to finish your peck of dirt. My advice is to young farmers to make it a *sine qua non* in a wife that she makes prime butter; and the young ladies who aspire to be farmers' wives, had much better be imperfect in fillagree and music than be deficient in that most important art of making butter, which smooths not only the sharp corners of crust and crackers, but will smooth asperities of the husband's temper.

The exhibition on this occasion has been splendid, and indicates that Merrimack county can show as good butter as the heart could wish. There were so many good specimens as to lead the committee to wish for more premiums to dispose of.

S. B. Little, *Chairman.*

CUTTING HAY FOR STOCK.

It has been frequently asked, how cutting hay for stock adds to its nutritive qualities. It is precisely upon the same principle as cutting up meat fine and making a mince of it. There is more or less nutriment in the tougher pieces, and even gristle, if these are cut fine with the chopping knife; and nicely cooked and agreeably seasoned, the dish is eaten with peculiar relish, easily digests, and goes twice as far as in the ordinary method of taking meat in slices; for under such circumstances we reject all that is not tender, juicy and particularly palatable. In cutting hay all the coarser parts, and even straw, are made agreeable to the taste of animals, especially if it be cut up and spiced with a little meal, shorts or bran. Nor have they the power to reject any part when cut up, and as all is more or less nutritious, the hay must go further; nor can it be pulled out and wasted as

when fed loose. Another important consideration is, an animal can fill his stomach much more easily and readily on cut than uncut food, and can then lie down and ruminate and rest, allowing the food full time to digest and distribute its strengthening qualities throughout the system, and renovate it for renewed exertion.—*American Agriculturist.*

For the Southern Planter.

DOG FENNEL.

Mr. Editor,—Having seen a communication from one of your subscribers on the subject of destroying dog fennel, I am glad to be able to throw some little light on the subject. Dog fennel is a weed like very many others in its nature, propagated by too great neglect of the use of clover and plaster, hence you will not find it upon lands that are regularly clovered and plastered as on the five field system. When the field is thickly set with dog fennel, the quickest way to get rid of it will be to plough it up in the month of June, when the blossoms are all out, and let it remain till the 1st of September, when you will find a few plants springing up; then take the common shovel plough and stir or flush it up and sow it in wheat as soon after as you can and harrow it in. After you gather the crop of wheat, plant it in corn the spring after, and then sow it in wheat and clover, and I will insure that the dog fennel will have nearly all disappeared. By repeating this rotation once or twice, it will entirely disappear.

J. N. M.

White Post, Feb'y 22, 1848.

COOKING FOOD FOR CATTLE.

The November number of the Albany Cultivator contains a very elaborate article on the comparative merits of feeding cattle on cooked and uncooked food. The facts are derived from Scotch authority, and are based upon experiments which appear to have been judiciously conducted. The results of these experiments seem to justify these conclusions: that though in some instances cooked food does produce a greater gain than the same amount of raw food, yet the advantage of the former is not sufficient to defray the expense consequent upon the cooking of food. In feeding hogs, however, especially where grain of any kind is used, the advantage of cooking seems to be generally admitted: that there may be advantage in partially cooking some kinds of food for cattle—such as cornstalks, chaff or straw, they being thereby rendered more palatable, the nutriment they contain more soluble and easily assimilated.

THE VALUE OF ASHES AND OTHER MANURES.

At a recent agricultural discussion at the Assembly Chamber in Albany, Mr. Sotham made the following statements as the result of his experience and observations:

"Mr. Sotham had not seen any experiments made by barn yard manures, but he knew that it was valuable previous to burning. The excrement of animals, mixed with slaughter house manure, such as blood, liver and refuse of the butcher yard, mixed together and so far decomposed as to cut out with a shovel, is decidedly the best compost you can apply to the land. I never saw a soil yet that was not grateful for such manure when properly applied; nor do I think that such a composition can escape by evaporation when once deposited there, either on the surface or mingled in the soil. The rain may wash it off and carry it lower. He had seen many able experiments with ashes, and which have proved a very valuable manure. For instance: On many of the light soils in England, such as sand, stone-brash, gravel and light loam, much of the *sanfoin* is sown. Manured for turnips, the turnips fed off on the land, and then sowed with the barley. This sanfoin is mown for eight, ten, or fifteen years, and not a particle of manure put upon it. It is generally grazed the last

year and then breast-ploughed. A thin slice of the sod is taken off about half to three-quarters of an inch thick; as soon as it is dry enough it is thrown together in small heaps and burnt. Part of the ashes are black and a part red. They are spread regularly over the soil and then ploughed in very shallow, well dragged with a heavy drag cross-wise, and then thoroughly harrowed with light harrows, the soil is well pulverized previous to the second ploughing, then it is shallowly ploughed again, and the turnip seed is sown on the fresh furrow. I have never seen better crops of turnips than by this process, and the ashes have lasted as long and benefited the succeeding crops for three years, and sometimes longer, quite as long as barn yard manure. Now, if the principal substances, or organized matter, that Mr. Howard says are dissipated in the atmosphere by the burning, where did these turnips and the succeeding crops get them from, if it was not from the ash? I have seen two crops of turnips in one field, (at Northbuck, Gloucestershire,) one part breast-ploughed, the other manured with a heavy dressing of barn yard manure, both in the same state of cultivation previous to the burning and manuring, the latter ploughed three times and in a better state of pulverization than the former, when the seed was sown; still the breast-ploughed piece was far the best. How is this to be accounted for, if the principle of vegetation is dissipated? I do not believe it.

"Another instance: I have seen frequently and tried the experiment. Planted two rows of potatoes, the soil in the same state. To one of the rows I have put ashes, the other none. The former grew luxuriantly, the potatoes large and a heavy crop; the latter very small and a light crop. Where did the potatoes get their sustenance from, if it was not from the ashes? Both had the same resources from the atmosphere. The ashes could not have the power of attraction over the inorganized matter in the earth, as that could be nothing more than the earthy substances or inorganized portion of plants, according to Mr. H.'s representation. This is a very important subject, and requires much consideration. He wanted no better proof than a good crop for the manure applied."

We can hardly err in too often urging upon the attention of our readers the great value of wood ashes, as well as ordinary manure, for the improvement of crops.

TO COOK PARSNIPS.

Persons who have never eaten parsnips cooked according to the following mode, have no idea what an excellent dish they are. Scrape the parsnips, wash and slice them lengthwise; boil in just enough water to cover them till thoroughly done. Then put in a piece of butter, with a little salt and pepper. Beat up an egg with a spoonful of flour, and pour over them.—They are then ready to dish up. Parsnips are likewise very good, split once and roasted with pork in the dripping pan.

PREVENTING THE POTATO ROT—EARLY PLANTING.

We have heretofore mentioned the importance of early planting, as a preventive of the potato malady, and we now give some additional evidence on the same subject.

The Cultivator says: "An intelligent farmer on a small scale has tried a remedy for several years, which, though not new, has been attended with such uniform success as to deserve mentioning. He cultivates the Mercer, a variety well known to be unusually liable to the rot. The crop is planted *very early*, almost as soon as the snow disappears in the spring, so that the potatoes are fully matured by the end of summer. In the latter part of the eighth month (August) the potatoes are dug and immediately housed in as dry and cool a place as possible. By this means he has never lost a bushel, although his neighbors, who live close at hand on either side, and who plant and harvest their crops later, have suffered abundantly."

On the same subject a Norfolk paper remarks: "A gentleman farmer of our acquaintance tells us, for three years he has planted potatoes at three different periods, viz: early in April, late in April and in May. Every year the early potatoes have been sound and firm, the middle part unsound, and the late ruined. He says it is early planting which protects the potato against the epidemic. We recollect in a great many accounts of the rot that the early potatoes were sound."

The editor of the Farmers' Monthly Visiter (Ex-Gov. Hill) copies the latter extract, and adds his testimony as follows: "Our own experience for the three last years confirms the above statements: in none of the potatoes planted previous to the 10th of May, have we found any difficulty from the rot."

ERRATA.

At page 40, February number Planter, the name of the writer in the article on South Oregon Corn, should have been A. G. Moody instead of A. G. Woody.

FALL AND WINTER PLOUGHING.

Ploughing late in the fall and during winter, may, in some instances, be beneficial; in others, injurious. As a general rule, the principal reason that can be given in favor of the practice is, that the work can be performed at a time of leisure, and the farmer is relieved from the pressure and hurry which would attend the crowding of all his ploughing into a few days of spring. Loose sandy and gravelly lands are not, probably, injured by late ploughing; but compact soils, if ploughed in fall, are sometimes so beaten down by the heavy rains of winter and spring, that more labor is actually required to bring them into suitable condition for crops than if they had not been touched till near the time for sowing or planting.

The idea that any thing is gained by the decomposition of sward by late fall ploughing, is, we are convinced, a mistake. On the contrary, every one who has had the opportunity of observing, may have seen that sward, which is broken up after the weather has become warm, and the grass somewhat started in spring, rots much sooner than that which was ploughed in fall or winter.

Clayey soils which have been well drained, may be greatly improved by fall ploughing, if it is done in the right way. The ground should be thrown into narrow ridges, which should run in such a direction as will most readily turn off the water from the field. Let two furrows, as deep as can well be ploughed, be turned together in the form of what are called "back furrows," and the whole field be ploughed in this way. This will expose a large portion of the soil to the action of the frost and air. The ridges will be dry, and the soil being frozen and thawed while in this state, it will become loose and friable, and on cross-ploughing the ridges, when the proper time arrives for seeding, the soil will be mellow and in excellent condition for a crop. This course has produced good crops of grain and vegetables on land which would yield little or nothing in any other way.—*Alb. Cultivator.*

WATERING CATTLE.

Many farmers suffer a loss by not providing good and sufficient water for cattle. An animal that is compelled to go half a mile over a slippery road, and chased perhaps by dogs, cannot gain in flesh by the operation. If a cow has to travel twice a day half a mile to water, and return, she travels two miles a day; or ten cows perform twenty miles of travelling per day and two thousand miles each winter.

It is better to cut grain just before it is fully or dead ripe. When the straw immediately below the grain is so dry that on twisting it no juice is extracted, it should be cut, for there is then no further circulation of juice to the ear.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

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CORN.

April is of vast importance to our readers because it is in most places the corn planting month. Almost every neighborhood of thirty miles has a different time for this work; but for our latitude it generally falls in this month. This crop has ever been and is still the great staple of America. Corn seems to have been created for this continent. In every portion of it, from Canada to the straits of Magellan, it flourishes in boundless luxuriance. So perfectly suited to our lands is it, that we find no time in which it was not as popular as it now is. The Indians had it before us and it has kept its ground to this day. Famine has now introduced and established it in Europe as an article of food, and it promises to become a source of unbounded profit to us; while it forever must continue the staff of life here. It would be hard for us to raise too much corn for sale and consumption now. But it is time for our farmers to learn that they can no longer continue to produce this crop on the plan pursued by their grandfathers. Some fifty years ago, the lands of Virginia were very different from what they now are. The soil was always of small depth; but there was a rich coat of aboriginal mould all over it. There needed but the planting and weeding to produce an abundance of corn or tobacco, or any other crop desired. But this state of things no longer exists here; the thin coat of rich soil has long been exhausted and given place to the surface which we call "old field" soil. In the meantime, the immense prairies of the West, in their virgin richness, have come under cultivation. On these Western lands, far more grain can be produced with far less labor than we can hope to obtain in the state our lands are now. We have the great advantages of more labor, better markets, and greater propinquity to the seaports. But these advantages scarcely enable us to bear up under the present competition; and if we continue our present method of cultivation, we must shortly fail altogether. It must be reformed. We must not continue to plant corn without a manuring. It has become as necessary to this crop as it has long been acknowledged to be for tobacco.

Although this hardy plant will grow on poor soil, yet the ground can scarcely be made too rich for it. Corn is a gross feeder, sends out a large number of roots, in various directions, and there can hardly be too much sustenance in the soil for it. Neither stable manure, nor scarcely any other kind of manure comes amiss to it. But it is absolutely indispensable that lime and ashes, in some form or other, should be in the soil, as both these substances enter largely into the stalk and other parts of this plant. A most wonderful advantage will be observed from a dropping of even a few bushels to the acre. In manuring land for corn with stable manure it is of course impossible to lay down any general rule as to the quantity to be laid on. This must vary with the previous condition of the soil. We have seen, however, twenty double cart loads mentioned per acre, as in most cases, about the proper quantity.

Repeated experiments have established the fact, that a great deal may be done for corn, not only by a proper *selection* of the seed, but by soaking the seed for twelve hours in a solution of saltpetre before planting. The solution should consist of one pound of saltpetre, one pound of copperas and ten gallons of water. It will accelerate the growth of the corn, and, for a while, keep off mice, worms and insects. Another more effectual remedy against these last mentioned depredators is to add about half a pint of melted tar to a peck of seed, and to keep stirring it till each kernel is thinly coated in it. Then pour the whole into a tub of water, and continue to stir, so that they may be separated from one another when cool. This is a most excellent remedy against ground mice and worms; and it is also said to keep off the crows.

This leads us to mention the scarecrows. Those most in use among us reflect but little credit upon the ingenuity of our farmers. A ragged great coat thrown over a stake is generally the best that they can invent. Now, crows are expected to know *something*. Although they do not "know B from a bull's foot," they will be always able to distinguish such an effigy from a man. They will also laugh to scorn your scraps of tin strung on a line to jingle in the wind. But if you will place a stuffed figure behind a blind of a few bushes, so as to be partly seen and yet seem to be hidden, they will not trouble that field much. Like men, they think most of what they do not altogether understand.

From the American Journal of Agriculture.

REMARKS ON CHESS.

[*Bromus Secalinus.*]

Few subjects of practical agriculture have a greater interest than this. Substituted for wheat, not a more miserable crop exists. Its appearance in a field of wheat is like the *plague spot* on the human frame. To avoid it the farmer is obliged to see that his seed wheat is pure, and utterly destitute of that seed. It is the remark of many thorough farmers, that they never raise *chess*. This would be adequate proof in any other case of the origin of the plant.

But the remark is often made that the fields in which the wheat is winter-killed, abound in chess. The proof is palpable. Numerous such fields have been seen this year. Is this adequate reason for the opinion that wheat is converted into chess by the frosts of winter? I think not, for the following reasons:

1. All the wheat fields in which the wheat has been killed by the winter, do not abound in it, and some of them are free from it. It is curious that the chess is not the uniform result of the killing of wheat, if the supposed change is effected by the operation of winter.

2. Wheat and chess are not found growing on the same root. The contrary has been alleged, but an examination of the cases has ever proved that this is not the fact. If wheat is converted into chess, all the plants on the same root are the subjects of the transformation.

3. The distinctness and difference of the two. Wheat has a long head, or *spike*, of sessile flowers, and does not send out branches; chess has a diffusely divided stem or *panicle*, in several places towards the summit, in form like oats, and bearing short, and rather close, short *spikes*, or collections of flowers. The supposed change, therefore, affects the whole form and appearance of the plant. The embryo plant is formed in the seed of wheat, and the change must affect the very form of the embryo, and cause a great modification of the whole plant. The fruit or seed, too, is changed in its form, manner of growth, and character of the matter which it contains. No similar change occurs in other plants, and there is no proof of the said change in this. In all their characters, wheat and chess are more diverse than rye and wheat, barley and wheat, oats and rye, barley and rye, apple and pear, cherry and plum, and the like. Chess is not like a *hybrid* of other plants. It is not the *pollen* which effects the change in chess, but the form and peculiarities of chess exists before the flow-

ering and the evolution of the pollen take place.

It has been said that rye has been changed into oats, but there is needed a satisfactory proof of the fact; as there is that the brain of man is at one time that of a fish; at another, of a crow; and at another, of an ape. Such peculiarities must have been maintained to ascertain how far credulity can extend, and how large a part of men can believe themselves to be *improved tadpoles*.

4. There are adequate sources of the seeds of chess. They may have been sowed with the wheat, and developed with greater fertility as the wheat was absent from the well cultivated earth.—Such a fact is often noticed in the growth of other plants.

The seeds may have been already in the ground, and buried too deep for germination, till cultivation placed them in a situation to grow. This is a well known fact in respect to a multitude of plants, whose seeds are long preserved in the ground, and germinate on the proper exposure.

The wheat of new lands, if the seed is usually pure, is remarkably free from chess. The seed is probably always carried with the wheat, and this begins the chess, which is afterwards developed in the circumstances favorable to its growth. One of these is the absence of wheat by being winter-killed. Let it be shown that the seed of chess is not in the ground, before the influence of winter is made the cause of its appearance.

5. Chess propagates itself by seeds like other grains. Thus it is like any other plant, as the "herb yielding seed after its kind, and the tree yielding fruit, whose seed is in itself after its kind," a principle fundamental in human belief. If cold and frost may change wheat to chess, why does not heat change chess to wheat? If the farmer intends his wheat shall be free from the seeds of useless or injurious, or noxious plants, he must remove the seeds from his seed wheat, and weed out the plants from the growing grain.

It is of no avail to say, may not the transformation of wheat to chess take place? It is inconsistent with all the known laws of vegetation, and the violation of fixed laws, by natural causes, is impossibility. What miraculous power might effect is not to the purpose, when the laws of matter, organized or unorganized, are under consideration.

Fields of wheat sometimes abound in *cockle*, Lychnis *githago*, whose seeds are so ruinous to good flour. Why has not this plant been considered some modified wheat? Because it is so different. What is the limit to differences, when wheat and chess may be said to have the same origin?

The correct knowledge of chess leads directly to safe agricultural practice. The remedy is as palpable as the difficulty.—Let the soil be freed from the seeds of chess.

From the Southern Cultivator.

FENCES FOR LOWGROUNDS LIABLE TO FRESHETS.

Mr. Editor,—I desire to say a few words in your excellent "Cultivator" respecting lowground fences, or those fences on lands which are subject to inundation. It is the custom on all such lands after a "*freshet*," to collect as many of the scattered rails as can be found within the distance of half a mile, and re-construct the fence, with the addition of new rails, which are, perhaps, to be washed away again the succeeding fall or spring. To have a fence, therefore, which can withstand these "moving accidents by flood" is with many an important desideratum. A friend of mine constructed a fence after the following fashion: Upright parallel posts, through the lower ends of which were bored two inch auger holes; into these holes were inserted white oak pins, about five feet long. The posts are then placed in the earth, inclining from the stream, so that the shock occasioned by contact with logs and the stream is diminished. The earth is packed well around the posts, and the rails are then placed in between them, and the top of the upright rails are

then firmly fastened so as to hold the horizontal rails.

This fence, you will observe, is a straight one. The object of the pin placed through the lower ends of the upright posts is to hold them in the earth, which it does as effectively as if it were the roots of a tree.

Another kind of fence I would recommend for lowgrounds, is the Cherokee rose, a most excellent preservative against *washing*, as well as stock. Plant immediately after a "*freshet*," if you would be certain of a *stand*.

SUBSOIL PLOUGHING.

We have often expressed the belief that the practice of subsoil ploughing would be attended with great advantages in many situations in this country. In England it is becoming more and more adopted, and we can see no reason why its use should not be attended with equal benefits here. The manner in which this operation is performed is this: A team drawing this subsoil plough follows in the furrow made by a common plough. It is proper to observe, that for subsoil ploughing to produce the greatest benefits on wet, tenacious soils, they should be first underdrained.

The Journal of the Transactions of the Highland Agricultural Society of Scotland for January, 1847, contains an account of some very valuable experiments in regard to subsoil ploughing, furnished by Mr. J. Wilson. It is stated that the farm on which these experiments were made had been under cultivation for a long period; that it consists of various kinds of soil—from a gravelly earth to a tenacious clay. The usual depth of ploughing for many years had been from five to six inches, and a hard crust had been formed at that depth.

The field first experimented on contained thirteen acres, most of the soil being heavy, inclining to clay, on a clay subsoil, and the rest light soil, on a gravelly subsoil. It was under-drained in 1843, with tile, at the distance of fifteen feet between the drains. Previous to draining it had been very wet, and the crops it bore were generally poor. It was subsoiled in the fall of 1844, the plough going across the drains. A common two-horse plough was first used, taking a depth of six to seven inches, and a subsoil plough with two horses followed, taking an additional depth of seven to eight inches. Eleven acres were ploughed in this manner, and two acres were left, which were only ploughed to the ordinary depth of six and a half inches. The whole field was manured alike—the manure being from yard-dung and guano—and it was sowed to yellow turnips in the fore part of June. No difference was discernible in the crop till about the first of August, when the subsoiled portion showed a decided superiority, which became more and more apparent till the crop was taken up the last of October. The subsoiled portion gave 26 tons 7 cwt. per acre, and the part not subsoiled, 20 tons 7 cwt. per acre—making a difference in favor of subsoiling of 6 tons 7 cwt., or a value of £3 18*s.* per acre.

The next experiment was upon a field which had been furrow-drained with tiles in the autumn of 1844; the soil rather inclined to stand on a subsoil of sandy clay. Two acres were subsoil ploughed to the depth of fifteen inches, in December, 1845, and two acres were only ploughed to the depth of six or seven inches. Two ridges of the field were trench-ploughed to the depth of thirteen inches. [Trench ploughing is performed by running a plough of the common construction in the furrow of another of the same kind. Its operation and effects are different from those of the subsoil plough, as the surface soil is covered by the earth taken up from below by the second plough.] The field was manured alike with manure from the farm-yard, and planted to potatoes. The trench-ploughed part gave 7 tons, 1 cwt., 2 quarters per acre; the subsoiled, 7 tons, 9 cwt., 2 quarters; and the part only ploughed, 6 tons, 14 cwt, 1 quarter per acre—making a difference of 15 cwt., 1 quarter per acre in favor of subsoiling, over the part ploughed only in the ordi-

nary way, and a difference of 8 cwt. over trench-ploughing.

The next experiment was made on a field which had been partially drained several years since—the soil "an earthy loam incumbent on clay." A portion of the field was subsoiled, and the remainder ploughed to the ordinary depth. The field was sown to barley in 1846. The appearance of the crop was most favorable on the subsoiled portion during the time it was growing, and when threshed, gave the following results: The subsoiled portion yielded 8 quarters, 3 bushels per acre, with 36½ cwt. of straw; the part not subsoiled, yielded 7 quarters, 4 bushels, 3 pecks per acre, with 28 cwt of straw—making a difference in favor of subsoiling of 6 bushels, 1 peck of grain, and 8½ cwt. of straw per acre.—*Albany Cultivator.*

IRRIGATION.

The wonderful fertility of Egypt is, perhaps, more universally recognized than that of any other portion of the globe.—For more than three thousand years the lands inundated by the annual overflow of the Nile have continued to produce the usual crops without any perceptible impoverishment or diminution of fertility.

If a meadow is rather dry from its soil or situation, loam may be applied with profit, and if very dry, clay is preferable. In some cases clay has been used with great advantage. In many cases wet lands will not admit of access excepting when frozen; therefore farmers should embrace the favorable opportunity to attend to this business during winter.—*Boston Cultivator.*

COMPOST MAKING.

Jacob Mangle, in the Boston Cultivator, says:

"I conscientiously believe that no expenditure of capital can at all compare in profitable return with money put out at interest in the accumulation of articles with which to form compost heaps.—Every farm ought to have three of these heaps at the same time—one being formed, one just finished, and a third ready for carrying abroad, after the necessary turnings and mixings and pulverizations, have been given to render the mass fit for the immediate food of plants; then it might be employed either as a top dressing for meadow or pasture lands, or be ploughed lightly in for corn, grain, &c., thus adding a staple to the soil, and operating at the same time both chemically and mechanically; and no one would readily believe the ease and facility with which about a couple thousand loads of compost could thus be collected together, if the business were to be regularly conducted through the whole year. But here is a statement which exhibits the fact in a light that must stike every one at first sight.

"Suppose, then, a man and ox cart should be employed for 250 days in the year, collecting bank earth, tussocks, leaves, weeds, the parings and scrapings of highways, swamp mud, openings of ditches, and refuse articles of every kind, and to carry but six loads a day, throwing up the materials and spreading them completely over the heap at the close of every day's work. Why, here would be an accumulation of 1,500 loads at the year's end. And allowing 50 cents a day for the man, and as much for the oxen, the cost would be $250, or 70 cents a load, carriage, mixing and piling included.—Now, if we consider that this enormous accumulation would be an addition to the means afforded by the barn and cattle yards, what can more clearly prove, that capital so expended is money at compound interest. And again, if, as the carts were emptied, the mass was mixed with the stable manure, in the proportion of one load of dung to three loads of muck, &c., and after fermentation, the whole were turned over and pulverized, and mingled with a good solution of lime, why, the advantages could scarcely be calculated. And it may be inquired whether this mode would not be far preferable to sending the team many miles to town, for a load of stable dung, the cost of which and carriage would be equal to about ten loads of this compost.

It may be safely laid down as an axiom, then, that the aforesaid man and yoke of oxen would yield more profit by their labor than any half dozen teams otherwise engaged on the farm.

Few persons are aware of the fact, that the oftener the compost heap is turned over and pulverized, the richer its contents become. To carry abroad muck from the heap before it has been properly amalgamated by frequent exposure to the atmosphere by turning and mixing, is to throw away more than one-half the profit to be derived from the system of composting."

WHEAT FIELDS OF VIRGINIA.

The wheat culture of the South has not been, perhaps, as often described or as well understood by Northern Agriculturists as that of the West, and while we may well appreciate the general agricultural skill and enterprise of the latter, we should not lose sight of the former. The following, by a writer in the National Standard, will be interesting:

"We called upon the late President, Mr. Tyler, residing on the north side of the James River, about thirty miles below Richmond. To say he is a good cultivator would be small praise. He informs us that when he moved on his farm, three years since, a field of wheat of two hundred acres, which he showed us, would not produce more than the seed, but is now waving with a crop of twenty bushels to the acre. The dressing he applied to his land was shell marl, together with straw and other manure made on the farm. The marl abounds in sufficient quantities to last for many years. Ten or fifteen miles above the Ex-President's, on the same side of the river, is the family seat of the lamented Harrison, also in a state o cultivation, and perhaps one of the most eligible situations on the James River. From Mr. Tyler's we proceeded to the estate of Robert B. Bolling, Esq., at a distance of ten miles. We there found farming conducted on a gigantic scale, such as had not entered our imagination. He went with us through his fields of wheat, which contained *nine hundred acres?* The prospect for a crop was very fine, and we supposed he would have thirty bushels to the acre. He next showed us his grass field, which contained one thousand acres. Owing to the drought, it was not as good as expected, but we thought as good as any of ours. His corn, which loooked well, though small, in consequence of the cold, amounted to near seven hundred acres. The oats, owing to the drought, were backward.—The number of acres in oats, I think he said, was three hundred. The entire plantation contained *seven thousand acres of land!* The timber, consisting of white and black oak, and pine, is very large, except the second growth. He uses lime from the North River, which costs him six cents per bushel, together with straw, which he spreads over his land in the fall and winter—ploughs under and then dresses with lime. This mode has brought his land to a high state of cultivation. His land, a few years back, was very poor."

MANURE.

Good farmers know the great gain resulting from applying the manure which is made during the winter, to the corn and other spring crops. If left to ferment in the yard through summer, one-half at least of its value is lost in vapor, &c., and the corn crop receives none of its benefits. But if ploughed under in spring, the corn is enriched, the vapor as it escapes is absorbed by the earth, and a double benefit is thus received. But a difficulty occurs where corn fodder is largely fed, which mixing with the manure binds it together so that it cannot be drawn and spread till the stalks have rotted. All this is obviated by cutting the stalks fine in a machine, and more nutriment is obtained from them by the cattle.

Sheep manure is difficult to separate and load, being dry, hard, and crusty in its nature. In order that it may be separated by the fork, take a second-rate axe and chop parallel lines across the heap a

foot apart, and cut these again at right angles, which will give blocks a foot square, which may be easily loaded and drawn.

When manure from its coarseness must necessarily be left to ferment a few weeks or months, much of its value may be saved by mixing it, or merely covering it with plenty of muck, turf, earth, saw dust, &c., with gypsum, unslacked lime, and other ingredients of good compost. Gypsum is usually regarded as one of the best absorbents of the gases of manure; but in drawiag out the most fœtid of all manures, we have found covering it with air-slacked lime, far more effectually to destroy the unpleasant odor, than the use of gypsum.

SOAP.

Is composed of an alkali, united with some kind of oil, tallow, or grease. It depends for its cleansing properties upon the alkali which forms one of its component parts. This, in any good soap, is held in excess, and a part of it unites with the dirt to be removed, and the application of water washes them both off together.

Hard soap is made of soda and tallow; but soft soap may be made into hard by melting with it common salt, the base of which is sodium.

Soft soap is made of oil or grease and potash. For all purposes of cleansing, the potash without the grease is equally effective; but its causticity is such that it destroys the skin or the fabric to which it is applied. The oil unites with the alkali and destroys its causticity.

There are persons who suppose soap of any quality injurious to the skin, and who only use it on compulsion. This idea is founded in error. The skin is filled with minute pores, each of which is an instrument of perspiration. The matter perspired is of an oily character, and a portion of it adheres to the edges of the minute orifices whence it issues. The particles of dust floating in the air become attached to those oily places, and by degrees they are partially or wholly closed by it. There is also a gradual casting off the surface of the old skin to give place to the new in process of formation. The application of a brush to the flesh will show this to be the fact by the bran or mealy substance which it removes. Soap applied unites with these oily foreign matters, and by the application of water both are removed.

Soft soap, if used freely on the flesh, will injure the skin, by reason of its causticity; and the stronger it is—that is, the more alkali it contains, the sooner it will do this.

In the place of using the potash of the shops in making soap, farmers usually employ lye made by leaching the ashes of hard wood. The best mode of doing this has been heretofore described in our columns.

For the Southern Planter.

CULTIVATION AND MANAGEMENT OF TOBACCO.

Mr. Editor,—As I have a few moments to spare, I will drop you a few lines on the cultivation and management of tobacco. In the first place, I will say that I think the Yellow Prior is the best for rich lots and the Big or Ruffled Oronoko, the best for thin land and new ground.—The Yellow Prior is rather a late tobacco, and has the appearance of being ripe or nearly ripe at least two or three weeks before it is really so. The best mode of cultivating, I think, is to break up the lots about the first of August, and run a heavy bush over immediately after the ploughs, which fills up all the open places between the furrows, and effectually kills all the vegetation, especially the herds-grass. And if the land is to be manured with wheat straw it should be re-ploughed in January, and the straw turned under. A great many managers lay off their low-grounds in six or eight row beds, which I think a very bad way, for after a few years cultivation and re ploughing, the beds get up in a ridge on the top, and the

water runs off on each side as fast as it does off the roof of a house, and washes away all the soil—consequently you frequently see about three good rows on top of the bed, and the rest poor; and so it is with the wheat crop. The best plan is to lay off lowgrounds in forty feet beds, running from the river to the hillside, and run the rows across the beds, having a deep drain furrow wherever it is necessary. By running the rows across the beds, the soil is kept equally distributed across the beds. Another practice prevails of priming too low. The tobacco is generally in top before there is a large hill to it; and having scarcely any hill to it when it is primed, it appears to be high enough, but by the time it has a large hill put to it, the dirt is all mixed up with the bottom leaves, and so soon as the dirt is thrown up among the leaves, especially if the land is inclined to be wet, they perish away, and make nothing but the meanest lugs. It should be primed high and topped at eight leaves, if the land is strong enough to bring them to perfection; if not, top at six leaves. I assisted in the management of a crop of tobacco in 1840, of thirty hogsheads, and we only made two hogsheads of lugs. Tobacco should never be ploughed after it begins to come in top, but should have a round and large hill, as soon as it is large enough to bear it, and there should not be any loose dirt left between the hills, and never work it when the land is wet. If tobacco is cut in very warm weather it should be pressed together on the scaffold, and bushes put around to prevent the sun from scalding it. It should remain on the scaffold about four days if the weather is fair, though rather than have it caught in the rain I would put it in the house in two days. Fire with oak or hickory wood, and keep but very small fires for at least two days, when they may be gradually raised, though they should never be large. From three to four days is as long as tobacco should be fired. Never put fire under tobacco when it is wet. It is customary with a great many when they get their tobacco in prizing order in the spring, to strike it down on the sticks, and then haul it all up to the prize barn and pack it down there; but this is a bad practice, for in hauling up, or in waiting for an opportunity to haul it, some of it invariably gets out of order, either too high or too dry. Barn doors should all be made wide enough to admit of a tobacco hogshead being carried in the barn. The tobacco should be bulked down in the barn where it is struck down, and weighted heavy; and when it becomes necessary to carry it to the prize barn it should be nicely packed in hogsheads, one bundle at the time, carried to the prize barn, and as soon as it is taken out of the cart put under the prize. Get a good set on it, then put it aside, and re-prize it in another hogshead, and when you come to sell you will find that you are well paid for your trouble.

Respectfully, yours,

AN OVERSEER.

Clarksville, March 6, 1848.

We are much obliged to the "Overseer" for the foregoing communication, and wish we could hear from men in his line of business more frequently than we do. They have better opportunities for observation than any other class; and when they are intelligent men, as a large number of them are, they can furnish just the sort of information needed by the farming community.

From the Cultivator.

UNENCLOSED LANDS.

Messrs. Editors,—In the December number of the Cultivator, you allude to the fact that along the valley of the Connecticut, in Massachusetts, "there are large portions of territory unenclosed, yet there are thousands of acres under cultivation," &c.

Now we are proud to have such a paragraph as the one above cited and those that follow it, written of Massachusetts; for it is to the honor of any State to have such things said of them, and most certainly very much to the comfort of the population to have them exist; for within

the last week an intelligent man has remarked, that it was "worth ten dollars a year to any farmer to have the streets keep clear of animals." Another, who has been proprietor of a small farm since 1842, says that this public guardianship has been worth more than one hundred dollars to him in the six intervening seasons.

But let us look at the contrast which a few years have effected in this matter in our ancient, and in some things we hope wise, Commonwealth. Previous to the revision of the statutes of 1836, by the law it was left discretionary with towns to say at their annual meeting, whether "swine and neat cattle should be permitted to run at large under certain restrictions." Very naturally, every town adopted the course which their supposed interest and inclination prompted. In many places, especially in the western part of the State, the usual course was to let them ramble at discretion.

The consequences were, that our streets were so commonly ploughed by the long-nosed swine of those days, once at least in a season, that large crops of various unsightly weeds sprung up along the wayside to illustrate the beauty of the thorns and thistles overgrowing the vineyard of the man void of understanding. Large herds of cattle were seen rambling in every direction. These, one might suppose from their general movements, were acting in the capacity of *fence viewers*, for unless barriers were erected between the highway and the adjoining crops, almost high enough for the walls of a fortified city, they were sure to find the discrepancy, which they took for an invitation to "walk in," and partake, in such quantities as their voracious appetites demanded, of the good man's labor. Oh! what vexations arose when these pilferers, licensed by owners who had forgotten the law of love for their neighbors, and the law of right in their dealings with their fellow-men, had broken into the meadows, and were perhaps trampling down the cornfield whose luxuriant growth had promised a bountiful harvest, or, perhaps, wading through wheat ready for the sickle, and which, but for lowering skies, might then have been in the reaper's hands, instead of being garnered into the capacious stomachs of the wandering, starved, sacrilegious herd of trespassers, sent out to the daily task of highway robbery. Then, what care was necessary, that every gate and bar should be kept shut, for as sure as they were left for a moment unsecure, a host of quadruped Philistines were ready to enter in and spoil the land. It was not strange in such a state of things, with every temptation before them, that could be offered to educate them in wrong, driven by starving necessity one day, and invited by sumptuous prospects another, that cattle became unruly in their propensities, and ungoverned in their habits, or that they were induced to wander off, frequently to the annoyance of their owners, and sometimes as if to give a lesson of instruction, a total loss to them. But there were further evils, which are not wholly unimportant, attending this loose and illiberal state of things. If any one was so fortunate as to have a watering place by the wayside, near his residence, he was sure to receive a double portion of the visits of congregated groups of thirsty animals on a warm summer's day; and then wo to his crops, however lofty the barriers that separated them from the "long pasture," herded by a whole community. Perhaps a shade tree threw its spreading arms from his premises (it may be from his door yard, and around his front gate) over the highway. Under a cluster of such trees we found they were sure to make their nooning, and the appearance of the soft sward, and the effluvia round about, we leave others to imagine rather than describe.

The convention that revised our statutes in 1836, saw these evils, and perfected a plan for their remedy; and we have no doubt that the benefits of the single enactment relative to prohibiting animals from running at large in the highways and on unenclosed lands, have already been sufficient to defray the expenses of their whole session, and yet the first fruits of their labor are hardly begin-

ning to be enjoyed. They gave us a statute expressly in this matter, and which cannot be mistaken in its import. In its first application it runs thus: "The field drivers *shall* take up at any time, all sheep, hogs, horses, or neat cattle found going at large and without a keeper, in the highways or on unimproved lands;" and the field driver is sworn like other officers to the faithful discharge of his duty. So it will be seen there is no ground to parley in the matter, no discretionary power. If a field driver does not construe the law in its plain and simple meaning, it implies at once that he is blinded by prejudice, or led astray by mistaken motives.

After the liberal construction and discretionary power given by the former law, it was in no way strange that one so stringent in its application as the present, should find opposition in every community. This was truly the case, we believe, more or less, in every section of the Commonwealth. In some places severe threats were given, in case men did their duty, when they had solemnly sworn to do it. In some, it may be, summary acts were committed on the property of such individuals who dared to do as the law of the land said they must do or perjure themselves before high Heaven, and become guilty and untrustworthy in the sight of their fellow-men.

But the progress of the matter has been onward, and as you have lately had an opportunity to witness, its triumphs in some places have been complete. In others it is approaching that desirable position, and in all, even our most "secluded nooks and corners," it augurs well of its triumph. "Public opinion," that tribunal which will scarcely allow an appeal from its decisions, is growing stronger and stronger in its approval of the letter of the law, and individual prejudice, which is so prone to take root in the unbroken ground of self-interest, is yielding in its favor as a means of accomplishing its own ends. As you truly related, the state of things in our Commonwealth is essentially improved by the existence of this law. The farmer can now retire at night with the reflection that his crops are safe from highway depredators of all classes, except lawless bipeds, which no fences can stop, and law seldom restrain. He can plant trees along the wayside, and sit quietly and comfortably under the shadows of them—if convenience require, he can have half a dozen gates or bars open through the day, in the business of the farm, and no annoyance near—he can *drive* his own animals without inconvenience from those who have no driver—women and little children can walk the streets quietly and safely without danger from wild, disorderly animals—the waysides, unless used for ploughed crops, exhibit a gay, vernal appearance, and when newly mowed present a lively sight. In fact, *countless* benefits attend this improved state of things, and not a solitary wrong thing in the whole matter. Wise are the legislators who enact such good and wholesome laws for the preservation of our rights and safety. Public benefactors are the men who come boldly out and sustain them in their early adoption; and "happy are the people" who live under their salutary influence. May a similar condition to that which Massachusetts is now approaching, and which she is ultimately to attain through all her borders in these matters, be speedily realized all over the nation, and through the world.

WILLIAM BACON.

Richmond, January, 1848.

AGRICULTURAL ASSOCIATIONS.

The following judicious remarks are taken from a preamble to some resolutions passed at a late meeting of the Yates County Agricultural Society. A copy of the proceedings was forwarded to us by the Secretary, but we have only room for this extract:

"It is conceded by all classes that the science of agriculture is, of all subjects, the most interesting, and, indeed, absolutely necessary to the existence of the human family; therefore, it should claim the greater share of their attention. It is a self-evident truth that in union there is strength, and that by associated action

the standard of agriculture may be very much advanced among us, not only in theory, but in attaining to more perfect and certain results in practical farming than we have yet aspired to. Knowledge, the motive power of every science, must be brought to bear upon this subject.—This can only be done in the science of agriculture by experiments—these must be extensive, and carefully and accurately compared, until effects can be traced to their causes. Agricultural knowledge can in no way be so well disseminated, and experiments so well compared, as by agricultural societies."

USEFUL RECIPES.

Icing for Cakes.—For a large one, heat and sift eight ounces of fine sugar, put into a mortar, with four spoonfuls of rosewater, and the whites of two eggs, beaten and strained; whisk it well, and when the cake is almost cold, dip a feather in the icing, and cover the cake well; set it in the oven to harden, but do not let it stay to discolor. Put the cake in a dry place.

To Ice a Very Large Cake.—Beat the whites of twenty fresh eggs; then, by degrees, beat a pound of double-refined sugar, sifted through a lawn sieve; mix these well in a deep earthen pan; add orange-flower water, and a piece of fresh lemon-peel, of the former, enough to flavor and no more. Whisk it for three hours till the mixture is thick and white; then with a thin, broad bit of board, spread it all over the top and sides, and set it in a cool oven, and an hour will harden it.

Plum Cake.—Mix thoroughly a quarter of a peck of fine flour, well dried, with a pound of dry and sifted loaf sugar; three pounds of currants, washed and very dry; half a pound of raisins, stoned and chopped; a quarter of a pound of mace and cloves; twenty Jamaica peppers; a grated nutmeg; the peel of a lemon cut as fine as possible; and a half pound of almonds, blanched and beaten with orange-flower water. Melt two pounds of butter in a pint and a quarter of cream, but not hot; put to it a pint of sweet wine, a glass of brandy, the whites and yelks of twelve eggs, beaten apart, and half a pint of good yeast. Strain the liquor by degrees into the dry ingredients, beating them together a full hour, then butter the hoop or pan, throw in plenty of citron, lemon, and orange candy.

If you ice the cake, take half a pound of double-refined sugar, sifted, and put a little with the white of an egg; beat it well, and by degrees pour in the remainder. It must be whisked near an hour, with the addition of a little orange-flower water, but mind not to put too much.—When the cake is done, pour the icing over, and return it to the oven for fifteen minutes; but if the oven be warm, keep it near the mouth, and the door open, lest the color be spoiled.

To Give a Fine Color to Mahogany.—Let the tables be washed perfectly clean with vinegar, having first taken out any ink stains there may be with spirit of salt; but it must be used with the greatest care, and only touch the part affected, and be instantly washed off. Use the following liquid: Into a pint of cold drawn linseed oil put four pennyworth of alkanet root and two pennyworth of rose-pink, in an earthen vessel; let it remain all night; then stirring well, rub some of it all over the tables with a linen rag; when it has lain sometime, rub it bright with linen cloths.

For the Southern Planter.

ROADS.

Mr. Editor,—I was much pleased with your remarks on this subject in your February number. And as your object at present is "to persuade the people of the State *to do something*," permit me to make a suggestion whilst the good poople of Virginia are making up their minds.

That is, let the ditches on each side of the road be kept open and suffered to wash deeper and deeper, so that in working the roads, it will only be necessary to

pull down the sides of the road, leaving the centre highest, and thereby eventually levelling the hill and filling up the valley. I have known some hills entirely washed and worked away by this simple process; whilst others are kept in our way, simply by surveyors calling out our hands, and not having *blazing* enough to do, they cut and *toat* brush to stop the side ditches; and the consequence is, the road is soon lower than the ditches, and is necessarily wet and gullied, keeping up an eternal patching with leaves and brush and turf from the fence corners.

I do hope I may never see a side ditch obstructed again. The hills surely cannot wash away too soon, nor the valleys be raised too high.

Be sure and let the water off at the foot of the hill, when you are done with it. A.

Charlotte, March 3, 1848.

PERFECTION OF THE HUMAN FRAME.

Beauty is a property of animal forms, that is, the provision which is made to adapt their appearance to the perception of the animals with which it converses. The bones are covered, the bowels concealed, the roughness of the muscles smoothed and softened, and over all is drawn an integument which answers the purpose of concealment. Could we view the mechanism of our bodies through the skin, it would excite our fears. Durst we make a single movement, if we saw our blood circulating, the tendons pulling, the lungs blowing, the humors filtrating, and all the assemblage of fibres, valves, &c., which sustain an existence so frail? A surprising perfection of the animal mass is the *package*, by means of which several operations are going on at the same time; yet the case containing the machinery is rolled and jolted about without any injury to the mechanism. The whole must, therefore, be firmly packed together. Examine the contents of the trunk of any large animal, the heart pumping at the rate of eighty strokes in a minute; one set of pipes carrying the stream away from, and another bringing the fluid back to it again; the lungs performing their elaborate office, distending and contracting their many thousand vesicles, by a reciprocation which cannot cease for a moment; the stomach exercising its powerful chemistry; the bowels propelling the changed aliment; collecting from it as it proceeds, and transmitting to the blood an incessant supply of prepared and assimilated nourishment; that blood pursuing its course: the liver, the kidneys, &c., drawing off from it their secretions.

The great art in packing, is to prevent one thing from hurting another; for this end, the head, the chest, the abdomen of an animal body is provided with membraneous partitions, which keep the parts separate. This most curious and important provision is visible in the entrails, which one would think in danger of being injured by every jump or fall. The danger is, however, most admirably warded off. The intestinal canal, throughout its whole process, is knit to the edge of a broad, flat membrane, called the mesentary, like the edge of a ruffle, and being four times as long as the mesentary itself, it is what a sempstress would call "gathered on." The mesentary sustains the small vessels, arteries, veins, &c., which lead from or to almost every point of its coats and cavity, and this membrane is strongly *tied* to the first three vertebræ of loins.

A RAT POWDER.

A correspondent of the Albany Cultivator recommends the following for rats, of which he relates this story:

"I once, however, did *see* a tame rat, (in Edinburgh, at the back of the Castle, in the year 1837,) which, having been previously smeared with a certain composition—that which I am about to describe—was let loose in a vault, and in less than half an hour returned followed by some half dozen others, which seemed so enamoured of the decoy, or of the scent that hung about him, that they suffered themselves to be taken alive in the rat-catcher's hands, without ever offering

to bite. The preparation I purchased from an eminent practitioner in rat-catching. It is as follows: Powdered assafœtida, one-quarter of a grain; essential oil of rhodium, three drachms; essential oil of lavender, one scruple; oil of ainseed, one drachm.

For the Southern Planter.

PEACH TREE.

Mr. Editor,—In the Planter for March, a communication appears over the signature of "Bolling Jones," on the Peach Tree. Mr. J. states that by inserting twigs of peach trees "three or four inches in the ground leaving about two eyes out," trees may be grown. It is necessary that trees should be shaded, or the heat of the sun in June or July will dry them up. To obviate the necessity of making a shade, they may be planted on the north side of a house. Soil should be light and strong. A stiff clayey soil retards the growth of the small filamentous roots.

Apple trees may be grown with more certainty than peach; and quince more certainly than apple trees. Many persons object to the cultivation of pear trees from the length of time necessary before fruit is produced. Pears grafted on the quince stocks will mature and bear fruit in less than half the time required by those grafted on pear or apple stocks.

Yours, respectfully,

S. J. Wheeler.

Murfreesboro', N. C., March, 1848.

TRAPPING FOXES.

Take some fine hay chaff from a horse manger, and scatter over about one yard of ground, or on snow, in the open field, where foxes are apt to wander, as near the house as you can bait them. Then upon this chaff, which we call a bed, and around it for some distance strew a handful of fine scraps for several nights, the refuse of tallow or lard.

At first the foxes will not approach the bed, but will shy around and pick up some of the fragments. Examine occasionally and replenish with a little new bait, if they have taken any. If on the snow, always pass by close to the bed in one direction, not making any extra tracks. In a few nights they will approach the bed and clear the whole ground of the bait.

The best size for a fox-trap, when set, will measure about five and a half inches across the jaws. The springs should be made of the best steel, and not over five and a half inches long, each spring. Rub over the trap a little tallow, and smoke it. Make a hole in the snow or ground in the centre of the bed, that when the trap is set, it will be a little below the surface. Place a wad of loose tow or cotton under the pan, and cover over with dry ashes or sand that has been sifted. Then we pat these ashes down, quite compact with a limber stick, say about eighteen inches long, and one inch wide, covering the pan and jaws of the trap, when pressed, about one-fourth of an inch. It should be so set that a light weight would spring it. Scatter over, as at first, a thin coat of hay chaff, which is best done with a sieve. If there be snow, sift over the bed a slight layer, unless the trap be set during a gentle fall of snow, which is best; be careful not to make extra tracks about the bed; when all is done, scatter over the whole some fine scraps or toasted cheese, or both, throwing some bits about at a distance. When once well baited, if the trap be skilfully set, there is a fair chance of taking the fox, though he may be an "old one." I have seen many an one caught in this way, having had some fun myself.

A boy can tend two or three traps about as cheap as one. Level cleared land; in the woods foxes are more shy. If the trap be made fast, the fox when caught will make his escape by eating off his foot. A small chain should be attached about eighteen inches long, secured to a stone that will weigh about four pounds; this can lay under the trap when set.

A dead carcass, horse or other animal, makes a strong bait. Set two or three

traps within ten rods. If the ground be free from snow, cover over with moss upon the ashes or dry sand, leaving the surface of the ground as natural as possible; make use of a little bait (as above advised) on the trap; the size of a walnut, broken up, is sufficient. You will take more game in this manner, than if set by the carcass, and not be annoyed by dogs.

Another mode of taking foxes is to bait them on a small piece of ground surrounded by water. So arrange it that the fox may leap into a natural or artificial bog, covered with moss, before he reaches the bait. The trap may be covered with moss only, on this small bog, leaving all as natural as possible; you are pretty sure to outwit them in this manner.

If a trap be set for a fox burrowed in a den, he will not pass over it for some days, unless he be much famished; if there is any other possible way of escape, he is sure to find it.

Foxes deserve more credit than farmers usually give them. They are very useful in destroying mice and insects. If one should now and then, just take a fowl or a lamb, he may be severely punished, *when you catch him.*

S. W. Jewett.

Weybridge, Vt., Dec. 17, 1847.

For the Southern Planter.

FENCE LAW.

Shortly after No. 2, by "R. W. W." was written (see January number of the Planter) Member and Voter chanced to meet again, when the following interview took place:

Member. It's truly mortifying to me, friend W., to lose your vote. You have invariably sustained me heretofore, and so did your father, during his lifetime. Our families have always been intimate; and I fear, sometimes, there is some other difficulty besides our difference of opinion about the *fence law.* If so, I hope you will not keep it from me, but give me an opportunity to explain.

Voter. Nothing would give me greater pleasure than to vote for you, could I conscientiously do so. We are now, and ever have been together, politically; and be assured that the only reason of my determination not to vote for you, is because of our difference of opinion about the proposed *fence law.* Make a faithful effort to get that law passed at your next session, and on the fourth Thursday in April next you'll get my vote—otherwise you cannot. It is true, I am, and ever have been, a partisan in politics; never yet having voted for any man whose political tenets did not accord with my own; but I am now well satisfied that party feeling has been carried too far for the good of the country; and the chief question with me now is, are you *fence* or *anti-fence?*

Member. Really it seems to me this is a small matter, to separate friends politically.

Voter. A small matter, indeed! What? vote for a man who will tax me unnecessarily, hundreds of dollars, and the State tens of thousands?

Member. You astonish me. Surely you cannot think me capable of imposing an unnecessary tax upon my constituents and State?

Voter. You may not *designedly* do this; but still you do it.

Member. Are you in earnest?

Voter. I am almost in angry earnest.

Member. Pray give me some of the items of this heavy taxation.

Voter. Because of the great amount of fencing which the present law requires me to keep up, I am compelled to have on my farm at least three more laborers than would be otherwise required. These are to be boarded, clothed and tax paid. But, not to itemise further, let us add up. Three negroes' hire at $60—$180; do. board at $40—$120; clothing at $10—$30; taxes at $1—$3; making a sum total of $333; of annual unnecessary tax upon me individually; and I leave you to ascertain as nearly as practicable, the number of farmers in Virginia, and then work out the following plain statement, by the rule of three. Take W., he being

one of your constituents, and about an average Virginia farmer—then say, if the annual unnecessary tax upon W., be $333, what is the amount of annual unnecessary tax paid by the State of Virginia? and when you get the answer, you'll find you've done and are about to do more mischief, than you ever intended perpetrating in your lifetime. But before we part, let me give you another rule of three sum.

Member. Excuse me, if you please; it will now take me till night to reach home, and as I have to pass your house in the morning, I'll call and give you the result of my deliberations. Good night.

Voter.—(Next morning.) I suppose you've worked the sum I gave you, and are now ready for the other!

Member. The truth is, I am almost confounded. I've not had time to digest the subject well, but I own I am half convinced.

Voter. Well, give us the answer to the first sum.

Member. For want of time and data, I couldn't state the sum satisfactorily, but the result is *thousands added to thousands.*

Voter. Fearing I may not see you again shortly, I'll give you the second sum, and at your leisure you can give me the answer. If W. by reducing the amount of his fencing to just so much as will be necessary to enclose a *standing posture*, can enrich annually twenty acres of land, now worth four dollars per acre, but which when enriched will be worth twenty dollars, what will be the number of acres, and their increased annual aggregate value in Virginia? and when you get this answer, add it to that of the first sum, and you'll find it no *single barreled* business you've been doing, but that you've been firing *revolvers* all the time you've been a member of the House, at the farmers in Virginia.

Member. Be it so, but being a farmer myself, it can hardly be supposed that I would designedly do any thing prejudicial to the farmers interest.

Voter. That may all be true, but whether with or without design, if I'm taxed, I'm taxed. What matters it, whether I'm killed by a Mexican ball, or a Guerrilla's lance? If I'm killed, I'm killed. I want a representative who will not tax me unnecessarily, either with, or without design.

Member. I must own, my time and attention have been so engrossed for years past with politics, that I've scarcely for a moment thought of the agricultural interest.

Voter. No wonder, when you have permitted yourself to be so trammelled by party, and influenced by *boy lawyers* and inexperienced youths, who wholly ignorant of the agricultural interest, can only spout forth party politics, keeping up forever a fevered excitement upon that subject, but never for a moment thinking of the weightier matters of the law. Let me give you a case. B., a young lawyer, a delegate elect, was informed by several of his constituents that some half dozen of them owned large tracts of land on —— creek, in his county, worth fifty dollars per acre, if drained, but, that this could not be done, because M., who owned a small tract at the mouth of said creek, refused to ditch, or to permit others to drain it for him, without heavy compensation for the privilege of so doing. Now, said his constituents, at your next session we wish you to relieve us, either by compelling B. to drain his own land, or permit others to drain it for him, without allowing him compensation therefor. And as "allowing compensation" sounded somewhat (very remotely though) like "Old Zac," it set him all on fire; and what think you was his reply? "*I shall go for Old Zac against the world.*" Now, you at once perceive that the head of this young *professed* jurisconsult, but *practical* politician, was so crammed with politics, that there wasn't room for another idea. Pray, what has the election of General Taylor to the Presidency, to do with ditching low grounds? How knows that young lawyer, what will best promote the agricultural interest? and consequently, his county's interest. What cares he if A.'s stock commit depredations on B.'s farm? He may get a fee thereby. He's prompt, however, though a Virginia delegate, to legislate the other side of Vir-

ginia, and to resolve, that the President deserves the thanks of the nation for the *great ability* with which he has conducted the Mexican war, &c. Resolved, that our Senators in Congress be instructed, and our Representives be requested, to do this, that, and the other thing: but the poor farmer, by whose vote he has been made an honorable Representative, is never thought of during any one of the four seasons, except the spring; and to be charitable, we'll attribute his then kindly feelings, to the genial rays of the sun; and by no means insinuate, that it is because the fourth Thursday of April is at hand. How the farmer (who at best is but a beast of burden, sustaining himself and all the world besides) is to support much longer the heavy burden which he bears, is an oppressing thought. The legislature first saddles him with many miles of heavy fencing; more, frequently, than he can get along with. His neighbors' stock take advantage of this, and commit depredations. Neighbors fall out, and now's the lawyers' time. Up he mounts behind the Legislature and their long fence, so that the poor farmer now carries double. Finding him still able to travel, though it be but a crawl, the merchant with a bale of goods next gets astride. Then mounts the M. D. with a wallet of drugs; and presently, all the lesser dignitaries; till last, though not lest, up mounts the sheriff, with an enormous bundle of executions, attachments, &c. &c. &c.

You perceive at once, Mr. Editor, that an Asiatic camel couldn't stand up under this burden. But, observe, while the farmer writhes, and groans and dies, under this immense pressure; the legislator laughs and talks, drinks grog and eats oysters. The complaisant lawyer, leisurely smokes his cigar, while counting up his fees for the last twelve months, and at the next term of the court makes a labored argument to prove that "*this*" is the meaning of the law; while his opponent makes an equal effort to convince the court that "my friend has wholly misapprehended the meaning of that law;" both of them, too, members of the House when that law was passed. Thus the chameleon is made white, black or blue, as policy may dictate—but observe! if the court decide that the chameleon is white, the lawyer who proved him black, nevertheless gets his *fee* from the farmer. The smiling merchant has just opened a new store, and tells the farmer, "Never mind about the money—whenever you want anything in my line, just send an order, and you can get anything you want." (Take care, farmer! if you travel that road I tell you there's trouble ahead!!) Finding it more convenient to send an order than the money, the farmer determines to go on credit, and at the end of twelve months proposes a settlement: the merchant tells him, "oh, never mind, I am not in need of the money, continue to send for what you want." The settlement is delayed, and the unsuspecting farmer thinks the merchant the kindest and best friend he has in the world. (He'll learn better when he gets older.) Presently it's whispered that the farmer is getting behindhand (in debt). The merchant now informs him he is sorry he cannot extend unto him longer credit, but kindly tells him that he can still get such articles as he may need, provided he will make over to him his little tract of land, &c. &c. Farmer consents, and still goes on credit, hoping to make a good crop and square off, but is disappointed—presently lands, goods and chattels are sold, and the poor farmer, like his goods, is now off, going, gone! Do the legislator, the lawyer, the merchant, *et id omne genus*, shake his hand now as cordially as heretofore? Nay, the one has found out he has now no vote, and the other no dollars; and if left to pay to him the last sepulchral rites

"Sic is the way
Of them wha fa' upon the prey—
They'll scarce row up the wretch's feet
Sae scrimp they'll make his winding sheet."

R. W. W.

Oak Shade, Goochland, Aug. 1847.

Wild onions may be destroyed by cultivating corn, ploughing and leaving the field in its ploughed state all winter.

VALUE OF OLD ROPE.

Among the numerous worn out and often considered worthless materials which the ingenuity of man has discovered the means of re-manufacturing, and rendered of equal value of its original substances, are old tarred ropes which have been in use at coal pits. Our readers will be surprised when we inform them that out of this dirty and apparently unbleachable substance, is produced a tissue paper of the most beautiful fabric, evenness of surface, and delicacy of color, a ream of which, with wrapper and string, weighs two and a half pounds. It is principally used in the potteries for transferring the various patterns to the earthenware, and is found superior to any other substance yet known for that purpose; it is so tenacious that a sheet of it, if twisted by hand in the form of a rope, will support upwards of one hundred weight. Truly we live in an age of invention.—*Farmer and Mechanic.*

For the Southern Planter.

MOUNT AIRY AGRICULTURAL INSTITUTE.

This Institution is located at Mount Airy, Germantown, seven miles from the city of Philadelphia, being the grounds and farm of James Gowen, Esq., so favorably known to the agricultural community—a site proverbial for its salubrity and in every respect eminently adapted to the end and object of an Agricultural Seminary.

The system of instruction is such as to afford the student every facility for acquiring a thorough knowledge of scientific and practical agriculture, with the use of the best modern farm implements and machinery.

Chemistry and the other natural sciences requisite to an enlightened course of agriculture, and applicable to the general pursuits of life, receive special attention; lectures, with experimental illustration, being connected with each course.

The best facilities are also afforded to those who may desire to pursue collegiate branches, or acquire a thorough commercial education, under circumstances highly favorable to physical and moral culture. so that, in addition to the main object of the Institute, (agriculture,) the students may be prepared for any other respectable profession.

The institute has the advantage of adjoining the residence of Mr. Gowen, who kindly volunteers his experience and counsel in promoting the object of the establishment—agricultural education.

The year is divided into two sessions: the first session beginning on the first Thursday of April, the second on the first Thursday of October.

Terms $125 per session, payable in advance—including bed, bedding, washing, mending, fuel and lights.

Address the Principal, JOHN WILKINSON (until 18th March) at Poughkeepsie, N. Y., (after that time Germantown, Pa.)
Or, JAMES GOWEN, ESQ.,
Philadelphia, Pa.

Mr. Gowen is well known to the agricultural community of the United States as one of the most successful and skilful farmers of the day; and this is the best title that any man can have to conduct an institution of this sort. To carry out this favorite scheme, he has made great sacrifices—both pecuniary and otherwise—as the following extract from a private letter addressed to Gen. Wm. H. Richardson, which we take the liberty of publishing, will show. The residence which he has given up, that he might have the college under his eye, is well known to all who have visited it, as one of the most beautiful and delightful in America:

"I take leave also to place in your hands a few of the prospectuses for circulation, which you will please to place in suitable hands. You will perceive by this that my long cherished object—one on which I was meditating when almost on the brink of the grave—is now being carried into full experiment, at a monstrous sacrifice of convenience to my family and much pecuniary loss to my purse. Will not then the agricultural

gentlemen, who have as deep an interest in the cause as I have, put to their hand and assist this effort? God knows, such an institution is much needed, for there is no place to educate a country gentleman; no place to make a useful, intellectual man. The colleges are preparatory only to professional life and genteel loafism. The lawyers and doctors, in the general, succeed but indifferently, and those who do succeed, earn their living and their fame at the sacrifice of both health and happiness. The landed interest is the most inviting, the safest, the happiest of all, and should attract the attention of planters—especially men who have fortunes to bequeath to their sons."

WINTER-KILLED WHEAT.

William Little, in the Ohio Cultivator, says that his late sown wheat on corn ground, was much "winter killed," that is thrown out by frost, which is chiefly remedied by using a heavy roller, pressing the half-killed roots into the ground, which caused them again to vegetate.—Such wheat yielded about twenty bushels per acre.

For the Southern Planter.

TIME OF PUTTING COLTS AT WORK.

Mr. Editor,—The February number of the Planter has a piece headed as above, from the Prairie Farmer. Now, as the short piece commences by saying, "the common practice on this point is wrong," let us see what he advises.

First, commence breaking a colt "before he is weaned," and continue, "by accustoming him to the halter and to handling" without intermission for five years; then, "with fair usage the horse will be as good at twenty years of age as he is commonly at fifteen."

Let us calculate for a moment. A celebrated farrier estimates a colt to cost to raise it to three years of age, $120.—Now, what does the colt cost the last of the three years? Why, at least $50, and to keep him two years longer we may very safely put it down at $60 per year, making $120 additional cost. Now, add the cost of "accustoming him to the halter and to handling" without intermission for five years, and I think $10 per year a very moderate charge; making in all $170 additional outlay before you put your horse to work. Now, add say twelve years' compound interest (for most of we farmers pay it), and you have the nice sum of more than $340 actually advanced, (to say nothing about the use of money,) in food, hauling, &c. And all for what? To have an old worthless horse on your hands to feed on meal for five years. But, grant the old horse is worth at the age of fifteen, $40, and you have a clear loss of $300.

But paper calculations are generally extravagant, let us curtail. For instance, let us say farriers know nothing about it, and suppose the farmer is willing to work cheap, and instead of $120 for raising a colt, let us say $60, then to make "surety doubly sure," let us have it again, and say $30, and let us give up the difference in feeding a five year old and a one year old, and say it cost $10 per year, which makes $20 for keeping a horse two years and the interest till he is, say sixteen years of age, will make it more than $40 outlaid, and all for the mealing of a poor old horse. Without pretending to know whether "the common practice on this point is generally wrong," or not, it seems to me to be a clear case, if a hog cost $6 per annum to raise and keep it, and say pork is worth $6 per cwt.; that, though the hog at two years old may weigh 150 lbs., if, at one year old he weighs 100 lbs. we had better salt him. And even, if, at one year old he may weigh 200 lbs., and at two years old, 300 lbs. we had better salt. "Quick profits," says the six weeks tanner. "This side will weigh more to lay in tan another year," says the country tanner to his customer.

Again, without knowing much about the "breaking process" or "the halter" custom, or the "handling" of colts, I have heard old women say "handling" kittens

made them runts. And I have heard old horse breakers say, "the wilder the colt the gentler the horse;" that is, when once subdued they are less likely to rebel than those who look upon their rider rather as an equal than their master. But, enough,

"Poor old horse, let him die."

A.

Charlotte, Feb. 26, 1848.

REMEDY AGAINST MOTHS.

It is an old custom with some housewives to throw into their drawers every year a number of fir cones, under the idea that their strong resinous smell might keep away the moth. Now, as the odor of these cones is due to turpentine, it occurred to Reaumur to try the effect of this volatile liquid. He rubbed one side of a piece of cloth with turpentine, and put some moths on the other; the next morning they were all dead, and, strange to say, they had all voluntarily abandoned their sheaths. On smearing some paper slightly with the oil, and putting this into a bottle with some of the grubs, the weakest were immediately killed; the most vigorous struggled violently for two or three hours, quitted their sheaths and died in convulsions. It was soon abundantly evident that the vapor of oil of turpentine acts as a terrible poison to the grubs. Perhaps it may be said that even this remedy is worse than the disease, but, as Reaumur justly observes, we keep away from a newly painted room, or leave off for a few days a coat from which stains have been removed by turpentine, why, therefore, can we not once a year keep away a day or two from rooms that have been fumigated with turpentine?

It is, however, surprising how small a quantity of turpentine is required; a small piece of paper or linen just moistened therewith and put into the wardrobe or drawer a single day, two or three times a year, is a sufficient preservation against moths. A small quantity of turpentine, dissolved in a little spirits of wine, (the vapor of which is also fatal to the moth,) will entirely remove the offensive odor, and yet be a sufficient preservative. The fumes of burning paper, wool, linen, feathers, and of leather are also effectual, for the insects perish in a very thick smoke, but the most effectual smoke is that of tobacco. A coat smelling but slightly of tobacco is sufficient to preserve a whole drawer. We trust our fair readers will not scold us for thus affording their husbands or lovers an additional excuse for perpetuating a bad habit.

The vapor of turpentine and the smoke of tobacco are also effectual in driving away spiders, ants, ear-wigs, bugs, and fleas. The latter tormenters are so abundant on the continent, as frequently to deprive the weary traveller of his night's rest. If he would provide himself with a vial, containing turpentine and spirits of wine in equal parts, and would sprinkle a few drops over the sheets and coverlid before retiring to rest, he would probably have reason to be grateful for the hint. Foreigners are in the habit of smoking in their bedrooms—a habit which excites surprise and disgust in England; it will now be seen, however, that there is reason for the practice.—*Sharpe's London Mag.*

For the Southern Planter.

AGRICULTURAL PAPERS.

In reading the February number of the Planter I am so much more than half a mind to lose my originality enough to assume the character of a "reviewer" that I have actually sharpened a quill for the task. If I prove a burthen to its Editor or readers the sin is not at my door entirely, for it has been clearly shown to be the duty of all who can make a hard stroke a lighter one, or by any process make "two blades of grass grow where but one grew before," or tell us how to save the penny or expend it to a better advantage, or how things in doors and out can be arranged to save trouble, time and expense; to communicate their knowledge for the benefit of their brethren. A volume might be written on the subject

now under consideration, showing the *necessity* of scattering agricultural papers *broadcast* through the land would time and space permit. My experience—every farmer's experience is replete with the advantages of such a help—where a few words have saved many dollars, or many hard days' work. *We are too ignorant*—we do not *know* what enters into and forms the plant, and how *it is supplied;* we sometimes poison instead of giving it food; sometimes we treat it very unkindly. Our fathers did many things, both wise and good, but not perfect in every respect, and if there be a better practice, it is not wisdom in us to obstinately follow the routine of their days; and were I to say what I thought would be the best thing for every farmer—the best thing for the prosperity of this State in an agricultural point of view, it would be to place in the hands of every person *a copy of the Planter.*

The "Memoranda for the Month" is good. This suggests many things that might not have been thought of otherwise. Read it carefully one and all; and while you are fixing your fences just revolve it in your mind if it would not be better to have the fence laws changed, so that instead of fencing to keep your neighbor's stock off from your premises, you would fence to keep your own at home Every one knows the character of his own stock better than he does that of his neighbor's, and he can make fence accordingly. Your neighbor may have unruly cattle, and put you to all the trouble of fencing against them. It looks to me far more reasonable that every man should keep his *own* on *his own*, than to keep his neighbor's off. If it be so, if *enough would speak*, it should be done.

Is it a fact that February is the right time for pruning apple trees? I thought that June was, by all means, as the sap was then in that thickened state as not to bleed freely and the wound would the more readily heal. I speak not knowingly, but the best time, and the reason why it is so, is necessary to be known.

The practice of "nicking horses" savors entirely too much of barbarism. It certainly is a cruel practice, and one that no really humane person can do without some feeling of pity for the poor beast that suffers for the *mere fancy* of his owner. To say that it *is necessary* to prevent catching the lines, &c., is mocking reason. Brutes suffer enough necessarily for man, without suffering unreasonably.

If the facts contained in the article under the "Useful Hints about Bed-Rooms," were as intelligibly impressed on the minds of every parent as they are in the Planter, a vast amount of pain, sickness and premature death would be avoided. Here is a text for many sermons, and I many times have been pained in seeing the small, miserable, unhealthy rooms in which some forty children were confined day after day for many years of their lives, without *even* a comfortable seat, tired beyond all endurance, becoming subjects for a miserable existence or an early death. A tocsin should be often sounded, that intellect and health are so vitally impaired by many wearisome customs now common, and not fully understood.

"Food on an acre of land." Here is a text from which a long sermon might be preached, and from which much *more* should be said and practically applied. The quantity *that might be produced* from one acre of ground has never been ascertained. The number of times that one grain will multiply itself under the best circumstances, although, perhaps not definitely known, is really surprising, and the great aim should be *to raise the most from one seed*, or *off one acre*, instead of raising so many acres of wheat, and only receive seven, ten, or may be "fifteen" bushels to the acre. I wish to introduce here the remarks of Dr. Adam Clark on these words "some a hundred-fold," which I hope every reader of the Planter will consider very attentively.

"For the elucidation of this text," says he, "I beg leave to introduce the following experiment: In 1816 I sowed, for a third crop, a field with oats, at Millbrook, in Lancashire. The grains weighed, on an average three-quarters of a grain each. One grain produced *three* stalks with three ears: the largest had 68 grains in it, the second 26, and the third 25. Whole

number of grains 119; which together weighed 83 grains. The root separately, after washing and drying, weighed 13½ grains. The stalks and remaining leaves (for many had perished in the wet season), 630½ grains. Weight of the whole produce of one grain of oats, 726 grains. Which was 725¼ times more than the original weight. The power of grain to multiply itself, even in the same year, is a subject as much of curiosity and astonishment as of importance and general utility. For the further elucidation of this text I shall give the following example from a practice in agriculture, or rural economy, which is termed filtering.

On the 2d of June, 1766, Mr. C. Miller, of Cambridge, sowed some grains of the common *red wheat*, and on the 8th of August a single plant was taken up, and separated into eighteen parts, and each planted separately. These plants having pushed out several *side shoots*, about the middle of September, some of them were taken up and divided; and the rest between that time and October. This second division produced 67 plants. These plants remained through the winter, and another division of them, made between the middle of March and the 12th of April, produced 500 plants. They were divided no farther, but permitted to remain in the field. These plants were, in general, stronger than any of the wheat in the field. Some of them produced upwards of 100 ears from a single root; and many of the ears measured *seven inches* in length, and contained between *sixty* and *seventy* grains. The whole number of ears produced from the single plant was 21,109, which yielded three pecks and three quarters of clear corn, weighing forty-seven pounds seven ounces, and, from a calculation made by counting the grains in an ounce, the whole number of grains was about 576,840. Mr. Miller thinks that had he made a second division in the spring, the number of plants would have amounted to 2,000. Whoever considers the subject carefully must be impressed that there is something like infinity in the multiplication of grain, which is of the first, and the mainly to be considered point of the good agriculturist."

The "Plan of Berkeley Farming" seemed to work well by the experiment given. But it seems to me to be the best way to put on as near fifty cart loads of manure to the acre as possible, and plough it under. To do this, limit the number of acres—go by the wayside and ditches and gather as good material as can be found and haul into the yards, on which feed the stock through the winter. Make a business of *making manure* and saving it; and if but one acre can be thoroughly manured at a time at first, it *is better*, to raise seventy or eighty bushels of corn from it, than to plant four acres for the same.

Mr. Woody, of Smithfield, wants to sell fifty or seventy-five bushels of corn at two dollars per bushel, for which you ought to be well paid. If Mr. Woody will guarantee seven barrels of good corn to the acre on our poor land in Fairfax county, he can find purchasers a plenty. Notwithstanding his brilliant description of the South Oregon corn, I think it better policy *to seek* to improve our exhausted fields that they may bring an ordinary crop of *common* corn than *to trust* it, nevertheless.

For one, I believe that tea and coffee as in general use are no more to be considered a blessing than ardent spirits, and the testimony in reference to its nutritious properties is strongly against it. So many are the arguments against their use that I will not, in this extended article, attempt to notice them, but will, in a separate paper, if any choose to defend their use.

I hope, Mr. Editor, that you will frequently give us lessons on roads. If you will keep the subject before the people, by and by the effects will be seen. What a shame that we are so indolent, and in such a state as this, that we should go backward instead of forward. And while you are lecturing on roads, if you stir up the people to believe that it is more just to compel every man to keep his stock on

his own premises than to fence his neighbor's off, you will likewise prove a public benefactor.

Yours, respectfully, F.

Fairfax, March 19, 1848.

With regard to pruning, we partly agree with the foregoing writer. We are opposed to spring and early summer pruning, because much of the sap would be then lost; while we are in favor of midsummer, for the reason he named. But we still think autumn and February, in Virginia, and in all places north of Virginia, to be still better seasons. For, during the whole of the autumn and winter trees are collecting nourishment from the ground, which remain mostly in the stock until the warmth of spring carries it to the branches. Now, if the pruning is done in autumn or February, all this nourishment goes into the remaining branches. In midsummer the trees certainly do not bleed much; but they scarcely bleed more at the seasons we named, and those seasons have the great advantage just mentioned. The wounds heal over more quickly at midsummer; but any simple composition, such as one part of Venice turpentine and two parts beeswax, or a quart of alcohol, with some shellac dissolved in it, answers the want of bark till formed.

TO PROTECT TREES AGAINST RABBITS AND HARES.

For years I have suffered by the destruction committed by these vermin among my apple trees; unless painted every year with train oil and hog's lard, mixed over the fire to the consistence of paste, many thousands of my trees would have been destroyed. The above I have found the only efficient composition, after many trials of others recommended. The oil is injurious to trees, but the lard neutralizes its bad effects, and appears to prevent its penetrating the bark; still, the trouble of having 20,000 apple trees painted with a brush by boys, was very great; and I felt much pleased when visiting Mr. Dillistone last autumn to learn from him that sundry pieces of rags tied to the sticks, which I observed in his nursery, and about which I was inquiring, were *sulphured rags*, which had protected his trees from hares and rabbits all the preceding winter. I must confess, however, that I felt incredulous, observing at the same time, that, surrounded as I am by preserves, if they would protect my trees, I should feel perfectly convinced of their efficacy. In November last I purchased a quantity of sulphur, collected sundry pieces of rags, which were cut into slips nine inches by six; these were put into cleft sticks, (about two feet in length,) dipped into the melted sulphur, and the sticks with their miniature flags stuck into the earth so as to stand about eighteen inches out of the ground, round the quarters of apple trees, about three yards apart. Now for the result. We have had much sharp weather, in which hares and rabbits are generally very destructive, but not a single tree has been touched in those quarters surrounded by my flags of sulphur.—Some straggling unprotected trees have been completely gnawed round, and, in particular, one solitary row of apple trees, which was forgotten, was entirely destroyed. I have, therefore, strong hopes that I shall never more have occasion to smear my trees with oil and grease, and other compositions, all of which are, to a certain degree, injurious; for oil, even when mixed with lard, often forms a coat over the buds on the young shoots; and prevents their breaking kindly. I have, in by-gone years, destroyed in my nursery more than three hundred hares and rabbits in one season. I have reason to be grateful for such a simple and efficacious mode of protection from their ravages.—*Foreign paper.*

The application of oil or grease to young trees is productive of injury, not so much from forming a coat over the young buds, as the author asserts, as in its effects upon the circulation, or rather perspiration, by closing the pores of the bark. Tar is sometimes applied and often proves fatal to young trees.

Although it is quite a task to paint twenty thousand apple trees with a brush, yet it may not be found so great a job to

paint two or five hundred trees, as to enclose the orchard with *sulphured flags*.

As a protection against rabbits, stir a quantity of sulphur into some soft soap and apply to the trunk of young trees. This is offensive to rabbits, and the soap will promote the health of the trees. Another method of protecting orchard trees is to stick three cornstalks two feet long around the tree, tying the upper ends to the tree. Hog's lard and sulphur will answer instead of soap.

BREEDING MALE OR FEMALE.

It would be highly desirable in many cases to have it in our power to determine the sex of cattle, to cause the production of male or female at pleasure. We frequently wish to multiply the number of cow calves of a high breed, and we frequently wish to have a preponderance of bucks from a celebrated stock of sheep. Many cattle breeders think they have a rule by which they can effect this desideratum. This rule was started in France, but it is now considered somewhat out of date in that country. It consists in simply making that parent of whose sex the offspring is desired the more robust of the two at the time of cohabitation. For instance, if you want more females than males among your lambs, put your ewes on low keep, and use vigorous rams of a full age; or if you wish the contrary result, use full grown and robust ewes with weaker and low-fed rams. Some experiments have been published by a gentleman in Urbana, Ohio, who signs himself "J. H. J." which would seem to upset this improbable but popular rule. He states that being desirous to multiply the number of high bred cow calves, he was for a long time very careful to keep his cows in the best possible condition during the winter and spring. His experience for *four* years gave tolerable proof that the rule was true; for, of thirty-five calves produced by his cows in that time, fourteen only were bulls, while twenty-one were cow calves. But he tried the same plan for nine years more, and found that the majority of females in the first four years was merely the result of chance—as there were more males than females in many of the succeeding years.

There is another rule for determining the sex of animals much advocated in England, which is founded on the relative age of the parents. According to this rule, if the male is younger than the female, or if they are both of the same age the offspring will probably be female. If the male be but little older than the female, a few months or a few years according to the longevity of the animal, the sex will be doubtful, and probably depend on the relative health and strength at the time of impregnation. And, lastly, if the male be considerably older than the female, while yet his animal powers are undiminished in vigor, the greater the difference the more likely will the offspring be male.

The following table, drawn up from the records of the British peerage, where every particular of ages and marriages have been recorded, would seem to support the English rule, at least so far as the human animal is concerned:

When the husbands were younger than their wives to 100 girls were born 86 boys.

When of the same age as their wives to 100 girls were born 94 boys.

When older from 1 to 6 years to 100 girls were born 103 boys.

When older from 6 to 11 years to 100 girls were born 126 boys.

When older from 11 to 16 years to 100 girls were born 147 boys.

The influence of age, as shown in this table, is too striking to be attributed to chance.—Whether the analogy will hold so well with lower animals, we have no means of ascertaining at present within our reach.

For the Southern Planter.

CORN.

Mr. Editor,—The enclosed certificate of as respectable gentlemen as any in the counties of Culpeper and Orange of the quantity of corn grown on two acres of my land, the last year, (1847,) and the following statement as to the land, preparation, cultivation, &c., you can publish,

if you think them worthy a place in your Planter:

The first acre on my Slate Hill farm (Culpeper) is seldom overflowed, consequently not as rich as the larger portion of my lowgrounds; I, therefore, gave it a light manuring, by penning my cattle on it a short time. In February a bushel of plaster was sown over it; the land was then ploughed with a M'Cormick plough, No. 12, drawn by three horses, a subsoil plough (of my own construction) following in the furrow. The two ploughs averaged about thirteen inches deep.—Late in April the second bushel of plaster was given it, and the land thoroughly harrowed. On the evening of the last day of April and the first day of May the corn was planted in rows two feet apart and one foot in the drill, and covered by a large two-horse harrow, (my favorite mode of covering corn, as it gives the land an additional working.) When about one foot high the single coulter passed twice in the row, followed by a small cultivator once in the middle. It was then thinned to one stalk, and nicely wed out. When about waist high the hoes passed through it, and the third bushel of plaster was sown over it. Here the cultivation ended. The second acre, on my Soldier's Rest farm, (Orange,) is a rich alluvial soil, subject to overflow, receiving from every freshet a heavy deposit. It was well ploughed some time in April with No. 12, M'Cormick, but was neither manured nor subsoiled. About the 10th of May it was well harrowed, and planted as the first acre. It received one additional working with the cultivator, but had only one bushel of plaster, which was sown over the corn immediately after the last cultivation. For the production of the two acres I refer you to the certificate.

I will add, my whole crop was a good one—pronounced by many gentlemen the best they had ever seen—and will state, upon my own authority, I gathered and measured from three and a half contiguous acres, on my Slate Hill farm, eighty-seven barrels and two pecks of corn, and from about forty acres nearly six hundred barrels, and confidently believe but for the two freshets of October and November, would have exceeded six hundred.

Yours, respectfully,

GEORGE MORTON.

Culpeper, Feb. 26, 1848.

We, the undersigned, do hereby certify that during last fall, (1847,) by the request of Dr. Geo, Morton, of Slate Hill, Culpeper county. We were present at the gathering and measuring of the corn grown on one acre of land on his "Soldier's Rest" farm in the county of Orange. The acre having been surveyed by Col. Rob't Alexander in the presence of several of us, and it measured twenty-three barrels, three bushels and three pecks. We have no doubt some was destroyed by the extraordinary freshet in October, which was entirely over it. Mr. Morton sold at the pile in our presence to Dr. Thomas Wharton, (one of the undersigned,) twenty barrels of the same for fifty dollars cash. Given under our hands this 22d day of February, 1848.

THOMAS WHARTON,
P. P. NALLE,
THOMAS HAWLEY,
GEORGE PANNILL, Sr.,
As respects measuring the corn.
GEORGE WALLIS, Sr.

For the Southern Planter.

THE SOUTHERN PLANTER.

Mr. Editor,—I feel the want of the Southern Planter in my farming pursuits. In this part of the country we have nobody as a guide. The overseers are ignorant and irresponsible. They have been greatly the cause of the ruin of this country. Send your February number. I want to hear more about deep ploughing and raising manure, without which I find it is next to impossible to plant or sow to advantage.

Instead of consulting the ways and means to be used to raise our pork, horses, or mules, we are all engaged in President making and filling our own hall with

young lawyers who concede nothing and talk by the hour. How long will it take them to repeal our miserable fence law?

I hope you will publish from some of your enterprising customers a treatise in favor of deep ploughing, heavy manuring and sowing thick of clover, herdsgrass and other grasses. It strikes me forcibly that without this we cannot improve, but I am unaccustomed to write, so I will stop before I get in a difficulty, by requesting you to send me the paper for the present year.

Your humble servant,

SAMUEL HOBSON.

Cumberland, Feb. 16, 1848.

We hold the same opinions expressed by Mr. H. about deep ploughing and manuring, and we have frequently urged them in the Planter. Nothing would be more acceptable to us than an article on deep ploughing from some one who has experimental knowledge of the same. Will not our present correspondent favor us with such an article. He says he is unaccustomed to write; yet he seems to speak very much to the point. At any rate, he can tell us what facts he knows about it.

SAWDUST.

The shipping lists report at Frankfort, (Penobscot river,) December 10th, "six small vessels loading with sawdust for Charlestown, Massachusetts." The commodity is designed for packing ice at Charlestown and Cambridge—the great sources of the ice trade for almost the whole world.

A very respectable income is now derived, at several places in this State, from the sale of pine sawdust for this purpose, and the transportation gives employment to considerable tonnage. Thus the exigencies of luxury within the tropics, and in many of the largest cities in the world, are giving encouragement to the minutest results of industry in the "down-east" regions of Maine.

At the steam saw-mills it is well known that the sawdust of their own making forms a part of their fuel. Yet so little were either of these uses of the articles thought of till lately, that, upon the erection of the first steam saw-mills at Hallowell (the first in the State) on the bank of the river, it was deemed necessary to pass a law prohibiting the owners from obstructing the channel by throwing the sawdust into the river. Similar laws were passed to meet similar cases at Ellsworth and elsewhere. Such legislation is now obsolete, and an article once deemed so useless and worthless now teaches us to despise nothing that ingenuity and industry can get hold of.—*Bangor Whig.*

For the Southern Planter.

THE SOUTHERN PLANTER FOR 1847.

Mr. Editor,—For seven long years this worthy journal has withstood the buffeting of the storm, and has commenced its eighth volume, it is to be hoped with brighter prospects than it did its seventh. That it deteriorated in value during 1847, is not to be denied, yet I would ask whose fault was it? Undoubtedly not the Editor's nor the Publishers—both discharged manfully and faithfully their respective duties. On whose shoulders then rests the blame? Certainly on the *farmers of the State of Virginia.* I have taken the trouble to look over the entire volume for last year, (1847,) and to my great surprise, I find out of four hundred and twenty articles, only sixty are communications from the farmers of this State. From 1841, to the close of its sixth volume, its pages were regularly replete with original communications, written by men of known ability and practical experience. The editor frequently called on the farmers of Virginia. But few, very few, answered his call. Page 10, he remarks, "But from the practical farmer, who understands his business and nothing else, we never hear." On page 147, he again remarks: "And we must again express our *earnest wish* that the friends of agricultural improvement would favor us with their remarks more frequently than they do."—

The editor felt the want of original communications to give the Planter that interest and value which it once commanded. It is well known by every man that has common sense that no editor can by his individual efforts make an agricultural journal what it should be: the farmers must sustain the journal by their money as well as their remarks. The experience of intelligent, observing and industrious farmers is wanting. My word for it, the editor would not thank a *lazy farmer* for any of his remarks. A man that does not attend strictly to his farm in every respect should not set down to write his experience to the editor of an agricultural journal; for, doubtless, he is better acquainted with the house and pillow than he is with agriculture. How often do we hear the farmers remark that such an agricultural journal "has lessened in value," attaching all the blame to the editor or publisher, never thinking for a moment that they are most frequently, if not entirely, to blame. The practical farmers must send in the rough material, and leave it in the hands of the editor to dress (not polish) before it is presented for the inspection of the public.

With these remarks, Mr. Editor, I must cease to write, by wishing you success in your laudable efforts and an increase of original communications for the pages of the Planter.

A SUBSCRIBER.

Sussex, March 9, 1848.

We have already stated to the public the reason why we were not able to furnish the usual number of original communications for Volume VII. of the Planter. We had not the acquaintance of the majority of Mr. Botts' (the former Editor) correspondents, and therefore, could not call on them individually for help. But we have now, in a great measure obviated the important difficulty. We have formed acquaintances and opened a correspondence with many of the most celebrated farmers in the State. We have obtained from them promises of contributions, and in a month or so we shall have them in abundance. In the meantime we do not understand how the Planter could have diminished so much in utility because we had not our present number of contributors as our friend seems to suppose. Of course we had much rather fill our pages with communications than with selections from other journals, because it is better for the reputation of our periodical. But in point of *utility*, a good selected article is of far more value than a mediocre communication; and in all such cases we feel bound by our duty to our subscribers to make the one give place to the other. But there are very many farmers of Virginia who are as well fitted to furnish first rate articles as any other set of men in the world; and their writings would have the value of being suited in all things to Southern farming. If these will but come up to our aid now, the Planter will become one of the most useful papers in America.

IMPROVEMENT OF FARMERS.

Professor Meacham, in his address before the Addison County (Vermont) Agricultural Society, observes: "In making provision for your family, you should provide something to *read*, as well as something to *eat*. You have little reason for congratulation in improving land and stock, if the mind about you is going to waste. Every farmer has more time in the year for gaining knowledge than any professional man in the active pursuit of his profession. But it does not depend on time so much as on inclination. Webster says that 'even in matters of taste and literature, the advantages of a man of leisure are apt to be overrated. If there exists adequate means of education, and the love of learning be excited, that love will find the way to the object of desire through the crowd and pressure of the most busy society.'"

Agriculture, says Socrates, is an employment the most worthy the application of man, the most ancient and the most suitable to his nature: it is the common nurse of all persons, in every age and condition of life; it is a source of health,

strength, plenty and riches; and of a thousand sober delights and honest pleasures. It is the mistress and school of sobriety, temperance, justice, religion, and in short, of all virtue, civil and military.

For the Southern Planter.

THE SWEET POTATO.

Mr. Editor,—Among the many things published in the Planter, nothing seems to me to be more generally neglected than the cultivation of the sweet potato. I have frequently remarked that, certainly others could not be so fond of this most excellent root as myself, or more attention would be paid to it!

The high prices which corn has commanded has induced me to think that potatoes could be raised at less expense for fattening hogs, than corn. However, this I intend to try by planting several acres more in potatoes than usual. Will some of your subscribers be so kind as to furnish me, through the columns of the Planter, with the best modes of its culture? Some farmers recommend raising entirely from the sprout, while others think it best to sprout from the *yam*—now, which opinion is preferable?

It has been a saying among our farmers that manure caused potatoes to "run wild," that is, going almost exclusively to vines. It appears strange to me that *manure* will not produce potatoes, and I have been inclined to think the superabundance of the vines was owing to some other cause; notwithstanding, I think if any manure is serviceable, it is old, decayed leaves, from the woods.

Will some one enlighten me on this subject, and also give the best method of raising slips for seed?

I would also be much obliged to some of our old mothers for a recipe to make sweet corn-bread without the addition of sugar, molasses, or any other saccharine matter.

Respectfully, yours,

A Young Farmer.

Indian Town, N. C., March 17.

For the Southern Planter.

ROLLS.

To seven pounds of flour add two teaspoonfuls of salt. Make a hole in the mass of flour and stir in two table-spoonfuls of good brewer's yeast, or a tea-cupful of home-made, mixed with a little lukewarm water. Then add a quart of milk and stir in the whole with a spoon in the centre of the flour till a thin batter is formed in the centre. Sprinkle a little flour over the batter, and set it to rise.—When light, knead it well and form it into rolls, and allow them fifteen or twenty minutes to rise before baking.

P. W. M.

WORKING HORSES.

These should be well fed, warmly sheltered, cleanly bedded and curried and rubbed down twice a day. Their food should be given them thrice a day, they should be watered as often; receive salt or a mixture of salt, lime and well-sifted ashes twice a week. With such attention they will be able to go through their work well; without it, they will lack the physical strength to answer the calls made upon them.

For the Southern Planter.

IRISH COMPOST.

Mr. Editor,—In my last I promised a new theory for a compost, which by way of a name I shall call the Irish method. Among the peasantry of that country there are many farms (if they may be dignified with that name) on which no animals are kept, and many more, only a cow and a pig—to keep up the fertility of the *land*, other than putrescent manure have to be resorted to there must be a constant diminution of product which would lead to ruin of landlord and tenant.

The plan, therefore, is to collect the cleanings of ditches, their banks and land ends (where the plough is used) into a pile, and as they begin to make this heap

they lay in one load of lime to nine or ten of earth, and thus continue in alternate layers until it is as high as is convenient to throw from a cart or wheelbarrow, and after laying for a few months it is carefully dug down and thoroughly incorporated. This is done two or three times during the year, and is then fit for use. It is, says my informer, esteemed equal to soap boilers' ashes for all crops, but especially for wheat. He farther remarked that when the ditches were clean enough some resorted to clay, and found for some soils equal crops. This system, it seems to me, is productive of three good results: 1st. It may keep the ditch banks down; 2d. The ditches open and fence corners clean; and, 3d. The utility of mixing soils can be carried out, and by forming clay composts for light or deficient (of clay) lands and light for clay lands, all would be much improved thereby.

The advantage of this over other methods, in addition to the foregoing, is that such field can have its own compost.—Should this method act as well as it does when practised, and become universal, farmers would have to be paid to take off the mass of putrescent accumulation about cities, for who would spend a day in hauling twenty-five bushels with two horses and pay for it, if he could pay seventy-five cents for twenty-five bushels of shells, which he could incorporate with nine loads of earth, and thus make two hundred and fifty bushels instead of twenty-five—and by consequence, improve the soil ten times as fast.

I have never tried this experiment in the precise mode here laid down or suggested (as it is but recently I have heard it), but tried it on corn and turnips against cow-pen, stable and wood-pile manure, and thought it better for turnips and not quite so good for corn, and fine on oats which succeeded the corn. Since, I put out of the same swamp, earth about five hundred loads without lime, and it was inert for three years; after which it gradually showed itself. In the application for turnips it was used in the drill and was probably one-seventh lime, and mixed as put out, which was a great loss to the experiment upon the Irish theory. The theory of Mr. Ruffin on the application of manures is deemed by me the true one; viz: manure the clover or grain crop and apply that to all other farming operations or crops. You may consider me a subscriber while the Planter exists.

I remain, respectfully yours,

J. H. D. Lownes.

MAPLE SUGAR.

Every man who can conveniently attend to it should make maple sugar. It can be done when the farmer has little else to do, so the labor should not be reckoned high. In some sections fuel is of little consequence, and where it is high, strict economy should be practised as to the mode of boiling. For catching sap, birch buckets answer a temporary purpose, and the cost is a mere trifle.—Troughs made of light, soft wood cost but a few cents each, where timber is cheap; and they will last long, if housed, or turned upside down, in a pile and sheltered from the sun and storms. But the most convenient and cheapest vessels in the end, are buckets with iron hoops.

Boston Cultivator.

FRUIT TREES.

Pruning.—Now is the time to commence, in good earnest, to prune trees and vines. Give a good form to the trees—prune too little rather than too much—avoid large wounds, if possible,—cover them with composition. Peach trees tend to make long branches. Shorten them. Grape vines should be pruned early.—Moderate bleeding, however, does not injure them.

Grafting.—Cut your grafts from thrifty shoots of young bearing trees; use grafting wax of about one part, by weight, of beeswax, two of tallow and one of rosin. It is our impression that very thin gutta percha is deserving of trial. It is accompanied with a paste to make it adhere.—It would keep out water and air.

Budded trees should now be cut down to the bud if it has taken.

Transplanting.—Get your ground well prepared; ample holes dug and rich earth, or compost of earth and well rotted manure all ready.

Caterpillars.—Examine your trees and cut off the limbs containig deposits of eggs.

Buy the Best Trees.—Every person owning land, should, every year, buy a few of the choicest fruit or have them grown ready to hand.

Wash for Trees.—A weak solution of potash, or lye of wood ashes, applied to the trunks and branches of trees destroys insects and gives a smooth bark. A mixture of lime and cow manure makes a good wash.

For the Southern Planter,

SAUSAGE MEAT.

Proportion your meat about half fat and half lean; cut it fine; then to one hundred pounds of meat add two and a quarter pounds of salt; ten ounces sage, and ten ounces of black pepper. Warm the meat, and mix it thoroughly and stuff them, and the thing is done right. If any wish to keep them through the summer good and fresh, put them in a clean firkin, warm fat and pour in until you cover them; cover and set them in the cellar, and they will keep good the year round. This is no mistake. M.

From the Complete Farmer.

OXEN.

Till oxen are four years old they are usually called steers; afterwards oxen.—The signs of a good ox, according to Mr. Deane, are these: thick, soft, smooth and short hair; a short and thick head; glossy, smooth horns; large and shaggy ears; wide forehead; full, black eyes; wide nostrils; black lips; a thick fleshy neck and large shoulders; broad reins; a large belly; thick rump and thighs; a straight back; a long tail, well covered with hair; short and broad hoofs. The best colors are brown, dark red, and brindle. When an ox has completed his eighth year he should be fattened.

If oxen are worked in the yoke in wet weather, their necks are apt to become sore. To prevent this, a little tallow should be rubbed on the parts of the yoke which lie upon their necks, and also on the bows.

The following remarks on the management of working oxen, are from "The New England Farmer," Vol. VI., p. 191:

"Do not retard the growth of your beasts of draught, endanger their health, and render them insignificant in the eyes of many by working them hard while young. But the younger they are inured to light work, the more docile they will generally become."

An English writer recommends carding oxen, and says, "the ox, after the sensation becomes familiar, receives pleasure from the operation, and will momentarily forego his meal to receive the full enjoyment. His feeder perceives this, and brushes the part which gives most pleasure. The ox shows his gratitude by wagging his tail; the feeder in return, calls him by name, and ingratiates himself with him. Thus not only an intimacy but a mutual affection is formed, which at once gives attention to the keeper and docility to the ox, and renders the labors of both pleasant."

"Their labor and their fodder ought to be proportioned, that their health and their spirits may be kept in full tone.—Their coats ought to be sleek; their hides loose and silky; the flank should fill the hand; and the shoulder handle mellow.—If they be overworked or underfed, sluggishness will inevitably follow. A working ox ought always to *be beef*, that in case of accident he may be fit for the table."

The common mode of working oxen by a yoke has been condemned by many agricultural writers. Mr. Cooper, an Englishman, according to Young's "Eastern Tour," used collars on oxen as on horses, except that they were buckled on with the narrow and open end downward.—

They draw in harness abreast, in pairs, single, or in a line, *and walk as fast as horses.* Mr. Bordley said, he "saw a waggon in Pennsylvania drawn by two bulls and two oxen bridled and geared in harness and collars."

It appears, by a work entitled "Letters from Cuba," by Dr. Abel Abbott, that in managing the oxen of that island, the yoke is made fast to the horns, "near the root, behind, so that it does not play backward and forward, and gives to the ox a similar but better chance of backing, (as in teamster's phrase, it is called.) I have been astonished at the power of those oxen in holding back. There is a short hill in one of the streets of this city, at an angle of forty-five degrees. Standing at the foot of it, I saw a cart and oxen approach at the top, with three hogsheads of molasses, and the driver sitting on the forward cask. The driver did not say so much as leave his perch; the oxen went straight and fearlessly over the pitch of the hill, and it seemed as if they must be crushed to death. The animals squatted like dogs, and rather slid than walked to the bottom of the hill. Have we any animals that could have done it? And if they could, have we any docile enough to have done it with the driver in the cart? Thus superior is this mode of yoking in holding back the load in difficult places.

"It gives them still more decisive advantages in drawing. A fillet of canvass is laid on the front below the horns; and over this fillet the cords pass, and the animal presses against the most invulnerable part of his frame; his head, his neck, his whole frame is exerted in the very manner in which he exerts his mighty strength in combat. It is the *natural* way, therefore, of availing yourself of this powerful and patient animal to the best advantage."

CURCULIOS ON PLUMS.

Mr. J. B. Farmer, of Concord, tells us he succeeded in raising a fine lot of plums last season, where he had not brought any to perfection before. The curculio had destroyed his fruit in former years.—But last May he filled a number of vials nearly full with molasses and water, and hung the vials on the limbs of the trees. He found his vials soon filled with insects—the curculio among many other kinds. He thinks he caught a quart of insects of different descriptions.

This is a very simple mode of destroying insects, and we hope many may be induced to try it.—*Ploughman.*

HAY RACKS.

For feeding during winter hay racks should be placed in a vertical position instead of inclining towards the animals, which was the original position assigned them. In the former arrangement you have perfect security against loss or waste of food, besides guarding from the great inconvenience of having their necks encumbered with seed and other annoying substances.

For the Southern Planter.

WINTER VETCHES.

Mr. Editor,—Mr. R., in the February number, asks for the identification of the two varieties of vetches, alias partridge peas, with those called by Arthur Young the winter vetch. I came to this conclusion from a perusal of Mr. Young's treatise, which, no doubt, may be seen by R., but should any others desire the information, Mr. Young's treatise might not be unacceptable to your readers generally. With regard to their being a pest, my former piece, if published entire, would have conveyed the idea that they are a pest on wheat farms, but are esteemed for forage above every other. For grazing I know nothing, save if stock get a taste of them in the fall while in their incipient state, they will graze no where else; but how they would bear the hoof I know not.

I am sorry, Mr. Editor, you find it so often necessary to alter communications, omitting, sometimes, a few words and

placing others in their stead, which cannot possibly be helped by the writer; for instance, when writing of the utility of leaving the straw of wheat on the land to improve it, and recommending a cutter for taking off the heads only, the piece is remodelled. The idea of improvement by this plan is made subordinate, and lo! I am made the author of a treatise on wheat cutters. I seldom write, but when I do, I have a definite idea, thing, or person in view, to which remarks are made, and should be glad to convey them, with due deference, however, to you.

I am, yours,

J. H. D. Lownes.

For the Southern Planter.

WHITE LUPIN.

Mr. Editor,—Have you any knowledge of "*White Lupin?*" It is extensively cultivated in the South of France and Wales as a green manure, and also in Germany, on unfruitful, sandy soils, which is exactly the character of a large portion of the soil from the head of tide water to the sea, in Virginia. The superiority of this plant for enriching the soil depends on its deep roots, which descend more than two feet into the ground and upon its capacity to resist drought—upon its rapid growth and upon its large produce of leaves and stems. In the North of Germany it is said to yield from ten to twelve tons of green herbage in the space of three or four months. I should think it of great value, if we could introduce it into Virginia, and could you notice it editorially in the Planter and request information on the subject, it could easily be procured.—Germans, many of whom arrive annually into our cities, could impart information to any one. I should like to import a few bushels, if it could be done.

I am, very respectfully,

Yours, &c.

Rob't W. Carter.

We have no practical knowledge of white lupin, but from what we have heard and read of the plant we have no doubt of its great utility as an auxiliary to clover. It is used to a limited extent in France and Italy for fodder, but is inferior for that purpose to many other plants of its family. Its great value consists in its capacity for enriching poor soils. When sown in February and March, after a very shallow ploughing, it will blossom two or three times between May and August and prove an excellent enricher of the soil when ploughed in, just after its second blooming.—The best time for mowing this sort of crop is just after a shower of rain, as the seed drop easily out of the pods when gathered dry.—They must, however, be laid up very dry, or worms will soon breed in them. We have no doubt that it may prove beneficial to the sandy worn out soils of Virginia, as upon such soils it thrives well, especially if it be dry. Indeed it is said to grow well on every kind of soil except the bad chalky, and the wet; but, like all the grasses, plants and every other species of vegetation we have yet heard of, it grows *best* on *rich lands.*

The seed is as large as a pea and very nutritious. Was much used by the ancients as an article of food.

For the Southern Planter.

DUMPLINGS.

To two quarts of flour add two teaspoonfuls of salt; one teaspoonful of soda; one pint and a half of milk; three eggs; half a pound of butter; knead it well and use figs instead of apples. Boil them until thoroughly done. Make a rich sauce to eat with them and they will surpass anything you have ever seen.

P. W. M.

Spottsylvania, March, 1848.

It has been ascertained by scientific research that one pound of wheat affords as much nourishment as four pounds of potatoes. According to statements based on actual experiments and measurements, in England, an acre of ground in good condition, and with an average crop, produces 1,680 lbs. of wheat, or 20,160 lbs. of potatoes.

CONTENTS OF NUMBER IV.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

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JOHN M. DANIEL,

EDITOR.

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BOUGHT MANURES.

The Dutch, that prudent people, have a proverb to the effect "that paint costs nothing"—meaning of course that it saves wood work to an amount that covers the price. The same may be said of manure—it costs nothing. It adds to the value of the land much more than the price you give for it; and the good crop that comes up the same season it is placed upon the soil is all clear gain. We are great friends of manuring, and we shall continue to reiterate our oft-given advice to the farmers of Virginia—be it stable dung, or lime, or rotted corn stalks, or guano, lay it on.

In the choice of manures however, where we can have a choice, we are decidedly in favor of the old fashioned simple stuff to be be obtained from our stables and barn yards, where it can be obtained in plenty. For there can be no mistake about its use; it contains all the essentials of vegetation; and there is no variety of soil which will not be benefited by it. It ought to be one of the first cares of the farmer that not a particle of the farm manures should be lost. Every farmer should have his compost heap, where all the dung, dead animals, slops, weeds, corn-stalks, feathers, shavings, and other trash, should be carefully preserved and reduced to a homogeneous mass with lime.

But, unfortunately, even the most judicious management, the best directed husbanding of resources, will not enable us to raise enough of such stuff on a farm to recruit exhausted old fields. If we find the strength of our lands gone, we must *buy* manure to bring them up again. Those whose farms are situated in the neighborhood of cities, or by the side of water courses, find no difficulty in purchasing and transporting to them as much dung, ashes, &c., as they desire. But, then, the greater part of the country is far from the cities and the water courses, and to haul stable manure twenty or thirty miles would make it a *dear whistle* by the time it was safely lodged on the plantation.

If, therefore, it is simply impossible to procure enough stable manure for the enriching of the soil in the larger portion of the country on account of its bulk and the cost of transportation, it only remains for us to make the greater use of those manures whose bulk is little and whose cost of transportation is small. These are known as "bought manures," "prepared manures," &c., and guano, poudrette, &c., belong to the class. Until some familiarity with their strength, the exact quantities to be used, the method of application is acquired, their success is not always certain. But that the requisite knowledge *can* be quickly acquired, and that these "bought manures" *can* be used with triumphant success by those who never tried them before, is an established fact—witness the experiments of Mr. Newton, published in our January number.

To those who wish to make experiments in such things, the following table will be found of great value. It was prepared with great care, and placed in our hands by an eminent statesman, who is also an enterprising and industrious farmer—we wish there were more such.

For the Southern Planter.

SYNOPSIS OF MANURES.

GUANO.

ure and Composition.—The dung of ds, imported from Peru, and con- various salts of ammonia and tes.

ity to be used and mode of applica- Farm Crops.—Three to four cwt. with its own weight of ashes or nd drilled or sown broad cast for rnips, mangold-wurzel, or other ops, or two cwt. of guano mixed rter ton of Clarke's compost.

ity to be used and mode of applica- Garden Crops.—Three lbs. per l to thirty and a quarter square This, and all other soluble salts, pplied in solution, containing not n five ounces in two gallons of

POTTER'S GUANO.

and Composition.—A chemical ion, founded on the analysis of guano, and of uniform value.

y to be used and mode of applica- rm Crops.—Two and a quarter nd a half cwt. per acre, sown , mixed with its own weight of mould.

y to be used and mode of applica- arden Crops.—Three lbs. per in solution, four ounces to two water.

NITRATE OF SODA.

and Composition.—Nitric acid , a natural product imported from

y to be used and mode of applica- Farm Crops.—One and a half cre, sown broadcast, with half weight of ashes or mould, for s, grapes, &c.

y to be used and mode of applica- arden Crops.—One lb. per square ution like guano.

TE OF POTASS.—SALTPETRE.

and Composition.—Nitric acid ss, a natural product, imported East Indies.

Quantity to be used and mode of application for Farm Crops.—One cwt. per acre, sown broadcast, in the same manner as nitrate of soda, for wheat only.

PETRE SALT.

Nature and Composition.—The residium of a manufacture, common salt and nitrate of potass.

Quantity to be used and mode of application for Farm Crops.—Five cwt. per acre, sown broadcast, as a purifier of grass land.

Quantity to be used and mode of application for Garden Crops.—Four lbs. per square rod, in solution like guano.

GYPSUM, SULPHATE OF LIME.

Nature and Composition.—Sulphuric acid and lime, an abundant mineral in several parts of England.

Quantity to be used and mode of application for Farm Crops.—Two and a half to three cwt. per acre, sown broadcast on clover, trefoil, cinquefoil, and other grasses.

Quantity to be used and mode of application for Garden Crops.—Three lbs. per square rod.

URATE OF THE LONDON MANURE COMPANY.

Nature and Composition.—Earthy salts of bone, combined with ammonia.

Quantity to be used and mode of application for Farm Crops.—Three sacks, or six and a half cwt. per acre, drilled with a little mould for turnips, wheat, oats, barley, &c.

Quantity to be used and mode of application for Garden Crops.—Two lbs. per square rod.

SULPHATE OF AMMONIA.

Nature and Composition.—The residium of a manufacture, sulphuric acid and ammonia.

Quantity to be used and mode of application for Farm Crops.—Two cwt. per acre, mixed with a little mould, and sown broadcast for clover, oats, &c., and drilled for turnips.

Quantity to be used and mode of application for Garden Crops.—One lb. per square rod.

BONE DUST AND HALF INCH BONES.

Nature and Composition.—Phosphates of lime and magnesia, carbonate of lime, and animal matter, yielding ammonia.

Quantity to be used and mode of application for Farm Crops.—One and a half gr. to twenty bushels, drilled or sown broadcast, mixed with ashes, for turnips, vegetables, wheat, &c.

Quantity to be used and mode of application for Garden Crops.—Ten to twenty lbs. per square rod.

CALCINED BONES.

Nature and Composition.—The same constituent as above, with the exception of the animal matter.

Quantity to be used and mode of application for Farm Creps.—For mixing with farm yard dung, and other manures containing ammonia.

PHOSPHATE OF LIME.

Nature and Composition.—Phosphoric acid and lime.

Quantity to be used and mode of application for Farm Crops.—A preparation of the last named, being more easily blended with farm yard manure.

Quantity to be used and mode of application for Garden Crops.—Three lbs. per square rod.

SUPERPHOSPHATE OF LIME.

Nature and Composition.—Phosphoric acid and lime in a more soluble state than in bones, prepared by dissolving bones in sulphuric acid.

Quantity to be used and mode of application for Farm Crops—For mixing in compost, fixing the ammonia of dung heaps and urine tanks with formation of phosphate of ammonia.

Quantity to be used and mode of application for Garden Crops.—For garden culture half lb. to the square rod.

PHOSPHATE OF AMMONIA.

Nature and Composition.—Phosphoric acid and ammonia.

Quantity to be used and mode of application for Farm Crops.—For mixing in compost, for the purpose of imparting two such important constituents of plants as phosphoric acid and ammonia.

Quantity to be used and mode of application for Garden Crops.—One lb. per rod.

MURIATE OF AMMONIA.

Nature and Composition.—Muriat and ammonia.

Quantity to be used and mode of application for Farm Crops.—Applicable same manner as sulphate of ammo

Quantity to be used and mode of application for Garden Crops.—One lb. per rod.

SULPHATE OF MAGNESIA. (EPSOM SA

Nature and Composition.—Sul acid and magnesia.

Quantity to be used and mode of application for Farm Crops.—Mixed with soil for potatoes, (zieby); one ov acre to eight loads of stable d (Gardner's Almanac.)

Quantity to be used and mode of application for Garden Crops.—Three q lb. per square rod.

MURIATE OF LIME.

Nature and Composition.—Muria and lime.

Quantity to be used and mode of application for Farm Crops.—For mixin compost heaps.

Quantity to be used and mode of application for Garden Crops.—Two l square rod.

SODA ASH.

Nature and Composition.—Lime nesia, alumina, charcoal, silica, an other ingredients in smaller propor

Quantity to be used and mode of application for Farm Crops.—For destroyin worm.

DANIEL'S BRISTOL MANURE

Nature and Composition—Ve matter, nitrate of soda, lime, an gas tar, and sulphur.

Quantity to be used and mode of application for Farm Crops.—Twenty to bushels for wheat and barley; th forty for turnips.

Quantity to be used and mode of application for Garden Crops.—Seven l square rod.

CLARKE'S DESSICATED COMPOST.

Nature and Composition.—A preparation of night soil.

Quantity to be used and mode of application for Farm Crops.—One hogshead for two acres.

Quantity to be used and mode of application for Garden Crops.—Seven lbs. per square rod.

WATSON'S COMPOST.

Nature and Composition.—Contains, in a concentrated form, all the ingredients essential to the growth of plants.

Quantity to be used and mode of application for Farm Crops.—Four to six cwt. per acre, for turnips, wheat, or spring crops, drilled or sown broadcast.

Quantity to be used and mode of application for Garden Crops.—Two and a half to four and a half lbs. per square rod.

ALEXANDER'S COMPOST.

Nature and Composition.—Contains, in a concentrated form, all the ingredients essential to the growth of plants.

Quantity to be used and mode of application for Farm Crops.—Twenty-four to forty bushels, according to crop.—(See Prospectus.)

Quantity to be used and mode of application for Garden Crops.—Seven lbs. per square rod.

GROUND PEAS FOR HOGS.

I have grown them three years, and must say that I have never found any thing to answer so good a purpose in fattening a hog, and at the same time keeping the corn in the crib, which is "money in the pocket," and you know a "penny saved is a penny made." My plan is to plant them in small patches in the different cornfields at the end of the corn rows, so as to be plowed when you plow the corn, and planted at the time you plant the corn; you will find no inconvenience in plowing if the corn is drilled, and none if in hills, provided you give the same distance, though the pea will admit of being closer. Planted in the fields with the corn, the hogs have the advantage of the waste corn left in gathering, and also the field peas which are planted by every farmer, more or less. I also plant in my cotton fields, selecting, if you wish, some poor spot, and drop them along the drill about three feet apart—leaving off the cotton seed, of course, where the peas are. From this patch, in my cotton, I save my seed peas, and give the balance to my sows and pigs, after they have thoroughly gleaned the patches left by the pork hogs. I have never given a sow any thing so good to cause her to yield milk and raise fine pigs. It is perhaps a well understood fact, that, ground peas yield better upon a sandy soil than any other, though I have never tried any other. I set down their lowest yield on ordinary land, and an ordinary year, at 50 bushels per acre, and from that to 100 per acre, according to circumstances. I have heard of 159 bushels per acre. I will also add that I plant them in drilled corn, about midway between the grains of corn, letting one small hand drop along after the corn dropper. And again, before planting, I shell the pea and select out all the decayed or faulty ones, then put them in some old vessel, put in about a table spoonful of tar to a quart of peas, stir them with a stick a few moments, and every pea will be thoroughly coated with the tar, then put in a few handfuls of dry ashes, and stir likewise until they are thoroughly ashed over, so as to be dry in handling. The object of this is to prevent the moles from getting them before they come up; and I will here add, that I serve all my seed corn in like manner; besides, I select, shell and assort well nigh every ear of seed corn with my own hands.—*Correspondent of Southern Cultivator.*

The committee on swine of the Essex county Mass. Agricultural Society, in their report for 1846, say: "It is believed by your committee that pork can be raised for six cents a pound, when corn is eighty cents a bushel, and so on, either way, one cent a pound on the pork and ten cents a bushel on the corn; and this conclusion is drawn from the fact, that a good thrifty hog that will eat four quarts of corn a day will gain a pound and a half of pork a day."

From the Ploughman.

THREE EXPERIMENTS IN RAISING INDIAN CORN.

BY I. E. HOWARD, OF WEST BRIDGEWATER.

First Experiment—1845.

I had conceived the notion that, by combining certain substances, to wit: swamp muck, wood ashes, corn and cob meal, and human urine, a manure would be produced which would prove singularly efficacious in promoting the growth and development of cereals generally, and of Indian corn in particular. Accordingly, having a limited quantity of this compost at my disposal, I determined to try its effect upon the latter. With this view I selected a light soil situated at some distance from home. Such land is not unfrequently met with in this vicinity; and its owners find it convenient, occasionally, to take from it a crop of Indian corn succeeded by one of rye, for such remunerating returns as it will give.

A few square rods were ploughed in April, 1845; on which, after harrowing it down, were planted about eleven hundred hills. In each of these, with the exception of twenty opposite to each other, in two adjoining rows, as favorably situated as any in the field, a half pint, or thereabouts,—nearly eight bushels altogether were used—of the manure in question was placed. Of the twenty hills which were not thus dressed ten in one row received none of any kind, the remainder in the next, as much good barn-yard compost as could well be covered with the hoe; being at the rate, perhaps, of from sixteen to twenty loads to the acre, supposing an acre to comprise thirty-two to thirty-three hundred hills, and each load to contain some twenty-five bushels.

The kernels were dropped on the naked compound, which, that being in a moist state, was an error in the outset. The consequence was that many of them not only did not vegetate at all, but that those which did, put forth their blades luctantly and not simultaneously; a circumstance which gave an uneven and homely aspect to the whole piece. There were not, however, many hills in which one or more of them did not come up.

It was, moreover, unlucky that some of the hills were injured by the frosts, and nearly all of them by the ravages of those vile insects, called, in common parlance, Rose Bugs, and sometimes, Plymouth Fleas. These Plymouth Fleas—a term, by the way, aptly invented, and preferable to the other from the *sprightliness* of the collective image, which, by a natural association of ideas, it presents to the mind—these Plymouth Fleas I found one morning hanging upon the leaves in immense numbers, fantastically grouped, and exhibiting relations that showed plainly enough it was no divided foe I had to deal with. Accordingly, as no time was to be lost, I immediately commenced an indiscriminate attack upon them, which was renewed at intervals during ten or a dozen days; when the surviving legions withdrew, leaving me master of the field, and proprietor, as it seemed, of an almost ruined crop. Such, however, did not prove to be the fact. It apparently recovered from this disaster, and meeting with no subsequent misadventure worth mentioning, got along very well during the remainder of the season.

The hills planted without manure of any kind and those dressed with the barn-yard compost were harvested separately, and yielded, the first at the rate of twenty-one and a fraction, and the other at that of twenty-seven bushels and a fraction to the acre, supposing an acre to comprise thirty-two hundred. At the same time there were also harvested ten hills taken from each of these several rows to which the new compost had been applied in quantity as before stated—about a half pint to the hill. The first ten in each row were taken. These gave an average at the rate of thirty-three bushels and a fraction to the acre. It thus appearing that the measured product of the latter indicated a yield per acre exceeding that of those manured with the yard compost, by as many bushels as did the product of these last show one exceeding that of those to which no manure had been applied.

The yard compost alluded to consisted of the manure made in winter by the cattle, combined with muck, in the proportion of two of the former, perhaps, to one of the latter, fermented together.

When therefore it is added that the cost of this compost was equal to that of the best description of such manure, whatever that may be, and that the cost of the other did not exceed ten cents the bushel, all the data will have been supplied necessary to a just estimation of the separate and relative merits of the two kinds of manure, as shown by the facts above detailed.

I might have selected, it is but just to say, many hills treated with the new compost other than those taken, without showing as to them, a result less favorable. But it was my object to take a number equal to that of those with which I wished to institute a comparison; and to take them from different rows where so many perfect ones could be found together.

Whether an experiment conducted on a more extended scale would show results corresponding in every particular, with those here presented, I know not. It is difficult to conceive, however, why, in such case, they should be, in a relative point of view at least, materially dissimilar. For myself, I can say in regard to the present results thus viewed that I was not disappointed in my expectations concerning them; a circumstance arising from the fact that the hills dressed with the yard compost did not at any time appear to be among the heaviest in the field, while those without manure were evidently the lightest. This was matter of sensible observation, and could have been verified on the spot, at a glance, by any one blessed with half the portion of visual organ, that man is heir to.

In another field, a better soil than this, a few hills were also dressed with the new compost. These were planted and treated in the same manner as the foregoing, and similar consequences ensued in this case as in the other, from dropping the kernels on the uncovered manure. The first ten of one of four rows were harvested separately; and the ears after being dried eight or ten days in the sun, gave five quarts and three sixteenths of shelled corn; equal to fifty-three bushels and a fraction to an acre of thirty-two hundred hills. Probably, however, some deduction should be made for further shrinkage; since it is not unlikely the corn, when measured, was not in a state sufficiently dry either for the miller's purpose or for market. However this may be, it is proper to state, which is a more important matter, that, as compared with the hills in the adjoining rows on either side where manure had been liberally spread, they did not appear to be in any respect inferior, save only as showing fewer stalks in in some of them; a fact already accounted for. Such was the conclusion arrived at after frequent and careful inspection.

—

Second Experiment—1846.

On part of a field ploughed the preceding autumn, designed for Indian corn, I spread, this spring, (1846,) good barnyard compost at the rate of fourteen loads of thirty bushels each to the acre. On the residue, being in quantity something less than half an acre, the new compost was used. After furrowing the whole both ways, which was done so as to leave the spaces between the rows three feet and a half wide, thus giving nearly thirty-two hundred hills to the acre, about two gills of the latter were applied to each hill on the less than half acre piece, by means of shingles so shaped as to be conveniently used for that purpose. The manure being in a moist state was covered with earth, a precaution neglected in the other cases, and the kernels dropped thereon, and both pieces planted on the 28th day of April. The weather being then remarkably fine and the ground in excellent condition for the reception of the seed, I was induced to yield to the influence of circumstances so tempting, and anticipated the usual time of planting it. This I did by half a month; the middle of May being considered by farmers generally, in this quarter, as the most suitable time for putting Indian corn into the ground. The season, however, proving mild and favora-

ble, no apparent evil resulted from this precipitate movement.

On the 9th of May, the corn dressed with the new compost began to break ground; which the other did not until two or three days later. The former had decidedly the advantage over the latter during the fore part of the season, presenting a deeper shade of green and standing up somewhat higher in the rows. The difference between them, however, in these respects, became less marked as the season advanced, and finally disappeared altogether; when for neither, apparently, could any superiority be justly claimed.

The part to which the new compost had been applied, was, as might have been expected, less infested with weeds than the other; and the crop there seemed to attain maturity somewhat sooner. Eight rows presenting as favorable specimens of the product of the two kinds of compost as any that could be taken, were selected from each part of the lot to which they had been severally applied, and harvested separately. Those grown with the new compost gave ten, and the other, little more than nine baskets of ears. Ten baskets from eight rows would be not far from fifty bushels to the acre. The latter fell short of this. But admitting it had been otherwise, and that the product of both had been in quantity the same; what, on that supposition, as applied to each separately, would be the cost of production calculated for an acre.

The expense of cultivating an acre of such land with Indian corn, applying to it a dressing of fourteen loads of manure, cannot vary much from the following estimate:

Ploughing,	$3,00
Harrowing,	1,25
Getting on and spreading 14 loads of manure,	2,50
Furrowing,	75
Planting, including seed corn,	1,50
Fourteen loads manure,	14,00
Total,	$23,00

For the rest, assuming that the stover would be worth enough to pay all other expenses, and setting down nothing for interest on the land, and we have fifty bushels of corn at an aggregate cost of twenty-three dollars; which is just forty-six cents the bushel.

The expense of cultivating an acre treated with thirty bushels of the new compost, which would be a more liberal application of it than that in the instance above given, I estimate as follows:

Ploughing,	$3,00
Harrowing,	1,25
Furrowing,	75
Getting on and applying manure and planting,	2,50
Seed corn,	12
30 bushels manure, 9 cts,	2,70
Total,	$10,32

Balancing the other items of expense in this as in the other case, and we have fifty bushels of corn at an aggregate cost of ten dollars and thirty-two cents; which is less than twenty-one cents the bushel. The difference between twenty-one and forty-six cents, is twenty-five cents. By so much per bushel then is the cost of production according to this estimate, less in the latter case than in the former.

The whole piece was last spring (1847) seeded down to grass. After being ploughed, twenty-seven loads of yard compost were evenly spread over the surface, (about one and a half acres) harrowed in, and oats and grass seed sown. The oats came up well and proved to be a heavy crop; but not perceptibly more so where the manure had been spread than where it had been applied in small quantity to the hills. The grass seed appeared to have taken equally well over the whole piece; and appearances during the fall fully justified the expectation that the crop of English grass, the ensuing season, will be as abundant on the one part as on the other. If then the fact stated be admitted sufficient to establish that of the even condition of the land, it follows, either that the effect of the manure applied in 1846, was, in both cases, wholly limited to that season, or that, if it extended farther, it manifested itself no more favorably on the part where the greater quan-

tity in bulk, than on that where the less had been bestowed. Consequently as it regards any prospective operation favorable to the land, one application would seem to be entitled to as much credit as the other, and no more.

There seems therefore a manifest propriety in changing as I have done, all of both kinds of the manure, to the crop the growth of which they were severally designed to influence.

—

Third Experiment—1847.

Having resolved to try the new compost, this year, on a somewhat larger scale, rather more than an acre and a half of sward land, in an adjoining field, was ploughed for that purpose. This field, it may be proper to observe, was last laid down to grass in 1843. The productive calibre of its soil at the time when the present course was commenced, will be sufficiently indicated, by stating that, for the two preceding years its average crops of hay could not have exceeded fifteen hundred pounds to the acre. After being harrowed, it was furrowed leaving the spaces between the rows three feet wide, both ways. A part of it—perhaps, half an acre of rather low ground—was cultivated with potatoes. On the remainder the corn was planted about the 20th of May; later than usual on account of the backwardness of the season. The hills numbered 4545; being as many more than an acre would accommodate at the distance given them, as that number is greater than 3556. Each hill, with the exception of those contained in eight rows as favorably situated it seemed as any, and numbering 488, was dressed with a half pint, or thereabouts, of the new compost, which was lightly covered with earth, and the kernels dropped thereon, as practised the preceding year. Of the eight rows not thus dressed seven were treated with an equal, and one with a double quantity of night-soil, prepared by admixture with substances of the same nature (without any liquid being added) as those that formed the ingredients of the new compost; the night-soil constituting, in bulk, about one half. It should be also mentioned that a hundred hills, more or less, were subsequently dressed again, some with the new, and some with common compost. As, however, this dressing had no favorable effect perceptible to the eye, no separate account was taken of them; nor, for the same reason, of the row to which a double dressing of the prepared night-soil had been applied.

The crop was hoed twice and three times harrowed between the rows during the season. It took a promising and even start, but worms soon made their appearance, and by them it was considerably injured; making the return less than it otherwise would have been. On the southerly part of the field the rows, running nearly east and west, were of equal length. On harvesting them their produce was as follows: the first eight gave ten baskets of ears; the next, proceeding northward, gave nine and a half; the next six gave seven baskets; the next eight, being those to which the prepared night-soil had been applied, gave ten baskets; the next eight gave nine, &c. Here the cut of the cut worm had been more particularly unkind, and the amount consequently fell off. In some parts it was observed also, that the implement, used to sever the stalks near the ground, detached therefrom, without parting them, entire hills, so completely had their roots been divided by the depredations of the muck worm.

The whole return was 94 baskets of ears; being little more than 73 baskets to the acre. The same basket used in measuring the crop, having been filled from the top of the crib wherein it had been deposited, was weighed on the 6th of December. The ears weighed forty pounds and three quarters. Deducting, then, seven baskets for shrinkage to this time, Dec. 6th,—an amount, by the way, assumed on conjecture, as I am not in possession of any facts to determine what it should be—and it will leave 66 baskets; which, at forty pounds and three quarters each, will give a trifle less than 36 bushels as the product of an acre thus ascertained at the time specified. This, esti-

mating expenses as above, would make the cost per bushel nearly thirty cents. The produce of the 488 hills treated with the prepared night-soil, adopting the same mode for getting at it, was at the rate of 35 bushels and a fraction to the acre; which, it will be perceived, fell little short of an average. According to the same method of calculation, 635 hills from another part, gave at the rate of 41 bushels and a fraction. And from one square rod not included in the foregoing, the ears after being dried one or two weeks, (the date was accidentally omitted,) weighed 32¾ pounds; which, allowing 75 pounds in the ear to the bushel, is nearly 70 bushels to the acre. Twenty-five hills, however, were included in this square rod, as it happened; which was more than its just proportion, and more than the piece would average. Proper deduction being made for the excess, and it will show a yield at the rate of 61 instead of 70 bushels per acre.

The night-soil above alluded to was not an expensive preparation. But could it not have been made less expensive, and as efficacious as a manure? Equal parts of the meal of corn cobs alone and swamp muck mixed together with a small quantity of fresh wood ashes, form a compound, which exposure in a warm and dry atmosphere soon renders an exceedingly powerful absorbent. With a due supply of this material, if it can be procured on reasonable terms, every farmer and householder should be provided; since it offers advantages as a means for imbibing the stale of cattle, and for the desiccation of night-soil, found in no other substance. It may, moreover, on trial, prove sufficient for every other purpose appertaining to the preparation of the latter; forming in combination therewith a cheaper than that above alluded to, and, at the same time, as efficient a manure as any into which this species of excrement is capable of being converted. (But with regard to the new compost it is probably otherwise. Without the more expensive part —the corn meal or some part of it—the latter would be inadequate to supply to a sufficient extent those phosphates which enter largely into the composition of Indian corn—especially the phosphate of magnesia. These with the other elements of its own composition this meal will supply; and supply in much greater abundance from any given quantity than if it had previously passed through a digestive apparatus and contributed to the support of an animal organism. Not having been thus deprived of any portion of its virtues, it is fitted to act with unimpaired energy. The meal of the grain and cobs together, in addition to the nutritive matter it may afford, not needed it may be in the other preparation, serves to give a loose and open texture to this as to that, due mainly to the meal of the cobs; and by thus facilitating the access of air, and running easily into decomposition itself, to hasten that of the other ingredients with which it is united in the compost. Every offensive property is soon removed, and it becomes a porous mass which the roots of plants can easily penetrate.)

In order to justify the above statement with regard to the cost of the new compost, it may be sufficient to observe that the meal is the most expensive ingredient; and that this was added to the others in such proportion that each bushel contained an amount not exceeding five quarts, involving an expense for the same, equal to the cost of two and a half quarts of corn. To this add what would be proper for about three quarts of fresh wood ashes, and their sum will show the cost per bushel according to my estimation.

Whether the new compost would be equally efficient without meal of any kind as with, is a question which I have no experience to aid me in determining. On this point, however, we have the testimony of Dr. Liebig as follows: "Mr. Pusey," says that distinguished philosopher, "the late able president of the Royal Agricultural Society, has shown, that the same effects are produced by putrified urine, soot, gas-liquor and nitrate of soda." "Now the three former," he proceeds, "act by virtue of the ammonia which enters into their composition. The usual effects produced by these and nitrate of soda are to increase the intensity of the green co-

loring matter, to augment the quantity of straw, but to produce a light grain."

In reference to the subject of composts, few farmers, perhaps, are without their synthetic dogmas of some sort. To one as above presented, and to the very imperfect details connected with the practical application of the same, I have ventured to invite attention. If it have no intrinsic merit, and be not worth even

"A pin, a nut, a cherry-stone,"

its suggestive power upon other minds may fortunately be such, as to lead, ultimately, to important results.

December, 1847.

From the Prairie Farmer.

CULTURE OF GRAPE VINES.

BY G. M. SUPPIGER.

Messrs. Editors,—In answer to an inquiry, by a subscriber, about the treatment and culture of grape vines, I am able to give you very practicable and useful information. The culture of grapes in this neighborhood is getting to be a product well worth a farmer or gardener's attention; and almost every one among the German settlers has planted a patch, more or less—some as much as two, or even four acres. I got the method which I shall recommend, out of a German book, which experience has shown is by far the best mode of any tried in this prairie and in the vicinity of St. Louis, and is as follows:

Get your settings (we bought them in Cincinnati, at 70 cents per hundred, freight and all) ready to be planted soon in the spring. The ground ought to be spaded so that the black soil will come below the surface, and the clay on top. Soak the settings in cold or lukewarm water about one day before planting; put them six inches apart in furrows three feet apart, one foot deep. Let the last eye come out even with the surface of the ground. The sloping cut must be two inches from the last eye, the eye up and the cut downwards. If a dry season they will want a little watering, till they begin to grow and make roots and leaves. Keep the ground loose and clean about them, and mind not to break off any leaves or branches during the summer. This is all for the first year. In the fall cut all the top off down to two or three eyes, cutting off two inches from those eyes, and not immediately above them, or too close. What you cut from the grape vines is the best manure you can put to them, and therefore I always throw it right around the roots and hoe it in in the spring and summer. These two or three eyes will, if they are sound and healthy, make two or three branches the following summer, which are again treated as the summer before. In the ensuing fall they should be cut down to four eyes.

I forgot to mention that when one year old they ought to be set out to their proper places—where they are wanted in a field say in rows six feet apart each way—in a garden, where they are raised on lattice work, one vine in ten feet; and when they get five to ten years old, one vine in twenty is enough. Those that grow very large the second summer ought to have poles six or seven feet long, and be fastened on them.

The third spring of their age (the bearing year in this country) those four eyes will grow out in four beautiful branches or arms of the vine. When the young branches begin to show themselves, select the two branches with the most grapes on as *bearing* branches—the two remaining ones as *wood* branches, to make bearing branches the following year. These two wood branches are entirely let alone all the summer; but the bearing branches want particular attention. I prefer lattice work to single poles, as it is better and easier attended to, and gives the vine more light, air, and room.

As I have said, when the young branches begin to show, break off the branch (bearing) two leaves above the last grape bunch; also break off the inferior branches as they make their appearance between the leaves and the main branches, and also those ringlets or twisted threads, which are apt to entangle the vines and make it harder to keep them cleaned. The wood branches are tied up

separately, and are not in any way interfered with, even if they should show a few branches too, which will not hurt them. In this way the bearing branches receive all the necessary nourishment to bring forth and ripen most delicious fruit, while the wood branches grow very stout, and will make excellent bearing branches the following season. In the fall, after the fruit is all ripe, and the leaves begin to fall off, the bearing branches are cut clean off with a sharp knife close to the main stem, and put away in a cellar for settings for another year. The wood branches are cut down one to two feet, with a short inferior branch of two eyes close to the root—all other inferior branches being cut off also. The other wood branch may be left four to five feet long, according to size, with also a short stump of an inferior branch left on nearest the roots. These two stumps with two eyes each are left on, out of which will sprout two, three, or four wood branches. If you left more eyes or all the inferior branches on, you would have fifty to one hundred branches, and all of them not worth any thing.

They are treated the fourth, fifth, and all subsequent years, like the third, with the exception that the larger the vine grows, the more stumps, wood branches, and bearing branches, the main root is able to nourish; and therefore, in a vine eight or ten years old, you may leave in the fall four main branches eight or twelve feet long, four short arms of five to eight, and four stumps with one or two eyes each. A vine like this ought to have room twenty feet square, and will have more and better fruit than twenty would that occupied the same space. We have a vine which, when three years old (this summer,) ripened 196 beautiful bunches of the best Catawba grape. The Isabella also does well here, but is more apt to rot on the vines than the Catawba, and does not make as good and strong a vine. Our prairie soil and climate is well suited, and manure would do more harm than good. They ought to be planted on dry ground; I think one side of a hill is as good as another. To train them on a house I prefer the east side. The breaking out and top clipping on the bearing branches should be repeated during the summer two or three times. You can graft a superior kind on a poorer one by picking a branch of the same size with the old stock, splice them like apple trees, and tie it together; bend it all under ground one foot deep, and let the last eye or two eyes come out even with the surface wherever you want it. Pack the soil on it again; but mind not to hurt the spliced part. You can graft the wild grape with tame ones, and have good grapes the second year from grafting.

Never use the pruning knife in the spring, as the vine would lose more sap or juice than the bunches needed. Always do this in the fall, to prevent bleeding.

Should you want some more explanation on any part of the treatment, I am ready to give you my experience, and my neighbors', whenever called for.

Madison Co., Ill., March, 1848.

PLOUGHING GRASS LAND.

We noticed that many farmers were turning up green sward last week for planting. Some of them have an idea that the sward will rot sooner when it is turned early, than when the work is done at planting time. This is a great mistake, as any farmer will see who examines and reasons upon it. There is nothing green early in the spring, and the old straw and stubble are a long while in rotting when there is nothing to aid them.

But wait till the tenth or fifteenth of May and you have a green crop to turn under; and this soon sets every thing in motion. The later you turn green sward for planting, the better you will succeed in rotting the furrow. We are sometimes induced to turn earlier than we would choose lest the work should be too much crowded in planting time.

Sweet olive oil is a certain cure for the bite of a rattlesnake. Apply it internally and externally.

For the Southern Planter.

SUB-SOILING.

Mr. Editor,—In looking over the memoranda for the month of March, I noticed a request made by you in regard to sub-soiling; trusting that it is not too late for some of your subscribers to *test its utility* by a few *well regulated* experiments during the present year, I am induced to send you the result of an experiment in sub-soiling for corn, made during the spring of 1847. As you admonish your correspondents to be concise, I will to the point. The lot on which the experiment was made, contains precisely seven acres. *Six acres of this lot was sub-soiled, one acre through the middle of the lot was not sub-soiled.* Having laid off the *entire lot* in squares for the purpose of regularly depositing the manure, I commenced on 11th of March to haul out the manure on the land, placing the heaps which contained by estimate six bushels in the centre of each square—heaps deposited 7 *yards by* 7 *yards*, making 99 heaps, or 594 bushels to the acre, total to the seven acres 4158 bushels. This manure was a compost of *hog pen manure, mould and pine straw*.

March 16.—Commenced ploughing this lot with two horse turn plough, averaging eight inches in depth, sub-soil plough following in the furrow cut by the turn plough averaging nine inches, the entire depth of ploughed land *seventeen inches*.

March 22.—Dragged the entire lot with two heavy thirty tooth drags, two stout mules to each drag.

March 23.—Run off rows five feet apart.

March 24.—Commenced planting, dropping six grains in the hill—hills twenty-two inches in the drill, 4078 plants to the acres, or 28,546 plants on the lot.

April 14.—The entire lot of corn was much injured by a severe frost.

April 28.—Run a single furrow with the single turn plough, throwing the earth from the corn, hoes following, cleaning out the remaining grass and thinning to one stalk.

May 18.—Run a single furrow with the single turn plough, throwing the earth to the corn, the intermediate space broken close and deep by running six times in the row with the wing coulter without mould board, hoes following, but having little to do.

June 10.—Commenced laying by this lot with the five tooth expanding cultivator running three times in the row. A hand went on before this cultivator sowing the stock pea, putting a bushel to the acre, hoes following the cultivator clearing out the remaining grass.

Now, Mr. Editor, I will present to you the most pleasing part, the reward of my labor, viz. the result or yield.

The six acres of sub-soil made *seventy* barrels of merchantable corn.

The acre of unsub-soiled made *nine* barrels of corn equally as good. The unsound corn not measured in neither instance. I will mention that two gentlemen of this county, Nathaniel Raines and Victor M. Eppes, Esq., walked over the lot during a severe drought and marked the great difference between the sub and un-soiled. Mr. R. remarked, that with a favorable season, he thought it would yield fifteen barrels to the acre. The pea vines was so much shaded by the corn, that they yielded little or no peas; but I had one of the most luxuriant growth of vines to turn under in September for wheat. The wheat on this lot at this time looks fine. I have sub-soiled for the coming crop of corn, and intend to push that work as far as possible. I should like to know from you or some of my brother farmers, if grazing wheat with sheep injures that crop, and how late should they be permitted to graze. In your wanderings through Virginia, Mr. Editor, it would afford me great pleasure to receive a visit at your hands: you might find something in Sussex to afford pleasure. With my best wishes for the success of your Journal,

I remain yours,
THOS. E. BLUNT.

P. S.—Ralston's plough is considered a very poor implement in these diggins.

Sussex, March 22, 1848.

HEDGES AND HEDGE PLANTS.

The subject of ornamental hedges and living fences begins to attract very general attention throughout a large portion of the country. The inquiries are, "What is the best plant for an ornamental hedge?"—"What is best for a strong impassable hedge?"—and, "What is the best for an evergreen hedge?"

For live hedges, on a large scale, for the farmer, perhaps our *native varieties of thorn* are the best and most economical that can be recommended for the Northern States. The plants are raised from seeds, which are easily obtained in every part of the country, or they may be purchased at a low price from the nurseries. The plants may be set out either at one or two years old, in a well prepared soil, and by regular and careful annual pruning or clipping, form in a few years a close, strong and beautiful hedge.

For extensive hedging in open exposed tracts of country, and particularly on the prairies of the west, the *Honey Locust*, (Gleditschia triacanthos,) offers many advantages. Its growth is very rapid, much more so than the thorn; it is armed with powerful thorns that render it fearful to men or animals, and its foliage is delicate and beautiful, like all the acacia tribe. It bears cutting well and is perfectly hardy. It is easily raised from seed, or the plants may be purchased cheap at the nurseries. Plants a foot high, one year from seed, planted a foot apart, cut half back when planted and regularly cut every year, will in three years, or four at most, make a dense, impassable, and beautiful hedge. The common yellow locust, (*Robinia prendacacia*,) may be used for the same purpose, but is not so good, as it is attacked by a borer.

For ornamental hedges around gardens or pleasure grounds, the *Italian privet*, a sub-evergreen but deciduous in a northern climate, though it retains its foliage through, November, is an excellent plant, propagated easily from cuttings, and easily cut and kept in any desirable size and form. It is of rapid growth, has elegant foliage with spikes of pure white blossoms which appear profusely in June, and afterwards bears clusters of black fruit, like small grapes. The plants may be set a foot apart, well cut back at planting; and, sheared once or twice during each succeeding season, makes in three years a very pretty hedge. The *Buck Thorn*, (Rhammis catharticus,) which is raised from seed and managed in the same way, makes a beautiful hedge. Fine specimens of this are to be seen around Boston. The plants are set out at one or two years old, 8 or 10 inches apart, cut half back at planting, and each succeeding season cut back half of the season's growth, thus producing closeness until it attains the desired height. All live hedges should be kept in a pyramidal form, broader at the base and narrowing to the top—thus giving the bottom as well as the top, the full benefit of air and light.

For ornamental *evergreen* hedges or screens, where strength is not requisite, the American Arbor Vitæ (*Thuya occidentalis*,) is very eligible, forming, in a short time, a dense, elegant wall of green, both in summer and winter. They may be taken 3 or 4 feet high, and set a foot or more apart, and may be kept in any desired form and height by shearing. The *Red cedar* is another evergreen that answers this purpose well, and is coming into general use.

But for a *strong*, and at the same time a beautiful evergreen hedge, none of these we have mentioned are equal to the *Norway Spruce*. Its strong, rapid growth, great hardiness, and elegant green at all seasons, combine to place it at the head of this class of plants, and it cannot fail to be, in time, extensively used as a protection to fruit gardens, orchards, and pleasure grounds, against the invasion of both human and brute depredators, and to ward off the severe north and west winds, so injurious in many parts of the country to the culture of the finer fruits. Robert Nelson of Newburyport, Mass., an experienced man, says, in the Horticulturist for September last, that in Denmark he has planted and managed several thousands of yards of it as a hedge, and has seen it there from 5 to 50 years old. The

writer also recommends the follow-
de of *planting* and *trimming*:

nting.—When two or three years
having attained a height of about
ne to two feet, the seedlings are to
transplanted where they are wanted
edge. It will be remembered, that
e is almost death to the Norway
, which is most fond of sandy, or
ter, gravelly soil, and I have known
of this tree to grow most admira-
en planted on sunk fences. Where
l is very rich, it would be well to
trench pretty deep, and fill it with
rocks to the depth of six inches.
ransplanting should be done in
and it need not be very early;
e middle of May is often not too
less we should have a very for-
eason. Transplant with as large
earth as possible, or else be care-
et all the roots, and not to let them
ess the ground about the roots,
too firmly; water directly and
ly, which will settle the ground
und the roots; and afterwards oc-
lly in a dry season, till they begin
w. If wanted for an ornamental
in a garden, to grow only about
et high, the plants ought to be set
om nine to twelve inches apart;
en the hedge is wished to grow six
en feet high, they must be planted
t apart.
r an outside hedge, as a protection
cattle, or for subdivisions in the
where they are desired to give shel-
inst high winds, I would advise
ce of plants two feet high, and
y may be planted two feet apart.
n as the hedge is set, it will be ne-
to protect it with a few rails for a
of years.

* * * *

ough many gardeners and nursery-
mmend the planting of hedges
rows, still, for several reasons, I
edly prefer to plant only singl

ming.—A good hedge ought never
med in any other way than in a
shape. Nature teaches us best,
very little observation, I think,
shows plainly that this is the natural way. It may be considered tastely and absurd, to trim a hedge in a square form, in point of beauty, or, still worse, broad at the top and narrow at the bottom; but when we reflect that the growth of the bottom of the hedge is checked and stifled by allowing it to be broadest at the top, reason should teach us to abandon that mode on the ground of unfitness.

"As soon as planted, stretch a line, and with a hedge shear trim both sides in a convenient *conical form*, leaving the top till the hedge almost has attained the desired height.

"A well trimmed hedge in a small garden, four feet high, ought never to be broader at the bottom than twelve inches, and should slope to the top in a very acute angle. For each foot higher, it may be allowed to grow two or three inches broader at the bottom, and in that proportion at any height. In this way only, every shoot will enjoy the full benefit of air, light and moisture, and by this simple and natural method, you will, in a short time, form a hedge such as I have often seen, as green and close from bottom to top, that even a sparrow could not, without difficulty, pass through it.

"A hedge, until it has attained the desirable size, may be trimmed at least twice in a summer, with a hedge shears; afterwards it can be much easier, more quickly, and as well done, with a sharp sickle or hook."

WIRE FENCE.

This mode of fence is becoming quite common, as we learn from various sources, in the northern part of Illinois. We hear of many pieces of it at various places near Rock River—one of them on the farm of John Shillaber, Esq., in Ogle county, being about two miles in length. The cost generally, as near as we can learn, is about 35 cts. to the rod. *It is said* to answer a most admirable purpose against all stock but swine. Cattle and horses particularly, after having their noses well sawed once by it, can scarcely be got near it again. A portable fence might easily be made of this material.

REARING LAMBS FOR MARKET.

At our request, Mr. GEORGE EDWARDS, of Mechanicsville, Saratoga county, has furnished us the following account of his mode of managing sheep and rearing lambs for market:

"As my farm is near our large markets, and well adapted to what I call *mixed husbandry*—that is sheep, grain, and grass—the soil a loam, high and dry—I find the rearing of fat lambs the most profitable branch of farming. The ewes have generally been bought in September—always selecting those of rather coarse wool, they being larger, and generally the best nurses. The rams (pure South Downs) are put to them early in November, and the lambs are dropped about the first of April. The ewes are fed during the winter with corn-stalks and straw, and about one month before lambing and from thence till they go to pasture, they are each fed with three quarts of brewer's grains per day.

"Last year, 100 ewes raised 100 lambs. The wool, which was sold at Troy at 32 cents per lb., brought $104,75. Twenty-five lambs sold at $2 each, one ram lamb $5, one do. $3, and the remaining seventy-three at $1,75 each. They were all taken away by the last of July. The ewes were sold to the butcher at $2 each in October—so that the hundred ewes realized $490,50.

"It is desirable to get rid of the lambs early, that the ewes may have time to fatten, so that they may be sold to the butcher in the fall—giving room for a new flock which should be bought in for the next season.

"It is a good mode, and one which we have frequently adopted, if we have a piece of rye which had been sown on a clover sod, (or where the land was otherwise in good order) to plow the stubble the very moment the rye is off the field, and sow turnips. The furrows are first harrowed with a light harrow, lengthwise, and then crosswise—the seed sown broadcast, 2 lbs. per acre—ending with rolling the ground with a very light roller. The turnip called the stubble turnip, is preferred. A larger quantity of seed is sown than some use, in order to g good stand in spite of the ravages o fly. I have now procured one of E seed-planters, and shall probably sow turnips in drills henceforth—the row feet apart, to give space to work bet them with a horse and small plow, o tivator. As soon as the turnips ar about two inches, we put on the harrows, passing both ways, keepin straight course. If the turnips a drills, the drags are only run across rows. About two days after the harrows are run over the turnips, they gone over with hoes, and thinned w they are in bunches.

"Ten acres of turnips, with a tol ble even plant, will supply and fatten sheep, and will afford fine keep for from the first of October to the end of vember, (if there is not much snow) time when pasture is generally sh About one acre should be fenced o commence with, and after four or days, add about one-fourth of an every other day. At first the sheep appear not to like the turnips, but a three or four days they will eat them pidly. A boy should be placed with sheep for two or three hours each day chop up the shells—the sheep will back and eat them up clean.

"While the sheep are on the turnip is an advantage to give them a little hay in troughs—say about three bush per day for 150 sheep.

"Let any man try this plan, and if land is in good heart, he will not only his sheep get *really fat*, but they will le the land in fine condition for a spr crop. It must be observed, the more tention that is paid to keeping down weeds, the better will the crop pay cost." *Cultivator.*

USEFUL TABLE.

An acre of ground will contain fruit trees, 16½ feet apart eace way, 4 hills of corn 3 feet apart each way, 240 stalks of wheat six inches each way, 6,272,540 blades of grass inch apart each way.

BUILDING MATERIALS.

We have said something, in a former number, in relation to the size and form of farm buildings, but nothing of the materials that should be chosen, when the builder has a choice. Pine timber is now valued more highly than it was in the first settling of the country. Pine beams, plates, and posts, answer well when the foundation is good; but the sills should be of more durable wood; white oak or chestnut will last a long while though placed near the ground, and one of these should be procured when they conveniently can be for sills of houses and barns.

Higher posts are now used than in former times; the reason given is that more room is obtained under the same roof, and that the roof of a barn is the most expensive part of the building. Yet it is not prudent to run to extremes in regard to height. Posts 18 or 20 feet long are sometimes used, but the labor of unloading in such barns is so much increased by this height that it may be doubted whether any thing is gained by it. Posts 16 feet high make as convenient supporters for barns as those that run higher. A forty foot barn with a good cellar under the whole of it will be found to be capacious enough for a good farm. And if the farm is very large, two barns may be built that will prove more convenient than one barn that is as capacious as both.

It should be kept in mind that very large barns require larger timbers than small barns, and that very large bays for hay are not so accessible as small ones, and of course not so good. Two barns may be so placed, that the north and the west winds will be broken, and cattle will have a better yard for winter than by the side of one large barn.

As the roof is the most costly part of a barn, so it is most important that this should be well finished. Pitch pine boards are better than any to hold the nails that are driven through the shingles, and we have them now on a barn that has been covered with them for eighty years past, and they hold the nails on shingling anew, better than new boards of white pine.

Shingles are the most expensive articles on modern barns, for many are purchased that will not turn the water for a term of 20 years. Yet it was no uncommon thing, in old times, to find shingles that would do good service for forty years in succession. White pine and cedar were formerly the principal kinds that were used. But chestnut shingles are now preferred to cedar. Yet old swamp pine shingles are still found, as formerly, to do more service than any others.

The modern practice of making shingles with circular saws is attended with much evil. Poor and knotty timber, such as could not be split, is sawed into shingles, and these lie more close than shaved ones, and thus retain the moisture longer and rot sooner. Chestnut shingles warp more, admit more air, and last longer than any timber that is sawed and made to lie very close.

Many attempts have been made to substitute other covering than shingles, but no kind excepting slate, has proved effectual. Flat composition roofs have very generally failed, though we should suppose something of the kind might answer the purpose.

Carpenters generally incline to expose but a small portion of each shingle to the weather, calculating on more than a triple coat of shingles—that is shingles 15 inches long are laid with but 4½ inches to the weather. When roofs are new the more thicknesses we have the more sure the roof will be to turn all the water. But it should be considered that this close shingling will not last so long as materials more exposed when they dry sooner.

Good shingles, 15 inches in length may be laid six inches to the weather with perfect safety, and lying thus they dry sooner after a storm, and of course last longer than when crowded on and made to ride each other three or four fold. All who consider of it must admit this principle, yet it is not practised upon. A roof that is double boarded or battened, rots faster by half than a roof of single boards matched.

HOW TO MAKE GOOD TEA.

Boil rain water and pour upon your tea, letting it steep from one to two minutes, if you wish to realize the true taste of the "plant divine." Well, river or spring water, in many parts of the country, is strongly impregnated with lime, which acts chemically upon the tea-leaf, and greatly deteriorates, or destroys its fine aromatic flavor. In fact, water, containing lime, or much vegetable matter in solution, has more or less effect upon all kinds of cookery. Besides it is highly injurious to the health of some persons.—*American Agriculturist.*

ON THE IMPROVEMENT AND MANAGEMENT OF SOILS.

Perhaps there is no subject of greater importance to the agriculturist, than a right understanding of the principles on which the fertility of the soil depends. In many excellent treatises on manures, we find considerable lists of various substances, all calculated to support the productiveness of the soil; and experience has long proved the necessity of some return being made to those soils which are kept under constant cultivation.

Every tree and every plant in growing takes something from the earth which makes it *poorer*. Every vegetable in dying and mouldering back again to dust, adds something to the earth which makes it the *richer*. It is the same when an animal dies. Every thing which has possessed life, whether animal or vegetable, having undergone putrefaction and being returned back again to dust becomes food for the support of vegetable life.

The quantity of this return, or as it is generally termed, manure, that is requisite to continue the soil in a productive state, varies in different soils, and those kinds which continue the longest productive with the least additional supply, are justly styled the richest or best. Experience has also proved that such soils are those which contain moderate proportions of all the elementary constituent of soils, which are but few and generally found combined with the clayey, sandy, and vegetable earths. Nothing, therefore, appears more evident than the propriety of assimilating as much as possible, a regular intermixture of these ingredients. When the upper surface is very sandy, the most excellent layers of clay or marl, are frequently found at no great depth below, thirty or forty cart loads of which, dug and spread upon the surface of each acre, will form a most effective and permanent improvement. On the other hand, clayey soils are improved by the application of sand, gravel, and exposure to winter frosts.

Vegetable or peaty soils frequently rest on beds of clay, which, when burnt and intermixed, form a good soil. These modes of improvement, wherepracticable, are the most proper, and although perhaps in the first instance attended with considerable expense, can not fail ultimately to prove the most beneficial. Before we proceed to the consideration of the application of particular substances, as manures, it may not be improper to take a view of the natural state of vegetation in those vast tracts where every operation necessary to perpetrate a never failing produce, invariably takes place without the aid of the hand of man.

By art and industry, the augmenting and improvement of vegetable productions are truly great; yet, whenever we exceed the limits of natural laws some equivalent redress must be substituted, or our pursuits will soon terminate in the entire destruction of that subject on which we repose.

Any man, with very little skill or knowledge, may fell trees, plant, hoe, cut hay, raise rain, and rear cattle; and so long as the virgin fertility of his soil lasts, he may do well. At length, however, that becomes exhausted. The store of provision for the nourishment of plants, which had been accumulating perhaps for centuries, while the land was in woods, by the annual decay of vegetables and the leaves of trees, is at length spent.

It is impossible to survey the uncultivated wilderness without admiring the wonderful energies that must there be returned in the soil. The majestic pine, the

stately oak, with the great variety of other inhabitants of the forest, seem to mock the idea of receiving aid from the hand of man; and when the stately productions are removed by the hardy woodman, instead of finding the soil exhausted, it is generally found replete with every nutritive principle. The means by which the soil is here capable of supporting vegetation are extremely obvious; every material ingredient extracted by the vegetable products are again faithfully returned by the constant descent of leaves and limbs; and even trunks and roots every where intermingle their mouldering elements, where succeeding products ascend with renovated vigor, and stand monuments of exalted verdure; while the various animal inhabitants that consume so much of the produce as is necessary for their support, transmit continued returns by their excrementitious discharges, and the natural dissolution of their own carcasses.

These are entertaining and interesting facts to all those who cultivate the soil, and exhibit incontrovertible rules by which all their proceedings ought to be influenced.

Some kinds of manure are proper only for particular kinds of soil; ashes are a very valuable manure for light soils. Two years ago we strewed about twenty bushels of ashes on about half an acre of a dry sandy soil. The crops were evidently benefited by this dressing. This is an application capable of producing moisture and retaining it in a dry soil, superior to any thing we have ever seen, and stamps an invaluable worth on ashes as a manure for this kind of soils. But on strong moist soils, they do not answer as good a purpose.

Horn shavings and hogs' bristles, are an excellent manure for potatoes, strewed in the drills or hills over the sets, the latter at the rate of about twenty-five bushels to the acre. They produce earlier with these than any other manures we have ever tried; they are also a good manure for grass and every other crop which we have applied them to.

There are other ingredients, such as salt, charcoal, oil, &c., whose salutary effects on vegetation have been occasionally demonstrated; and it is altogether probable, that the ingenious assiduity of philosophical perseverance, will still continue to contribute much additional information respecting the various processes connected with the fertility of soils and laws of vegetation. In our present state of advancement, we ought to husband well those maxims founded on the adamantine base of long and tried experience, and wield with a fearless hand that invaluable support on which both old age and youth may rest with security.

PICKLED EGGS.

In some parts of England, pickled eggs constitute a very prominent feature in the farm-house store rooms. The mode in which the good dames pickle them is simply thus: at the season of the year when their stock of eggs is plentiful, they boil some four or six dozen in a capacious saucepan until they become quite hard. They then, after removing the shells, lay them carefully in large mouthed jars, and pour over them scalding vinegar, well seasoned with whole peppers, allspice, a few pieces of ginger, and a few cloves of garlic. When cold, they are bunged down close, and in a month are fit for use. Where eggs are plentiful the above pickle is by no means expensive, and is a relishing accompaniment to cold meat.

SHEEP FEEDING.

A series of experiments on sheep-feeding and wool-growing have just been made in Germany. The following are the results which have been deduced:—1st. The feeding property of the Swede turnip, as compared with the potato, is as 7 to 2; and for the growth of wool, the relative value of these two substances, 20 to 17. 2nd. That the temperature is of much more importance than generally imagined, both with regard to quantity of food consumed and the benefit derived from it. To ascertain this fact, one lot of sheep was fed in warm (though well ventilated)

sheds, and the rest were fed in the open air, exposed to the weather. The latter required more food in proportion as 30 to 22; and yet the former have increased weight as 3 to 1. 3rd. It was tried whether lambs, or two and a half year old sheep, gave the most increase of weight with similar food, and it was found that the increased weight was equal; though in the former case it was principally carcass weight, and in the latter case it was wool. The writer concludes the very long and carefully written account of his experiments with the following remarks: "These experiments have shown most distinctly that sheep are exceedingly sensitive of any sudden change, either in food or temperature; and that these circumstances, as well as any disturbance, are very disadvantageous to their feeding. If it is wished to secure the full benefit of their food, and the greatest profit of their keep, we must *avoid exposure to the changes of the weather.*"—*Sprengel's Jour.*

We are not aware that the practice of feeding sheep in warm folds has ever been extensively acted upon in this country, though the subject has been frequently noticed. Throughout the whole of Prussia and Northern Germany, it is now almost the universal practice. It must however, be remembered that the winters there are much more severe, and the snow deeper, than in this country. It is also one of the maxims laid down by Liebig, in his "Animal Chemistry," that warmth is favorable to fattening; and it is at all times interesting to see the theories of science borne out in practice.—*Trans.*

JUST THE CHEESE.

An establishment in New Orleans has received a cheese from New Jersey, weighing 1,700 pounds—a regular millstone affair.

Do not keep a horse too fat nor too lean, as either disqualifies him for hard labor.

DESULTORY NOTES ON INSECTS AND THEIR INJURIES TO FRUIT TREES.

Those creatures which are most injurious to our orchards, are the insects that assume the grub form and pass a portion of the year in the ground or in the bark of the tree. To get rid of these is the problem of the fruit-grower. We have already stated in this journal, that we have seen a peach orchard which had been nearly destroyed by the grub, brought to a healthy condition by the simple removal of all the fruit as fast as it fell. Whatever may be the theory to account for it, the fact is certain; and we still regard it as one of the most effectual means of getting rid of that pest.

But all these grubs, both those which infest the peach tree and those which infest other fruit, are much affected by the use of common salt as a top dressing to the ground about the roots of the tree. Mr. Downing relates that "in a neighborhood where the peach worm usually destroys half the peach trees, and where whole crops of the plum are equally the victim of the plum weevil, we have seen the former preserved in the healthiest condition by an annual application of a small handful of coarse salt about the collar of the tree at the surface of the ground; and the latter made to hold abundant crops by a top dressing applied every spring, of packing salt, at the rate of a quart to the surface occupied by every full grown tree." The refuse salt will do as well as any other for these purposes, but the coarser the better. That sort used for packing fish is far preferable to the fine table salt, because it dissolves so much the more slowly in the atmosphere. But salt is a powerful agent, and must be used in small quantities—particularly upon the plum. Too much, like guano, destroys every thing; and the application for two or three seasons is long enough.

Salt has not only been found useful in ridding fruit trees of worms, but it has been used with success, on a large scale, in farm crops. The cut worm is driven off by it. Three bushels sown to an acre is the dose.

But let us return to the peach trees. Our great enemy, the grub or *borer* as it is sometimes called, takes its origin from a moth

with four wings, of a slender body and a dark blue color, which deposits its eggs in the tender bark of the trunk near the ground during the early part of the summer. The egg becomes the grub, which lives in the bark till next summer, when it becomes a moth like its parent, and proceeds to the laying of more eggs.

We have mentioned two remedies, and here follows the third, perhaps better than either of the others. Heap half a peck of air slaked lime somewhat mixed with ashes around the base of each tree during the present month (May) and keep it there till the end of October. Of course the moth will not approach the tree, and the worms of the former year, which are already in the bark, will in all probability be destroyed in their attempts to leave it.

Either of these three remedies seems to us simpler and better than the common plan of searching for the worms and cutting them out with a knife.

The grub which infests apple and quince trees, the apple borer, is the product of a beetle, which flies only at night. Immense numbers of these beetles may be destroyed by kindling small bright fires in the orchards in the end of May and in June. Like the peach moth, it lays its eggs near the base of the tree, and the grub perforates the tree in every direction. Some persons kill them by thrusting a flexible wire into the hole that they make. Others put a bit of camphor into it, and then plug up the aperture with a peg of soft wood. But the best remedy is undoubtedly the lime, used as we have already advised for the peach.

But the injury done by these worms will never bear comparison with that which the apple orchard suffers from the caterpillar. How many fine trees do we continually see stript of their leaves and destroyed by this hateful creature. Yet no trees are destroyed by it save those of the indolent farmer—the means of getting rid of it being so numerous and evident. It is one of its peculiarities, to collect in large nests in the forks of the tree, and here they may be killed in great numbers. One method is, fasten a sponge to the end of a pole, dip it into spirits of ammonia, (or hartshorn,) and thrust it into the nest. Every insect touched by it will be instantly killed. Another is, a pole with a fork or brush at the end. This is to be worked about in the nest until the young caterpillars are thrown upon the ground, when they may be crushed. Another is, to tie a bundle of straw, shavings, pine twigs, &c., to the end of a pole, fire it, and let it burn in contact with the nest. This is a very effectual method, and we have often practised it with great success, and with no injury to the tree. The caterpillars which remain scattered about the tree, should be picked off and destroyed with the hand. An active lad with a small ladder, may do great execution in a small space of time.

The canker worm is another most mischievous enemy to the apple orchardist. It rises out of the ground very early in March, crawls upon the tree, and lays its eggs in rows over the bark. These are hatched in May and prey upon the foliage.

The tactics most commonly resorted to for defence against the canker worm, are to envelope the trunk of the tree with a piece of canvass, which must be smeared with tar. It is better not to put the tar on the bark itself, because its effect is injurious thereto. A circular leaden trough has been invented, intended to surround the trunk and be kept filled with oil, which is said to be effectual in preventing the ascent of the canker worm, but which is injurious to the tree, because of the nails necessary to fasten it around the trunk. These are the best methods to *keep off* the canker worm, but they must all be used very early in the spring. The best method of *destroying* the worm is to dig up the earth under the tree to the depth of six inches, pulverize it, and mix with lime; give the ground about the tree a good top dressing of the same. This must be done in the fall—say October.

The great enemy of all the smooth-stoned fruits, the plum, the nectarine, and the apricot, is a small beetle, known as the curculic, or plum-weevil. This insect lays its eggs in the fruit; the eggs become grubs; the fruit falls, and the grubs makes their way into the ground, from whence they come forth as beetles to renew their ravages on the fruit.

It has been observed, that the plum-weevil never troubles trees planted in a heavy soil, and that it is the tree planted in a light, sandy

soil, that they prefer. The plain course of action is, therefore, to make the surface of the earth under the tree of a heavy and compact character. A mortar of stiff clay as far as the branches extend, and to the depth of two or three inches, answers the purpose. A pavement is still better. We see many trees in this city, planted in paved back yards, &c., which are never troubled with them. If swine are allowed to run beneath the trees, or if the injured fruit is picked up as fast as it falls, the ravages of the plum-weevil will be effectually stopped.

The insect blight upon the pear trees is frequently a most disastrous thing. When the trees are in their fullest bloom and summer luxuriance, shoots at the extremities of the branches are observed first to droop, then to turn brown, and then black and dry. This is caused by a minute insect, which girdles the branch at the point when the withering begins. There is no remedy but to cut off the branch a little below that point, and to put it in the fire; and unless this is done when the disease makes its first appearance in the tree, it will prove exceedingly troublesome.

Most of the grubs, &c., which infest fruit trees, as we have shown, are the product of moths, &c. It is desirable to destroy these before they produce the grubs. That would be the best way of all if we could only do it effectually. They are all very much affected by strong odours, tobacco smoke, brimstone, &c. And a very simple and excellent method is to suspend among the branches a number of wide-mouthed glass vessels or jars, half filled with a mixture of molasses and vinegar. In a few days they will be found completely choked up with every species of moth and other insect.

All sorts of birds should be encouraged to keep about orchards; and every farmer should make it a plantation law, that no gun is ever to be carried into the enclosure. It is true some kinds of birds eat a few cherries and plums, but the service they all perform upon the insect and bug tribe is immense. Sparrows, wrens, and wood-peckers, should be held in especial consideration, and let no idle prejudice against toads and bats be the cause of their molestation. The former make way with great numbers of insects—all indeed that we can find near to the ground—while the bat lives upon the moths, weevils, &c., which inhabit the air.

CHEESE MAKING—KNOWING HOW.

The advantage of skill and exactness in cheese making are well set forth in an address by Col. A. Petrie, before the Herkimer (N. Y.) Agricultural Society:

"Some farmers make less than three hundred pounds of cheese per cow in a season, while others exceed six hundred. Perhaps some of this difference may be accounted for by the inequality of advantages, but I am assured by gentlemen, in whose skill in the art we have the highest confidence, that there is a great difference in the product per cow, when all advantages are equal. One case I will mention: A gentleman who had for four years made more than six hundred pounds per cow in a season, from a dairy of twenty-five cows, let out his dairy to a tenant, whose reputation as a common cheese maker, was of the highest order. He observed that the tenant's cheese was smaller and lighter than they should be, and suspecting the cause, watched the mode of making them, and found it to be like that of nearly all the cheese makers in the county—by guess. The milk was tempered and set, the curd scalded without a thermometer, and less care was taken in other parts of the process than he was accustomed to. He attempted to teach the tenant, who was rather prejudiced to "book farming"—reminded him of his reputation; the landlord, however, made a few cheese himself and the tenant looked on. These were found to be larger and heavier than the cheese made by tenant. The tenant then adopted the improved mode, and he could make as large a cheese as his friend. Both gentlemen now agree, that the improved mode increase the amount ten per cent. Now the tenant was evidently more than an ordinary cheese maker, for he would have made over four hundred pounds per cow during the season, but by the improved mode he made over six hundred."

From the Genesee Farmer.

AMERICAN AGRICULTURE.

We are in the receipt of all the agricultural journals published in the United States; and it gives us great pleasure to mark the new and able correspondents, and the increased editorial ability and spirit which they display.

We rejoice at this evidence, that the noble work of advancing American Agriculture will command, in the year 1848, the best service of more talent, more science, more learning, and more of invaluable practical research and experience, than it ever did before. From the energy, skill, and indomitable perseverance of so much American Mind, we anticipate, at no very distant day, vast and auspicious results. Compared with the length and breadth of the field now ready for the harvest, the laborers are indeed few. Better, however, than seed sown in good ground, they will achieve improvements, such as the world has never witnessed.

We are a *peculiar* People; and Providence in its wisdom has given us a *peculiar* country. Its very vastness, embracing almost every variety of climate, soil, and minerals—its immeasurable capacity to feed, clothe, elevate and render happy, civilized man, fill us at once with amazement at the grandeur of our prospective power, and with fear and trembling at the greatness of our present responsibility. To the Farming Interest of our country, its patriot sons ever look for a stable, conservative influence to sustain its dignity and honor, in the most trying emergencies. Confined to the mixed and impulsive population of commercial cities and manufacturing towns, the sovereignty of the people would be lost in anarchy and end in despotism. But a free and independent yeomanry, well versed in the theory and practice of a representative government, and far outnumbering the whole urban population of the nation, will, for many ages to come, control and shape the destiny of North American institutions. Nor will the Agricultural Press be wanting in power, for good or for evil.

From our boyhood up we have watched the signs of the times. They have been pregnant with mighty events. The period of quickening has arrived, and the day of delivery is not far distant. Agricultural education, imparting thorough mental training, and sound scientific attainments to the intellects of all that cultivate the earth, are measures next in order in American history. To this end agricultural reading must be more varied, and rendered more attractive to young and ardent minds. An effort should be made to build up a *rural literature* of our own. We are emphatically a reading people. Alas, what of good can we say of our most popular reading? A vile decoction, made by steeping a single grain of virtue in a thousand grains of vice and folly. This should not be, in a land of moral and intelligent parents. All editors of agricultural works, and their contributors, should aim to interest as well as instruct popular mind. Take the whole United States together, and not one farmer in thirty reads any agricultural paper whatever. Give each but one journal, (and thousands already take several,) and every publisher might increase his list of subscribers *thirty fold!* There can not be far from four millions of adult males engaged in agricultural pursuits at this time, in the Union. How few of all these see anything, or learn anything of the recorded experience of the thousands in this country and Europe, who write for the Press! That large class of farmers who never see an agricultural book or paper in their lives, or if they do, never study them, deserve more attention at our hands than they have yet received. While considering their position in this progressive age, and the poor advantages of their children, we often wish to have a fortune that we might appropriate its annual interest to the publication and gratuitous circulation of agricultural *tracts*, for the perusal of the million. We expend hundreds of thousands to circulate political tracts, and aid in putting down one party, and setting up another. If Congress and each administration would give a tithe of the money annually expended for party

purposes, to aid in diffusing a knowledge of agricultural science among our whole rural population, it would add immensely to the wealth and improvement of the country.

The soundness of the policy of imparting instruction to the popular mind may be regarded as settled. It is an open question, however, *in what way* all needful information in matters of science and learning shall be conveyed home to the understanding of the whole community.—There are over three millions of farmers who greatly need that knowledge of the laws of nature which agricultural journals and books are capable of imparting. But hitherto no effective means have been used to accomplish the object. At this time the Smithsonian Institution has over $700,000 invested, the principal of which was given "to diffuse useful knowledge among men." If a portion of its large income should be expended in publishing cheap tracts on rural topics, to be gratuitously circulated over the whole Union, and especially where few or no agricultural papers are read, great good might unquestionably be done. Considering how plenty paper, ink, presses, and type-setters are, surely all that can read should not lack for any useful information which the art of printing can furnish. Let its light shine in every log house in the land.

There are millions in the United States who have yet to acquire the habit of reading any thing more than the Bible, Pilgrim's Progress, or something of the kind. There are more still, who read—to no useful purpose, except to amuse themselves in an idle hour. The study of Agriculture and Horticulture in Common Schools, by the most advanced pupils, would do much to create a general taste for rural pursuits and improvements.

CORN COBS.

A friend who had read an article in some paper recommending corn cobs, ground or unground, as constituting a valuable feed for stock, undertook to test the truth of the statement for himself. He had a large quantity on hand, and after providing himself with a proper vessel, (half hogshead tub,) he filled it with cobs, and then with a solution of salt water. In this steep the cobs were suffered to remain till they had imbibed a sufficiency of the fluid to render them soft. In this condition they were fed out to his stock—half a peck to a full grown cow or ox in the morning, and the same quantity at night. He remarks that all his animals are extremely fond of them, and that they consume a much less quantity of hay and grain than before he commenced giving them cob feed. Neither do they require salt in its natural state. He has also ground several bushels of cobs, and finds the meal an excellent article for making "mush." The most economical mode, however, of appropriating corn cobs, is to grind them with the corn. The corn should be first crushed in a mill constructed expressly for the purpose, and then ground into meal, the same as corn when shelled.—*Maine Farmer.*

A READY RULE FOR FARMERS.

A "quarter of wheat" is an English measure of eight standard bushels—so if you see wheat quoted at fifty-six shillings, it is seven shillings a bushel. A shilling is twenty-four cents—multiply by seven, and you have $1 68 per bushel.

In Kentucky corn is measured by the barrel, which is five bushels of shelled corn. At New Orleans a barrel of corn is a flour barrel full of ears. At Chicago lime is sold by the barrel, and, measured in the smallest sized cask of that name, will pass muster. A barrel of flour is seven quarters of a gross hundred, (one hundred and twelve pounds,) which is the reason of its being the odd measure of one hundred and ninety-six pounds. A barrel of tar is twenty gallons, while a barrel of gunpowder is only a small keg holding twenty-five pounds, and this reminds me of cotton, a bale of which is four hundred pounds, no matter in what sized bundles it was sent to market.

FARMING AND READING.

Do you take and read an agricultural paper? Strange that a farmer, or planter, should think of doing without one. The merchant surrounds himself with his shipping lists, price currents, and all the means that can communicate information and ensure success; the lawyer's shelves are loaded with law journals, law reports, law commentaries, and law precedents, for he is sensible that without understanding what others have done, he cannot hope for triumph at the bar; so with the other professions, they must and do read, if they hope for eminence or usefulness. All are anxious to understand their own business, the farmer excepted, and too many of these are content to follow on in the beaten path, never reading, scarcely thinking, and showing no anxiety to know what science is doing for them, and what discoveries and improvements are making to aid and accelerate their progress. No man needs extensive, varied knowledge, more than the farmer; none can turn it to more profitable account. The whole growth of a plant from the germination of the seed to the ripening of the fruit, is purely a chemical process, and one that may be understood and known. The farmer is admirably situated to study and to interrogate nature. Let him read, observe, compare, reflect, and practice accordingly. Never act without system, nor do a thing because others have done it.—*Cult. Almanac.*

MILCH COWS.

Those who may desire their milch cows to furnish them supplies of milk, cream and butter, must provide them with nourishing slops, fodder and hay, as dry provender alone, and that of the coarsest kind, is but an indifferent substance to excite the milk vessels into action. The secretion of this delicious fluid cannot be carried advantageously on unless the cows be generously fed. In the latter case they never fail to repay their provender in a grateful measure. Warm, dry lodging and clean bedding are great helpers to the cow in her efforts to fill the udder.

FEAR OF INNOVATION.

An article is given by Sir Walter Scott, very pleasantly, of a fanning mill introduced into Scotland over a hundred years ago, and the objections to its use:

"Your ladyship and the stewart has been pleased to propose, that my son Cuddie should work in the barn wi a new fangled machine for dighting the corn from the chaff, thus impiously thwarting the will of Divine Providence, by raising wind for your ladyship's own particular use, by human art, instead of soliciting it by prayer, or waiting patiently for whatever dispensation of wind Providence was pleased to send upon the sheeling hill."

This fanning mill, it seems, was introduced from Holland in the year 1710, by Fletcher of Saltour, and its use was publicly denounced from the pulpit, as impious. But innovation is not so much feared now; and to see a farmer plowing in the same furrow, his grandsire turned, is not so common as it was thirty years ago.

GETTING ON THE RIGHT TRACK.

Mr. Magruder, a planter of Columbia county, Ga., communicated to us, verbally, the following interesting facts:

First—That his plantation is badly worn under the old system of cropping or planting alone.

Secondly—That by manuring, sub-soiling, and planting corn in rows three feet apart, and allowing one stalk a space of eighteen inches in the row, he has grown the past season eighty-four and a half bushels of shelled corn on an acre, and seventy-nine bushels the year before on the same ground.

Thirdly—He sells all his butter in Augusta at twenty-five cents a pound, and finds that by keeping up his cows and cooking their food, he gets twice as much milk and butter as he formerly did. We say, from our own experience, that one-half of his milk will pay all the expense, leaving him a net profit of one hundred per cent., while the annual improvement of his neat stock, by their superior keep, will, should he have fifty cows, amount to a handsome sum.—*Southern Cultivator.*

WIRE FENCE.

Messrs. Editors :—Being a practical farmer and a subscriber to your valuable paper, I desire to contribute something to aid the farming interest, by making a few suggestions on the subject of wire fence, for the consideration of the tillers of the soil, which I cannot but hope may lead to some practical results, that may prove highly beneficial to many who are engaged in the noblest pursuit that ever occupied the mind of man.

The writer of this, having lately learned that posts and wires have in some places been substituted for other materials for fence, has taken some pains to ascertain the comparative value of making it, which may be done as follows: First set one post of common size firm in the ground, and place in it a long screw or small windlass, with a small rag wheel at or near the top where the upper wire is designed to be; then fasten one end of the wire to the screw or windlass, and extend it to the other end of the fence, whatever the distance may be. There set another post, to which fasten the wire as at the beginning; then turn the screw or windlass at each end, until the wire is as tight as desired, when it will be ready to receive as many intermediate posts as may suit the fancy—which posts, it is believed, need not exceed two inches square of *hard wood*, which can be sharpened and very easily driven into the ground, on a line with the wire, to such depth as may be necessary. Extend as many wires as desired to accomplish the object. Let each wire be fastened to each intermediate post with common tender hooks, with the hook part so bent over as to fully secure the wire in its place. Four wires, it is believed, will be sufficient to secure sheep, as they do not get over a fence unless they can first jump on to it. The wire may be of such size as best suits the fancy. No. 16 is no doubt sufficient—which, for each rod of fence of four wires, will not cost, at the wholesale price, more than nine or ten cents; and such posts as above described will not cost more than one cent each, and one to a rod will be sufficient, as the whole line of fence from one end to the other will be all united to resist any presure against it, and for that reason the posts may be small and set but lightly in the ground.

Such a fence could not be disturbed by the wind, and should the posts be raised by the frost, it would be but a small matter to drive them down to their proper place. If any fear exists that the wires may contract in cold weather and break, it will be very easy to turn the screws or windlass at the approach of frost, and leave all secure. Fences may be made on the same plan to secure any other kind of animals, but for the larger kinds it is not unlikely that it will be advisable to place a cap board on top of the posts. How durable such a fence may be remains to be known hereafter; but it is highly probable that the wire would endure for many years, if placed on the sun side of the post, even without paint, which can be applied if necessary. Such a fence could be more easily moved than any other; all that would be necessary, would be to unfasten each end of the wire, and wind them on a reel, and remove the posts to any place desired, which could be very speedily accomplished.

Yours, &c., H. C. W.

Auburn, N. Y., Jan., 1848.

The subject of the foregoing letter is attracting a great deal of attention in some parts of Virginia—and indeed in the middle states generally. We rejoice to see it. If we cannot get our Legislature to repeal our odious and tyrannical fence law, all plans which go to diminish the sum with which we are robbed of by it, deserve great attention. The wire fence will in the end do this to a very considerable extent; and if it will prove as serviceable as here, as we are told it has done elsewhere, it is a great invention. Whether it *will* answer the sanguine expectations formed of it has yet to be seen. A very fine specimen of this sort of fence is now in course of erection upon the well manured and well arranged farm of Mr. Wm. Crump near this city, and we shall then have an opportunity of observing its operation. We would mention one fact, however, which we derive from those who are conversant with this fence, that

it is absolutely necessary to have a strip of board nailed along the upper part of the posts. The cattle do not see the wires, or regard them as too small to be an impediment, and either injure themselves or break through by plunging against them.

AMERICAN vs. ENGLISH IMPLEMENTS.

A Mr. Slocum has taken over to England a variety of our Improved Agricultural Implements for a trial against their far-famed articles.—Plows, Fanning Mills, Scythes, Cradles, Rakes, &c.—and the trial by a committee eventuated as follows: the best Northampton and Howard's Champion Plow required to turn a furrow on a clay soil five inches deep and eleven inches wide, a draft of four hundred and twenty; the American Plow five inches deep and fourteen wide, three hundred and sixty-four. The next trial was at eight inches deep, and eleven wide; the English Plow required six hundred and forty-four pounds, the American five hundred and eighty-eight pounds. The triers remarked: "In justice to the American Plow, we must say, they cut and turned their furrows quite as well as the others, breaking the land to pieces; indeed they are the most simple, light, strong, efficient Plows that it is possible to conceive."

The Fanning Mills were equally as superior. They say, with the exception of cleaning out white caps, they "are quite equal to our best machines, and one man is able to fill more chaff into it, than two can put into any of our machines; but its greatest recommendation is its cheapness, simplicity, efficiency and expedition.—Mr. Slocum's Hand Machines are the strongest, lightest and most perfect articles that ever came under our notice."

This result is rather creditable to the ingenuity, and good judgment of the "Universal Yankee Nation." It is what the boys would call, in common parlance, "teaching their grand daddy's how to suck eggs."

Sheep put into fresh stables are liable to be killed by eating too much grain.

MANURES.

The *Girardin des Fumiers* says: It would certainly be very useful, if the specific properties of every kind of manure were carefully studied, so as to acquaint us with the quickness, the strength, and the duration of the action of each, in order that we might apply to every soil and every crop exactly, and without hesitation, that which is most suitable. What has hitherto retarded the acquisition of this knowledge is the universal custom of throwing pell-mell, all the manure of the farm-yard into one receptacle, under the idea that this mixture of manures is best for all kinds of soil. This practice is well enough in an alluvial soil, where all fields are of the same character; but in general practice, especially upon large farms, where more varied soils come under one cultivation, I would advise not to mix the manures, but to apply to each field that manure which is most suitable to it. In the present state of our knowledge, it seems advisable to recommend the application of the cattle manure to dry sandy, warm situations, and horse and sheep manure to cold, damp soils.

DEPTH OF PLOUGHING FOR CORN.

The proper depth to plough for corn, has long been a subject of controversy among farmers; the advocate for subsoiling, pulverizing the earth to the depth of 14 inches; the medium farmer turning up the earth six or seven inches deep; and the shallow plougher only skimming the surface to the depth of three or four inches, and each point to equally good crops produced, as an evidence of the correctness of their system: hence, 'when doctors disagree, who is to decide?'

If shallow ploughing is as productive as deep, there is a great saving of labor in the operation, which is quite a desideratum in breaking up hard, stiff soils in warm weather. I commenced farming with ploughing six or seven inches deep for corn; and after pursuing that system for a few years, I was told that subsoiling was the true principle. Upon trial, I

found it to be laborious work for man and beast, without a corresponding benefit, except to root out stones that the eye of man had not looked upon before, at the expense of sundry sore punches in the ribs, by the stilts of the machine, besides I never could perceive subsoiling to be the least benefit to the crop. Being satisfied with this experiment, I next proceeded to test the difference between ploughing a field in alternate lands at the different depths; and contrary to my expectations, the shallowest ploughing produced the best corn. I have since repeated the experiments, and always found shallow ploughing to be as good as deep for corn.

I know this to be contrary to the opinion of many of our most eminent farmers; but did they ever try the experiment in this manner? The theory of deep ploughing is good enough, but theories as many a city farmer has found to his cost, are sometimes fallacious when applied to farming.

Suppose the friends of deep and shallow ploughing, try the experiment of ploughing different depths in alternate lands for the coming corn crop, carefully noting the depth, time of ploughing, kind of soil, and mode of culture, and giving the result to the public next fall, through the columns of the Telegraph. The pleasure of employing the experience of others, will amply compensate for the little trouble of noting down the progress and result of the experiment.—*Germantown Tel.*

For the Southern Planter.

FENCE LAW.

Mr. Editor,—I observe in some of your late numbers, that the Virginia Fence Law is attracting a good deal of attention. The principle of this law appears to be, that each farmer or planter is obliged to fence *out* his neighbor's cattle, instead of fencing *in* his own. Each farm or plantation is, under the present system, to protect itself against the inroads of all nomadick horses, hogs, mules, jack-asses, horned cattle, &c. Each farm or plantation is thus, in the eye of the law, subject to be in a state of continual siege, and whenever the beleagueing cattle can find or make a breach in the fencible outworks, they are entitled to the usual rights of conquest. This is in accordance with Hobbes' maxim, that the natural state is a state of war. The fence law is universally belligerent; it allows letters of marque to all four-footed beasts, and every land-holder, of fifty or five thousand acres, is in the condition of perpetual se defendendo, and must incessantly be performing the grand rounds. The old principle, that a man must so use his own, as not to injure his neighbor's, seems in this case to be lost sight of. The word cattle, (catalla,) is very comprehensive, and includes, I think, *bees*, which though they sting, are yet not ferœ naturæ—that is, they are not wild beasts, for, as sayeth my lord Coke, their stinging is not animo feroci, from a savage disposition and in wantonness, but only se defendendo, in self-defence, and when magnopere provocatæ—excessively provoked. So far from being *wild* beasts, it is well known that they only accompany the footsteps of civilization. Now if it is legitimate to let loose horned cattle, horses and other great beasts, to enterprise upon the weak points of neighboring fences, a fortiori it is right to carry on a petty Guerilla warfare by means of the light infantry, flying artillery and lancers—the bees. For example, an amateur of bees might establish an apiary in the vicinity of a grocery, where sugar is a chief commodity exposed for sale. In a fine summer morning, perhaps the bees of a more refined and poetical temperament, would betake themselves to gardens, orchards and meadows, but the majority, no doubt, being of a more practical turn of mind, will invade the grocery; the old reeking sugar hogshead will be their regular rendezvous, where they will buzz and hum, wheel and dart and crawl. The grocer will be driven to the ultima thule of his counting-house; the clerks will have to be always on the qui vive, and must occasionally be stung. The loss of a few pounds of sugar might be borne, but the society of the

insect privateers would be intolerable. Nor would it much lighten the annoyance of the grocer, to be told, that every man has a right to keep bees, and that he who is annoyed by them, has only himself to blame for not making his fortifications more complete. As in a retail store, it would not be convenient to keep the windows and doors *always* closed; the only alternative that occurs to me, would be for the grocer to employ *bee-flappers* to be constantly on guard, armed with large flaps of leather, to prevent the incursions of the enemy, or to dislodge them when they got in. It might as well also to keep a lump of assafœtida burning on the counter, and occasionally, in case of an extraordinary onset of the enemy, to beat up their quarters with some dozen or so of Chinese gongs. Whether in case a bee should be killed, an action of trespass would lie, I am doubtful. If it should, the complaint would be probably "for making an assault in and upon the body of A. B., with intention to maim and disfigure the said B., or do him some other great bodily harm, against the peace and dignity of the commonwealth and the statute, in that case made and provided."

A. B.

April 26th, 1848.

FRESH *vs.* DECAYED MANURE.

The Pharmaceutical Times says:—"M. KOERTE, professor at the Royal Academy of Agriculture, at Mœglin, in Prussia, made some years ago, a series of experiments to ascertain whether it is more economical to use fresh or decayed manure, regard being had to the relative proportion of each. I subjoin the principal results of his experiments. 1. Manure exposed to the influence of the atmosphere, in heaps or layers, continually loses its fertilizing principles, and its bulk diminishes in a corresponding proportion. A hundred loads of fresh dung are reduced at the end of 81 days to 73.3 of its first bulk, or loss of 26 7; 254 days, to 64.4 of its first bulk, or loss of 35.7; 384 days, to 62.5 of its first bulk, or loss of 37.5; 493 days, to 47.2 of its first bulk, or loss of 52.8. 2. The loss was much more considerable in a certain time, at the commencement of its decay, than at after periods of this change, as Gazzeri had previously ascertained. 3. Less loss is sustained when manure is spread in layers on the land, and well pressed, than when in small heaps; so that it is advantageous to spread it in layers on the land, and roll it, when it cannot be immediately plowed into the soil. 4. Although it is impossible to state exactly the loss of bulk of manure when allowed to lie for a long time in the heap, we shall not be very far wrong in stating that in common circumstances it is at least one-fourth of the whole: so that one hundred cart loads are reduced to seventy-five. M. KOERTE concludes from his investigations, both on a small and large scale, that it is more advantageous to carry the manure at once, in its fresh state, to the land, (and this is more particularly the case with sheep dung,) than to wait until it has decayed; and this rule should be invariably followed, taking at the same time into consideration the nature of the land."

THE "GOWEN" AND OREGON CORN.

The "Gowen" corn is a new variety now attracting some attention in Pennsylvania. A letter from its originator contains the following extract:

"The corn does not exhibit a uniform character, which should be explained, as I did to you last fall. It is a mixture or an attempt to blend three distinct sorts into one, with the view of holding all the good of the three, and rejecting the bad points. The celebrated "Cooper Corn" was too small. The Mexican Gourd, red cob, was too short in the ear for its thickness, was late ripening, but it was the most prolific, though it wanted consistency—a little more flintiness. To give it length and soundness, I planted it with the "Cooper" and the old long eared "Pennsylvania eight row flint." I have, as you may observe, succeeded admirably so far; but it will require another year or two's planting to combine and determine

it into a distinct sort; but, alas! who will regard this? Should I give it to them in the perfection I hope yet to bring it to, they would not take the pains to keep it apart from other inferior sorts, nor even put themselves to the trouble, when husking, to cull the best for their next season's planting. Cattle, swine, sheep, &c., all, are doomed to the same untoward practice. But I have now made a beginning of that which long filled me with hope, when I found all other hopes to have mocked me—that is, the School to train the gentlemen, who will know what to do and how to do—men, who will shine as beacons from afar to pilot the bewildered safely to the desired haven, and may be, to shed a glimmering upon my humble grave. My heart is full with this. May God prosper the feeble effort! 'Tis a momentous one to me.

Ever yours, sincerely,

JAMES GOWEN.

N. B.—The "Mexican Gourd Corn" here spoken of, with red cob, is what the fools are now being humbugged with by fools and knaves, who sell it as "Oregon." This sort has been planted by me for years, and has been in this neighborhood long before I was known, and it is the basis I have been working upon in the cross-breeding upon it to improve it.

J. G."

Mr. G. says that the corn now known as "Oregon" has long been known to him, and that it is no other than the "Mexican Red Cob" mentioned in the foregoing letter. It forms the basis of the new variety of which he speaks.

HOW TO RAISE FINE BEETS.

Mr. John Wright of Appomattox has produced a crop of beets, the largest of which are from 20 to 22½ inches in circumference.—Who'll *beat* that? His method is, to manure pretty well with stable dung and the scrapings of his hen-house floor early in the winter, with enough ashes to ensure the decomposition of the stable dung. This is as powerful and as effectual as any system of manuring that has been ever yet invented. In May he sows the seed in drills, 18 inches apart. As soon as the beets make their appearance he pours on from time to time all the soap-suds raised in his laundry. This is also an excellent practice; and in our opinion every good gardener will save every drop of soap-suds raised in his establishment. The proper time for their application is in the evening, after the sun goes down; if they are applied while the sun is shining hot, they are very apt to kill the plants. Of course they should not be applied while the ground is wet from a fresh rain—for the ground will thereby be reduced to a mortar by too great a supply of moistures.—One beet only should be left to every eight inches. By these means Mr. Wright has been able to bring the common red table beet to perfection.

From the Cultivator.

CULTURE OF THE POTATO.

Messrs. Editors,—There have been a thousand and one attempts to explain the cause or causes of the potato rot, and as many remedies suggested, most of which, in whole or in part, appear to be unsatisfactory.

I am not about to theorise upon this subject, but shall simply deal in matters of fact, as they occur under my management of this crop on my soil, leaving the reader to judge for himself whether the same management would be attended with like success with him.

There is one system of management by which I have thus far never failed of raising fine, mealy and sound potatoes, that keep well the season round. I select a piece of green sward land, of sandy or gravelly soil, that has never been subjected to a course of manuring and cropping; (a piece of pasture land is best, and if it never bore a crop of potatoes it is still better;) and plant it as early as possible to potatoes *one year*, without manure. A table spoonful of plaster, or a handful of unbleached ashes, or a mixture of both, put into the hill at planting time, will well repay the expense. It imparts considerable vigor to the growth of the crop in the fore

part of the season, and also increases the yield somewhat. It will be observed that I do not prescribe this application in the shape of a nostrum, to prevent the rot, for it is my impression that applied or not applied, is all the same as to the soundness of the crop.

In digging them in the fall, I am careful to dig when the land is tolerably dry, and their is a prospect of fair sunshine. They are dug out of the ground in the forenoon, and lay scattered about to dry in the sun till two or three o'clock in the afternoon, so that no *moist* dirt shall adhere to them, for I find that potatoes put into the cellar in a damp state, are much more likely to rot than those which are put in dry. I also delay digging them as long as possible, but by no means so long as to encounter a hard freeze by which the potatoes are affected, for in that case they will surely rot. The bottom of my potato-bin is made of plank, raised up the thickness of slit work from the bottom of the cellar, and the sides of narrow pieces of boards, not quite tight together, which admits of a circulation of air on all sides. The bin should not be more than three or four feet wide for the same reason. Potatoes keep best in my cellar not to touch the bottom or the walls on the side, as dampness is imparted to them from both these causes. For this reason the back side and ends of the bin should be of boards as well as the front and bottom. Every clear, cool morning, until the freezing weather of winter sets in, the cellar doors are opened two or three hours for ventilation. A thing which should always be practised where a considerable quantity of vegetables are stored away.

It is true that potatoes will not yield 4, 5, or 600 bushels to the acre, on land of moderate fertility, without manure; but I get 150 to 200 bushels of excellent quality, and by using care in gathering and storing them, they keep well through the season.

The first year that the potato rot made its appearance in this section, I planted three rows wide of potatoes around a cornfield of eight acres, for the purpose of turning the horse more conveniently in working among the corn. The field was a little broken in surface, and embraced several qualities of loam, some rather coarse gravelly spots, some more sandy, and some, through the hollows, rather compact and fine-grained. I had the curiosity to mark the result upon these three rows of potatoes through the season. The vines blasted and died off early in the season, where the rows encountered the compact and moist soil in the hollows, while those on the gravelly and sandy spots held green and thrifty, and in harvesting were found to yield more in quantity and better in quality, than in the hollows, and more fertile parts of the field. The result was entirely at variance with all my former experience in growing this crop. I had previously always selected such kind of soils as these rich and moist, but not wet, hollows, obtaining from them a large yield and good quality of potatoes.

Last spring I planted two bushels of my table potatoes in the kitchen garden, which had been heavily manured, partly by way of experiment, and partly because I had no particular use for the land. In digging them this fall I found, as I expected, not one quarter of them sound, while seed potatoes taken from the same bin, and planted on a piece of pasture land, without manure, where my main crop grew, gave me a return of perfectly sound potatoes. I leave your readers to draw their own conclusions, whether or not these two cases which I have given, go to substantiate the method of growing this crop which I have recommended.

F. Holbrook.

Brattleboro, Nov. 25, 1847.

TRANSMUTATION OF WHEAT.

The Ohio Cultivator says that a correspondent, who does not complain of his wheat turning to chess, says that it has been turning to timothy; and what is still more unaccountable, he has had much difficulty in preventing his *corn* and *potatoes* from turning to *weeds*. A writer in the same paper says when the growth of the wheat is good, the chess is stunted,

small, and escapes notice; but when the wheat is killed, it stands out far and wide, and that he has counted 78 stalks of chess from one seed, showing an increase of 1560 fold.

For the Southern Planter.

WILD ONIONS.

Dear Sir,—Think it not strange that I now trouble you with this communication. We are very much infested with the wild onion or garlick. They are in our grain fields and pastures. The wheat is so impregnated, that we can scarce use the flour—the milk cows eat them, and the milk and butter taste so much of the onion, that they cannot be used. We call on you and the readers of your paper, if you can find out any remedy, you will give it to us in your paper. I beseech you if you can find out any way, whereby we can destroy them, you will not fail to to let us know it through your paper.

Yours, &c.,
THOMAS G. WATSON.

Buckingham Co., April 27th, 1848.

We recommend Mr. Watson to give the lands infected with this most troublesome pest, *a few hoed crops, and heavy liming*. He will not have much difficulty with it afterwards.

WASHINGTON'S AGRICULTURAL CORRESPONDENCE.

We have received a copy of this beautiful Quarto from the publisher, Mr. Franklin Knight. It contains some of the most valuable investigations into the soils and productions of Virginia which have ever been published, and an able discussion of the "profits of farming" in our part of the world.

While the great Washington lived, it was thought that without his name and support, no object of national importance could be safely undertaken. Nor was this confidence confined to matters of a public nature. In all kinds of business he was able, and was often called upon to give advice, in cases in which he had no experience; for his great mind gave him the power to judge from analogy and reflection where he had not observation to guide him.

If is as a soldier, and as a statesman that we are most familiar with him. On the questions of war and politics none in the main appeal from him. Why should not also the agriculturists place great dependence in him? Washington was one of the first, if not the first farmer of his day. Agriculture was his first and favorite study. In the cultivated field his practice was as excellent as his tactics skilful on the field of battle—his maxims of husbandry as wise as his political precepts. So important did he consider the position of the American farmer, both to the wealth and prosperity of the nation, that he himself setting the prime example, devoted all his leisure time either to the culture of his farms in person, overseering and directing all things with his own eye, or in conducting an extensive correspondence on the subject with some of the most experienced men in Europe.

These LETTERS TO AUTHORS YOUNG AND SIR JOHN SINCLAIR cannot therefore be too highly prized, presenting as they do the opinions of one so practical and scientific; and as coming from Washington, exclusively of their internal merit they are worthy of the highest regard of every American citizen.

Besides the letters of Washington, Sinclair and Young, the volume contains statistical tables and remarks from Jefferson, Peters and other distinguished men of this country who have devoted themselves to agriculture.—There is also a fine collection of *fac simile* letters, a magnificent portrait, and several other plates.

CAST IRON CHIMNEY TOPS.

The various uses to which iron is being applied are increasing daily. Within a short time it has been used for ornamental chimneys. They are considered to be far more durable than brick—they are at least far more beautiful in design.

Keep notes of all remarkable events on your farm.

CONTENTS OF NUMBER V.

P. D. BERNARD, PRINTER,
NEARLY OPPOSITE THE EXCHANGE BANK.

To Subscribers and Postmasters.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

☞ All Communications, concerning the Planter, must be addressed

P. D. BERNARD, *Richmond, Va.*

☞ For Terms see last page.

AGRICULTURAL SCIENCE.

We understand that a bill appropriating two thousand five hundred dollars a year to found an Agricultural Professorship in the State University has already passed or will pass the Legislature of Georgia. In the South Carolina College, at Columbia, there is an agricultural professorship. So also there is an agricultural chair in Yale, so also in Harvard. We would be glad to see these good examples followed in Virginia. We would be glad to see an agricultural chair in our own University at Charlottesville. Why should there not be? Is not agriculture a science, and an important science? What other science is half so important to us? We are a nation of farmers. Nature has decreed that by our broad lands we should live. Agriculture is the true profession of every Virginian born. Why should not our State make the same effort to advance it as she does other sciences?

We think it would be beneficial in many ways, not the least of which would be the lessening of the absurd prejudice existing in the community against the application of chemistry and other sciences to the cultivation of the soil. If our young men were taught something about agricultural chemistry at college, as well as Greek and Latin, they would cease to despise it, and they would teach its utility to those around their estates. Nearly *all* agricultural processes are chemical experiments. The benefit resulting from the application of lime, the application of stable manure, of the sun's heat, and of the rains, is all effected by chemical combinations according to chemical laws. How great a waste of resource would not an extended knowledge of those laws save us. A piece of land is poor, that is, it will not produce corn. *Why* is it poor? Because it no longer contains certain substances necessary to the production of corn. By a chemical analysis we can find out the various substances which enter into the stalk and grain of the corn, and by chemical analysis we can also find out which of these substances the ground lacks. We would thus know exactly the kind of manure to put upon it. No land lacks *all* the elements necessary for the production of any crop. Some it has in plenty; all that we have to do to make it rich is to put in the elements which are wanting. When we do not know what these are, it is all chance work, and we may put on the soil much manure of a kind not wanting at all.

We do not pretend to say that knowledge of agricultural chemistry, &c., is necessary to make a successful tiller of the soil. But persons who have not that knowledge must act according to the rules which are established by the experience of those who have. There should be a greater number of persons in the community who are acquainted with these things. Some effective measure on the part of the State might secure this object. It would also, as we said, do away with the absurd prejudice against agricultural science, and against agricultural journals, the organ of communication between those who are acquainted with this science

and those who are not. It would also do away with the necessity for such sketches as the following:

Look at the roofs and see their graceless and disconnected proportions. The siding, as you see, is of all widths, and of all varieties of material. Here a wide hemlock board, loose at one end to catch the flying breezes of summer, or give octave to the harsher notes of winter; while there the absence of outer screen permits the storms, in playful fancy, to search into the firmness of the winter walls.—The windows, too, show marks of strange fantasies of taste, by exhibiting, at paneless intervals, patchwork of many-colored shreds, single-panes, openwork of cooling dimensions. Around the premises, the wreck of what should have been the last fence to have fallen, shows the broad port holes through which destruction sends its powerful missiles. That was never a neat and tidy fence. In its creation it was but the counterpart of fell decay.—The barn, which, next to a man's house, should be his castle and his tower of strong defence, as you see, like the owner, has lost the centre of gravity, and is going down to share the fate of all things. The roof, now, serves no other purpose than to riddle the storm, and give strange pastime to the winds. The siding, too, as you must notice, is composed of boards confined only here and there with a nail, which leaves them hanging, like malefactors, to the mercy of the elements.—The doors, unhinged, play antic capers in the blast and fall. That load of hay, just at the threshold of the barn is left because, through the failure of a single strap in the harness, it could be taken no farther; and the poor farmer has gone three miles on a pleasant day to get a new one in its place.

Not a tree greets your eye in all these premises; but broken carts, wagons, and old ploughs occupy the places where the pear and the peach should luxuriate: and the swill-tub has tumbled over in the last stages of decay, where the rose and the myrtle should bloom.

Observe the gauntness and wan appearance of the animals. The cow, as you see, is approaching the dwelling, as if to hold sympathy with the sad mistress of misfortune's home. How feeble her gait, and how wan her countenance!—And why should it be otherwise, when her only food is gathered among the brambles by the wayside, and her only drink from the filthy frog-pond in front of the dwelling! See that starving swine, just driven from the meadow. Its features have stronger resemblance to the wild boar of the East, than any thing of American origin. Yet it looks like an animal adapted to its circumstances; therefore, it is perfectly in place in its present locality.

Go into Philip's dwelling, and examine among the scanty furniture for the library, and not a solitary work will meet the eye; or listen for the sweet sounds of music, and not a note, but those of discord, will greet the ear. Ask him if he takes an agricultural paper, and his reply, from a countenance exhibiting bewilderment beneath his old slouched hat, will be,

"No; I reckons I knows as much about farmin' as these 'ere chaps can tell; and as for them city fellers that write, they don't know enny more about it than the old hoss."

Attempt to explain to him, if you have patience to parley with the mope, the benefits that agriculture is receiving from such papers, and the labors of scientific men who make them their organs of communication, and his wise reply will run something in this wise:

"I don't keer for your orgins nor your skientifics. I knows enough about farmin'; and, besides, I 's not a farmer: I trades and spekerlates."

Poor man! he is right once; he is not a farmer, and nature erred as widely when she planted him on a piece of land, to dress and keep, as she did in forming such a miserable clodpole in the likeness of dignified, intelligent man. Urge him, for the sake of his rising family, to take an agricultural paper, and he will tell you,—

"Humph! my family must take care of themselves," (we wish they had spirit enough to do so,) "and I take care of

myself. My boys! they won't be dirty farmers, and work all day in the sun; they want'er to be merchants, and live like gentlemen in fine housen."

"Have you ever tried any experiments with fruit?"

"I doesn't try experiments; it don't do no good. There was some fruit trees here when I come, but they didn't do much, so I cuts them down. I don't set out any fruit; takes them so long to grow, one may never live to get any good on 'em."

NEW HEMP-BRAKE.

The Maysville Herald gives a long and most interesting account of a new hemp-brake invented and put in operation in that place by Dr. O S. Leavitt, recently of this city. The machine breaks unrotted hemp, and in the opinion of the editor of the Herald, who has seen it in operation, it is destined to bring about at once a great and most important revolution in the hemp business of the West. He has seen it at work for hours, and, by his description of it, it is certainly a wonderful machine, breaking and cleaning at the rate of 2,800 pounds of hemp in twenty-four hours.

From the Journal of Science and Agriculture.

THE GOOSEBERRY.

That useful and valuable fruit, the gooseberry, which is now considered so important in Europe, is with difficulty raised here, the berry so soon becomes scabbed or covered with a dirty fungus. This takes place, too, in gardens where every care has been bestowed on them. This excess of attention in keeping them free from weeds and grass, and exposing them to the hot weather of August and September, proves highly injurious and contrary to their nature. I am fully convinced, after much observation, that the mode of culture with gooseberries in England, will not apply to this region. I have had ample opportunities of witnessing what has been accomplished in England, and what has been attempted here, and now see the cause of failure. In the notes I have kept on the progress of vegetation and the ripening of fruits for 1837, which was a remarkably wet season, there is the following entry:

"July 12.—The gooseberries this year are better than I have seen them for several years past. The shrubs as well as the fruit are less coated with a fungus which spoils the berries."

It appears, therefore, that a wet season is peculiarly suited to the gooseberry.—That the season of 1837 was remarkable for its wetness, will appear from the following table kept at Albany, New York. (See Report of Regents for 1838.)

Rain.

1837, April,	1 inch	63	hundredths.
May,	7 inches	34	"
June,	5 "	06	"
July,	4 "	38	"

It is satisfactory to find that a wet season, which is injurious to many fruits, causing them to decay rapidly, is congenial to the Gooseberry. The season of 1846, as to the amount of rain, has resembled that of 1837, and has suited this fruit.—With this knowledge, we may hope to commence a new era in the cultivation of the Gooseberry, which may be highly useful in some sections.

I would here briefly state, that the secret and success in cultivating the Gooseberry in this place, free of scab, and securing a full crop, is to grow them in grassy places, or grass borders sufficiently wide, and allow the grass to grow rather luxuriantly among them, until they have attained their growth, and are thereby secured from the forming scab. When the berries begin to ripen, the grass should be cut, being no longer required. I saw, many years ago, in Vermont, some excellent Gooseberries growing in wet shady places, and among grass and plants. I also, most unexpectedly, found a stray Gooseberry bush growing among tall rye, and bearing a full crop of excellent fruit. I give these instances to show that the Gooseberry is

fond of shade and moisture in this climate, and to grow them with success in the garden, abundant dew and moisture must be provided, and this the grass fully supplies.

There are two gardens within the limits of this city, which have produced gooseberries from year to year, *entirely free of scab*, when all others, we may say, generally had their fruit ruined. These, I ascertained, were grown rather by negligence than design, at first among the grass. One of the gardens belongs to the Rev. Dr. Jarvis, the other to Mr. John Bliss. The latter assures me, he has not failed during about twenty years in having his gooseberries free from the scab.—I purposely watched these gardens attentively, as well as several others, to give a faithful report of this novel mode of culture, which promises so much. I found them nearly ripe, July 4. The berries were of the red kind, of a medium size. The bushes required the aid of props to secure them from breaking under their load of fruit. As to quantity, I was highly gratified to observe that they bore as largely as the best examples I had seen in England.

The gooseberries in the garden of the Rev. Dr. Jarvis, grew on a long strip of grass, about four feet wide. They are not, I apprehend, the largest and choicest fruit, and at first did not keep pace with some of the later imported kinds. The grass, instead of being cut, was suffered to grow among the bushes. I was struck with the luxuriant manner they grew, from the wet and dew thus afforded. While the grape and cherry were rapidly decaying, the berries of the gooseberry were entirely free from decay, being clear and bright skinned. Those in dry grounds were much diseased, and the bushes had become a nuisance.

I have already adverted to the peculiarity of the blossoms of the currant, resisting heavy rains. The gooseberry blossoms are similarly constituted, and entirely different from the flowers of the grape, the apple, the peach, and the plum. I have thought that grass may be farther serviceable to the gooseberry, by abstracting from the soil those substances which foster the growth of minute fungi. This, however, is offered rather as a matter of conjecture, than from actual proof, and requires farther investigation to determine.

I do not expect that the plan recommended will be perfectly successful the first year, after the removal of the gooseberry shrubs among grass, or when sodded, though I do in the second season.—The forming buds are injured, and the bark diseased by exposure to hot weather during the months of August and September, when they are not protected by grass, and sufficiently supplied by dew and moisture. The gooseberry is a dew-loving plant, and must be supplied with moisture, otherwise it cannot flourish here as in Europe.

The wild American strawberry furnishes another striking example of a berry growing among grass. This seems its favorite place, or habitat, as the botanists would say. They grow in grassy meadows in argilaceous soils, (which are best adapted to hold moisture,) much better and sweeter, than when suffocated among their own dense leaves in the garden.

I remember to have seen a garden in England, devoted to the cultivation of the strawberry, where the leaves and vines became too luxuriant, and they yielded but little fruit. As an experiment one bed was underlaid with a reddish clay, fit for brick-making, and nests or a mixture of soil was prepared for the strawberry plants. The difference was most striking; it seemed as if this bed was all fruit, and the others only leaves. I have observed some similar examples of this preference to clay in meadows, in new cleared lands in this country, where the wood ashes and carbon of the burnt brush had given the highest perfection to the fruit, without the luxuriance of foliage which causes so much trouble. When left to nature they travel or plant themselves, by means of running vines they put forth.

In my botanical excursions in England, I do not recollect finding the strawberry growing in grassy places, as in North America. I have turned to Gerard's fa-

mous Herbal, printed 1597, for his experience in this matter. He says: "strawberries do grow upon bills and valleies, likewise in woods and other such places that bee something shadowie, p. 845."

The same author, also, describes, and gives a figure of the gooseberry, p. 143, and mentions one whose fruit "is almost as bigge as a small cherrie, and verie rounde in forme; also another of the like bignes of an inch in length. We have also in our London gardens, another sort altogither without pricks, whose fruit is is very small, of a perfect red color."

This early notice shows the little progress then made in the cultivation of a fruit that is now the pride of the Lancashire weavers, and not less esteemed in all the large cities of Great Britain.—The English markets are now largely supplied with the gooseberry. They have grown this berry weighing 31 pennyweights and 16 grains! which is a little more than one ounce and three-quarters avoirdupoise Twenty-five pennyweights is regarded as a good weight for a gooseberry.

IMPREGNATION OF VIOLETS.

Thomas S. Rulf, Esq., pointed out to the members of the Linnean Society, the particular form of the stigma that was connected with the development of hairs in the spurred petals upon which the pollen falls. The stigma is globose and the style bent, which brings the former in contact with many moniliform hairs in the claw of the petal. It is through these that the pollen gains access to the interior of the style.

POTATO ROT.

Dr. Klotsch, a Prussian, is said to have invented a very simple and efficacious plan for preventing the potato disease. It is to lop off the branches to the extent of half an inch, when they are from six to nine inches above the ground, and repeating the operation about the tenth week after planting. If this be a good remedy, it confirms the theory of the disease which we have stated in this journal to be, in our opinion, the most probable, viz: that the disease is caused by a minute insect which injures the plant by wounding the leaf and abstracting from the sap a necessary element. By cutting off the stem when it is but a small distance above the ground, the swarms find nothing on which to lay their eggs or to support them, and, therefore, pass to some other neighborhood. By cutting them off when the branches are put forth again, the danger of their return is prevented.

For the Southern Planter.

INTERLEAVE YOUR ALMANACKS.

Mr. Editor,—I have lately heard the question often asked, "have you ever seen vegetation so backward at this season of the year?" This question has been variously answered by different persons, some affirmatively and others negatively—but neither party were in possession of such facts as to entitle their opinions to full credence. I know no information that would be more useful to farmers or gardeners, than such as would aid them in choosing a fit time for pitching their crops. If a series of observations, for a number of years sufficiently extended, should prove that our springs were becoming earlier, and the danger of injury from spring frosts less than it formerly was, our farmers would obtain the advantage of earlier seeding and gathering in their harvests. A very simple plan has suggested itself to me, which promises to accumulate vastly more information on this subject than any I have heard of. None, I believe, are without almanacks—certainly no farmer or housekeeper should be without one. Let such as feel an interest in such matters, interleave their almanacks with blank paper, and constitute them memorandum books. It would be attended with little trouble to enter opposite the respective days of the months such facts as would be important. Thus "frost (more or less) to-day"—"Rain, commenced, continued," &c.—"Snow," &c.—"First peach (or other

fruit tree) blossom appeared"—"Peach (or apricot, &c.) in full bloom"—"Buds (of any tree) swelled," &c. &c. By continuing these memoranda through a series of years, sufficiently extended, much accurate information, in regard to the advance or retardation of our springs would be obtained, and would make a book, when properly arranged and neatly bound, which would be as valuable as any book that could be obtained.

I have been led to make this suggestion by finding on the margin of an old almanack, now in my possession, for the year 1770, "great fresh" opposite 10th of June, and "frost" opposite 1st of May and 30th of April.

MEDICUS.

ASPARAGUS.

A correspondent of Downing's Horticulturist raises shoots of asparagus, which he says are without exaggeration as large as his hoe handle, and perfectly tender and succulent, by this method. One part hen dung to forty parts of stable manure, are spread two inches thick, in autumn, and forked in. The next spring this is turned over slightly, and a coating of a quarter of an inch of salt added. This dissolves by rain, and kills every weed while it promotes a vigorous growth of asparagus. He cuts his asparagus when six inches high, wholly above ground, and then it is perfectly tender.

For the Southern Planter.

RECIPES.

Mr. Printer,—Feeling it my bounden duty to impart all the useful information I have been gathering during a long and laborious season—(for I have been taking your paper ever since the beginning of the present volume)—feeling it my duty, I say, I cannot forego answering a few of the many perplexing questions propounded by some of your worthy correspodents.

It is said "a child can ask a question which a philosopher cannot answer."—And all a philosopher has to do is to take care never to ask a question which a child can answer.

In the November number, pages 329 and 336, appears some "very sensible and just remarks" on the accuracy of recipes, over the signature of "S. P. S." That gentleman wishes to know "how many are a few? Six or six hundred?" Tell him six hundred peas are *a few*, and six are very few. Six hundred slaves are *not a few*; and six nations are *many*.

"And *a little*; how much is *a little?*" asks he. Say to him, the tobacco on a thousand hills is *a little*; but the cattle on a thousand hills is *much*.

Again, says he, "who knows how much water the writer wishes you to add to the tincture to obtain *a weak solution?*" If the tincture is weak, add *a little*; if strong, add *a good portion*. But, says he, "ask twenty persons to measure out '*a good portion of water*,' and how many do you suppose would hit upon the same quantity?" About as many as would hit upon the same quantity in measuring ten yards of calico each. "Boil it to a consistence!—of what?" Of solidity, of course.

But I have told enough, and lest you should think that I am too wise to learn anything, I will *ask* a few questions for the information of others.

First, in April number, page 119, in "breeding male or female," which is correct, the rule or example?

The rule "consists in simply making that parent of whose sex the offspring is desired, the more robust of the two at the time of cohabitation." The example:—"For instance, if you want more females than males among your lambs, put your ewes on low keep, and use vigorous rams of a full age; or if you wish the contrary result, use full grown and robust ewes with weaker and low fed rams." Perhaps both are right.

Second. One of your Irish correspondents, who expects to live to see the death of the Planter, (which, G—d forbid,) in writing on "compost," says, page 124,

"Should this method act as well as it does when practised," &c. What does he mean?

Again: I should like to know what conclusion Mr. J. H. D. Lownes has come to by reading Mr. Young's treatise? If you will send me that treatise I will also conclude.

Yours, respectfully,

IGNORAMUS.

If our correspondent will take the trouble to read over our note about cross-breeding he will find that we never expressed it as our opinion that either the rule or the example was right. We simply stated it as "an improbable but popular rule." The *contradiction* will be easily reconciled when he discovers that he has put the example to rule, in a way which we never recommended. We suppose he is trying experiments in breeding. The other questionings are not for us to answer. The following note accompanied this communication, which is much more worthy of consideration. Any man who intends to take the Planter as long as this gentleman, is a sensible man—there is no doubt of it.

My Dear Sir,—I am unlike Mr. —— in his sorrow for communications being altered, omitted, or remodelled. Alter, omit, remodel, or burn the above, and I will try again. I am not sure that this style of writing is adapted to an agricultural paper. I cannot promise to be a subscriber while the Planter exists, but I am making arrangements for my grandchildren's great grand-children to take it. Please continue to send it as long as the money is forthgoing, and

Oblige, respectfully, yours,

I.

ROUP IN POULTRY.

This disease, frequently called in this country "swelled head," attacks both common barn-yard fowls and turkeys. The first symptoms are a watery fluid being discharged from the eye. The eyelids soon become inflamed and swell; and the swelling extends more or less over the head. A fœtid discharge proceeds from the nostrils, which so obstructs respiration that the fowl is constantly sneezing and gasping. In bad cases one or both eyes are frequently destroyed. The disease is believed to be contagious, and as soon as a fowl is affected, it should be removed to some dry and comfortable place where there will be no liability of the malady being communicated to others. If many fowls are affected, it will be advisable to remove the whole of them, and wash their apartments with a strong wash of hot-lime. A writer in the English Agricultural Gazette, recommends as the best remedy, bathing the head with warm fomentations in which poppy-heads have been infused, and giving a preparation of goose-grease, (lard probably would do as well,) and chopped rue, mixed together—two tea-spoonfuls for a fowl twice a day. For drink, the fowls are allowed water which has iron, or iron-rust and sulphur in it.

PRODUCTION OF NEW VARIETIES OF FRUIT.

To the farmer and orchardist who are really in love with their occupation, who look somewhat beyond the gratifications and profits of the present moment, and who desire to do *something*, however small, that may advance the matters which they have in hand, no attempt offers superior attractions to that of producing some new variety of fruit, which shall surpass all kinds which are now in use, and bear the name of the discoverer to the latest generation of fruit lovers and orchardists.—The thing seems so easy—simply plant the seeds of any apple or pear, and the seedling trees in almost every case will be of a new variety. But many persons plant seeds every year of their lifetime, produce innumerable new varieties, and yet fail to get a solitary slip out of them all which will produce fruit superior to that from which their seed was taken. This is owing to an ignorance of the laws of nature by which all *good* new varieties are produced.

It should be recollected that the fruit of our

orchards and gardens are all improved varieties of wild fruit. The pulp of apple, pear, &c., which we eat, and for which we value them, is very small in the original varieties, having been intended by nature to serve as a simple sheath or protection for the seed. It is the object of cultivation to diminish the quantity of wood of the fruit tree, to diminish the size of the seed, and to increase the quantity of pulp. The fruit trees of our orchards, therefore, are in an unnatural state, they all have a tendency to return to their natural or wild state, and if left to themselves, if cultivation is withdrawn from them, in a few generations they all will return to it. This tendency to return to the wild state is always stronger in old than in young fruit trees.

If we take the seed of the common wild crab, which is the type of all the apple tribe, and of an apple which is not quite ripe, plant it in rich and well pulverized soil, keep the ground clear of other shrubs and of weeds, it will produce a variety of apple one degree superior to the crab. Take the seed of this new apple before it is quite ripe, cultivate it, and it will produce another variety still farther removed from the first, and so the amelioration may be continued for several generations.

But this progressive amelioration has its limits, beyond which we cannot go. The limits of perfection in the apple have been found to be four generations; of the pear, five; of the peach, three. Plums, cherries, and indeed most stone fruits require but three successive reproductions from the seed to reach the limits of their perfection. After they have been reached, the road turns back—that is, the seed produce inferior varieties, and they will continue to deteriorate till the varieties become almost as bad as those with which we set out; and then there will be another turn for the better.

The rule of nature, therefore, which we must observe in the production of new varieties of good fruit from the seed is to take the seed of young trees of a variety which is in progress of amelioration. "While," says Mr. Downing, "the seeds of the oldest varieties of good fruit yield mostly inferior sorts, seeds taken from the recent varieties of bad fruit, and reproduced uninterruptedly for a few generations, will certainly produce good fruit."

There is another method of producing new varieties of fruit which requires more skill, but is more interesting and certain. It is called *cross-breeding*.

Looking into the blossom of an apple or pear tree, you will see one little stem with a ball on the end of it standing up in the centre of the blossom. This is called the pistil. Around it are several small threads, with smaller balls on the ends of each, which are known as stamens. These are the vegetable organs of generation. The stamens secrete a yellow powder, which is blown upon the pistil, and the fruit begins to form at the bottom of the blossom. To produce a new variety, all we have to do is to remove, with a small pair of scissors, the stamens from a blossom of one variety, collect the yellow powder from another variety with a camel hair brush and sprinkle it upon the remaining pistil. It is well then to tie a piece of gauze around the blossom, to prevent the wind or the bees from conveying the powder from the other blossoms on the same tree to the pistil, as that would interfere with your plans. The fruit produced by the blossom so treated will be different from the fruit of either variety, because it will partake of the qualities of both. By collecting the seed of this crossed fruit, a tree may be produced superior to either.

By this method, also, new and beautiful varieties of every sort of flowers may be obtained.

From the Ohio Cultivator.

REMEDY FOR KIDNEY WORM.

Mr. Bateham,—I have observed, in a late number of the Cultivator, several remedies for the kidney worms in hogs—one of them a cruel one. I have in my time paid a good deal of attention to the rearing of those useful animals, and also observed the diseases incident to them.—The best remedy for the kidney worm, is the following powder, given according to their age, from a table-spoon to a tea-spoon-

ful, in a little thick slop, for one whole week: Bayberries, flour of sulphur, each one ounce; nitre, half an ounce; antimony, half an ounce, powder; mix well, and give morning and evening.

But the best cure is a preventive. Let the hogs have access always to rotten wood, charcoal, or stone coal, and give them always plenty of salt.

Want of salt and sulphur is the cause of the worms.

CULTIVATION OF THE MELON.

From a correspondent of the Albany Cultivator we make the following extracts upon the cultivation of the melon:

PURIFICATION OF MELON SEEDS.

Few fruits are more acceptable in their season than melons. But if there be any other seed in the purchase of which the gardener runs so much risk, I know not what it is. And yet it requires but little labor, in the cultivator who has room, to keep melon seed pure, or to cleanse it when it becomes mixed. Those who have not abundant room, may raise a great variety of good melons the first year if they have good seed to start with, but they must not expect to do it the second year without a change of seed. It may be here premised, that melons kept pure exhibit very little change in shape and appearance, being, in this respect, among the most constant of fruits; nor yet do they change much in quality or flavor in successive years, if the seasons are favorable. The names of melons occurring in this article are used as I find them here at Utica. I make no pretension to learned accuracy.

Experiments with Mixed Seed.—1st. In the spring of 1844, I planted the Green Fleshed Citron Melon. As it ripened in August it exhibited an intermixture of the Honey Melon. By carefully selecting my seed from such hills as seemed to have no Honey Melons in them, I have succeeded in perfectly purifying this seed. 2d. In the spring of 1845, I obtained some seed of the Skillman Melon from Albany. It produced three sorts of melons—a large round, very early, and tolerably good yellow flesh—a long, oval green flesh of fair quality—and a small flattened green flesh of excellent quality, very nearly identical with the New Jersey Rock Citron, though a little earlier. 3d. I have tried another experiment, which is too long for detail here, in which I succeeded in separating from *a single melon*, presented me in the fall of 1845, three distinct varieties of yellow flesh, one of white flesh, two of green flesh, and one of pumpkin or squash—in all, seven, two of which I shall continue to cultivate.—The others are not sufficiently valuable to be perpetuated, especially as I have others quite as good.

I think it evident from the foregoing facts, that the intermixture of melons, and probably of all classes of plants called popularly *vines*, is not very intimate, since they are so easily separable. Persons who forward their vines under glass, and keep them covered until the fruit begins to set, may always secure good seed by artificially impregnating the early sets. I have done so, nearly invariably for some years. The labor is small compared with the advantages. The mode of doing this, though described in the books, is seldom practised. It will bear repetition. In the morning, as soon as the dew is off, collect a few staminate blossoms, in such as have long stems, and never exhibit an embryo fruit below them. Then search your vines for the pistillate flowers, i. e., those with short stems, and having a small hairy fruit below them. Having found a pistillate flower just open, take a staminate one between the thumb and finger of one hand, while with the other you carefully pull off the leaves of the flower, being careful not to disturb the organs in the centre of it. Now take hold of the pistillate flower with one hand while with the thumb and finger of the other, you gently twirl the prepared staminate flower which you have at hand just within it. The object of this operation is to sprinkle the dust of the staminate flower, upon the central portions of the pistillate ones. This being done suc-

cessfully, the pistillate flower will soon begin to enlarge, while, if unsuccessful, it will turn yellow and die. One thing should not be forgotten—staminate flowers are not only much more numerous than pistillate, on all sorts of vines, but begin to appear one or two weeks earlier, and are most numerous the whole season.

CHOICE OF MELONS.

He who has once tasted a good green flesh melon, will rarely long for a yellow one. "But of the green which are the best?" I answer that between the green which I have cultivated, there is but little room to choose in regard to flavor. Yet to the cultivator it is important to make a wise selection. The *Persian* is a little the earliest, and requires the most care, as it should be watered almost daily in a dry season. Its fruit also fails rapidly in quality on the appreach of autumn. The *Skillman* is somewhat liable to crack and rot, especially in wet weather. The *Honey* melon is too small for a market melon. The *New Jersey Rock Citron* is the latest melon we have, and, therefore, it is not so eligible as some others. The *Citron* remains to be noticed. It is usually the largest of all fine green flesh, is more uniformly good in all seasons, and holds its qualities at the approach of autumn far beyond any melon of my acquaintance; often presenting a bright green luscious flesh when all others have become pale and vapid. I have said nothing here of the Minorca. When ripened in very hot weather it is often of fair flavor, but it so uniformly cracks before it is ripe, and so loses all flavor at the first approach of cold weather, that I consider it worthless; though to the eye it is the most magnificent of all green melons, sometimes reaching with me the weight of nine and a half pounds.

I have said nothing of the *cultivation* of the melon. That, in so cold a climate as that of Utica, would become the subject of a long article.

I subjoin a description of the principal melons referred to above:

1. The *Honey*, very small, white, round, smooth; very thick meated, of most delicious flavor.

2. The *Skillman*, as purified in my hands, is small, flattish, has moderate sutures thickly netted on a green ground.

3 The *Rock Citron* is much like the Skillman, only with deeper sutures, and more variable in size.

4. The *Persian* is oval, with a slight neck, thinly netted, on a green ground, which approaches a yellow when ripe. Its flesh is a little thinner than that of the preceding kinds, and not so deep a green. It has moderate sutures, and is larger than any of the preceding kinds.

5. The *Citron*. This melon is bluntly oval, larger than any other Green Flesh, except the Minorca, usually moderately netted, on a deep green ground, which changes but slowly as it approaches ripeness. It has a very obscure suture.

I think the community is greatly in danger of being gulled in the recommendation of melons. Should a pomologist make the tour of Persia, Afghanistan and Egypt, he could not find melons which, when brought home and cultivated here, would be superior in flavor to almost any one of the fine good varieties noticed above. He who wisely cultivates them in a hot sand, in a warm and long season, will have fruit as rich as a *Peach*, as rich as can grow in this country. Ordinarily they should be forwarded in a hot bed, so that they may ripen under a July and August sun.

MELON SQUASH.

This is a hybrid between the Green Fleshed Melon and the Seven Years' Pumpkin. The latter, for some reason, had not with me answered its character abroad, either in the richness of its flavor, or in its duration. In the July of 1844, I impregnated about fifty of its pistillate flowers with the staminate of some of my varieties of the Green Flesh, although I did not notice which. The flowers were covered carefully with paper, immediately after impregnation, to exclude bees and flies. About six or eight were successful. The fruit was not altered in size and appearance that year, but the seed was,

as it became thicker and more stubbed than the orignal seed of the Seven Year pumpkin, while its color became exactly that of the melon seed. In 1845 I planted seed from four specimens that seemed most changed by the crossing. In consequence of very dry weather and neglect, all these failed but one. This one produced largely. From its crop I selected a few specimens that combined the Nankin yellow and pale blue of the pumpkin with the knotty and netted appearance of the melon. These and others like them, were planted in large quantity for market in 1846 and 1847.

The *result* is a very rich, thick-meated squash, (or pumpkin, if you please,)—much richer than its pumpkin parent, with a yellow, almost red, flesh. This squash is not so long a keeper as the pumpkin from which it was derived, but is to me a more valuable variety.

I remark on squashes, as I did upon melons, that the public are perpetually amused with intelligence of new and extraordinary varieties. Mammoth squashes are only valuable to look at. For the table, they are comparatively less valuable than "still-fed beef." Any one who has a spot of moist ground, can grow a mammoth pumpkin; but when grown, it is far less valuable and deserving of a "State fair premium" than a great crop of corn. The true *Valparaiso cheese* and *winter crook neck*, and my melon squashes, are, I apprehend, as rich and valuable varieties as our climate can ever produce. They have the advantage of moderate size, and this is not a small one either to the cultivator or the consumer. Let us hold on to them, and discard new varieties, unless they are recommended by an old wholesale cultivator in the most unqualified manner. In the hands of a tolerably careful gardener, squashes need never run out. A good corn season will almost always give good winter squashes, if they are planted early so as to mature, like the melon, *in the very hottest weather*, or if not absolutely to *mature*, at least to get the most of their growth during this season. Squashes are sometimes rejected, because, being planted one season, they fail. I had a valuable squash that was not eatable in 1840 and 1841, which, both before and since, has been very fine.

CULTIVATION OF CABBAGES.

The best soil is that which is rather moist for tillage strong and rich. New land ploughed in fall or early spring is good for cabbages. If it be very mellow, that is of a tender sward, it will answer to plough late in or early in summer.—Land that has been planted only one year in potatoes or other crops will produce good cabbages, but if the land has been planted several years they are less likely to succeed, on account of numerous insects that eat the root and leaves.

To guard against this evil, when it is necessary to use old land for this purpose, put about half a pint or a pint of wood ashes into each hill, and mix it with the manure, and about one-fourth or one-half gill of salt to the hill, mixed with the soil, which will be about 8 or 16 bushels to the acre. Both of these substances may be mixed with the manure, and the labor will be less; and they are excellent manures for cabbage besides the advantages of preventing the depredations of insects. Salt is a valuable manure for cabbages and turnips, and they require more of this condiment than most other plants. Mellow compost manure is good for cabbages. —*Boston Cultivator.*

PEACH TREES.

A writer in the Horticulturist thinks that the shortening-in mode of pruning and the use of ashes, will drive that most fatal malady to peach trees—the yellows—out of the country, if cultivators can be brought to estimate properly their joint value. He uses wood ashes, either leached or unleached—half a peck of the former, or half a bushel of the unleached, for a young tree just beginning to bear. The best time for applying it is in October, but it has been found to answer admirably as late as June. It is best to

prune the peach early, but the writer has seen no bad effect from shortening-in as late as the middle of May, and he advises those who have not performed that operation already to take knife in hand, and sally forth immediately.

WHEAT CROPS.

We learn from our exchanges that the wheat crops of Virginia and all the surrounding States are "great."

For the Southern Planter.

AGRICULTURE.

Mr. Editor,—Enclosed you will find two dollars, the subscription of the undersigned for the Southern Planter for 1847 and 1848. I very cheerfully pay you this money, and can with a clear conscience say to every farmer who may read these lines, that the dollar I pay for the Southern Planter annually, yields me the best profit of any dollar I have invested in my business. In every number I am either told something new, or something useful which I had heard before and forgotten. I take two newspapers, a Whig and a Democratic; but the Southern Planter gives me far more pleasure than all my newspapers. *They* speak of politics; the Planter speaks of agriculture, and agriculture is of more interest to me than all the politics of the whole world. It is of more interest to me, because it is of more importance. The Planter is useful to all the members of my family, and makes my home far more comfortable, because far better managed than it could be without the knowledge we gain from its pages.

But agriculture is not only more interesting because on it I depend for subsistence, but because of the admiration and attachment I have for it as a profession, and without regard to the emoluments to be gained from it. It would give me inexpressible delight, if I were able to contribute something now and then to your pages which might be useful to the cause. But, unfortunately, I am no scholar. I write with great difficulty, and I hope you will not take the arrangement of my sentences as a specimen of the way in which I arrange my affairs at home.—Some of the writers in the Planter have said that it is not expected for a plain farmer to possess the clever arrangement of sentences which marks the literary man, and they will pardon me, therefore, if I attempt to lay before your readers a few views and facts. I do not promise that they shall be of much account, however. For although I have a plenty of ideas when I am thinking over a subject, it seems that so soon as I set pen to paper, they all fly off like blackbirds from a corn-field when they see my boy coming with the gun.

In 1835, I got possession of a farm containing 562 acres. On this farm, I well recollect, my father had been overseer when I was twelve or thirteen years of age. My father was esteemed a good manager, got a high salary, and according to the customs of overseers and farmers in the Old Dominion, he *was* a good manager—good as any of the rest. The plan of operation pursued by him, was the one then and now most popular in Virginia—which is, to cut down, wear out, and go ahead with a *rush*. The overseers which succeeded my father, pursued the same system of tactics. In consequence, when I got the farm I found no buildings or fences, but a plenty of red gullies, mires and pine barrens. As the purchase of my farm left me without means, and as I saw the necessity of changing the face of affairs if I wanted to live on it, I determined to make it, like Gen. Scott's army, a "self-sustaining machine," and to make one part of it manure the other. I therefore put but a small portion of my land in cultivation, and set myself to work to scrape together all the leaves, trash and loose stuff on the rest of it to make manure heaps. I cut down the bushes, carried them to certain fields and laid them thickly over the ground.—Here they remained, much of them rotting, and thus enriching the soil, but do-

ing even more good by protecting it.—When I at length burnt the brush, the land was much improved, and with the help of my manure, able to bring good clover. After you get land to this point, the road is easy. By turning under the green crops which can be raised after clover, the soil can be enriched—at least with the help of the quantity of manure which can be raised by keeping of compost heaps. And by this means I have improved my poor lands, and they now bring me good crops of corn and tobacco.

I make great use of pasturage. I have my farm divided into twelve fields, and change my cattle and my crops continually.

The main principle which I have formed in my mind from my observation and experience is, that we have farms of too large a size in Virginia. All our force is spent in cultivating a large quantity of poor land, and at last we do not get as much from a small piece of rich ground. Besides, we have in our present system no opportunity for improvement of the soil. Every thing is taken up in the planting, the cultivation, and the getting in of a bad crop spread over an immense space. One thing is certain, that if we do not make a change in our plan of operations, we must bid farewell to all hopes of agricultural prosperity in the Old Dominion.

Yours, respectfully,

A. G. W.

Goose Creek, April 3, 1848.

PLOUGHING WELL.

No farmer, we think, who has ever remarked the inefficiency of the "cut and cover" mode of ploughing,—that is, trying to throw over a slice of earth twice as wide as the plough will perform,—will prefer it to the infinitely superior mode of drawing deep, straight, and narrow furrows. "It is not to please the eye only," says a practical writer, "that the ploughmen of Westmoreland, Cumberland, and other well cultivated counties in England, take so much pains in drawing their deep furrows, as straight as a line can make them, and laying them so compact, that not a crevice between them can be found in fields of many acres, but to favor a perfectly even and uniform covering of the seed sown upon the ground." We would recommend to the farmer who reads this, to plough the next acre with perfectly straight furrows only six inches wide; and if, after viewing its superiority, he then goes back to foot-wide slices, we shall be very much mistaken.

Do not begin farming by building an extensive house, nor a spacious barn, till you have something to store in it.

POTATO CULTURE.

Potatoes have failed so generally for three years past that farmers will not be disposed to plant many this season. Still as prices now are we can well afford to lose half a crop if that is all which is to be feared.

What is to be done? Never despair; try new modes, new manures, and new times of planting. Light may yet be thrown on this mysterious failure of that favorite crop. It may be recollected that some farmers have found the potatoes that grew under shady trees were sound while others rotted. Some have tried planting alternate rows of potatoes and corn with decided success. Perhaps owing to the shade cast on the vines by the tall stalks. Yet why is a shade important? No one knows.

Our readers are aware that we have no confidence in the notion that the air is poisoned, and that a fever or other disease preys on plants as it does on animals. We have suggested, without pretending to much wisdom on this difficult subject, that minute insects or *animalculæ* invisible to the naked eye, may possibly prove to be the cause of the rot. Now if it is an insect we may readily conceive that it might prefer sunshine and heat to shady places; and that on the supposition of swarms of these pervading the country

the shady sides of woods would be a protection—and the shade of cornstalks might, in addition to the aid afforded by shade, form an obstruction to the progress of any insect tribe that may be patroling the country.

In the supposition that some kind of *animalculæ* is the cause of the mischief, we are supported by various facts which would seem to have no connexion with the theory of a poisoned atmosphere. One field was attacked last year,—an adjoining one the year before. A field that was rotten in 1846 was sound in 1847. A whole county was infected in 1846; but the county at the leeward of it escaped. All these facts are consistent with the supposition that insects are the cause, but not consistent with the theory of atmospheric influence—or a poisonous atmosphere. We make these suggestions for the consideration of experimenters this season.—*Ploughman.*

CARROTS AS FOOD FOR STOCK.

At one of the agricultural meetings held in Boston during the past winter, the subject of cultivating "root crops" for stock, was discussed. The general expression was, that the carrot is the best root for this purpose, in situations adapted to its growth. Hon. Mr. Brooks stated that he had made experiments in feeding carrots, and for young stock he thought them as valuable in weight as good hay. He thought they did not produce as much milk, when fed to cows, as potatoes, and hogs preferred potatoes. He considered carrots compared with oats, to be worth 33 cents per bushel when oats were worth 50 cents—that 10½ lbs. of carrots were equivalent to 3½ lbs. of oats. He considered the tops of carrots of sufficient value to pay the expenses of harvesting. He put them up in small stacks out of doors, and they kept good till mid-winter.

Mr. Rice said he sowed carrots early in May on light land—usual crop 500 bushels per acre—40 bushels weigh about a ton, and were worth as much as half a ton of hay.

Mr. Proctor said 35 tons of carrots had been grown on an acre at a single crop, and it was not uncommon to obtain 32 tons. Most of the speakers mentioned that the blight had injured their carrots, more or less, of late years.

WHAT IS THE BEST MANURE FOR SANDY LAND?

Without pretending to say "*what is the best manure for sandy land,*" we will content ourself with observing, that if we had our choice between 20 double horse-cart loads of stable manure, and 10 loads of Virginia clay and 10 loads of stable manure, which had been well mixed together, we should prefer the latter compost. The clay portion beside acting as an *amender* of the texture of the soil, thereby partially imparting to it the capacity to hold manure and retain moisture, two most desirable qualities, would in all probability, add to it no inconsiderable portion of *potash*, a substance proved to form one of the constituents of most clays, and whose agency in the formation of the *silicate of potash*, is essential in all soils, as the outer crust of all grasses and grains cannot be constituted well without it—The flint-like substance apparent upon the face of the corn-stalk, and on the straw of the small grains, is thus constituted.—Without, therefore, potash be present in the soil, to dissolve silica, combine with it, and form the essential compound named above, it would be fallacious to expect the grains enumerated above, to stand erect and perform their respective offices of bearing fruit. So far as the formation of this *silicate of potash* may be concerned, an application of *unbleached* ashes would answer, as the potash contained therein would very efficiently operate to produce the same desirable effect; but as full supplies of ashes can only be obtained in the immediate neighborhoods of large cities, the substitution of virgin clay for them may well become a matter of grave conclusion.

We do not pretend to affirm, that ten loads of such clay as we have mentioned, would be an ample dose to bring about a

permanent amendment of an acre of dry soil; neither do we affirm that such a quantity would yield a sufficiency of potash, because we do not subscribe to either one or the other of these opinions, and only desire to urge our preference for it as an alternative choice. To give the proper consistence and tenacity to sandy soils, would require many repetitions of the dose of clay which we have prescribed, which quantity has been named by us, from the desire we feel not to impose a too onerous labor upon our agricultural brethren at any one time, preferring that their works of melioration should be performed by gradual stages, and thus relieved of the objection of too much labor, which is so often urged with the show of plausibility.

Those who manure as they ought, usually apply 20 loads of stable or barn yard manure to the acre, and surely if they can substitute 10 loads of *clay*, for so many of manure, with equal, if not more, benefit to their land--and we have no doubt of the fact—self-interest, that great momentum in all human actions, would indicate that they should do so. That they would experience benefit in the first crop, we do not entertain the slightest doubt, and as little, that the degree of benefit would induce them to repeat the dose of clay each succeeding year, until their sandy soil had been converted into a sandy loam, and had imparted to it the mechanical capacity of holding manure, retaining moisture, and of performing every function belonging to a fertile soil—and we need not add, that once placed in that condition, it would be an easy matter to continue it by a judicious rotation of crops and the use of mineral manures, as lime and plaster and their adjunct clover. Indeed, if it were not that we do not wish to alarm our friend, by asking too much of him, we would say, that he should spread, annually, over his field of sandy land, while it may be undergoing the process of being manured and clayed, at least 20 bushels of lime, until he shall have reached our maximum quantity, of 100 bushels to the acre; the lime, of course, to be spread on the surface after the clay and manure compost had been ploughed in. Where a sandy surface soil may rest upon a hard pan or clay subsoil, the labor of hauling may be saved, by ploughing deep, and then cross ploughing so as to mix the two different soils together. This done, let the field be thoroughly harrowed and cross-harrowed, then put on the manure, plough it in and harrow; then spread on from 25 to 30 bushels of lime. We are cognizant of a field of exhausted sandy land which has been restored to fertility in this way, without the least injury resulting from turning up the so much dreaded subsoil. The operation was performed in the fall, the field was planted in corn the succeeding spring, yielded well, was seeded in wheat the ensuing autumn, gave a fair product, had clover seeded on the wheat, which produced a good crop of grass, and by judicious management since, the fertility of the soil has been continued.

THE HIGHLANDS OF THE SOUTH.

The highlands of Western Virginia and of East Kentucky and Tennessee are being settled by a free hardy and industrious yeomanry, that at no distant day, will give character to the mass of southern mind, and cast to the future distinctive features of the south. The living example of industrial enterprise distribution to the whole mass of a great community, will illustrate in these States the independence and power of producing labor, and the true interests of a commonwealth and a nation. For their mountain regions are to become the summer resort of the planters and their families, who will be led to contemplate here the true element of Virginia's ancient glory; and the true interest of her patriot sons. These regions are to become the patrons of schools and the nurseries of intellectual power; and they will at no distant day send forth a light that will gild with benign radiance, the grave of Patrick Henry, and illuminate the spot which gave to our country a Jefferson and a Madison as a boon to its independence.

SQUASHES.

Farmers who raise squashes often lose most of their crop from the squash vine borer, a white worm that bores into the leaves just below the surface of the ground. So great have been the ravages of this insect that in some cases whole acres have been destroyed by it. To guard against its depredations, plant on new land, though sometimes the borer is common in new lands; and use fresh horse manure with wood ashes, mixed up awhile before used, and mix the manure with the soil in the hill. About 1 part of ashes to 4 or 5 of manure. With this kind of manure we raised some fine crook-neck squashes last year, some of which we still have on hand in fine condition. Not one vine was destroyed by the vine borer.

HOW TO RAISE GOOD POTATOES.

My object in writing at this time is to give you a method of growing potatoes free from the rot. I have practised it for two seasons with entire success, and now have 600 bushels of fine Mercer potatoes in my cellar, all free from the disease.

My method is to plough the ground late in the fall or early in the spring, harrow it smoothly before planting time, then haul out say 15 tons rotted manure, spread it broadcast, then take two horses and a plough, and back up two full furrows, the furrows just meeting in the backing; leave a strip one foot wide, and back two more—and so continue till you have completed the lot. Then turn about and split these double furrows open with a single furrow, then commence dropping your potatoes (pieces of cut potatoes, containing at least four eyes) in the furrow six inches apart. After the lot is dropped take your horses and throw two good furrows (one round of the team to the row) just making on the top, clearing the row of stones, clods, &c.; then sow broadcast five bushels common salt over the ground immediately after planting; cultivate well till the plants are in blossom and you will have a good crop; never cultivate potatoes when in blossom.

When the crop is ready to gather clear the ground, take your two horses and plough, turn a furrow from each side of the row, let a boy pick up the scattering potatoes, then turn out the row, pick up the potatoes, then hoe down the ridge—lastly harrow over the ground, pick up the remaining potatoes, and the work is finished. The agriculturalist must observe that by this process he gets a broad loose bed for the potatoes to grow in, also a double depth of soil; then you are certain of good dry potatoes. I would here observe, that potato ground is the very best for producing a good crop of wheat; and I would advise farmers to grow a greater surplus of this most valuable root. If there is no market, store them, and feed to your horses, cattle, and hogs; feed them in your stable through the winter, give your stock good bedding; clean out your stables once a week; make as large a manure heap as possible; and you will not be troubled with the potato disease, nor that worse malady, arising from always taking out of the meal tub and never returning any; you will thus not come to the bottom.

Respectfully,

T. R. Dendomandie.

Columbian county, Ohio.

AGRICULTURAL PAPERS.

A correspondent of the Ohio Cultivator, states the case of a farmer who lost $150 by neglecting to take that paper. He had taken it formerly, but concluded that he could do without it. After he had discontinued it, certain practitioners of Neurotomy on horses were traversing that State, and the paper cautioned the farming public repeatedly against the practice. But this farmer did not see these cautionary remarks, and suffered two fine horses to be operated upon, paying him ten dollars, which resulted in the entire ruin of his two horses. Farmers must not expect to be guarded against impositions, unless they inform themselves.

CORN CULTURE.

As to the culture of corn we are not vain enough to suppose that we could prescribe any mode that would even be an approximation to the best plan. Most corn planters have peculiar views of their own, while almost every neighborhood has its particular method. Whilst, then, such diversity of opinion exists upon the subject of what is the best plan, it may be the part of modesty in us to be cautious in what we say. So far as our observation and experience enables us to speak, we would remark that we believe that corn should never be worked with the plough after it is a foot high; that we have no faith in large *hills* or in the cutting of the roots of the corn plants with the plough; that the great object in every corn grower should be *to keep down all weeds and grass, and keep the soil open to the action of sun, air, dew and rain*, and that, after the first ploughing, these objects can be attained by the use of the cultivator better than with the plough. This is our honest opinion, founded on experience; and while we feel ourself called upon by a sense of candor to express it, we do it with the most perfect deference to the opinions of others.

The question as to the number of times which corn should be worked, has often been asked us, and we have as often replied, that that must be governed by circumstances—that, until laid by, it must be kept entirely free from weeds and grass, and the soil open to atmospheric influences. Keeping these land-marks in view, no one need be at a loss to tell when and how often to work his corn.—*Amer. Farmer.*

TO DESTROY COCKROACHES.

If your correspondents will try the following simple plan, I will warrant them that every beetle and cockroach will shortly disappear, and that the kitchen will not again be infested. Add about a tea-spoonful of powdered arsenic to about a table-spoonful of mashed boiled potatoes; rub and mix them well together, and then crumble a third of it every night at bed time about the kitchen hearth; it will be eaten up or nearly so by the following morning. The creature is very fond of potatoes, and devouring them greedily, crawls again into its hole and perishes. I had occasion to have some alterations made in the kitchen stove, six months after I pursued this plan, and found hundreds of wings and dried mummies of defunct cockroaches. Their disappearance was not attended with the slightest perceptible smell; and though five years have elapsed, not one has again been seen in my kitchen. In putting it into practice, any remaining crumbs should be swept up the next morning.

F. H. Horner, M. D.

We have tried the foregoing, and found it perfectly effectual.—*Downing's Hort.*

For the Southern Planter.

SASSAFRAS.

Mr. Editor,—Can you, or any of your readers, inform us of any method or means by which the sassafras bushes, that so infest our fields in this section of the State, may be destroyed? By penning our cattle upon them, we eradicate a few; but it is obvious that this is necessarily a tedious operation. Polypus-like, the more you grub and cut them, the more rapidly they increase. Now, sir, if in the vegetable or mineral kingdom there exists any remedy for us, do let us know it, and the Planter shall have many blessings and many more subscribers.

Northern Neck.

We can give Mr. "Northern Neck" a remedy in four words: MAKE YOUR LAND RICH. There are plenty of substances in the "vegetable and mineral kingdoms" which will eradicate the sassafras sprouts; and among the most effectual are stable dung and lime.—Sassafras grows well enough on rich soil, but we never see it springing up in the manner complained of by our correspondent when the land is in proper order for a good crop. Sassafras bushes are very troublesome on

worn out old fields: so are broom straw and pine shrubbery. Stinted corn is another product of such lands. Item, bad fences, dilapidated housee and poor people. All of which are troublesome and disagreeable things, to be gotten rid of as soon as possible; and the best method of accomplishing that end is to MAKE YOUR LAND RICH.

SHEEP HUSBANDRY.

Messrs. Editors,—I am not going to write a lecture on the breeding and keeping of sheep for their own intrinsic profit, but their profit relative to other branches of husbandry. That sheep will improve pasture land beyond any other kind of stock, is no longer a debatable question with me. I have pasture land now that was improved for that purpose some twenty or more years ago, and then the sheep removed, and occasionally cultivated with corn and grain since; and the line of the old fence might always be traced by the superiority of the corn and grain where the sheep were pastured. And even to this day the field shows it.

It has been said that one sheep will manure sufficiently, if folded on ploughed land, one yard square of land. Now let us figure a little. One square rod is 30. 25 yards; so that 30¼ sheep will manure one square rod a night. Suppose, then, you fold these 30¼ sheep five and a half months, you will have one acre in prime order for any crop. But some say this is only robbing Peter to pay Paul. Your other land loses what that gains. Let us see how that operates. I have kept my sheep a number of years, until within two or three years, where they lay at night and noon day, around rocks and logs, where their manure never yielded one cent of profit in ten years; and I presume thousands of others can tell the same story. Well, let that pass.

We have another objection, say they: the expense of fencing. Now for a plaster for that sore. In most cases, you will have but two sides to fence; and we will suppose your acres ten by sixteen rods—two sides will be twenty-six rods. For fence you will want a moveable picket fence. Pickets three feet long will be long enough for this purpose, and those who have cedar or other durable timber of suitable size, can make them very very quick, and do it in stormy days.—For those who live where wood is scarce, the wire fence would be complete. I do not recollect the cost of this. Now I will guess the cost of these pickets to vary from twenty-five cents to one dollar a rod, and will last from five to twenty years. The decay of the fence is one dollar a year, and the interest on twenty dollars, the first cost, is one dollar and twenty cents. Then say fifty cents for moving and staking fence, and it gives two dollars and seventy cents for all the expense of fencing an acre one year.

But hark! I hear another objection—you will have to fold them at night and let them out in the morning. In answer, I do not expect this. I expect, by erecting moveable sheds and moveable troughs under them, to give them their provender and salt in, they will soon learn to spend all their leisure hours from feeding under these sheds and around them. Well, as to the cost of these sheds. Why, I will charge that, or offset it against the additional wool and meat the sheep will produce by being sheltered in cold rains in pastures before coming to the barn. But hark, says the objector, you lose one year's profit or rent of the land, in addition to other charges. Yes, friend, that is true, and I gain one hundred per cent. profit for five years following.

There is another purpose for which sheep may sometimes be profitably employed; and that is killing bushes and briars; and I am now engaged in using mine for another purpose connected with it, and that is in preparing a sugar plantation. A sugar plantation! says the reader. Surely the man's dreaming himself in the sunny South, with a flock of negroes instead of sheep. No, no, reader, it's all sober reality. I have quite a grove of young, thrifty sugar maples, which I have been forcing by the following process: I go in the summer once or twice a week, and lop down (not cut off) all the

other green growth that would interfere with the growth of the maples. When these are well browsed, I go again and cut another lot. In the fall or next spring these may be hauled off for wood, or burnt, or used to top the fence as occasion requires. I calculate, if life and health are spared for ten years, I can have two thousand such trees ready for manufacturing.—*Boston Cultivator.*

GREEN AND DRY FODDER FOR CATTLE.

A communication has been made to the Paris Academy of Sciences, by M. Boussingault on the comparative nutritive powers of green and dry fodder for cattle. Hitherto the received opinion was, that natural or artificial grasses, on their being converted into hay, lost a portion of their virtues. To determine this point, M. Boussingault fed a heifer alternately, for ten days at a time, upon green or dry food, and weighed the animal after ten days. He found no difference in the average weight; and therefore comes to the conclusion, that the hay made from any given quantity of natural or artificial grass has the same nutrition as the quantity of green food from which it was made.—*London Athenæum.*

HOW TO IMPROVE CLAY SOIL.

The natural remedy for a heavy clay soil in a kitchen garden, is to mix sand with it. This acts like a charm upon the stubborn alumina, and, allowing the atmospheric influences to penetrate where they were formerly shut out, gives a stimulus, or rather an opportunity, to vegetable growth, which quickly produces its result in the quantity and quality of the crops.

But it not unfrequently happens that sand is not to be had abundantly and cheaply enough to enable the proprietor of moderate means to effect this beneficial change. In this case, we propose to the kitchen gardener to achieve his object by another mode, equally efficient, and so easy and cheap as to be within the reach of almost every one.

This is to alter the texture of too heavy soils, by burning a portion of the clay.

Very few of our practical gardeners seem to be aware of two important facts. First, that clay, when once burnt, never regains its power of cohesion, but always remains in a pulverized state; and, therefore, is just as useful, mechanically, in making a heavy soil light, as sand itself. Second, that burnt clay, by its power of attracting from the atmosphere those gases, which are the food of vegetables, is really a most excellent manure itself. Hence, in any clayey kitchen garden, where brush, faggots, or refuse fuel of any description can be had, there is no reason why its cold compact soil should not be turned at once, by this process of burning the clay, into one comparatively light, warm and productive.

The difficulty which stands in the way of the kitchen gardener, who has to contend with a very light and too sandy soil, is its want of capacity for retaining moisture, and the consequent failure of the summer crops.

In some instances this is very easily remedied. We mean in those cases where loam or heavier subsoil lies below the surface. Trenching, or subsoil ploughing, by bringing up a part of the alumina from below, and mixing it with the sand of the surface soil, remedies the defect very speedily. But where the subsoil is no better than the top, or perhaps even worse, there are but two modes of overcoming this bad constitution of the soil. One of those is, to grasp the difficulty at once by applying a coat of clay to the surface of the soil, and mixing it with the soil as you would manure; the other (a less expensive and more gradual process) is to manure the kitchen garden every year with compost, in which clay or strong loam forms a large proportion.

It may seem to many persons, quite out of the question to attempt to ameliorate sandy soils by adding clay. But it is surprising how small a quantity of clay, thoroughly intermingled with the loosest

sandy soil, will give it a different texture, and convert it into a good loam. And even in sandy districts there are often valleys and low places, quite near the kitchen garden, where a good stock of clay lies, (perhaps quite unsuspected,) ready for uses of this kind.

In the *Journal of the Agricultural Society of England* a case is quoted, (vol. ii. p. 67,) where the soil was a white sand varying in depth from one to four feet; it was so sterile that no crops could ever be grown upon it to profit. By giving it a top dressing of clay, at the rate of 150 cubic yards to the acre, the whole surface of the farm so treated was improved to the depth of ten or twelve inches, so as to give excellent crops.—*Star in the West.*

From the Prairie Farmer.

PRESERVING EGGS.

Messrs. Editors,—The numerous prescriptions "how to preserve eggs" seem to indicate that the matter is somewhat doubtful; for there is a great diversity of opinion on it, when in fact the preservation of eggs is subject to chemical laws like that of other matter subject to decomposition, and these laws are well established and known. Warmth, moisture, and contact with *oxygen* are the conditions which favor decomposition more than any thing else, and therefore eggs, to be preserved, ought to be kept *cool*, *dry*, and packed in close vessels; but at the same time care is to be taken to prevent the drying up of the white, and the loss of flavor.

Salt, which has been recommended so much, is therefore objectionable; for it will absorb the white, and when moist the eggs will taste salty on account of the shell and membranes being very porous; and it becomes necessary to fill the pores with some cheap and handy material, and for that purpose a thin solution of glue answers the best. Afterwards they may be packed either in dry saw dust or ashes, and kept in a close box or jar in a cool cellar.

Eggs of parrots and other birds were preserved in this way, and when arrived at the Jardin des Plantes, near Paris, hatched after the coating was removed, as readily as any others.

CAUSTIC.

A RURAL PICTURE, WITH ADVICE.

Messrs. Editors,—Never having seen, as I remember of, any thing in your valuable work setting forth any of the many injurious habits and indulgences that farmers suffer themselves (or rather ourselves) in many instances to be subject, and even slaves to, suffer me to copy an extract long ago made from a very old manuscript book (none the better or worse for that, as I know of,) in an old farm library in the possession of the owner down east. It appears to have been written in that book by himself, to be read by his own household (probably the young men,) setting forth of his views as follows, nearly:

"You ought to shun all such luxuries as experience tells you the habit brings forth no good The use of tobacco in any shape (not free from that habit entirely myself,) is both injurious to health and a waste of money, doing no manner of good to the consumer. No man feels as well after smoking a pipe full of tobacco, or chewing a quid of this nauseous stuff. The smoking of it often causes a dizziness the most unnatural and unpleasant for hours after it, and leaves the whole nervous system in a debilitated state.—Above all, if you have fallen into the habit, avoid using it in any shape in the morning before eating your breakfast.—Try and dispense with it only a few mornings, and see how much keener your appetite will be for your meal at three quarters of an hour after sunrise. You will find that after going out upon your farm and overlooking the business of the day, or to the well doing of your sheep, cows, &c., that a smoking breakfast, well prepared, or coffee, toast, potatoes, ham, and the like, will be more pleasing to you than tobacco. After eating your breakfast, still persist—still deny the pipe or the

slimy quid having a place betwixt your teeth that day. I well know the temptation is great; and though there is nothing at hand so dirtisome, yet there can be nothing all that day put in the mouth that will seem to answer any thing like a substitute; but never fear—go ahead with your determination, now so well begun, and don't fast at all, but *eat, eat* and work, *eat* and do any thing honorable, rather than indulge your thoughts on tobacco—eat whenever the false goddess attempts to rise to your thoughts, and the pains will grow weaker and shorter; and in due time—and that not long—you will begin to think *eating* is to be the main business of life, and *refraining* one of its happiest reforms. You will feel like one born into new life: your sleep will be free from tobacco spasms, and your dreams—ah! greatly improved; and you will rise from the bed in better health, free from pain, in better spirits, and your taste in every way improved. Try the experiment thoroughly, and you will be rid of this habit altogether.

Lying in bed in the morning, for one that is well, ought never to be indulged. Most people feel some hesitation in getting up in the morning—and sometimes they do well to sleep later; but the privilege, I think, is seldom advantageous; and who does not like to see the grey of the morning and hear the birds sing, the bleating of calves and lambs, and the scattering of the herd and flocks over the dewy fields, when early stirred up. It is bracing and cheering to the mind, to say nothing of the advantage to be gained by 'taking time by the foretop;' and at that time, too, every object coming in contact with the mind through the eye or the ear, will be more pleasing and diverting than at any other time of day; and from the impressions so made the mind remains active and cheerful throughout the day. In short, early or late rising causes a vast difference in the acquirements and dispositions of mankind.

Drinking spirits of any kind, or even cider, on getting out of bed in the morning, ought never to be thought of by any farmer, or any man of good sense. There are times, however, when I should think a little stimulus does good; but those times come so seldom, that a discretionary farmer will hardly get in a habit of its disorderly use.

There are many luxuries used at table both extravagant and unwholesome, and might better be dispensed with—such as wine, raisins in pies and pound cake, sauces richly preserved, and every thing of the kind. They ought never to be seen on an every day table—though every farmer does well to have such good things at hand, if he likes; but for every day eating such food is neither natural nor palatable to a good appetite. A person generally feels best after eating the most simple food. I have even found my appetite wholly satisfied in eating a few crackers with a glass of beer, or even a glass of water; and if, when farmers are teaming through the wet and cold, instead of calling for liquor at the bar when they stop, would call for a cup of coffee or tea, and a few crackers to eat, they would no doubt add many years to their life, and much happiness too. For my own liking, all the withered dainties of a city life table, strewed with luxuries from the stifled markets in town, never can compare with the sumptuous and burly fare upon the table of the farmer, gathered fresh from the dewy farm.

The breakfast horn—Heaven bless its life-cheering sound—as it issues from the shady porch—still it echoes louder and louder, through the yards, through the lane, through the garden, through the barn, through the hay loft, to the spicy fields. It plainly speaks of coffee 'piping hot' upon the clean swept hearth, the shady room, and the clean white cloth teeming with lots of smoking potatoes and well buttered toast, brittle cabbage cut up fine in lots, peppered, cooked and uncooked, and then a bowl of crout as yellow as straw, lots of goodly ham, and eggs poached up fresh from the cackling hens —onions, parsnips, and vegetable oysters too—all of which must be acceptable to any reasonable man loving his home and his country, and who has taken nothing

into his mouth in the morning but the wholesome and bracing air.

Nothing can be more imprudent than for men coming in from the fields at noon and drinking down a glass of spirits or cider—then to sit down and overload an ungovernable appetite, with hard cider for drink with his dinner. I will ask any man who has done so, and after dozing for a half hour, if he wont look out from 'one corner of his eye at the corn field or the harvest field with a heavy heart.' It is much better, if not too much trouble, (and it ought not to be for men who work hard,) to have brought to them in a cool shade, some fresh cold water, at 10 o'clock; and if spirits must be used, a little then will be less injurious—but what is better, a pail of good coffee or chocolate with boiled rice. Then at noon touch not cider or whiskey, eat slowly and temperately a good nourishing dinner, rest cheerfully an hour, and you will feel the better for being temperate."

I would add a few humble remarks of my own, by way of exchange and compromise with my toiling brethren, but my sheet and pond are very scanty, and if I do so I must defer it till some future time.

MISCELLANY.

Bigfoot, Wis., April, 1848.

MANURE FOR FRUIT TREES.

The best compost for 'all fruit trees,' (without endeavoring to suit the specific wants of each particular fruit,) is a compost of *peat* or *swamp-muck*, reduced, or rendered available to plants, by *unbleached* wood ashes. The peat should if possible be dug and carted out it winter—though it will answer if dug in the spring. As early in the spring as is convenient, mix thoroughly the wood ashes with the peat, in the proportion of five bushels of good hard wood ashes to one wagon load of peat.

Let the heap lie a week, turn it over to incorporate more thoroughly, and in two or three weeks it will be fit for use.

This compost, or manure, contains largely lime, potash, phosphate, and vegetable matter, the elements most necessary for the growth and health of fruit trees generally—and all in a state ready for food for these trees.—*Horticulturist.*

PRACTICAL BLUNDERS.

There is not a week passes over our heads but we see or hear tell of some lucky person who has discovered perpetual motion. The pursuit of this motion is not confined merely to the illiterate and unlearned mechanic, but singularly enough men of rare intellect, wealth and learning have pursued the phantom and wasted both time and means in futile efforts to immmortalize their names in the discovery of an impossibility. A general diffusion of sound knowledge connected with the principles of mechanics would soon dispel this kind of chimera from an inventive mind and leave it free to pursue projects of utility and of a rational character. A young man of an inventive turn of mind when first struck with the beauty of some piece of mechanism and not well acquainted with the principles of its construction, generally turns his thoughts upon perpetual motion, because it is something of which every one has heard. Many an hour's sleep it costs him to astonish the world and at last he makes the grand discovery of a teetotum propelled by smoke, which would have run forever only it exploded. We have come to the conclusion that there is only one way to construct a perpetual motion, and that is by having a tall pole, say one hundred and seventy-nine feet eleven inches and fifteen-sixteenths in length, elevated on a tall cliff and on the top of the pole have a single spider's thread suspended on the *point* of a point, which must be so fine that a microscope will fail to perceive it. The thread will no doubt always be in motion as the atmosphere is never without some current sufficiently strong to move it. Of the hundreds of perpetual motions that have been discovered, there is not one in existence at the present moment. This every body knows, but the reason why they failed is not

known to a great number. Many no doubt ridicule perpetual motion who could not give a reason for their ridicule and who would be dumbfoundered were an opponent to assert ingeniously, that all perpetual motions failed for the want of true ingenuity. Every person, especially every mechanic, should be established in the fundamental principles of science, so that he may be able to give a convincing proof and reason for every assertion that he makes.

NEW STRAW-CUTTER.

Our valuable cotemporary in New York, the "Farmer and Mechanic," contains an account of a new straw-cutter, which, if its qualities are correctly stated, will probably supersede all others. It is fitted equally for straw, hay and shucks, and is the invention of a Mr. Sullivan, Lexington, North Carolina. It was made in 1847, a caveat filled, and the inventor is now getting out his patent. Its cutting apparatus consists of a series of small circular saws on a horizontal axle, about half an inch apart, with circular iron plates betwern them, which are also indented. It is not fed with straw put in endwise; a whole bundle is thrown in sideways, and is used up in less time than it would take to cut off three inches with an ordinary straw-cutter. What is also worthy of notice, it does not only cut the straw into equal lengths, but it also tears it to shreds, and makes it as fine and soft as wheat chaff. It can be used with hand, horse, or any other power.

The great advantages of this new machine are the amount of work which it is able to do, and the superior manner in which it prepares the straw. If the "Mechanic's" account is correct, it is the best straw-cutter ever invented.

HOW TO KEEP SMOKED HAMS.

The best method of keeping hams is, after they are smoked to put them back into the pickle, and the smoky taste is preserved as perfectly as when put in ashes or kept in a dry place.

For the Southern Planter.

MANUFACTURE OF STRAW.

Mr. Editor,—A desire to introduce a new means by which additional employment can be given to those disposed to industry, and which will compensate them for their labor, induces me to request the publication of this article.

The object is to introduce a simple, neat and profitable article of manufacture, which is adapted to the female portion of our State—the plaiting of straw for bonnets, hats, &c. When we know that, in Massachusetts alone, the value of straw, imported grass, &c. made into bonnets, hats, &c. is $1,640,000 per annum, and that this is the work of females and children, we can readily perceive its great value, if introduced among our females. That they can speeeily learn to plait it as handsomely as the Massachusetts females, none will deny. To enable them to learn, it is only necessary that they should take an old bonnet, rip it to pieces, and they will readily see how it is plaited.

If they will prepare the straw by the directions here given, plait it well, and bring it to Richmond in the plait state, the Messrs. Carpenter will willingly purchase it at a liberal price per yard of plait. The manufacturing, or making it into bonnets, is another and distinct branch of manufacture.

To split the straw after it is properly cured, so as to reduce it to its proper texture, it is only necessary to fit the point of a pen-knife in a piece of board, leaving about the eighth or fourth of an inch above the board, then pulling the straw against it. Straw of any size can be made.

Directions for curing straw to adapt it to the manufacture of straw bonnets, hats, &c.:

"Cut wheat or rye straw while in full blossom, or as the blossoms begin to fall. Scald it in a few hours after it is cut (the heads being first cut off) in boiling water about a quarter of a minute; then spread and dry it in the sun. Take care that neither rain nor dew falls upon it. It will

cure in three days sunshine. Then keep it in a dry place"

Rye and wheat are nearly in the true condition to be cut. I beg that an effort may be made to introduce this valuable manufacture into our State. Rye is the best straw, because of the preference given to its color by the ladies. It is grown in every neighborhood; and one hundred pounds, when dry, will give a whole family occupation in plaiting for many months.

Every female who can obtain a supply of straw, can now have the means of making a yearly support by plaiting it; and this, too, can be done at her own fireside. She can plait it at home; put it up carefully; send it to Richmond to the Messrs Carpenter—and they will pay a price per yard which will depend upon the neatness and beauty of the workmanship.

A Friend to Females.

May 28, 1848.

POTATO ROT.

A gentleman in Maryland, a Mr. Naill, thinks he has discovered another of the thousand and one remedies for the rot, in the use of straw upon the surface. He manures well, planted his sets three or four inches deep in drills, and about one foot asunder; and immediately after planting, covered the whole surface pretty thickly with straw—from three to five inches in thickness. The result was a sound and excellent crop of potatoes, so far as the ground was covered with the straw; while the potatoes in the uncovered ground were much affected with the rot. The covering of straw also kept down all weeds and superseded the necessity of cultivation.

OLD BOOTS AND SHOES.

Prussian blue is now manufactured extensively in Philadelphia by the burning old boots and shoes.

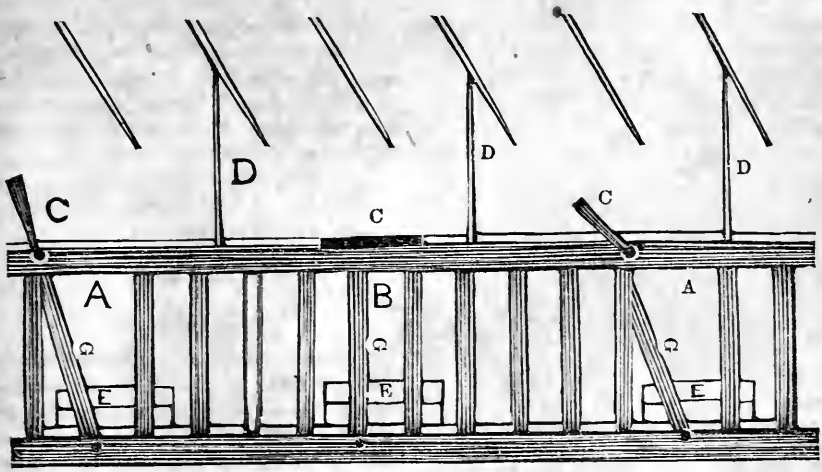
From the Berkshire Agriculturist.

CARROTS.

Mr. Editor,—I see in your last paper you say, carrots are good for horses and cows, but "we doubt whether a hog will do well on them." I am satisfied from the experiments of one of the most careful farmers we ever had in Stockbridge, and one who raised more carrots than all Stockbridge farmers put together, at the time he lived here, viz: Jeremiah Vallet, carrots *are* good for hogs, for he has repeatedly told the writer of this, that he could fat hogs with boiled carrots, mixed with meal scalded in the carrots, faster than in any other way. As to raising "1000 bushels" of carrots to the acre, it has been done and can be done again with good seed and a propitious season. I have raised 800 measured bushels from two-thirds of an acre, and the last season, I raised 95 bushels from 18 square rods of ground, and had the seed all come up, there would have been enough on the vacant spots to have made up what it lacked of being 1000 bushels to the acre. But I raise mine in a different way from most people. My way is, to plough the ground deep, several times before sowing, and the last of May, mark out my rows 22 inches apart with a light corn plough, then strew rotten manures in the rows and pass the plough each side to cover the manure, and sow on the top of the ridges. I sow with a machine, which leaves the rows straight—a great advantage in hoeing—and distributes the seed as it should be, which saves the trouble of thinning; and when I dig the carrots, I pass the land side of the plough next the rows, and then you have little else to do but to throw the carrots in piles for cutting, you get the manure where you want it most; and get a great depth of soil for the roots. I had last year many carrots which measured eighteen inches long and twelve inches round. I know of no root as valuable as this: and I doubt whether, at the price they sell at here, viz: 25 cents a bushel, our farmers can obtain as much profit from the acre from any other root.

For the Southern Planter.

SECURING AND FEEDING MILCH COWS.



A represents the places where the cows are confined when opened for the cows to go to their food.

B represents the places shut when the cow is confined.

C the pieces of timber working on a pivot to let down into the shoulder of the moveable slide. At A they are raised to open the slide; at B they are down to confine the slide and hold the cows.

D are braces to secure the frame to the rafters above.

E are troughs, placed on a bottom frame, and close to the upright frame.

The drawing is a section of three places all complete, one closed and two open.

The frame is four and a half feet high, placed three feet from the brick wall.

The openings are six feet apart.

G represents the movable board secured at bottom with an iron pin.

Mr. Editor,—The usual plan adopted for securing and feeding milch cows, I consider defective; for if fed in the same pen, the strong cows will drive the weak from their troughs, and if secured in stalls, some difficulty is experienced in milking them, and keeping them and their troughs clean.

The manner of confining my cows obviates all these difficulties; and as I have never seen it in print, I have concluded to give it to the public through the columns of the Planter. It is by confining the cows by their heads, which is done with facility, and the only necessary precaution is first to fasten the strong cows, and in the morning first to loosen the weak.

I saw this plan adopted some thirty years ago in the county of Essex, and is now used at Mrs. Percival's, near Lynchburg. It is exceedingly difficult to describe this fixture so as to be understood by those who never saw it, but as I consider it of considerable public utility, I have concluded to draw a profile and send it along with this communication, which I think will be sufficiently plain to be understood.

In building my barn and stable, I had them located eighty feet apart, due east and west—a brick wall built six feet high from the north side of the stable to the north side of the barn, and a shelter with rafters on one side resting on posts and

plates, and shingled, so as to throw the rain out of the pen. This pen is enclosed with a plank fence, and a cross fence cutting off thirty feet for my calves next the stable, into which pen a window opens from the end of the stable, through which the manure made in the stables is thrown under the shelter. The remaining fifty feet is allotted to the milch cows and eight fixtures with troughs, placed about one foot from the brick wall, with planks from the troughs to the wall so inclined, that when the food is thrown over the fixture it will slide into the troughs.

There is much said in agricultural papers, about having permanent shelters for all the stock, and these are highly recommended by many intelligent persons; but upon large estates and in so mild a climate as ours, I think they are unnecessary and inexpedient, and the only inducement I had in making the shelter I have described was, that my milch cows might be near the house that I could attend to them—for the milkers not to be obliged to travel a distance—and in bad weather that they might keep dry whilst engaged in this necessary employment. As it regards the wintering of my cattle, except the milch cows, I have adopted the plan of stacking my top-fodder at the place which I intend for that purpose, the stack being made east and west, and a shelter made on the south side of this stock, by forks being securely put in the ground, those nearest the stack about six feet high and those about ten feet off about ten feet high. Poles are placed on the top of these forks in two rows, with rails across, and then covered with corn-stalks and straw, and bushes placed on the east and west side of the pen, to protect them from the cold winds. My corn-stalks, straw, &c. are thrown into this pen, and the cattle kept until the last of February, when they are removed and fed on poor spots in a field I wish to manure, and the manure in the pen is put up in large piles, lime being freely mixed with it, and the top covered with earth and plaster.

I always select a spot for my farm pen convenient to water and near the land I wish to manure; by which means I save a great deal of hauling, and my stock is perhaps as well wintered, as if I were to construct permanent houses for that purpose. I also consider it entirely unnecessary to prepare shelters for sheep, as I find they winter as well by running at large, and if in a tolerable pasture, it is only necessary to feed them when the ground is covered with snow.

Very respectfully, yours,

RICHARD G. MORRISS.

Amherst, May 12, 1848.

HARVESTING.

The greatest and most common mistakes in harvesting are, that most persons cut their wheat too *late* and their hay too *early*. Repeated and careful experiments have shown that the proper time for cutting wheat is just before it is fully ripened, while the grain is still in a dough state, and immediately after the lower portion of the stalk turns yellow. When the straw begins to turn yellow, it commences to do so at the bottom and advances upward. The proper time for cutting is while the upper portion is still of a greenish hue. If cut then, both the quantity and quality of the grain are greater than if cut later. If cut when fully ripe, a great deal is lost by shaking out before it is laid upon the threshing yard; and not only is no nutriment conveyed to the grain after the stalk begins to turn yellow, but there is even some decrease.

Among the many accurate experiments which have been tried to establish these facts, are those of Mr. Hannam, an English agriculturist. The lateness of the dates mentioned is to be accounted for by the excessive humidity and coolness of the English summers.—"On the 1st of August," says Mr. Hannam, "I cut a small portion that was quite green; that is, both ear and stalk were full of vigor and of sap. Though the grain appeared to be perfectly formed, the chaff adhered so firmly to it, that it was scarcely possible to separate it by friction of the hands. When separated, it was large and plump, but so full of milk, that the slightest pressure reduced the whole to a pulp. This sheaf stood in the fields a

fortnight and was then housed. On August 18th I cut another sheaf. The wheat was of course yet green—being what farmers call raw—that is, though appearing at a distance green, yet when examined closely, was of a hue fast approximating to yellow, while from a foot upwards from the ground it was quite yellow. The ears too were more open, the chaff tinged with various shades of yellow and green, and the grain itself, when separated, soft and doughy, but not so full of fluid as before. The judgment of the farmer however will best tell him the condition of the wheat both at this and the preceding cutting, when I tell him that in another fortnight the whole field was ripe. At the end of this fortnight (September 1st) I housed the sheaf which had been cut on August 15th which had remained exposed in the interval, and cut another. This I have said was *ripe;* but I don't mean that degree of ripeness when the straw breaks, the ears curl, and the grain shakes out; but that condition when it is customary to commence reaping it, when the straw from the roots to the ears is uniformly yellow, and has lost all symptoms of vivid health." When the grain was secured, it was found that the second or half ripe parcel was worth thirteen per cent. more than the green sheaf, and four per cent. more than the perfectly ripe parcel. There is an advantage of four per cent., therefore, for cutting wheat when it is just turning over that which is moderately ripe; an item to be largely increased when the loss from shaking out, which is from ten to twenty-five per cent. is considered.

On the other hand, nothing is gained by cutting hay or clover too early. The principal nutriment of hay is to be found in the sacharine matter contained in the sap. The sap is thin and watery, and contains but little of this nourishing substance early in the season.—The proper time for cutting is indicated by its *gumming* the scythe. When the sap upon a freshly used scy he has a sticky feeling, the hay is in order.

The proper time for clover cutting is when the flowers just begin to assume the brownish hue, and before the leaves begin to wither.

The less exposure to the sun which can be used in curing hay and clover, the better. After wilting a short time in the sun, clover should be laid in high cocks of small diameter, and then allowed to remain until sufficiently dry to be put in the barn.

From the Chronotype.

TEA, COFFEE AND TOBACCO.

The richest soils produce the rankest weeds, and perhaps the strongest reason turns out the greatest crop of folly. Coleridge chewed opium and swilled laudanum like a fool. Hence we cannot infer that because we see the wisest people sipping coffee, and snuffing, chewing and smoking tobacco, it is not folly. Some people call it sin, and they are not so far wrong as they might be, for it is unquestionably a sin to be sick, and that is what all users of tea, coffee and tobacco are sure to be, more or less. But as this is a roundabout way of reasoning, and we have never yet taken oath or pledge against the whole of the mischief, we choose rather to call it a folly.

It is considered folly by most people to borrow money of brokers at two or three per cent. a month. The tea drinker borrows vivacity, happiness, intellectual flame, the stuff life is made of, at a still greater rate of interest—rather, we would say, attempts to borrow it. The attempt is not remarkably successful as to the amount of the loan at any time, and being often repeated becomes less so, or what is the same thing, the loan is more and more used up in paying interest. By a stomach full of well made tea, you borrow into the next two or three hours nearly all the brightness, blaze and vitality of your system which belongs to the next twelve hours. So in the next two or three hours you will be wide awake and witty to your own wonder, and in the balance of the twelve yours flickering in the socket and burning BLUE. Coffee to the same amount will perhaps extend the loan the next twenty-four hours, making the first part brighter and the last part bluer. Tobacco—we never tried that—

but we shouldn't wonder if a man could borrow life by it for nearly a week ahead. Wine will negotiate a still deeper loan.

Now just as an eternal borrower may make his life an everlasting anxiety, (while it lasts,) spend oceans of shave and come to unfathomable poverty, and that speedily; so it is with your tea, coffee and tobacco chewers. What, chew tea! Yes, we knew a very pious clergyman who carried it in his pocket and chewed it as men commonly chew tobacca. There is nothing gained but much lost by this heaping up the vitality of life in spots and leaving the rest bare. The snow, which, if it had fallen evenly, would have made excellent sleighing, by being tossed about and drifted by the wind, makes hard sledding most of the way and no first rate glibness any where. These slow poisons by which we are enabled to anticipate our vital resources, do not create one atom of the etherial treasure, on the other hand they actually destroy much. They demand exorbitant usury, against which no capital can stand forever.

But do not the great, strong and glorious, drink tea, drink coffee, smoke, sip champagne even? Verily. And it is very difficult to find a man or woman who abstains from the popular stimulants who does not owe the blissful exemption to weakness—some constitutional hereditary feebleness, that positively forbade such reckless speculation in vitality. Such a one, who would have gone straight home to the grave yard on strong tea, manages to battle with hereditary penalties of transgression, and do something worthy of life after all, by simply sticking to cold water, wholesome diet, and exercise. But does it follow that if society would entirely leave off its stimulants there would not be a vast increase of health, strength and happiness?

But perhaps strength, health, beauty and jollity are too abundant in this world. Tea, coffee and tobacco may be a wise ordination of Providence to beat down the exuberance of human life; to turn the green, scarlet and gold into DEEP BLUE, and to make work for law, physic, and all sorts of divinity. If so, they are wonderfully successful. They bring nearly all the penalties of poverty into the homes of the rich, and spread such a blue, sulphurous, deathly flame over life, that all sorts of diabolism, quackery and monstrous theological humbugs are sure to flourish. We would not undertake, with all the wit, logic and fact in the world, to dislodge Calvanism from the mind of a confirmed imbiber of tea and coffee, nor to inspire one bright, playful, youthful, immortal, spiritual hope into a brain baconed with tobacco. Truth and dyspepsia never yet dwelt together. Fat or lean, young or old, male or female, there was never yet a habitual consumer of tea or coffee or tobacco who was not more or less a dyspeptic. Tobacco and dyspepsia are synonimous. Did you ever see or hear of a tobacco smoker whose pipe or segar did not serve to settle his stomach, always in an *emeute* after dinner? Troubled he is with watery stomach—and still wairier brain. Settle the stomach? Why, without tea, coffee, beer, wine, alcohol, tobacco, opium, and such deadly drugs, men never would have known they had stomachs. They might have digested ham, sole-leather, tenpenny nails, mince-pies with perfect impunity, if they had not scalded all the tone out of their digestive organs by hot tea and smoke.

HINTS ON GARDENING.

Landreth's Rural Register, for 1848, says that a hot bed for advancing tender vegetables is a treasure to every country resident, and by no means an expensive one. As this month draws to a termination, early cabbage, tomatoes, egg plants, peppers, &c., may be sown in the hot bed, which will greatly expedite their maturity. If it should be formed adjacent to the dwelling, air, water, &c., may be given as required, in the necessary absence of the farmer and his hands, by the females of the family, who almost universally take pleasure in gardening—indeed were it not for their provident attention, how many families would be without a

garden vegetable; to their shame be it said, one may go from farm to farm, the property of men who till their own lands, and are comparatively independent, but who have neither 'vine nor fig tree'—they have 'no time to bestow on such trifles,' unconscious, it would seem, of the amount of comfort missed by a disregard to trifles, to say nothing of the kindly influence they exert. We could point to some farmers and men of moderate means too, who whilst their lands bear evidence of care, their fences in order, out houses yearly white-washed, fruit trees pruned, hedges trimmed, gates which require no propping to keep close or open, so accurately are they hanged, and who are never behind their neighbors at seed time or harvest, whose garden is an object of special care; who are not content with a scanty or uncertain supply of vegetables, but have always at command for daily use, and unexpected visiters, all that the season yields; besides this, the plat of grass around their unpretending homes is kept neatly mown, whilst the small but choice assortment of evergreens, shrubs, and hardy flowers, gives cheerful tone, and make their homestead the seat of pleasure, as it is one of plenty. In addition to all this, when the annual account is balanced and the charge made for every hour devoted to such objects, the pocket is found to be the gainer. Such we could desire to see the condition of every farmer's homestead, and such it would be did they properly appreciate their own importance to society, and educate their sons and daughters; there would then be diffused around them more of the comforts and refinements of life, and the 'country cousin,' now sometimes jeeringly referred to, would stand in his proper place, on the top round of the social ladder. Perhaps some one, who, like the gourd of Jonas, has sprung up in a night, and is doomed to wither almost as rapidly, may give a contemptuous smile at the idea thus expressed, that labor, honest, useful labor, and refinement, are compatible; the error is with himself; the refinement we advocate is of the mind; the capacity to enjoy nature's delightful handiwork, the expanding flower, the umbrageous tree, the glorious splendor of an American sunset, and the thousand ever varying beauties by which we are surrounded.—*Maine Farmer.*

BREEDING FOR FINE WOOL.

It has been often said that the quality of wool can be made such as the breeder chooses, by a proper selection of bucks. Mr. Blanchard gave his opinion on this point, at a late conversation at Albany, as follows:

"In crossing low grade or native ewes with high blood bucks, the increase will partake more of the characteristics of the ewe than the buck. The process of improvement in this way is slow and tedious. He had seen flocks that showed the native blood on the thighs and back, after twenty years had been spent in trying to produce fine wool by crossing common or low grade ewes with high blooded bucks, selections being made each year, of such only as showed improvement."

CULTURE OF SWEET POTATOES.

The culture of this vegetable is worthy of particular attention, especially by our Southern agricultural readers, whose soil and climate are so particularly adapted to their profitable production. A writer in the Southern Cultivator housed last fall, *two thousand* bushels of sweet potatoes from ten acres of ground, three of which were planted as late as June, on stubble land, after harvesting a full crop of oats. He used them for fattening his hogs, which were fed almost exclusively on boiled potatoes, and says he never saw hogs thrive better, and also fed them cooked with turnips, to working steers and milch cows with much success.

The quantity raised on the same ground in proportion to corn, he estimates at six bushels to one and with about the expense of cultivation. His method in the culture of sweet potato is first to select his seed from that kind which he con-

siders the most valuable, (the Yam,) and which when cut open is "nearly as yellow as the pumpkin," and as he cultivates from the sprouts, prepare first his bed from which he is to procure his sprouts. This is done by first making a bed very rich with vegetable or stable manure, spread on and ploughed in. He observes: "I then open a furrow with a broad turning plough, and spread the same from end to end with potatoes, and if large I split them carefully, turning the skin up, and cover them with the same plough, spreading as above every furrow with potatoes, and thus ploughing, planting and covering until I have buried eight or ten bushels for each acre that I intend for potatoes. This may appear to some persons unnecessarily many, but as it is obviously important that the whole crop should be planted as early as practicable, this quantity should not be considered a waste, especially as the sprout bed, when done with for the purpose of planting, may be made a convenient and profitable place for one or more sows and pigs, until the potatoes, which will be found perfectly sound, are consumed. I lay off my rows when ready for planting, at four feet distdistance, with a shovel plough, following in the same furrow by a turning plough, opening a deep, broad furrow. I then throw up as large ridges as I can conveniently with the plough, which completes the bed, and plant immediately, the bed being fresh made. My first working is done by running the bar of a turning plough as near the potatoes as possible, without cutting them up, covering up all grass between the rows, which will smother and die in three days, when I thoroughly plough out, throwing the earth to the potatoes, the hoe hands following the ploughs, whose work is merely to remove or cover the grass on the top of the ridges, not covered by the plough, which is done with all the rapidity common to the working of a cotton crop By this time, the second and most important working is necessary. The vines will have run down the sides of the ridges; and here arises the greatest difficulty with most persons in cultivating this crop. Every vine covered at this time, or at any subsequent working, puts forth numerous fibres, but few of which ever produce a potato worth eating; and to avoid this evil, as also to facilitate their culture, I send ahead of the ploughs the weakest hand leaving every other row into which the vines are thrown over out of the way of ploughs, (a chap eight or ten years old will rapidly perform this part of the work) the plough throwing the earth to these potatoes, to be completed by the hoe hand drawing the earth well up to the potatoes which from the vines being thrown over on the opposite side of the bed is left in good condition to receive the dirt without being covered. As soon as I have passed over in this way, I turn immediately back, and throw the vines into the middles just worked, and plough and hoe the rows left, leaving the crop in fine order, with scarcely a vine covered. If a third working is rendered necessary, it is performed in the same manner as that of the second working. As before stated, cover the vines, and you have numerous fibrous roots and small potatoes, while on the other hand keep the vines above ground, and the earth well stirred, and you have potatoes of better flavor, and their size and bulk greatly increased."

"The gathering is performed by plough labor, principally, as it performs the work with greater facility, and with less injury to the potatoes than if done with the hoe.

For this preservation he deposits them in "banks" of about 105 bushels each, in the following manner:

"He combines together with potato vines some dozen or more corn stalks, to be placed upright in the centre of the intended bank, around which, after covering the surface on which the potatoes are to be thrown with straw, he piles up about one hundred bushels. He then spreads over the bank corn stalks or straw, or both, and covers well with dirt, leaving the corn stalks placed upright projecting above the dirt, and the dirt placed well up around the stalks. The bundle of corn stalks in the centre of the bank serves as a flue through which the air passes from the bank, effectually guarding

the potatoes against heating, which need not be covered, even in the coldest weather, common to the climate, as the smoke from the banks thus put up will, of a cold, frosty morning, exhibit the appearance of so many small chimnies, and while this is the case, the banks being otherwise well covered, the cold cannot affect them, and they rarely ever rot, even in midsummer. On the contrary, banks fully closed, seldom do well. The banks, however, should be sheltered, and so arranged, as to protect them, more or less, from the influence of the North winds.

MILKING.

A writer in the Maine Farmer gives, from long experience, a number of rules for milking, most of which are very good, as—pare your nails short—sit on a stool—milk fast—never scold a cow—never get out of patience—tie her tail to her leg in fly-time, &c. But the following are objectionable: "wet the teats with the first stream of milk"—and "never strike a cow for running or kicking." Milk, applied to the teats to soften them, dries and forms a glossy varnish, which tends to cause cracking or chapping of these parts. Cold water is much better, becoming quite dry by the time the milking is finished, and leaving the teats clean and soft. Touching the striking of a cow—the rule applies well to ninety-nine cases in a hundred as now practised—but judicious punishment will cure a cow amazingly quick. I speak from long experience. If a cow kicks much, place a switch under the left arm, the pail in the left hand, and if, while milking, she kicks, let it be followed invariably by a *single* blow. Never strike but once at a time, even if she kicks so hard as to break your leg—and never omit it, if she hits nothing. Soothe her at all other times. In this way she soon finds what the whip means, and shapes her conduct accordingly. A small mess of pleasant food at the time, will serve to do away any disagreeable impression in connexion with milking. By never striking but once, she has not time to "get mad," and it is more terrific, for who cares for a blow while stimulated by fury?

I had some "hard cases" to deal with, but completely cured them all with a single exception. There was one old cow, so terrific in the blows she dealt out, that none dare attempt her with a pail, till her legs had been strongly secured, which was done with great difficulty. She never kicked, after I had given her the second milking, in the way I have just stated, but became perfectly mild, quiet, and gentle, having doubtless been made vicious by bad management. The case which I could not cure was a large, uncommonly knowing cow, who was wise enough never to kick when I milked her, consequently I could not apply the remedy, but was savage enough to other milkers. With regard to cows running about, —I once knew a cow quite troublesome in this particular, usually upsetting the pail of milk, before commencing a race. The boys chased her round the pasture till they cornered her, and then lashed her vigorously. As a consequence, she took care not be cornered next time, and hence became intractable in the extreme To cure her, she was placed in a moderate sized yard, and driven gently into a corner. When she ran, the whip was applied, but with only one blow at a time, till she regained the old corner, where every means was used to quiet her. In this way she soon found an intimate connexion between whipping and running, and that comfort consisted in sticking to her post. On the third day she was handed over to the care of the hired man, and ever after was a quiet cow.

It is almost needless to add that this mode of treatment requires perfect calmness, patience, and self-possession. When you feel passion or fear, the animal soon discovers it, and she feels no longer the influence of a superior being. Therefore those who cannot carry out the system properly, had better not try it.

AN OLD MILKER.

If you have bars at the entrance of your fields, substitute gates for them.

CONTENTS OF NUMBER VI.

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NEARLY OPPOSITE THE EXCHANGE BANK.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

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CORN.

The cultivation of corn-fields will constitute one of the chief duties of this month.—Therefore, we will take the opportunity to combat a superstition exceedingly common and prevalent among the farmers of Virginia. It is that corn is benefited by breaking the lateral roots by "*bleeding*," as it is termed. For this purpose they run the plough close up to the foot of the cornstalks, and effectually "bleed" them. We have often asked the reason of this practice; but never got any other answer than that "it *was* so," and that the corn *did* grow better when it was done than when it was not done.

The absurdity of the thing must be evident to every body. Corn is a gross feeder, and needs large quantities of sap to supply its large leaves and thick stalks. Consequently it sends out roots in every direction. A double supply is sent out in a lateral direction, because through them it must get most of the moisture which falls upon the ground. If you break these with the plough, all that source of sustenance is cut off. And what is gained by it? Does a man get fat the quicker by opening his veins and bleeding him profusely?

PRESERVATION OF FOOD.

The preservation of food has at most periods been an object; but the usual processes of man have been, for the most part, little in advance of the squirrels and other animals; less than those of the bees, which have an instinctive perception of the true principle, viz: the exclusion of air, which they accomplish by hermetically sealing up their honey cells. In some cases the principle is aimed at, but in a clumsy way. Preserved provisions, as meat, fish, soup and milk, are enclosed in hermetically sealed tin cases, and rendered durable for years. The air in these cases is excluded by the agency of heat and a partial cooking. The expense of these methods prevents their being more than a luxury. Potted meats are prepared with antiseptics, and the air is excluded by a covering of melted fat. Green fruits and vegetables are enclosed in sealed bottles, from which the air has been driven out partially by heat. Meats, antiseptically treated, are also preserved from the air by enclosing in a bladder or gut, in the form of sausages. Salted meat in brine is preserved partly antiseptically by the salt, and partly by the immersion in the liquid brine. Smoked meats are preserved partly antiseptically by the empyreumatic acid, and partly by the watery particles being driven off by heat, so that the meat becomes a kind of glue, and the air is excluded. Dry cakes of glue may be preserved any length of time; but if they be moistened to admit the air, they soon putrify. The charqui or jerked beef of Southern America is made into a glue by the heat of the sun, and thus assumes the character of cheese; decomposing by mites in the same manner. Dried flesh of this kind, mixed with butter or fat, is the pemican of Northwestern America, from which the air is thus excluded.—

Egyptian mummies have the air excluded by bandages.

There are various modes in which grain is preserved, some intentional, some accidental. What are called brewers' grains or spent malt, the cow-keepers in the neighborhood of London seek to preserve by covering them over in pits. The air is not excluded, and therefore the method is inefficient. What is called mummy wheat, has been preserved by the effectual exclusion of the air. In Spain, wheat is preserved in what is called Silos, i. e. underground pits of peculiar soil, covered in with earth. Wheat thus treated lasts many years. The French armies were accustomed to hunt for these deposits for subsistence. A flat stone usually covered the opening; and on its removal a quantity of deleterious gas often rushed out, sometimes killing the opener with asphyxia. In Canada West, hunters and Indians make deposits of corn and other things in artificial caverns, called Caches, chosen in dry spots and covered over. In some of the internal parts of Spanish America, the common granary is the skin of an ox taken off entire, and the legs and necks being tied round it, is filled with tightly-rammed earth through a hole in the back, while suspended between posts. When dried to a state of parchment, the earth is taken out, and the bloated bag, resembling a hippopotamus, is filled with grain, which is thus kept air and vermin proof.

Three conditions are essential to the process of putrefaction, viz: heat, moisture, and still air. With wind, moisture is carried off; with cold, the decomposing process is checked, as may be seen by the carcasses of animals that lie through the winter in snowy mountains, and dry up to glue. Without air, every thing is locked up and remains *in statu quo;* as reptiles have been buried for ages in blocks of stone or ancient trees and then resumed their vital functions, unchanged by time.

In direct opposition to these principles, are the granaries of Great Britain and other countries constructed. Their site is generally the bank of a river, or the sea side. They are built of many floors, at a vast expense. They are provided with many windows, each floor being the height of a man, yet not permitting more than twelve or fifteen inches depth of grain on each floor, for fear of heating, unless in the case of very old samples. Men are continually employed to turn the grain over, to ventilate it, and clear out the vermin; and the weevil is naturalized in every crevice, as surely as bugs in neglected London beds, or cockroaches in West Indian sugar ships. It is the admission of air that permits this evil, that promotes germination, that permits the existence of rats and mice. *In the exclusion of air is to be found the remedy.* The practicalization of this is neither difficult nor costly; on the contrary, close granaries might be constructed at far less proportional cost than the existing kind.—They might be made under ground as well as above ground—in some cases better. They might be constructed of cast iron, like gasometer tanks; or of brick and cement; or of brick and asphalte, like underground water tanks. It is only required that they should be air-tight, and consequently water-tight. A single man-hole at the top, similar to a steam boiler, is all the opening required, with an air-tight cover. The air pump has long ceased to be a philosophic toy, and has taken its place in the arts as a manufacturer's tool; and no difficulty would exist as to that portion of the mechanism. Now, if we suppose a large cast iron or brick cylinder sunk into the earth, the bottom being conical, and the top domed over; an air pump adjusted for exhausting the air, and an Archimedean screw pump to discharge the grain, we have the whole apparatus complete. If we provide for *wet* grain, a water pump may be added, as to a leaky ship. Suppose, now, a cargo of grain, partly germinating, and containing rats, mice and weevils, to be shot into this reservoir, the cover put on and luted, and the air-pump at work, the germination would instantly cease, and the animal functions would be suspended. If it be objected that they would revive with the admission of the air, we answer, that the air need not be

admitted, save to empty the reservoir. If it be contended that the reservoir may be leaky, we answer, so may a ship; and if so, the air pump must be set to work just as is the case with a water pump in a leaky ship.

The cost of an under-ground reservoir would possibly be more than one above ground, but it has the advantage of occupying space of otherwise little value.—One obvious cheapness of this improved granary over those now existing is, that the whole cubic contents may be filled; whereas, in the existing mode, not above one-fourth of the cubic contents can be rendered available. But many existing structures might be rendered eligible.—For example: the railway arches of the Eastern counties, the Blackwell and the Greenwich. In such cases the grain would be discharged into them from wagons on the line, in the mode used with coals. Reservoirs might be erected in farm yards, and the grain threshed out and carried from the harvest field direct, with the absolute certainty of preserving it any length of time that might be desired. Or, inasmuch as it is a certain thing that all farms must ultimately communicate with railways, by means of cheap horse-trains, steam-sidings, in order to work to profit, it would be desirable that the granary should be erected at some central railway station, where a steam mill would do the work of exhausting the air, discharging the grain by an Archimedean screw when required, and grinding it into meal.

The same arrangements that are good on land are also good at sea. Many cargoes of wheat have been abandoned owing to heat and germination on their passage. Rats, mice and weevils also are very destructive. If the vessels were built of metallined, air-tight compartments, the air might be exhausted by the pump, occasionally trying the pump to ensure against leaking; and thus even now, undried grain might be carried and delivered across the sea undamaged; the vessel would be more safe by means of air-tight compartments, and also more buoyant. And the same arrangements would be equally available for various kinds of goods subject to damage in transit—such as are hermetically sealed in tin cases; and thus the expense of packing would be saved.

In reservoirs on shore the air might not merely be pumped *out*, but warm air might be pumped *in*, to damp the grain. Water might be pumped in and out to *cleanse* the grain.

Similar reservoirs or magazines, on a smaller scale, might be constructed for butchers or other provision dealers, and meat might be preserved fresh for weeks in the heat of summer, preventing the necessity of waste, or of selling at ruinously low prices; and so with fish brought to Billingsgate or other markets. On the same principle, there is no doubt that fresh meat, as sea stock, might be carried instead of salt meat, and that fresh provisions might be transported from any part of the world to any other part. Pork, or beef, or mutton, or venison, might be killed in America and transported into England. Weevily biscuit would be a traditional commodity only in the annals of sailor craft.

"Water tight compartments" is at present the expression for a safe ship. "Air tight compartments" would be a term expressive of equal safety and far more general utility. The expense of air tight joints for the man-holes or openings would be but trifling. By the application of *gutta percha*, a perfect fit might at all times be ensured with very little expense.

There can be little doubt, that with such arrangements, the prices of food would be far less fluctuating, and that it would become a practicable thing to borrow money on food as on brandy or iron, or any other commodity, when once its durability and unchangeability were demonstrated.—*Westminster Review.*

It is not known where he who invented the plow was born, or where he died; yet he has effected more for the happiness of man, than the whole race of conquerors.

From the Genesee Farmer.

IRRIGATION.

Irrigation has been practised by the Chinese and Egyptians from the remotest antiquity. In countries where rains seldom fall, and the ground becomes dry and parched, irrigation is of immense value. It consists in taking water from lakes, sewers, running streams or reservoirs, and causing it to flow over the land by means of small canals or furrows, then by proper outlets to carry it off again. It is confined, according to Colman and Johnston, almost exclusively to meadow lands.

The benefits of irrigation in a country where rain falls frequently and abundantly, are the same as those of manuring. When the water used holds in suspension any organic matters, they subside while on the fields, and leave a visible layer of manure on the surface, after the water is drained off. An example of the fertilizing effects of irrigation is seen along the banks of the Nile and Ganges. But the effects of irrigation with water that contains no organic sediments, must be considered the same as that of rains. Runing water furnishes to plants some gases, which are absorbed, and in this way are beneficial. Crops of young and tender plants should be irrigated by pure water: it may be repeated every two or three weeks when there is any want of rain, and the water be allowed to lie on the field three or four days. It is thought by English agriculturists to be injurious to meadows to flood them immediately after mowing.

Warping is a process similar to irrigation: the object of this, however, is more especially to obtain the sediments of muddy streams, &c. The water should never be allowed in either process to remain on the field until stagnated. Irrigation is most beneficial on land which is well drained beneath, so as to allow the water to penetrate the subsoil, and not stand too long on the surface. Meadow lands are sometimes watered in the winter to prevent the injurious effects of frost upon the roots of the grass. Irrigation is not practised to much extent in the United States; and the remoteness of many farms from streams, as well as the expense attending the operation, will prevent its universal application, even where it would be beneficial.

M. M. Rodgers.

Rochester, N. Y., 1848.

A CHEAP PAINT.

As this is the season of the year when the good housewife delights in furnishing up the homestead and making it and all its appendages look almost as good as new, we re-publish the following receipt for making a cheap paint. It is by Col. Boyle, of Annapolis, a gentleman, who, notwithstanding the incessant claims upon his time in his legal profession, still devotes a portion of it to rural occupations, and has in times past very acceptably occupied our pages, much to the edification and delight of our readers.

To make paint without white lead and oil:

2 quarts skimmed milk,
2 ounces fresh slacked lime,
5 pounds whiting.

Put the lime into a stoneware vessel, pour upon it a sufficient quantity of milk, to make a mixture resembling cream, the remainder of the milk is then to be added: and lastly the whiting is then to be crumbled and spread on the surface fluid, in which it gradually sinks. At this period it must be well stirred in, or ground as you would other paint, and it is fit for use.

There may be added any coloring that suits the fancy.

It is to be applied in the same manner as other paint, and in a few hours it will become perfectly dry. Another coat may then be added, and so on, until the work is completed. This paint is of a great tenacity, and possesses a slight elasticity, which enables it to bear rubbing even with a coarse woollen cloth, without being in the least degree injured. It has little or no smell even when wet, and when dry is perfectly inodorous. It is not subject to be blackened by sulphurous or animal vapours, and is not injurious to health. All

which qualities give it a decided advantage over white lead.

The quantity above mentioned is sufficient for covering 27 square yards with one coat.—*Annapolis Republican.*

EARLY HARVESTING.

It will be seen from the following article that the position we assumed in our last, with regard to the propriety of cutting grain before it is fully ripe, is beyond dispute:

CADET DE VAUX remarks that "corn, (*grain*) reaped eight days before the usual time, has the grain longer, finer, and better calculated to resist the attacks of the weevil. An equal quantity of the grain thus reaped, with grain reaped at maturity, gave more bread, and of a better quality." The proper time for reaping, according to this distinguished author, is that "when the grain, on being passed between the fingers, has a doughy appearance, like a crumb of bread, just hot from the oven."

LOUDON, whose remarks on all topics associated with theoretical or practical farming, are deserving of the highest respect, says that in harvesting wheat "the best and most experienced farmers in England and on the Continent, agree that it should be cut before it becomes fully ripe. When this is the case, the loss is considerable both in the field and in the stack-yard."

According to VON THAER, "grain that has become fully matured, in the field, produces inferior flour;" and in the "REPORTS ON SELECT FARMS," in reference to the "Scorsely Farm," managed by C. HOWARD, it is remarked that "wheat ought never to be allowed to remain uncut till it is fully ripe. Experiments, easily made, will prove to every cultivator of it, that by permitting it to stand till the straw has lost its succulency, he gains nothing in plumpness or bulk of grain, but loses much in color and pureness of skin, beside which he incurs the risk of shelling by the high winds, or by its being cut under the influence of a burning sun. When fully ripened by standing in the stock, no dry hour should be lost in getting it well secured."

The following, from a distinguished agricultural friend and correspondent, affords a practical and very satisfactory corroboration of the above theory, as it comes from one whose whole life has been benevolently devoted to the advancement of the great interests of agriculture, and whose statements, however contrary to the preconceived and incondite "notions" of the *old regime* farmers, are beyond a doubt.

"Some years since," says the authority alluded to, "circumstances rendered it necessary for me to cut a road through a field of wheat in order to gain admittance to a piece of low land on which there was a crop of wild grass, which I was desirous of cutting as a winter feed for sheep. The wheat, at the time of cutting, was so green that I presumed it of no value, except as fodder. It was, however, by my directions, spread on the grass-stubble, and on examining it, four days subsequent to the cutting, I was surprised to find the kernels very plump and full, and little if any inferior to that which had stood till perfectly ripe, in the field."

It is a well known fact, I presume, with most of our agricultural friends, that Indian corn, if cut many days before it is fairly glazed, will ripen, and that too, in most instances, without any apparent diminution either in the quantity or quality of the grain. In several instances, which have fallen under my observation, during my agricultural life, it has, when cut at the roots before the kernels had become fairly "*speckled*," filled even more rapidly than while standing. That the stalks afford nutriment in no stunted degree, even for some days after cutting is fully demonstrated by the fact, that an ear plucked at the time of cutting will shrivel, and be very imperfect; whereas those that remain will "fill out," and become sound corn, capable of reproducing its kind the same as though its maturation had been effected in the stand.

There can be no question I think but that the juices become thicker in consequence of the non-supply of sap from the

roots; and, if the stalks are in a green and succulent condition, the quantity of the circulating and nourishing fluid, contained in the sap vessels, at the period of the corn's turning, is doubtless, under ordinary circumstances abundantly adequate to ensure the perfect development and maturation of the grain.

As the fluid becomes dissicated, the deposition consequently becomes progressively more active and rapid, so long at least as the supply continues, or till the process of filling is effected, and which is unquestionably much more speedily effected, under ordinary circumstances, than when the stalks are attached to the roots. It is customary with some farmers to permit their grains to remain in the fields until they are "dead ripe," under the presumption that if harvested before every particle of fluid has been extracted from the straw or haulm, the grain must necessarily be greatly diminished in weight and value; but this is an error. By early cutting, a very important saving is made in the article of straw, which, if cut in a green and succulent state, becomes excellent fodder for stock, and, if properly cured, and seasoned with a slight sprinkling of salt, is but little inferior to the best English hay. Beside, grain cut in a tolerable green state, is not likely to shatter out—a contingency wholly unavoidable when it is permitted to stand until thoroughly ripe. In the summer of 1840, I had a piece of oats on which I determined to test the experiment of early cutting. The grain was heavy and well headed, and had not been attacked by rust or mildew. Eight days before the usual time, I cradled two swarths round the entire piece, the berries being then just in the milk, and the straw as green as at any period during its growth. The grain cut, was carefully made, and bound in small bundles, and on removal to the barn was so stored as to admit free access of air on all sides.

On threshing, I found the grain slightly deficient in weight to that which was cut eight days after; about two pounds to the bushel, I think, but the increased value of the straw, as fodder, more than compensated for the deficiency in the weight of grain. Had I deferred cutting two or three days, I have no doubt the grain would have been equally as heavy as that cut last, while the straw would have been but little depreciated by standing. The straw of that cut last, was wholly worthless.

SAVING CLOVER SEED.

A correspondent of the American Farmer gives the following method for saving clover seed, and account of the "stripper," a machine used in some northern districts for that purpose:

"My plan is, when it is fully ripe, to take a common grain cradle and lower the first finger as close to the scythes as can be at the point, and then take a linen cloth and stitch it to the two lower fingers, and then you will cradle two swarths together; by this plan you will cut the tops, or more if you wish, and by keeping your scythe in order you can cut it very clean; and any hand that can mow grass can also cut clover seed. After it is cut, you will let it lay one or two weeks to season; in dry weather it may lay a long time; and when it is well seasoned, you will gather it in small heaps with a common hand rake in the morning, when the dew is on, otherwise it will shell; then it can be removed in the after part of the day, or may remain for some time in dry weather—you will then haul it to the barn or stack-yard, if you wish to stack it—my plan is to stack it 25 by 12 feet in length and breadth, and about 10 feet high—I then take long straw, and lay it with top ends out to project half its length over, and then build on and batten in to close the stack—every load a course of straw, and so on gradually with straw and seed, till you bring it to a point—the gable end I generally build perpendicular, then cover the top well with straw and heavy poles, and by the first rain, beat down the straw with your rake, and you will have a complete stack that will stand the storm till you have time to thrash it. You may thrash it on a common spike

machine, by having a good shaker to it, but I generally thrash it off with the flail in the winter—shake off the straw with hand forks, and rake in clean with hand rake; the better it is raked the easier it will clean on the common spike machine. I have cleaned as high as 18 bushels of seed per day with six horses in the short days of winter.

I will now conclude by telling you about the clover seed "*Stripper*," as it is termed by us, to which your correspondent refers, as being "shaped like a comb, and dragged by a horse." We have several kinds in our county—some run on sled runners, and others on wheels—they are not made by any particular manufacturer, but generally by farmers themselves, according to their own plan—but in my opinion, they are not calculated for large farmers, or for getting seed for market at these low prices; for they are too laborious in stripping, and then it requires a large barn floor for drying it before you can store it away, otherwise it will heat and must, and injure the seed, and cannot be thrashed clear; and therefore I will submit the above to your consideration, as also the result of the trial of my neighbor Diehl. Some years ago D. and I went some miles and borrowed a clover stripper, with the intention, if it answered the purpose, to get one made in company. Mr. D. stripped four acres and sent for me to see it work—I mounted the machine, and took the chair, when he handed me the scraper to scrape off the clover heads, and told his boy to move on slowly; but I tell you it soon raised me off my seat, and it took all my power to clean, and made the sweat roll in streams, for my neighbor was determined to make me go one round for trial—but that round put me out of the notion of going into a co-partnership for any more stripping of clover seed."

TO RAISE CABBAGES, &c.

Messrs. Editors,—Every spring I am called on for cabbage and other plants, when I inquire of my neighbors why they do not raise plants themselves, I always hear some excuse like 'The bugs eat them up,' 'The seed was good for nothing,' or 'The frost killed them,' 'You cannot raise cabbage plants on old land,' &c.; and may be it is so with neighborhoods where the Prairie Farmer circulates, and for that reason I will describe my way—and I have never met with a failure.

I have boxes prepared about 12 inches deep, and set them up in a sheltered place high enough to be out of jumping distance of the bugs, and fill them with good rich soil. Before planting the seeds I prepare a kettle full of boiling water and pour it as hot as possible over the boxes. This kills the varmints and seeds of weeds in the soil, and when cooled down some, promotes the germination of the seeds planted, which come up a great deal quicker than when planted in the cold soil. The seeds are sown on top and pressed in the warm mud with a board, are are afterwards covered with about one eighth of an inch of loose soil. The plant will come up quick and thrifty, and no bugs will trouble them. Last year I raised in a box about 36 feet square about 3000 cabbage plants, which sold readily at 2*s* per hundred, which would be at the rate of $9075 per acre. Who can beat it?—*Wisconsin Prairie Farmer.*

COMPOSTS.

It was formerly supposed, that great advantage was derived from the combination of several different substances together, and forming what are call *composts*.—The receipts for these compounds are numerous, and go to prove that the discovery of a good compost requires but little scientific or practical skill. When a compost heap is made up of several materials which are all separately good manures, it follows of necessity that the resulting compound must be a good fertilizer. But it is impossible to supply any more manure in this way than if these several ingredients were applied to the soil separately. And a little knowledge of chemistry will show that by this means no

new element can be generated. Neither can any new property be developed which could be done by their seperate action. We see that whenever a substance which has little or no fertilizing power, is in this way manufactured into a good manure, it is done at the expense of some powerful fertilizer which is diluted by the mixture, and consequently loses just as much of its efficacy as the other gains. Thus, although this process serves to dilute and extend manures which are too powerful or too extensive, it absolutely supplies none.

Now, although it is evident that this method does not augment in the slighest degree our quantity of available manure, —yet it has several advantages. Caustic lime and wood ashes are sometimes too strong for young and tender vegetation; and when this is the case, the object of their use is much better attained by mixing and diffusing them through some other substance, such as saw dust, sand, barn manure or other humus, or allowing them to lie in a heap together with any vegetable matters, such as leaves, straw, chaff, rotten wood or turf; or with animal matters; until decomposition is completed.

Another advantage is, that a manure which is valuable and scarce, as guano, poudrette, and some chemical salts, may be extended by mixture so as to be applied to a much larger space than would be practicable if used singly. Thirdly, this mode enables the agriculturist to spread his manure on the soil more even and uniformly. And lastly, by making compost we are enabled to hasten the final decay of animal and vegetable matters, so as to gain time. By mixing quicklime with barn manure, straw, leaves, &c, decomposition goes on more radidly, and these substances are transformed to available manures in a comparatively short space of time. But much discretion is necessary in this respect, otherwise some valuable elements are wasted; the object is to fix and retain the volatile elements—and not to dissipate them. A great objection to composts is, the amount of labor required in making, turning, and transporting them to the fields.

No definite formula can with any propriety be given for making composts, as the agriculturist must determine for himself in each particular case, as to what elements his fields most require, and also his time and the resources at his command. With these considerations, and an adequate knowledge of his business, he will be able to make a more judicious disposition of his manures than by the aid of any prescribed rules which can be laid down in books.—*Genesee Farmer.*

REMEDIES FOR HORSES.

Horse Ointment.—BLYTHE, in his *Pocket "Farrier,"* gives the following recipe for making an ointment for a wound, bruise in the flesh or hoof, broken knees, galled backs, bites, cracked heels, and mallenders, or when a horse may be gelded, to heal the wound and keep the flies away:

"Take rozin 4 ounces, bees' wax 3 ounces, hog's lard ½ lb., common turpentine 6 ounces, dissolve them in a pipkin with a gentle heat; then add two ounces of fine powdered verdigris, stir them together with a stick, and strain the whole through a coarse cloth, set it aside to cool for use."

Horse Ointment for Sprains.—Take 1 quart of soft soap, 1 gill spirits of turpentine, 1 gill spirits of camphor, 1 gill of the oil of Origanum, and 1 pint sweet oil; mix the whole together, and rub the sprained part three times a day for a few days, when, in most cases, a cure will be effected.

For Difficulty in Urinating—Boil 4 oz. of the flowers of yarrow in half a gallon of water for 30 minutes, then strain, and add 1 oz. of saltpetre to the tea; when the saltpetre is dissolved, divide the portion into four parts, and moisten the food of the horse with one portion, each morning, for four mornings in succession.

Cooling Spring Drench.—Make a tea of 2 ounces of the bark of the root of sassafras, and an equal quantity of spice wood, boil in half a gallon of water, dis-

solve in it 1 lb. of Glauber salts, and give the horse a pint of the decoction three or four mornings in succession on a fasting stomach, then give him gentle exercise for an hour before being fed.

For the Colic.—Boil 2 ounces of ginger in a quart of water, until the quantity has decreased one-half, strain, and dissolve 2 ounces of soda therein—give this in a drench, milk-warm. In one hour thereafter give 1 pint of linseed oil, and let the horse be moved slowly about for an hour. If the medicine does not operate in that time, he should receive an injection of Glauber salts, say one-fourth of a pound dissolved in a quart of warm water.

Amer. Farmer.

COMPOST OF STRAW.

In one of our exchanges we find the following method of making a compost of straw to be applied to wheat next October: Six loads of marsh mud, a thousand weight of straw, ten bushels of lime, one bushel of plaster, two bushels of bone dust and five bushels of ashes. The whole to be mixed well together and made into a cone like heap, so as to turn the rain. In first putting the material together, if the earth is not sufficiently moist, it is to be made so with three or four gallons of urine. Every three weeks the heap should be turned over with shovels until ready for use.

SHALLOW PLOUGHING AND SURFACE MANURING.

We make the following extract from a letter from a Maryland subscriber:—If you looked at the Farmer, you saw I got the first premium for wheat and corn—wheat 41 bushels per acre—corn 63 bush. per acre—and for ploughing, at our cattle show in 1847. I had taken some pains to prepare the lot for the wheat, and as I stand nearly alone on shoal ploughing, I was the more particular. I prepared a part of the lot with *Sinclair's* 3-mould ploughs, and the common drag harrow, and have never seen as good white wheat in the winter, during my farming; and nearly every one that has seen the wheat, which I have growing from 22 bushels seed, has pronounced that they hardly ever saw as good in the winter; few crops look well in our part of the country; I have seen but two or three in my travels. I am well satisfied, if surface manuring is true, which I thing will not be denied, that to keep the richest portions of your earth nearest the surface, must be the true interest of every farmer. I find that all men who give their manure to the top of the land, when in grass, will not hesitate a moment to say that they prefer the plan of putting their manure on top; that is to say on grass the year before they cultivate, or on the land after they have broken it up in the spring for corn, or as a top-dressing on wheat, after seeding; all of which must be rotted manure, except for corn, or there will not be the same benefit.

In the year 1834 or 1835, I ordered my driver to take to my corn lands, manure ten with rotted manure before ploughing, and ten after planting; also ten with unrotted before ploughing, and ten after, and alternate them, to see which would produce most corn—land equally good.—After the corn got three feet high, I told him to have it suckered. I inquired if he found any difference; he informed me the rows manured on top had four or five times as many suckers, which was the first thing that gave me the idea of top-dressing land. I regret I did not gather and measure; but I forgot to give the order.

I shall continue to plough from two to four inches, and I think if I have as good luck as I have had, that I shall not change, though I shall gve some efforts in good land a little deeper. One thing I will mention: if you will take a deep, rich black mould, and take off one or two inches from a few lands, and put in another place, you may put what you please in land, and nothing will grow equally good as in the rows which are in their natural state; but do you continue the manure, and after some years' exposure they will come to produce well. So in this case I draw the inference that sun and light are *first* all important. I like to go down

with such implements as will not take down the top or bring up the bottom, and for this reason, in excessive hot weather the roots of plants desire to protect themselves from the heat, and in very wet weather I like the water to have a chance to settle quick.

CHEESE.

The following are extracts from a prize essay by Mr. Fish, of Herkimer county, New York, upon the manufacture of cheese. The best cheese in the world is made in that county, and this essay received the prumium offered by the New York Agricultural Society:

"Having been personally engaged in 1845, in some 60 dairies, which were located in some thirteen towns and four counties, and more or less in the same manner the past two years, I have observed a marked difference in the capacity of soils for producing herbage, under different modes of culture, and the various conditions and treatment, of cows, affecting their capacity for milk, both as regards *quality* and *quantity*. The inconvenient and improper fixtures, in many instances, for making and curing cheese, which are to be found, all unite in convincing me, that any set of rules for making cheese would not be practicable, even with the most proficient cheese maker; because,

In the first place, milk is a fluid very liable to be varied in quality by impure water, by damp and unventilated stables, change of diet, excess of feeding, excitement of temper, irregular milking, salting, &c., which destroys its susceptibility to produce like results.

2d. Cheese, when pressed aud exposed in a *curing process*, is no less easily affected, and is equally liable to be varied in texture and flavor, by size of cheese, exposure to excess of heat, bad air, &c., the effect of which I shall hereafter notice There are, however, leading principles which form the basis of operations, and should be closely adhered to, *in all cases*, in the process of manufacturing cheese. *Salt*, *rennet*, *heat* and *pressure*, are the principal agents used in converting milk into cheese, the flavor and texture of which is determined by their proportionate use. Their proportion is varied by different dairymen, according to their notions of propriety, as best adapted to their experience, fixtures, &c. Hence arise the great inequalities in dairies, in the same neighborhood, and even in the dairy-rooms may be found as many different qualities of cheese as there are fruit in an apple orchard. Some of these are matured at an early period, while others mature later, and are unsuited to the same market.

Much of the cheese being contracted for before it is made, (in the early part of the season) both buyer and maker are liable to be disappointed, in the cheese being suited to the market for which it is designed, destroying the confidence of purchasers, and injuring the interest of the dairymen. It is therefore necessary, that makers should have sufficient knowledge of the science to determine the result of their practice, which cannot be learned from verbal instruction. It is by *practical experience and close observation only*, that the maker can learn to adapt his practice to the frequent and extreme changes in which our climate is subject, varying the quality of the milk, and materially affecting cheese in the process of curing.

The evening's and morning's milk is commonly used to make one day's cheese. The evening's milk is strained into a tub or pans and cooled, to prevent souring. This is done by running water through a vessel set in the milk, or setting pails filled with cold water into the tub, and stirring till cool: but little cream will rise over night.

The cream is taken from the evening's milk and kept till the evening's and morning's milk are put together, and warmed to receive the rennent. This is often done by heating a part of evening's milk to a temperature that will warm the whole mass. Both are objectionable, *because the natural affinity which is necessary to preserve between the constituent parts a perfect coherence* is destroyed, by a

portion of the milk being overheated. It is better to warm the whole mass in a manner that will produce an *equilibrium of heat*, which is best done by placing the vessel containing the milk, within a larger vessel, with two inches under the bottom, and one inch of space at the sides, into which space water may be put to cool the milk, and into which steam may be let to warm the milk and scald the curd. The more water surrounding the milk, the more uniform will be the heat. The cream, if added, (which is generally done,) is best incorporated with the milk, by putting it with twice its quantity of new warm milk from the cow, and add warm water to raise its temperature to ninety-eight degrees. Stir it till perfectly limpid, add cream to milk, and then put in rennet, that the same stirring may mix both at once with the same mass. If milk is curdled below eighty-four degrees, the cream is more liable to work off with the whey. *An extreme of heat will have a like effect.*

Curdling heat is varied with temperature of the air, or the liability of the milk to cool after adding rennet. A fine cloth spread over the tub while the milk is curdling will prevent the surface from being cooled by circulation of air. No *jarring of the milk*, by walking upon a springy floor or otherwise, should be allowed while milk is curdling, as it prevents a *perfect coherence.*

Rennet.—Various opinions exist as to the best mode of saving rennet, and that is generally adopted which is supposed will curdle the most milk. I have no objection to any mode that will preserve its strength and flavor, so that it may be smelt and tasted with good relish, when put into the milk. Any composition not thus kept, I deem unfit for use, as the coagulator is an essential agent in cheesing the curd, and sure to impart its own flavor. The rennet never should be taken from the calf, till the excrement shows the animal to be in perfect health. It should be emptied of its contents, salted and dried, without scraping or rinsing, and kept dry for one year, when it will be fit for use. It should not be allowed to gather dampness, or its strength will evaporate. To prepare it for use, into ten gallons of water, (blood warm,) put ten rennets, churn or rub them often for 24 hours. then rub and press them to get the strength, stretch, salt and dry them as before. They will gain strength for a second use, and may be used when the weather will admit of soaking them to get the full strength. Make the liquor as salt as can be made, strain and settle it, seperate it from sediment, (if any,) and it is fit for use. Six lemons, two ounces of cloves, two ounces of cinnamon, and two ounces of common sage are sometimes added to the liquor to preserve its flavor and quicken its action. If kept cool in a stone jar, it will keep sweet any length of time desired, and a uniform strength can be secured while it lasts. Stir it before dipping off to set milk; take of it enough to curdle milk firm in 40 minutes. Squeeze or rub through a rag anatto enough to make the curd a cream color, and stir it in with the rennet. When milk is curdling so as to appear like a solid, it is divided into small particles, to aid the separation of the whey from the curd. This is often *too speedily done*, to facilitate the work, but at a sacrifice of quality and quantity.

The three *indispensable agents*, *heat*, *rennet* and *pressure*, rightly applied, must keep pace with each other in effect. The two former operating to subdivide, the latter to aid cohesion, by bringing the particles of a sameness closer in contact. This should be *skilfully* and *studiously* applied in a mild way, according to the capacity of the curd to receive it. The less friction in working the curd the less waste. If *heat is raised too fast*, or commenced while the curd is too young, the effect of the rennet will be checked, and decomposition will not be complete, and will result in a leaky cheese.

This often happens when steamers are used in small dairies. Heat may be raised in scalding to keep pace with rennet; if rennet is quick, heat may be raised quick, if slow, heat must be raised slow and held longer. Scalding heat may be carried from 96 to 104 degrees,

according to the size of the cheese, and temperature to which the cheese is exposed. During the process of scalding, the whey and curd should be kept in motion, to prevent the curd from settling and sticking together, as separating it is attended with great labor and waste from friction.

When the curd is cooked, so that it feels elastic and will squeak when chewed with the front teeth, it is separated from the whey to receive salt. This is done by dipping it into a strainer over a basket or sink, or drained off and salted in the tub. Either may be done without adhering in lumps, by stirring it in a small portion of whey, till cooled to 94 degrees. This is the most critical part of the process, where cheese-makers are most likely to err, as the portion of salt retained in cheese after pressing, will be in proportion to the capacity of curd to receive it when added. At a particular period and temper of curd, when draining off whey, it will absorb salt freely, and after being thoroughly mixed and packed up for a few minutes while warm, it will be evenly shrunk and cleared by salt and whey, and will press out freely; but if the curd is *not well cooked*, or cooled too fast in draining off whey, it will acquire a degree of stubbornness, prevent the absorption of salt to shrink and cleanse, and no amount of pressure will be sufficient to drive out the fluid.

If curd is not worked even, the larger lumps will not be cooked enough, or the lesser too much, (like large loaves of bread and small biscuit baked together in one oven,) hence, the cheese is left impregnated with the elements of fermentation, which increase on being exposed to heat, till the cheese is sufficiently swollen (or huffed) for each constituent to occupy a separate space in the same shell or rind. The fluids first attract together by affinity, forming small cavities in which they remain *unaffected by salt*, become fetid and generate an unpleasant odor, which is a fair proof of the quality of rennet used. Curd should be salted warm, it is then most absorbent, and thoroughly cooled before putting it to press, to suppress the combined action of heat and rennet. The quantity of salt required, varies with the condition of the curd, size of cheese, amount of heat to which the cheese is curing, and market for which it is designed.

A well worked cheese, from fifty to one hundred pounds, requires one pound of refined salt to forty pound of curd, to remain in the cheese after it is pressed and exposed to a temperature of from seventy to eighty degrees. This may be varied from two to four pounds to the hundred, according to the texture of cheese required —small cheese requiring less and large cheese more.

A degree of moisture is necessary in cheese for a malleable texture, but this should not be from *animal fluids retained in the curd*. A high salted cheese immediately exposed to high temperature, becomes sour, hard, dry and crumbling; the same exposed to a cool, damp atmosphere retains sufficient moisture to be soft, yet solid. A cheese light salted in a high temperature will cure quick, become porous, huffy and stale. *Curd from hay milk*, requires much less salt than that from grass or grain feed, as it is poorer, and will retain salt like lean meats. The richer the milk, the more salt is required to control the animal properties, and the less absorbent the curd, the pores being filled with the finer buttery particles.

More salt is required in hot weather also, to overrule the combined action of rennet and heat, neither of which will be effective alone. When curd is ready to press, it is important to *dispossess those decomposing agents*. The gastric juice (or coagulator) is a *finid*, and works off with the animal fluids in whey; and the only way to git rid of it, is to work the curd down *fine and solid and work the whey all out*. Then cool the curd thoroughly before pressing, and the cheese will be solid and keep its place. But if the whey is not all out, the decomposer is yet on hand, continues its action (aided by heat) till *an equilibrium of chemical action is destroyed in the cheese*, and the fluid properties leak out in fetid whey and oil, leaving it a rank and worthless article. In

short, the proper method of using salt must be arrived at by a close observation as to its chemical combination with the constituent properties at different ages of the cheese with different sizes, heat, dampness, &c. This, although an essential point, has not been sufficiently determined by chemical analysis to be reliable.

INDIAN CORN.

The following observations in relation to Indian corn meal, were communicated to the Journal of Commerce, by a physician in the city of New York:

Yellow and white corn are not the same in quality, although they are identical in kind, and grow in the same field.

The nutritive qualities of the yellow corn surpasses that of the white, and that is a good reason why the common sense of the people, or their ordinary experience, assigns to it a preference, independent of its mere looks.

The investigations of vegetable chemistry have revealed to us many important and interesting facts. By the aid of analysis, it has been ascertained that butter in a pure state is combined in all grass seed and grains.

Out of one hundred weight of yellow Indian corn meal, for instance, a good chemist can extract from eight to ten pounds of butter. Out of the same weight of Indian meal six or eight per cent. of butter can be made, thus proving it to be in that proportion so much the less nutritious quality of Indian meal. Any one can satisfy himself by attending to the usual process of cooking it. When it is boiled thick for mush, if a crust adheres to the side of the vessel, on cooling, it is apt to peel off itself, owing to this fatty material in it.

It has furthermore been proved, that the butter obtained from the milk, is not animal secretion, but what previously existed in the pure and original state, in the hay or food of the cow; and a skilful chemist can make more butter out of one hundred weight of hay, than the cow can, as the cow must appropriate a considerable share of it for the uses and necessities of her organization. Give a cow a hundred younds of hay, and she will render back eight pounds of butter, but an expert chemist can realize twelve or thirteen pounds out of it.

In the choice of the various articles of food, to suit our taste on particular occasions—to correspond to the multiplied emergencies of life—the adaptations of the multifarious qualities of food, display infinite wisdom and goodness. In sickness, in health, in toil, while our means abound, when they are scanty, we demand different kinds of food and different varieties of the same kind, to satisfy our real and imaginary wants. Of the grain stuffs, rice contains the least fatty material, and Indian corn the most, and ranging between these two extremes, we have wheat, oats, rye, barley, &c., all different, and yet all of them capable of being applied to the respective conditions which are united to them.

It is because of the fatty nature of Indian corn meal that it is such a strange kind of food, and that persons unaccustomed to it cannot at first endure it. The nations which feed principally on rice, are not near so robust as those which use Indian corn, as the blacks of the South mostly do. Persons unaccustomed to this kind of food, therefore, will do best to commence with the white Indian meal, in preference to the yellow, as it is not so rich; and this preference to the white over the yellow has already occurred in England where the articles are new.

There is only one more observation which I wish to make. As Indian corn meal contains so much fat in it, kept too long it is liable to become rancid, and is then more or less unfit for use. In the shipments made to the West Indies, the meal in commonly kiln dried, to obviate as much as possible this tendency to rancidity. For reasons just detailed, the white meal will keep rather better; and from its being lighter and milder, it is as much preferred for use in warm climates, as the yellow for similar inducement is in cold.

Do not let the ploughshare rust.

STRAWBERRIES—THEIR CULTIVATION, &c.

Of all the cultivated fruits of the garden, we place the strawberry first. There is no fruit, in our opinion, equal to it for fragrance and flavor, and if not considered one of the necessaries of life, it is conceded, we believe, to be one of the greatest luxuries that is produced. This delightful fruit should be more cultivated than it is, for besides being one of the greatest luxuries of the table, it has the merit of being one of the best antiscorbutics that can be used, and is also one of the most effective dentifrices in removing the tartar from the teeth, to be found.

It has been a subject of surprise, that there is not more attention paid to the culture of this very valuable and delicious fruit, when they are so easily raised and require so small a spot of ground to supply a family plentifully, say eighty or ninety square feet, of good ground, well prepared, regularly and properly cultivated, would be sufficient in most cases for this fruit.

Our market is but poorly supplied; we have no regular market-gardeners, as there should be, but are dependent, in a measure, on the south for a supply. This should not be. Our soil and climate are suitable, and we can see no reason why they cannot be grown here in abundance. We think there is a good chance for a profitable business in cultivating them for market, in the vicinity of this city. The greatest difficulty attending the culture of this fruit, is to keep the plants bare of weeds and grass that spring up among them.

The best time to make strawberry plantations is in August, after the vines have done bearing. We have, however, succeeded very well by planting them out early in May, and have taken a fair crop the same season. The soil should be deep, rich and well prepared. A loamy or gravelly soil, with a full exposure to the sun, seems most congenial to their growth. The ground for the reception of the plants should be spaded to the depth of sixteen or eighteen inches, and the surface should be well and thoroughly pulverized with the rake, when it should be marked off with a line in rows from one to two and a half feet apart. This will admit air and light around the plants and give room for after culture. Then select the strongest plants, and set them twelve inches from plant to plant in the rows.—Strong, well-rooted young plants, of the best varieties should be selected. In Hovey's Magazine of Horticulture, the following are recommended as being the finest and most productive varieties:

"Hovey's Seedling, Female Hudson's Bay, Large Lima, Bishop's Orange, Bayne's Prolific, as being splendid varieties, and abundantly prolific. I believe every flower on the above varieties are female, and if planted separately, will fail to yield abundantly; but if planted in proximity with the Melon, or Southborough Seedling, every flower will be impregnated, and will produce enormous crops."

The after culture consists in keeping them free from weeds, cutting off the runners, and spading in a dressing of well rotted manure, or what is still better, decayed leaves from the woods, in the fall after they have done bearing.

In order to preserve the fruit clean, the space between the rows should be covered just before the fruit begins to ripen, with a thin layer of straw. Managed in this way they will continue to yield plentifully for four or five years.

That there are *fertile* and *sterile* plants we have every reason to believe, from the fact of having, in our early practice, once selected plants with the longest and largest leaves, and most vigorous growth, (which we now think were *male* plants,) for a bed—the consequence was we had no fruit, though they blossomed tolerably well. There seems to be some diversity of opinion on this subject, and as we have no pretensions to the science of botany, we shall leave this for others to determine.

"In all the long discussions about barren and fertile strawberries," says the editor of the Cultivator, "the actual amount which each variety will yield per acre, which is of great importance, appears to have been entirely forgotten. To one

who raises for market, it is quite essential to select such a variety as will yield a surplus of a hundred per cent. above the cost of raising, rather than one that will yield no such surplus at all; and the home cultivator wishes to get as much from his labor and land as practicable. Only a few statements of the amount per acre have ever been made. The Old Hudson, (of Cincinnati,) which is probably the most productive of all strawberries as yet much cultivated, has produced, according to N. Longworth, at the rate of 5000 quarts, or 156 bushels per acre. Burr's Late Prolific, a variety lately originated at Columbus, Ohio, it is stated, yielded 35 quarts on a bed six by twenty feet, which is almost 240 bushels per acre; it doubtless received the best possible culture. It would be very interesting and of great value to know the comparative productiveness of such varieties as Hovey's Seedling, Large Early Scarlet, Ross' Phœnix, Swainestone's Seedling, Black Prince, and others, raised side by side and treated precisely alike. Such experiments would greatly facilitate the selection of the best sorts for each different part of the country." The first and third varieties are comparatively new, and of American origin.

In order to show the importance of cultivating the strawberry, we give the following statistics: In twenty-six days of last summer, 1847, 4,572 bushels sold in New York—514 in one day. 80,000 baskets, equal to 833 bushels, weighing 25 tons, were brought in one day over the Erie Rail Road. Whole number of baskets sold in New York, equal to 602,640, being an increase of 212,000 or 24 per cent. over last year, (1846)—value $20,000 in a season!—*American Journal Agriculture and Science.*

THE ESSENTIALS TO PRODUCTIVE FARMING.

The following sixteen essentials for productive farming are from the pen of the editor of the American Farmer:

1. Good implements of husbandry, and plenty of them, which should always be kept in perfect order.

2. Deep ploughing, and thorough pulverization of the soil, by the free use of harrow, drag, and roller.

3. An application of lime, marl or ashes, where calcareous matter or potash may not be present in the soil.

4. A systematic husbanding of every substance on a farm capable of being converted into manure, as systematic a protection of such substances from loss by evaporation or waste of any kinds, and a careful application of the same to the lands in culture.

5. The draining of all wet lands, so as to relieve the roots of the plants from the ill effects of a superabundance of water, a condition equally pernicious as drought, to their healthy growth and profitable fructification.

6. The free use of the plough, cultivator, and hoe, with all row-cultural crops, so as to keep down, at all times, the growth of grass, and weeds, those pests which prove so destructive to crops.

7. Seeding at the proper time, with good seed, and an equal attention as to time, with regard to the period of working crops.

8. Attention to the construction and repair of fences, so that, what is made through the toils and anxious cares of the husbandman, may not be lost through his neglect to protect his crops from the depredations of stock.

9. Daily personal superintendence, on the part of the master, over all the operations of the farm, no matter how good a manager he may have, or however faithful his hands may be, as the presence of the head of a farm, and the use of his eyes are worth several pairs of hands.

10. Labor saving machinery, so that one may render himself as independent as needful of neighborhood labor, as a sense of the comparative independence of the employer upon such labor, begets a disposition of obedience and faithfulness on the part of the employee.

11. Comfortable stabling and sheds, for horses, and stock, all the necessary outbuildings, for the accommodation of the

hands, and protection of the tools and implements, as well as for the care of the poultry.

12. Clover and other grasses to form a part of the rotation of crops, and these to be at the proper periods, ploughed in, to form pabulum for succeeding crops. The clover field to be either plastered or ashed, each succeeding spring—one bushel of the former and six of the latter per acre.

13. To keep no more stock than can be well kept, but be sure to keep as many as the farm can keep in good condition, as it is a wise policy to feed as much as possible of the crops grown of the farm, and thus return to it that which has been abstracted from it.

14. To provide a good orchard and garden: the one to be filled with choice fruits of all kinds—the other with vegetables of different sorts, early and late, so that the table may, at all times, be well and seasonably supplied, and the surplus contribute to increase the wealth of the proprietor.

15. The taking of one or more good agricultural papers.

16. It is better to cut grain just before it is fully or dead ripe. When the straw immediately below the grain is so dry that on twisting it no juice is extracted, it should be cut, for there is then no circulation of juice to the ear.

THE YELLOWS IN PEACH TREES.

The in-pruning, or the shortening of the branches of the peach trees, and the application of ashes, is recommended as a cure or preventive of the yellows in peach trees. Of the efficacy of this treatment we know nothing but from report; but this we do know, that ashes is a most excellent manure for most fruits, and believe it to be well adapted to the one in question. If the *disease* proceeds from over luxuriant vegetation, the shortening of the limbs, if judiciously done, would serve as a corrective. It is said that this operation may be performed this month, and that the proper quantity of ashes, is a peck of *unspent*, and double the quantity of leached for each tree. It is recommended that it be placed around the trunk of each tree. If this really be a *cure*, or *preventive*, it will prove a great *desideratum* in the culture of this delicious fruit, which, in certain sections of our country, has suffered so severely for years from the yellows, and, as the experment is not expensive, we trust that peach culturists may be induced to try it, and report their success or failure, as the case may be, for publication in our journal. In testing its efficacy, it would be well to leave a few diseased trees untreated, as by so doing the virtue of the treatment would be fairly tested. We believe that half a peck of unleached ashes would be enough for a tree.

DRAINING OF MARSHES AND WET ARABLE LANDS.

By being drained, marshes which are now unsightly sources of disease, and as unproductive as unhealthy, may be converted into beautiful meadows, at once the fountains of wealth and the guaranties of health. All who have such lands upon their estates, should, at once, set about to transform them into arable soils—the improvement may cost time, labor and money, but it will pay 20 per cent upon the outlay in products, besides adding largely to the intrinsic value of such estates.

The facts here presented for consideration, are worthy of mature reflection.—Mr. F. Pym, of England, a farmer of great practical experience, used the following emphatic language with respect to the value of draining lands:—"without that necessary operation—draining—the profitable occupation of heavy land cannot be carried on."

F. Falkland, Esq., also of England, the author of several agricultural works of merit, thus sums up his views upon the importance of draining:

"In conclusion it should be observed, that every attention which can be paid to the preparation and application of manures will be ineffectual in rendering soils fertile unless due regard be given to

the removal of excess of moisture by draining, when needful. When a soil is saturated with water, the air is excluded from the roots of the plants, and prevented from acting upon the manure; while the low temperature produced, by continued evaporation from the surface, has an additional powerful effect in retarding the progress of vegetation."

"To lay manure upon wet soils, is, in truth, to throw money away; but were draining universally effected, the whole of the now unproductive soil of the country would, to a vast extent, be rendered capable of receiving the benefit of the numerous modes of fertilizing it. Its returns are immediate, as well as compensative; and to hesitate to drain the land, is to hesitate to confer a benefit upon one's self, of which a strong proof has been lately brought forward in a statement of the profit resulting from the drainage of 467 acres, and the employment of the drain water over 89 acres of land, on the estate of Lord Hatherton, in Staffordshire —affording a clear annual interest on the outlay of full thirty-seven per cent."

For the Southern Planter.

TO THE GENERAL ASSEMBLY OF VIRGINIA.

Your petitioners, a majority of whom are planters of tobacco and citizens of county, respectfully invite your attention to the Tobacco Law, and ask an amendment of the same. Many years ago, the Legislature prohibited the exportation of inferior tobacco. When this law was passed, it became necessary that the inspectors or some other officers should have the power of pronouncing judgment upon tobacco when inspected, and of deciding what was fit for exportation and what deserved the flames. In this way, originated the power conferred upon the inspectors of passing and refusing tobacco. The exportation of refused tobacco is not now prohibited, but it is now exported to the different markets of the world as freely as passed tobacco. The reason, then, for allowing the inspectors the right of passing and refusing tobacco has ceased. This power was given to the inspectors under circumstances no longer existing, and its continued exercise is at war with the liberality of the age. We also maintain, that it is injurious to the planters, who have the same right to ask that the proceeds of their labor shall be exempt from unnecessary condemnation as those who follow other pursuits. No one denies the expediency of having tobacco inspected. It is proper, that the hogshead be taken off, the tobacco broke, and samples drawn out and exhibited. When this has been done, the buyers and planters are competent to make their own contracts, uninfluenced by the judgment of the inspectors. We think that the inspectors should be inspectors *only*, and not *judges* as well as inspectors. No tobacco can pass unless the inspectors deem it "sound, well conditioned, merchantable and clear of trash." The refusal of tobacco by the inspectors (who are selected because of their integrity and knowledge of tobacco,) is equivalent to a public declaration that such refused tobacco is not "sound, well conditioned, merchantable," &c. Refusal brands tobacco with discredit and impairs its market value. To deny this, is as erroneous as to assert that the standing of a man in society is as good after trial and conviction as before. If all the horses brought in Virginia, for sale, were examined by legal inspectors, who were competent judges and who were required to refuse all horses not deemed by said inspectors to be "sound, well conditioned," &c., can any one believe that horses known to have been inspected, and marked as refused, would sell as readily, and command as much, as they would if there were no inspection and no refusal? Again, the words "well conditioned and merchantable" are so vague and indefinite, that the inspectors cannot act upon any uniform rules in deciding what tobacco ought to pass, and hence tobacco is refused at one warehouse which would have passed at another. Why subject tobacco to refusal, when other products are exempt?

Wheat varies in quality and appearance, yet the miller and farmer make their own contracts without the need of inspectors to enlighten their minds or bias their judgments. There are no inspectors whose duty it is to refuse any of the iron made in Virginia, or the cotton or woollen goods made here, nor are those who follow the various mechanical trades liable to have the proceeds of their labor disparaged by the refusal of competent judges acting in obedience to law. Western hogs and horses brought annually into Virginia are liable to no legal condemnation. We see no reason why the planters should be regarded with distrust and suspicion. They ask no exclusive favors, but they desire to be relieved from injustice. Their tobacco needs no commendation from the inspectors and should receive none of their censure. Let tobacco stand or fall upon its own merits. The reputation and character of Virginia tobacco should be confided, not to the inspectors, but to the planters themselves, who are the appropriate guardians of their staple. No refusal is necessary as a stimulus to improvement, or a penalty for neglect. Prompted by self-interest, the planters will always endeavor to make good tobacco and prepare it properly for market. When they make indifferent tobacco it is more their misfortune than their fault, and misfortune deserves no punishment. Other reasons might be argued in support of the proposed amendment, but we forbear and content ourselves with expressing the hope that it will be the pleasure of the General Assembly to amend our tobacco law as has been here indicated.

November, 1847.

CANTELO'S PATENT HYDRO-INBUBATOR FOR HATCHING CHICKENS.

This machine is very simple: it consists of a cistern of water, hot, which is heated by a peculiar stove, the heat of which is shown by a thermometer. This water is heated to 109 degrees, and flows over a surface of vulcanized caoutchouc, the lower surface of which is in contact with a tray or nest of eggs, and maintains a heat of 106 degrees. The tray is open at the sides, the bottom is made of wire gauze lined with cotton canvass, and is raised or lowered by wedges, thus merely presenting a small surface to the lower surface of the caoutchouc, which represents the breast of the parent fowl, and thus only a *top contact heat* is communicated to the egg.

Around the stove is a warm chamber, in which the chickens are put as soon as hatched, and where they remain about thirty-six hours before taking food; they are then placed under the hydro-mothers, which consist of a series of pipes, kept at a heat of 106 degrees, and under which the chickens nestle as under a real mother.

There is now no further trouble. During the first ten days, the chickens feed themselves in the house, and are then only permitted to go out in the open air, returning at pleasure to the protection of the hydro-mother. At the end of six weeks they are put into a common roosting house and henceforth shift for themselves.

In a large hydro-mother, 44 feet long, the warm water pipes are placed about four inches from the ground, and a movable board is so placed that the backs of the youngest chickens just touch the pipes; the board being lowered as the chickens increase in size.

The Hy-Incubator has been exhibited in Regent Street, London; as also at Mr. Cantelo's Model Farm at Cheswick, where he has more than two thousand head of poultry running about, from one day to three months old.—*Illustrated London News.*

WHAT CONSTITUTES GOOD FARMING?

About two thousand years ago, when the old Roman Columella was asked what constituted good farming, he answered, "first good ploughing." On being again asked what came next, he replied, "good ploughing;" thus strongly impressing the occasion for good tillage over every other consideration.

A GOOD RURAL HABIT.

A Spanish peasant, when he eats a good apple, pear, peach, or any other fruit, in a forest, or by the road-side, *plants the seed*, and hence it is that the woodlands and road-sides of Spain have more fruit in and along them than those of any other country.

MEMORANDA FOR THE MONTH.

Wheat Harvest.—This is now pretty well finished through our part of the country; but in some places there is still much of it to be done. To those who are engaged in it, we know of no advice better than to desire them to pay attention to and make ample provision for the comforts of their reapers. This is necessary to their own interests. The little indulgences granted to these men are far more than repaid by the greater amount of work which is done in consequence. Keep them in good humor and in high spirits, and many a day's work is saved.

The bottles of whiskey and water which formerly played so great a part on the harvest field are now no longer to be seen in many districts. In the Northern States they have entirely gone out of use. The next best thing to the "ra'al Monongaly" to string up the nerves of those who wield the scythe, is a drink composed of five gallons of iced water well mixed with half a gallon of molasses, one quart of vinegar and two ounces of ginger.

Grass Harvest.—We are not such warm advocates of early harvests of hay and timothy, as we are of wheat. Cut as soon as it blooms would seem to be the true plan, and it is recommended as such by many. By doing so you save the exhaustion of your ground consequent on the ripening of the seed and the hay is of a far finer quality; possessing more fragrance and a higher flavor, and it is preferred by cattle. But there is much more nourishment in hay cut a few days later. The true rule, in our opinion, is to cut it when it slightly gums the scythe.

Curing Hay.—This great principle should govern in the curing of hay, that there should be as little and as short an exposure to the sun as is compatible with safety. The more sun, and rain, the less of fragrance and the lower the flavor of the hay. After having been allowed to remain half a day in swathe, if drawn together in very small shocks, and next morning when the dew is off, turned over and allowed to remain till the middle of the day, it may be stacked without fear. In stacking, sprinkle a quart of salt over every half ton or so of hay. It absorbs moisture and improves the quality.

Buckwheat.—It is not too late to sow this grain. If wanted for the grain, however, it should be put in immediately. The quantity is half bushel per acre. But buckwheat is not merely a material from which to make breakfast cakes delicious to eat with honey or molasses. It is one of the best crops to turn under in the world. Sow one bushel to the acre for this purpose, and plough it in when blooming.

Turnips.—Toward the end of this month and the first of next month will be late enough to sow fall turnips. In the mean time prepare the ground. The richer you can make it between this time and the last of the month, the better. Plough, harrow and pulverize finely now; then roll it and let it "bide the time." When the time has come, sow the field with a compound of ashes and powdered gypsum. Then sow the turnip seed lightly, and harrow in. The American Farmer gives the following recipe for the fly. So soon as the plants are up, go over the ground with a pail of fish brine and a bush, and sprinkle plentifully.—Then immediately scatter over them a powder of gypsum, lime and flour of sulphur.—Repeat this every morning till the plants get a rough coat, and they are then secure.

Orchards.—Now is the time for the destruction of all worms and other enemies of the peach and the apple. Do up that fence around the orchard and turn in the hogs. By picking up and making away with the defective fruit, they will pay the expense of keeping them the rest of the year.

Sheep.—It is at this season that our flocks suffer most from their many enemies of the insect tribe. The best way to keep off the most troublesome of the set is to smear their

noses well with tar, and to renew the same every time they are salted—and do not forget to salt them regularly. In the June or July number of the Planter for 1847, the reader will find a long article upon the "Summer Diseases of Sheep," and to it we refer him now.

ORIGIN OF VARIOUS PLANTS.

From the German.

Wheat was brought from the central table land of Thibet, where its representative yet exists as a grass, with small, mealy seeds.

Rye exists wild in Siberia.

Oats, wild in North Africa.

Barley exists wild in the mountains of Himalaya.

Millet, one species is a native of India, another of Egypt and Abysinnia.

Maize was brought from America.

Canary Seed from the Canary Islands.

Rice, from South Africa, whence it was taken to India, and thence to Europe and America.

Peas are of an unknown origin.

Lentil grows wild on the shores of the Mediterranean.

Vetches are natives of Germany.

Chick-Pea was brought from the south of Europe.

The Garden Bean from the West Indies.

The Horse Bean from the Caspian Sea.

Buckwheat came originally from Siberia and Tartary.

Rape Seed and Cabbage grow wild in Sicily and Naples.

The Poppy was brought from the East.

The Suntiower, from Peru.

The Lupin, from the Levant.

Flax or Linseed is in Southern Europe a weed in the ordinary grain crops.

Hemp is a native of Persia and the East Indies.

The Garden Cress, out of Egypt and the East.

The Zealand Flax and Syrian Swallow show their origin by their names.

The Nettle, which sometimes furnishes fibres for spinning, is a native of Europe.

Woad is a native of Europe.

Madder came from the East.

Dyer's Weed grows in Southern Germany.

Safflower came from Egypt.

Dill is an Eastern plant.

Hops came to perfection as a wild plant in Germany.

Mustard and Caraway Seed, the same.

Anise was brought from Egypt and the Grecian Archipelago.

Coriander grows wild near the Mediterranean.

Saffron came from the Levant.

The Onion, out of Egypt.

Horse Radish, from Southern Europe.

Chickory grows wild in Germany.

Tobacco is a native of Virginia, and Tobago, another species, has also been found wild in Asia.

Fuller's Teasel grows wild in Southern Europe.

Lucerne is a native of Sicily.

Spurry is a European Plant.

The Gourd is probably an Eastern plant.

The Potato is a well known native of Peru and Mexico.

The Jerusalem Artichoke is a Brazilian product.

Turnips and Mangold Wurzel came from the shores of the Mediterranean.

Kohlrabi and White Turnips are natives of Germany.

The Carrot is supposed by some to have come from Asia, but others maintain it to be a native of the same place as the turnip.

The Parsnip is also supposed to be a native of the same place.

Spinach is attributed to Asia.

White Millet, to Greece.

The Radish, to China and Japan.

The Cucumber, to the East Indies.

The Melon is from Kalmuck.

Parsley grows in Sardinia.

Tarragon, in Central Asia.

Celery, in Germany.

OF FRUITS AND SHRUBS.

The Currant and Gooseberry came from Southern Europe.

The Pear and Apple are likewise European plants.

The Cherry, Plum, Olive and Almond came from Asia Minor.

The Mulberry tree from Persia.

The Walnut and Peach from the same country.

The Quince from the island of Crete.

The Citron from Media.

The Chestnut from Italy.

OF TREES.

The Pine is a native of America.

Horse Chestnut from Thibet.

The Hurtleberry is a native of both Asia and Europe.

The Cranberry of Europe and America.

ANALYSES OF MILK.

The chief component parts of milk are those which, when separated, are known as forming butter and cheese; the residue of which is called whey. These are distinguished by scientific persons as the *butyraceous* or oily substance producing cream, of which butter is composed; the *caseous* matter of which cheese is formed, and *scrum* or whey:

Cream forming,	4.5 parts of 100.
Cheese,	3.5 do
Whey,	92.0 do

This can only convey a general idea of the component parts, for they must necessarily vary according to the quality of the milk.

The analysis of skimmed cow's milk is stated by chemists to be:

Water,	918.75 of 1000.
Cheese, with a trace of butter,	38.00
Sugar of milk,	35.00
Muriate of potash,	1.70
Phospate of potash,	0.25
Lactic acid with acetate of potash,	6.00
Earthy phosphates,	0.30

Instruments have been invented, called lactometers, for ascertaining the richness of milk in nearly the same manner as that employed for trying the strength of spirits. The difference in the quality of milk between particular cows may thus be determined, but it does not show whether the caseous or butyraceous matter predominates.—*Rep. of Com. on Cheese Dairies, N. Y. State Ag. Society.*

"STILTON" CHEESE.

"This variety of cheese, proverbial for its richness, was first made near Melton, in Leicestershire, England, by a relation to the landlord of the old Bell Inn, at *Stilton*, which gave the name, and its reputation was such that it for a long time sold for half a crown a pound. The following account of its manufacture is from British Husbandry:—'It is made by putting the night's cream, without any portion of the skimmed milk, to the milk of the following morning; but those who wish to make it very fine, add a still greater quantity of cream, and of course the richness of the cheese depends upon the amount which is used. Butter is also said to be sometimes mixed with it. The rennet is then added without any coloring; and when the curd has come, it is taken out without being broken, and put whole into a sieve or drainer, where it is pressed with weights until completely cleared of whey; when dry, it is put, with a clean cloth, into a hooped chessart (or mould,) and placed under the press, the outer coat being first salted; when sufficiently firm to be removed from this mould, the cheese is placed upon a dry board, and tightly bound in a cloth, which is changed daily, in order to avoid all cracks in the skin, until this is found to be tolerably well crusted; after which it is no longer used, and the cheese requires no further care than being frequently turned upside down, and occasionally brushed.

The cheese of this kind, although not much larger than the crown of a good sized hat—the form of which they much resemble—and not weighing more than about a dozen pounds, yet require nearly two years to bring them to perfect maturity, for they are not generally thought sufficiently mellow for use until considerably decayed; and in order to forward their ripeness, it is said that, besides being

placed in damp, but warm cellars, they are sometimes wrapped in strong brown paper, and sunk in a hotbed."

McCORMICK'S REAPERS.

The manufacture of these machines in this city constitutes a feature among our manufactures. Messrs. McCormick & Gray have an establishment devoted to their construction on the north side of the river, where 500 machines are in course of completion of the ensuing harvest. We understand that they are all sold, and are now being delivered to purchasers.

We paid a visit to the establishment a few days since, when we found three dozen men employed in the various departments of the iron and wood work, and painting, belonging to the construction of the machines. A most beautiful steam engine of ten horse power turns the machinery which cuts the screws, saws, planes and bores as required, either in iron or wood Mr. Gray informed us that a thousand machines might have been sold. —*Prairie Farmer.*

MARES FOR BREEDING.

It is very often the practice to select a mare for breeding, because she is either too old to work, or too vicious; or is in some way unfitted for use. This is done by those who take no inconsiderable pains in procuring the proper male parent, and are willing to pay well for the use of him.

The practice spoken of is very pointedly condemned by Stephens in his Book of the Farm:

"Now, in acting thus, the farmer commits a fatal blunder; he is depriving himself of the use of superior farm horses, which would not only work with ease to themselves and satisfaction to him, and at the same cost of keep, but would do him credit wherever the went. Instead of pursuing this system, he should select one or two of the best mares in his possession to breed from, and if he has none possessing youth and beauty of mould, let him buy one or two at any price, if such are to be purchased. Let them not be under five years of age when the horse is first put to them; for they will not have acquired their full stature until that age. From that period let them bear a foal every year till they attain twelve or thirteen years, when they should cease to breed; for old mares, any more than old females of other classes of animals, cannot produce a vigorous progeny. For those seven years the fresh young mares, stinted to the best stallion that can be secured, will each produce, and bring up, a foal every year, and perform, at the same time, their part of the work with ease. Such foals will be strong in bone and constitution, and be always in high condition, because they are the offspring of young mares themselves, in high condition, and overflowing with milk; and having been brought up together will work better together. I speak not in this tone for the purpose merely of condemning the practice usually followed by farmers in breeding farm horses, but having myself tried the system I recommend, I can do it with confidence."

NAILS FOR SHINGLING.

At an agricultural conversation of the Massachusetts Legislature of late, on the subject of farm buildings, it was agreed by nearly all the speakers that the shingle nails in use of late are of the most miserable sort, lasting only from three to four years, while those in use twenty years since are good now. Farmers in building would do well to look into this thing. A roof which will only last three years is a nuisance, and good nails can be as easily furnished as poor ones, if demanded.

COLIC IN HORSES.

When your horse shows symptoms of this disease, take a bundle of old rags, and bind them hard and firm, and set them on fire, and smoke the horse in the nostrils until the water runs clear and freely. Then give him a little salt and water. He will be well in an hour or two.

LOOKING-GLASSES FOR BIRDS.

It seems that the feathered tribe look upon the mirror with very different emotions from those of a pretty woman. A correspondent of the Gardener's Chronicle finds them the most efficacious of all things to drive them from his fruits and garden beds. One of his servants having smashed a looking-glass, it occurred to him that the broken pieces, suspended by strings, so as to turn freely in every direction, would have the appearance of some living being, and alarm the birds. Accordingly he tried the plan, and found that none of the birds, not even the most fool-hardy of them, would dare to come near. They had attacked his peas; but a single bit suspended on a stick cleared them out. The tom-tits were partial to his seckel pears; but a piece of looking-glass suspended in front of the tree put an end to the mischief. His grapes were afflicted of cat-birds, but at the sight of the mirror presenting their misdeeds, the marauders left the place.

Whilst we are upon this subject, we will also inform the reader of some new remedies for destroying rats. "First catch your *rats*," cover two or three with tar, and turn them loose. These will daub the rest, and the result will be a civil war, which will clear the premises. Pulverized potash, says the Prairie Farmer, thrown in their way will give them sore feet and cause them to forsake their paths. The latter statement may be true, but they will quickly make new ones.

HOW TO ENLARGE VEGETABLES.

A vast increase of food may be obtained by managing judiciously and systematically carrying out for a time the principle of increase. Take, for instance, a pea. Plant it in a very rich ground.—Allow it to bear the first year, say half a dozen pods only; remove all others. Save the largest single pea of these—sow it the next year, and retain of the produce three pods only: sow the largest one the following year and retain one pod. Again select the largest and the sort will by this time have trebled its size and weight. Ever afterwards sow the largest seed. By these means you will get peas (or any thing else) of which we at present have no conception.

LIVE APPLE TREE POSTS.

The 'Massachusetts Ploughman' suggests that apple trees be planted about ten feet apart, on a line where it is desired to construct a permanent fence. In the course of ten or twelve years they would be large enough to be mortised for the purpose of receiving cedar or chestnut rails, which, it is thought, would last more than fifty years. In the meantime, these 'living fence posts' would occasionally bear a crop of apples, and thus become profitable in 'divers ways.'

From the Prairie Farmer.

BREAKING STEERS.

In addition to what we have heretofore published on this subject, we think the following, from two different writers, will not come amiss. It suits our idea precisely:

"I first select two steers coming two years old, that will walk alike. This may be determined by noticing them as they walk to and from water. Then compare their heads; get those that the humps correspond well. I then get them into a small yard by themselves, with a good fence, so as to keep them safe. I then store my pockets with 'nubs' of corn to tame them with, and a switch to drive them with; then commence with one at a time, without a rope; keep cool, speak moderately, drive one of them along by the fence till he comes to the corner, speak 'whoa' to him, and try to stop him, be very gentle with him, give him a nubbin or two of corn, and when he will stop at the corners at the word, try him between them; and as soon as he will stop at the word at any place I tell him, then I take the other and train him the same way, leaving the first to study his lesson while the other is practising. When he will

stop at the word, then I take the first and see if he has forgotten his lesson; if he has not, then I learn him to 'haw about' in the corner, then half way, and then across the yard. When they will mind 'whoa,' and haw about with some coaxing, I put the yoke on them—don't forget the nubbins of corn—and practise them together in the same manner; then let them stand an hour or so, and if they have not forgotten, hitch a yoke of steady oxen behind them, open the gate and drive out, and if managed carefully they will soon be a team. A *good* whip is necessary in order to have a team mind well, but not used too freely. Steers that are kind and tractable can be broke to drive in one day, but it takes several days to teach them to draw. They should be trained with light loads, and then they will walk fast, and changed every day or half day, in order to find out which will make the best near side ox. If they kick never beat them, for it only makes them worse. In order to have a team pull *straight ahead*, they must be trained with light loads, worked steady but not hard, and they will make a team for

A PLOUGHBOY.

Schuyler, Ill., May, 1848."

—

THE SAME SUBJECT.

"First as to the age. They may be broke at any age, and are easier handled when young than subsequently; but I am decidedly of the opinion that it is not best to commence the training till it can be continued without much interruption to completion. In fact I have never known a different course very successful; consequently it should be commenced at that age when the maturity of the animals fit them for continued labor—else they must be injured by being overtasked, or much time will be lost in training them without labor, when if done at the proper age, very little time need be lost. From $2\frac{1}{2}$ to 3 years probably the best age.

The old oxen should be driven as usual, only being careful to talk but little and to the purpose. Let your orders be given plain and distinct, and at the right time. Give but little attention to the steers. If the old cattle stop at the word, the steers will have to—so of any other order; and by so doing it soon becomes a habit, and this is what you want. When you perceive they stop of themselves at the word, you may then know that they have learned something, and it will then do to use the whip to enforce your orders, but it should seldom be used with more force than barely to be felt. Much severity is not only cruel, but decidedly injurious.

As soon as they have learned to stop at the word, to haw, to jee and to back, they should be put on the 'lead,' and although they may occasion some trouble, it is best to keep them there generally without a line till they are under complete command They should be made to back with the team at all times quickly and freely—not by halves; and if they are slow in obeying, a quick stroke of the whip well applied will do good; but if unnecessarily repeated, or if a fractious driver must expend his anger on them, they will soon be spoiled. As soon as it can be safely done, they should be worked alone in all branches of business. The man who is compelled to do all his work with steers, for want of other team, has generally the best broke oxen. They should at all times be closely watched, that they do not run. If they run once they will probably never forget it—if twice, probably never—if three or four times, and are naturally spirited, they are ruined. If steers are kept constantly at work from the first, and are treated kindly, but with firmness they break in very quick. I have broke them in two weeks so as to plough and mark off a land as straight as it is usually done, without a driver.

If at any time they get fractious and unmanageable, stop them and sit down perfectly quiet twenty minutes, and in nine cases out of ten it will remedy the difficulty; and if on reflection you find it was the driver instead of the steers that was unmanageable, the remedy will be equally effective. Always chain up firmly when yoking or unyoking, for the first

two weeks. If they should run away, a few ears of corn properly administered is a better cure than hickory gads. If they should kick, the driver should never know it, but he should be careful not to frighten them in a way to make them kick, and should always speak to them when going behind them. Never whip them for failing to do that which you have never fully learnt them to do. The best teamster uses his whip and lungs but little.

B.

Lusalle, Ill., May, 1848."

CULTURE OF GRAPES.

As the time of fruit eating, from the strawberry to the codlin, is near at hand, and as many of our readers when they come to the eating of the almost worthless productions of our native grape vines will then, if not now, wish they had something better, we intend in this, and in a few subsequent numbers, to call their attention to the subject of grape culture, in hopes to convince them that it requires but very little labor, and a still less expense to provide themselves and their families with an abundant supply of this most delicious fruit. There are several excellent varieties of the grape, so hardy that they will stand, with very little protection, the severest weather of the northern States, while they are equally adapted to southern latitudes, even to the very borders of the Gulf of Mexico. Among these we rank first the Catawba and Isabella. These grapes,—good and well established vines of which may be had at almost any of our nurseries at 20 cents each, and frequently for half that sum, will, if properly planted, a process requiring according to circumstances from ten to sixty minutes to each vine, yield after two years from twenty to one hundred bunches of grapes on a vine, every bunch of which, in a man's family, is worth the first cost of the stock.

We know not how it is,—we cannot account for it—that men reside year after year on their farms and never plant a vine. Some never plant a tree. A grape vine is certainly a small matter and yet we know of *one*— a single one, the fruit of which has sold for seventeen dollars in one year—seventeen dollars—the price of one hundred and thirty-six bushels of corn at 12½ cts. per bushel—or thirty-four bushels of wheat at its ordinary price. Now how much labor would be spent in the production of each. How much more on the corn, or wheat than on the vine—twenty times at least.

It is a common excuse for not planting fruit trees that it takes them a long time to bear. Not so with the grape certainly. There are vines in this city, which were not in existence three years last March and which are now loaded with—the promise of fruit. Ask their owners how much money they have cost? perhaps 25 cts. each;—how much labor? thirty minutes;—how much land do they occupy? a square yard, or probably less—what will they sell the mere promise of fruit for? and they will tell you as one of them told the writer—"not for fifty times the original cost." And this too by men who love money as well, and need it as much, as any of us. Then why do not others do the same thing,—plant a vine, two, five, or twenty of them? We ask them again why do they not? They "dont know."

One of the benefits of fruit and particularly of grapes in a family is, that it contributes to health. Let us ask our readers do you know—have you ever known a family well supplied with fruit, grown on their own premises, that was a sickly family?

Who are most certain to get bilious—those who eat freely of fruit, or those who live on greasy pork.—Why is it we may ask, that new settlements in our western country are usually so sickly? is it altogether owing to new soil, new lands—miasma and other causes inherent in the soil? or is it not rather, in some very considerable degree, attributable to the great abundance and too free use of "hog and hominy." Greasy meats and we may add—for it is sometimes fact, equally greasy bread, for we have found in our

travels, those who mix up so much grease in their corn bread that it is difficult to distinguish which predominates, lard or meal.

FRUIT—fruit: the free use of fruit will yet change the character of our people, and the sooner we go about its cultivation individually as well as collectively so much the better for us all.

In conclusion, for the present, let each one, who has a square yard of spare ground resolve, every time he sees or tastes the luscious production of the vine during the coming summer and autumn, resolve to have with the lapse of only a year or two a supply for himself, the product of his own industry. As the politicians say, we intend to keep this subject before the people; and we intend to do it now and during the summer and fall, in fruit season, that we may the more easily tantalize them into the resolution to "plant trees,"—and vines too. It shall not be our fault if pork and potatoes is hereafter their only fare, instead of strawberries and cream and other such like luxuries. *Iowa Advocate.*

For the Southern Planter.

TO DESTROY SASSAFRAS BUSHES.

Mr. Editor,—In reply to the queries of "Northern Neck," as to the best method of destroying sassafras bushes, you say, in four words, "make your lands rich," and there will be an end of them. You also mention lime and stable dung as very efficient to the same end. Mr. Editor, these are both humbugs. Were you ever in that region around Clarksville, in Tennessee? If you have never visited that famous tobacco and corn region, go there before you write about sassafras again. On their fine limestone lands, that bring fifteen hundred pounds of tobacco, and from eight to twelve barrels of corn to the acre, if left uncultivated for two years, sassafras will grow to the height of ten or twelve feet and so thick, that nearly a second clearing is necessary before the land can be cultivated again. Tell a planter there, that in order to eradicate that pest, sassafras, "*make your land rich,*" and he will laugh you to scorn. "Northern Neck" suggests one slow mode, and I will another, of destroying sassafras. If the leaves are carefully removed from the bushes three times during the summer, for two years in succession, nearly every bush will die. Again, make the field on which they grow a common, and if there is not grass enough to feed the cattle that frequent it, they will eat off leaves and destroy the growth. Making land rich will never effect that object.

A SUBSCRIBER.

P. S.—On the rich Southwest mountain farms sassafras is so vigorous in growth, that many fields which are cultivated in hoe crops only once in three or four years, have to be almost cleared over after being left uncultivated during the time elapsing in the ordinary routine of crops.

This gentleman is rather tart upon us. He advises us to go to Tennessee before we write about sassafras again. Now we advise him to learn how to read and also to learn how to keep his temper before he writes for the Planter again. We never told him that making his land rich would eradicate the sassafras from it. One of our subscribers complained of stinted shrubs of sassafras springing up in his fields, and however it may be in Tennessee, we have never seen a rich field troubled in this way. It is certainly that sassafras will grow rapidly enough upon rich ground, but it becomes *a tree*, as our "Subscriber" says. We were not asked for advice to stop either sassafras or any other tree from growing in the Northern Neck. We understood our correspondent to be plagued with the plague of stinted "sassafras bushes" which we have frequently seen springing up like mushrooms over the poor fields in the Old Dominion, which never acquire the thickness of a walking cane, and which are proof against all grubbing. This we understood to be the complaint of our correspondent; and as we have seen the cause of it upon poor fields and no where else, we advised him to make his land rich. We told him distinctly, that "sassafras would grow well enough on a

rich soil." But when eradicated by grubbing, if the land is in a proper condition for a good crop, it will produce something else.

As to his own method, we say, why not cut the whole tree down, instead of picking off the leaves? Perhaps he will say that it will send up shoots. But will it not send out leaves too when they are picked off?

Again we recommend manuring and deep ploughing to eradicate both sassafras shrubs and poor people from the lands of the Northern Neck.

For the Southern Planter.

MULTICOLE RYE—SASSAFRAS.

Referring to my communication of the 15th December last, published in the February number of the Planter, I can now say that the Multicole Rye, which I sowed in the latter part of last October, has wintered well and promises a very heavy crop—it is nearly ripe, and will be harvested (without accident) in a few days. Judging from last year's crop, I think from 28 bushels sown on the 19th to the 22d October last, upon a corn land of medium quality, I shall make 1600 to 1700 bushels, a much heavier yield than my last crop, which was sown earlier. This is attributable, I think, to two reasons. First, the land on which it was sown was cleaner and better than that on which the crop of last year was sown; last and not least, this season, with me, is decidedly the best I have had for maturing winter grain since 1839, whereas the last season was likely the worst.

I am strongly in favor, from my slender experience in the culture of the Multicole Rye, of early sowing, say latter August or early September, by which, I think, saving hail, frost or wind storms, it will make a heavy yield, be the season wet or dry, in a soil or clime congenial to it.

It is an indifferent, sedgey looking grain until it begins to head, and indeed does not show its magnificent superiority until it fills. One of my overseers told me in early May, that his Multicole Rye was like crab grass, and would be good for nothing. That was the twenty-eight bushel piece above alluded to.

Writers have maintained that the Multicole Rye should be sown on none but thin land, and that on rich land it would not mature. Upon that hypothesis I have sown mine on medium land, and would most certainly advise all new adventurers to do likewise. Nevertheless, (while I believe it will do better on thin land than any other crop,) a corner of two or three acres of my present crop decidedly indicates that land adequate to the production of ten barrels of corn to the acre, is not to be objected to for it, that part being immensely heavy. This, however, might not be the case in a region less congenial to it; nor might it do here, except in a cool, dry, propitious season like the present. I shall have considerably more than I desire to sow—consequently I send herewith an advertisement to be inserted in the July number of the Planter.

A writer over the signature of "Northern Neck," in your number of this month, asks for advice how to destroy Sassafras bushes. You certainly gave him the best advice, if he is able to heed it as soon as he could desire. As I apprehend, however, it is more than the work of a season to provide and scatter "stable dung and lime" enough to cover all the exhausted land about him, I will suggest that he mow the sassafras in May, leaving a stubble four to six inches long; again early in August, leaving a stubble about two inches long, and in the mean time graze the land heavily, by which I think, he will be materially aided in his object. Strong bush blades can be purchased that will, by a diagonal stroke, sever a sassafras bush of considerable size, and to leave standing a large bush occasionally will, I think, also aid the work very much.

Respectfully, your ob't serv't,

WM. MASSIE.

Pharsalie, Nelson, June 24, 1848.

This letter of Mr. Massie was received after the article which precedes it was in type. "A Subscriber" will see from it, that it is not every planter which "laughs to scorn" our advice to manure the land if you would

save it of the sassafras plague. We call attention to Mr. Massie's advertisement at the end of this number.

AGRICULTURAL PRODUCTS OF THE UNITED STATES AND FRANCE.

A writer in the English Agricultural Gazette makes an interesting comparison of the products of the United States compared with those of France. The population of the United States is set down at twenty millions and that of France at thirty-five millions. The proportion of the agricultural population in America is given as 80.4 per cent.; commercial 2.5; and manufacturing 17.1. The writer observes that the agricultural production of the United States, compared with its inhabitants, is enormous, viz:

	UNITED STATES.	FRANCE.
Horned Cattle,	14,971,583	9,936,538
Sheep,	19,311,374	32,151,430
Horses and Mules,	4,335,669	3,192,337
Pigs,	26,301,293	4,940,721

He also contrasts the grain crops of the two countries, showing the comparative amounts produced of each kind, in hectolitres, as follows:

	UNITED STATES.	FRANCE.
Wheat,	30,000,000	69,000,000
Barley,	1,500,000	16,000,000
Rye,	6,000,000	27,000,000
Oats,	44,000,000	48,000,000
Indian Corn,	135,000,000	7,000,000
Buckwheat,	2,500,000	8,000,000

"The United States" (says the writer) "produce aunually 70,000 tons of wool, 600 tons of hops, 300 tons of beeswax, 10,000,000 tons of hay, 95,000 tons of hemp and flax, 100,000 tons of tobacco, 40,000 tons of rice, 395,000 tons of cotton, 60,000 lbs. of cocoons of silk-worms, 77,000 tons of sugar, and 5,000 hectolitres of wine. The produce of the farm-yard, or cow-house, is estimated at £7,000,000 ($35,000,000;) that of the orchards, £1,560,000; forests, £2,720,000." The total amount of agricultural produce amounts yearly to the enormous sum of £138,730,160 sterling, or $693,650,800. The manufactures of the United States, though yet in their infancy, are rapidly increasing, and the writer puts down the amount of capial embarked in manufactories of various kinds, at £56,757,912. Considered in all respects, therefore, he concludes: "America may be classed next to Great Britain, as the second agricultural and commercial country in the world."

HAY MAKING.

The article of hay alone may be set down as one of great consequence to the farmer, being one of his principal products, and the most essential fodder for most kinds of live stock. My mode of managing the hay crop, with some other suggestions, I cheerfully present for your consideration.

Many different notions prevails among us respecting the time and manner of cutting and securing the hay crop. It would appear that some true system should be established with this as well as with the grain crop, which has been reduced to one regular system.

That mode which will preserve as much of the natural juices of the grass as possible, and in the cheapest practical manner, is the one I have endeavored to attain. Counting nothing for board and team, we do not pay out $1 per acre for cutting and securing our hay, at an average of one and a half tons per acre.—In this section of country, a majority of our mowing lands, are composed of clay, and quite free from stones. We lose ten times more out of hay by cutting too late, than by cutting too early. Many let their clover and herds grass stand till the seeds are ripe, and of consequence the stems become hard and wiry; a good share of the leaves have changed to a brownish state, and the natural sap has left the plant.

To get at the most proper time for cutting, let us inquire what rule the gatherer of herbs adopts in filling his medicine chest, or the distiller his plants. In collecting herbs and plants, they cut them as soon as they come into flower. At this period they contain all their useful

qualities, and by cutting at this period, they secure the greatest quantity of oil; but herbs that are cut at this period and dried in the sun, lose much more of their invigorating and essentials qualities than they do if dried in the shade. Plants of all sorts, if they are cut in full vigor, and afterward carefully dried, without any waste of their natural juices, either by bleaching with rain or evaporating in the sun, contain a quantity of nourishing matter nearly double what they do when allowed to attain their full growth and make some progress towards decay.—When mowing is delayed, as it very frequently is, till an advanced period of the season, when plants have not only reached their ultimate growth, but begin to decay, this description of herbage must become tasteless, dry, tough and less nourishing. Also over care in drying in the hot sun, by bleaching the juices of the early grasses, must produce a similar kind of fodder.

To commence with the cutting and manner of curing, we will suppose the grass to be a good burden, and in full prime for the scythe, but not ripe. The workmen should be made to cut as low as possible, especially if there abounds a fine bottom, thereby increasing the crop, and all the grass mown in the forenoon should be spread before dinner. As soon as the external wet is off, and it becomes partially wilted, we put it into winnows with a revolving horse rake, and before the sun goes down, into cocks of from 60 to 90 pounds; what grass is cut in the latter part of the day, remain in the swarth till next day.

Grass should be made into cocks of about 4 feet high, not by rolling, but by laying one fork full upon another, and of small diameter at the base as possible and stand firm; draw the loose hay out from the bottom all round and lay it upon the top with the ends hanging downward.—When grass is put together in this manner, it is in a great measure out of danger.

It will be proper to give them an airing before they are removed to the barn, and more especially that portion which comes in contact with the ground. When necessary, the first drying wind and fair day, lay them over by putting the top of the cock on the ground, and so manage after by putting as dry a bundle with the green, till you have one cock made up again, out of two being put together.—By this treatment there is a more speedy exhalation of moisture by the action of the air, while an incipient fermentation will evolve or discharge a portion of heat, and thus promote the drying of the hay, by increasing the evaporation of the humid particles. By this treatment the hay is secured until the maker withes to remove it to the barn.

Clover hay should remain longer in the cock than most other grasses, that all the larger stems may undergo their proper fermentation. Before removing to the stack yard or barn, we generally turn the cocks bottom side up an hour or two before loading.

Hay cured in this manner is much heavier, because not so much of the natural juices are evaporated by the direct heat of the sun. Its undergoing a partial fermentation in the cock, prepares it to be placed in larger bodies. Hay cured in this manner, should not be tumbled by the quantity into a mow all together, but one or two loads a day put together, and a mow of 20 tons should occupy the period of three weeks in filling, that it may all be got in as green as possible. The mow should be trod as lightly as possible at the time of filling.

When fears are entertained of over fermentation, a layer of dry straw or stalks over the whole, is an excellent thing. This coarse fodder, absorbing the extra juices of the hay, retains it, and makes it more tender and palateable. We prefer this method to the common one of salting for the above reason—and that we may select our days for feeding the stock their salt in the winter, by brining the hay on the more mild and warmest days, when they have the least appetite. In this manner, we have a ready market for our poorest hay. Cattle and sheep devour it with a good appetite. If farmers would pay more regard to this manner of

salting their stock, say to 100 pounds of hay use a pint and a half of fine salt and one pail of water, they would be well remunerated for their extra labor. Sheep and other stock will look as full on these faintest days of winter, by thus salting their food, as they will in the most favorable weather on good hay.

When grass is quite ripe it should be exposed to the sun as little as possible after it is mown, and be made into large cocks or removed immediately to the barn, that by a steaming process, the dry stalks may become more valuable. Hay should in no wise be put into the barn or stack when wet; there is more hay damaged in this manner than by securing it too green. That hay which comes out of the mow the most solid will spend the best. There is more value in a load of hay taken from land that produces about one and a half tons to the acre, than there is in that hay which is cut from lands that produce much heavier or lighter burden.

In stacking hay, first put in the rack about two tons, and let it rest two or three days before more is added. The stackman should be careful about treading near the outer side but as much as he will in the middle, and mind and keep the centre the highest. Four or five tons make the most convenient stack. We have different ways of stacking recommended to prevent vermin. But let the stack be put up as above directed in its proper time, before the seed is matured, and there is no danger of mice; but when it so happens that grass must be put into stacks in a ripe state, salting will aid in preventing the depredations of vermin, but such hay should be fed out the first winter.

Tight barns are preferable to more open ones, with ventilation at the top; the heat will not drive to the centre of the mow but remains more equally over the whole than it will in an open bay.

A very common but bad practice is to put an assorted lot of hay over a cow, calf or horse stable, for spring use, where it has received all the effluvia arising from the manure below all winter, which cannot add to the quality of the hay, for at a time when the team is the most dainty, the best hay for spring work comes out of a well pressed mow, as little exposed to the air as possible. By dividing the mow and hay stack with a hay knife, not only keeps the hay as fresh as possible, by first feeding out one half, but we can better judge at what time of winter our fodder is half spent.

As we cannot cut all our grass in proper season, we reserve our mowing by cutting first this season the field which was last to receive the scythe last year.

Drag-rakes are very fashionable in some parts, for raking light grass, and after the cart, &c. They are of very great advantage in facilitating the work. They are made with a light head six feet long; the teeth set in the head four inches apart, and fourteen inches long; the handle enters the head in two parts about two and a half feet asunder, and united together about four feet from the head where a convenient place is fixed for the head to draw by. The small hand rake is pretty much laid aside. hat would have required the labor of a boy and four or five men ten years ago to rake over now is disposed of equally as well by one boy eight, and another fourteen years old, a horse and revolving rake, and drag rake.

TURKEYS.

This is the true bird of Virginia. Its meat, as we all know, is a very delightful thing. When well fed, and after it has attained its full growth, it is perhaps of all kinds of poultry that which is least subject to disease. Yet we strenuously advise all our readers who have wheat crops, or oat, or rye, or any other crops, in the neighborhood of their houses, to exile the turkey from their poultry yards. No one can tell how much this fowl destroys. Not only does it tear the stacks, eat the grain and the like, but the injury it does to the fields in their hunting of grasshoppers and other insects is incalculable. We therefore strenuously advise our friends to avoid them, unless peculiarly well situated for their raising.—They cost more than they come to.

Whether they are so situated that they may keep them without an immense deal of waste, is what every man must judge for himself. If you have about your house half a dozen of little negroes, who have nothing to do (as is the case on every farm of size in Virginia) but to kick up their heels and run about in their shirts, they may be very well converted into turkey minders, and with the assistance of one or two floggings, "do the state some service" in that capacity. But without the "turkey-minder," don't attempt to raise that Virginian fowl and grain crops on the same plantation.

DOWNING'S HORTICULTURIST.

The numbers of this excellent and elegant publication come regularly to hand, and each number is equal to those which precede it. This is the best horticultural journal in the world. This is admitted by all who are acquainted with periodicals of that class. No lady who loves flowers, and no gardener who wishes to conduct his garden with the advantage which the science of the age affords, should be without Downing's Horticulturist. Price $3 per annum.

THE GAPES.

It is at this season that the disease above named is so troublesome to the poultry yard. We have before named the remedies for it, and we will now repeat them.

It is beyond question (so we think at least) that the gapes are caused by a small worm which infests the windpipe of the chicken.—If you can remove these worms the chicken will get well. And the best way to do it is to make some one take the fowl between his knees so as to prevent its struggling, with one hand hold the bill open, and with the other pass a hen's feather, with the feather stripped off, excepting about an inch at the tip, up and down the throat for two or three times. It should be turned about in the windpipe a good deal, and the worms will be loosened. The fowl will then sneeze them up frequently and soon be relieved.

A lump of butter, mixed with snuff, thrust down the throat, tobacco smoke puffed down while the bill is held open, &c., are remedies much in vogue with some poulterers. But we do not believe any of them to be either as simple or as certain as this mechanical remedy.

FRESH BONES FOR HENS.

Those who keep their hens confined, will find it for their advantage to keep them liberally supplied with ashes, lime, gravel and pounded bones. These articles are highly beneficial—especially the latter, which, with a large per centum of animal matter, contains also another principle highly essential in the formation of the shells of eggs. While on this subject I would advise every one who keeps hens to provide them liberally with vegetable and animal food. When permitted to range abroad through the fields and gardens, a very considerable portion of their sustenance is obtained from insects, and if they are restricted and deprived of the privilege of seeking it for themselves, they must be supplied, or they will become unhealthy and an expense rather than an income to the farmer.

CONTENTS OF NUMBER VII.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

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MEMORANDA FOR THE MONTH.

The wheat harvest is now finished, and it is with pleasure that we take up our pen to speak of it. We can congratulate our readers upon their crop, with the chance of starting a sore subject with but very few of them. For the wheat harvest of this year is the best which has been gathered in this country for many a year. Our exchanges, far and wide, bring us great accounts of the crops in other States. It appears to have been uniformly good all over the continent. In Virginia it has been particularly so. We have enquired of persons who have travelled the whole State over, and they tell us that it is nearly all magnificent. And in our office, at this present time, is a specimen of the crop in one part of Virginia which we have rarely seen surpassed. It is a single stalk of wheat (the whole having one root and springing from one seed) with sixty-three branches, and three thousand seven hundred and more of grains! This stalk is from the farm of Mr. Daniel Stratton of Appomattox county. It more than fulfils the scriptural parable of the seed sown in good ground, which sprang up bearing fifty and a hundred fold.

TIMOTHY.—The wheat is long ago all done. But there is still much timothy to be cut.—There has been even more controversy about the proper time of cutting this grass than about wheat, hay, &c. One set of agriculturists contend that it should be cut while in bloom. Another set contend that it should be cut when the seed is ripe. Those who hold to the first opinion have these arguments to support them, viz: the hay is more saleable, because more fragrant and of a finer look, and it is more palatable and consequently better liked by the animals who have to eat it. On the other hand, the advocates of late cutting have the infallible proof of analysis on their side. The difference in nutriment between timothy cut in bloom, and timothy cut when the seed is ripe, being the difference between 23 and 10!

Wiser advisers than either of these extreme parties say that the true plan lies between them. Timothy should be cut when the seed is developed, but before it is fully ripe. If cut late much of the seed is lost, and the hay is greatly inferior.

SOWING TIMOTHY.—This may be done in the present month. But let every one who intends to put a piece of land in timothy recollect that timothy is a *septennial* plant. Therefore, although all land into which you intend to put any crop should be first well manured, the land in which you are about to put timothy should be particularly well manured. For the simple reason, that it has to stand the crops of seven years before it lies open for another good manuring. If you fail to give it good, strong manure before seeding, and in plentiful quantities, there is but one way to keep it from being worn out; and that is to give it a top dressing each year of lime, ashes, or of marl. All of these are good manures for timothy. So are rich composts, and so is

barn yard stuff. Land should be well ploughed too before seeding in timothy, for the same reason that it should be well manured; it will be long before it can be done again. Besides, there is another reason. If it be left full of clods, much of the seed will not be able to force its way into the soil and therefore be lost. Timothy requires a fine tilth.

The usual quantity of seed sown to the acre is one peck. It is not probably enough. Enough seed should be put in to cover the soil with timothy to the exclusion of weeds, and in most ground a peck will not be sufficient for this. A peck and a half is perhaps more generally about right.

Wheat Fields.—Few persons will do much for the next year's wheat harvest in this month, but nothing will be lost by any farmer in putting his fields in first rate order as soon as possible. Give the soil into which you are going to put wheat a supply of marl or lime. This is an ingredient which must be in the ground from which good wheat comes, either placed there by the hand of nature or the hand of man.

Buckwheat.—May still be sown either for grain or turning under. For the latter purpose it may be sown as late as the 20th of this month.

Rye.—This grain should be put in the ground during this or the next month. The earlier the better. Rye sown early may be rank next spring, and if left to itself, although producing much straw, may yield little grain. But this evil may be easily and effectually prevented by eating it off with cattle early in the spring. Green rye is excellent food for cattle in general, but especially for milch cows and suckling ewes. It is so because of its succulent nature. It fills their bags with milk. Many persons are deterred from thus treating their rye when too rank by the fear of destroying in some way the plant's power of producing the kernel. But the fear is groundless. The most extraordinarily large yield of rye on record was twice successively eaten off close to the ground. The first time when it was nine inches high, and the second time when it was six inches high. This practice of eating it off in the spring if the ground is very rich, has not only the good effect of checking an over-rankness of straw, but it renders it thicker and stronger.

Turnips.—In with your turnips. Make your turnip field into a rich loam, pulverize thoroughly and sow towards the end of the month. It is a good practice to wet the seed well with fish brine and then coat them with powdered gypsum or with sulphur.

Sheep.—There is no certain way of saving your sheep from their insect enemies of this month. The gad-fly generally plays the devil with them now and then, and the worm in the the head ravages the flock in spite of all the precautions of the husbandman. Smearing the nose with tar is the remedy or rather the preventive most approved, but it does not always serve. Some think it would be effectual, if kept constantly on and fresh. This may be done by placing two or three troughs in their pastures containing supplies both of salt and of tar. They will then both salt themselves and keep their noses smeared without the trouble of calling them up every day or so.

Cows.—The heat and the flies prevent them from feeding much now. Besides the pastures are fast becoming bare of grass. Those cows from whom you now hope to get much milk must be fed or they will not be able to give the supply you demand. Messes should be prepared for them night and morning. This is the very best way of disposing of the wheelbarrow loads of rank weeds to be obtained from your gardens and corn fields.

Weeds.—There are an abundance of these same rank weeds which will choke up every untrodden space about your yards and fence corners during this and the next month, and we cannot too strenuously urge upon our readers to have them disposed of in the same manner. Cut them down with a short scythe and give them to the cows, or throw them into the pig pens. Do any thing with them rather than let them continue to grow more and more rank for the general rotting and decay which will come upon all such vegetable matter about frost time. For from their decay and the decay of the like green substances, comes that ghastly host of agues and of fevers which render so many districts in Virginia almost

uninhabitable at that season, and which bring sickness into the bosoms of hundreds and thousands of families in all parts of the country.

Corn.—Keep the plough out of your corn fields at this season. The roots run almost across the furrows now, and the fewer of them that are broken, the more means and sources of sustenance will the corn have. But keep the weeds out of your corn fields too. And, therefore, while the plough lies idle, let the hoe and the cultivator be busy in all the fields that have need of the same.

Thrashing.—The wheat harvest is now done, and the sooner you get the grain out of the straw, the less will be lost. If you cannot do it now, fill up the time with a thorough preparation of your granaries. Let them be swept till not a speck of dust remains, and let the trash swept up be burnt. Then let the whole, the floor and the sides, be washed with lie and water. Which done, cover them with a strong solution of clean salt water.

Draining.—The farmer who walks through his low grounds in this hot, dry summer month sees no use of draining now. There are no standing pools in any part of any of his fields. If he lacks sense, he will never once think of draining them now. He will wait till next spring, when he wants to plough that he may put in the crop, and then he will find these same lands very wet. Whereupon he will scratch his head and set to work to drain them *then*. But the work is just double when the ground is saturated with water, and in some parts overflowed. *Now* is the time to drain your lands, *now* is the day of their salvation. Seize the opportunity, and cut ditches wherever your experience has shown that they were needed.

NEST EGGS.

The eggs are made of clay, formed to the right shape in the hands. After being dried, they are whitewashed; when they are ready for use. The matter is so simple, that it only requires to be thought of, to be made available. These eggs answer the purpose perfectly—the hens accepting them as freely as those of their own make.

PRESERVATION OF BREADSTUFFS.

STAFFORD'S PATENT PROCESS.

This is an invention of Mr. J. R. Stafford of Cleveland, Ohio, which has been very highly commended by those who have seen the process, and tested its utility. The theory of Mr. S. is, that without the presence of moisture nothing in nature can change. Upon this theory is his machine made to operate. It is simplicity itself. A cylinder armed with flanches on the exterior, is made to revolve in a trough—the inclinations of the cylinder, and trough moves the substance to be dried gradually to the opposite side from which it was received. The interior of the cylinder is heated by steam. By this simple process Mr. S. is enabled to obtain all that is requisite for preserving grain, flour, meal, &c., for an indefinite time. The heat is uniform, the motion of the article drying is constant, and the ventilation perfect.

We learn that Messrs .E. W. Andrews & Co., of the Empire Millseat Elyria, Ohio, have had one of the machines in operation upon corn meal, for about one year. About 1500 barrels of this meal manufactured last spring, was shipped to Europe. It not only performed the voyage of the lake, canals and rivers of our own country, but, after remaining during some of the hottest months in store, it was sold in Liverpool for from three shillings to three and sixpence sterling per barrel more than the current quotations of the market for corn meal. The enhanced price is understood to have been realized in consequence of the superiority of this process for expelling the moisture over all others; meal prepared by this process being devoid of any other taste or smell than that which pertains to the natural meal. Heretofore it has been deemed necessary to destroy the germinating principle of the grain, to enable it to withstand the vicissitude of climate, and hence the parched, ill-flavored meal that is usually sent abroad, being divested of much of its nutrition, is rendered entirely unfit for the use of man.

Flour from Ohio wheat, dried by Mr.

Stafford's process loses 8 per cent. of its weight. This fact has been recently tested at Elyria. When therefore, dried flour is exported the miller will save transportation upon 16½ lbs. of water to each barrel and one twelfth of the cost of the barrel, the consumer paying at the same rate of 196 lbs. of dried flour that he would for 212 lbs. of undried. The consumer, then, has the certainty of purchasing and having flour always sweet and fresh, instead of running the risk of buying flour which is stale, musty or sour.

Samples of flour and meal dried by the above process of Mr. S, have been forwarded to the American Institute for examination accompanied by a letter to Mr. H. Meigs, Esq., Secretary of the Farmers' Club, in which he remarks:—

"I have noticed in several papers an article headed "A hint to American shippers," which states that serious damage often arises to cotton shipped on board of vessels partly laden with Indian corn.—The cause assigned is the great heat arising from the steam evolved from the corn; were this the true cause, would not the corn be destroyed by the heat which creates the steam? Cotton cloth when washed or ironed is subjected to a greater heat than that which can be produced by fermentation, and yet its staple is not injured.

The solution I think may be found in the fact, that when corn is not properly matured, a large amount of acid (supposed by some to be sulphuric acid) is disengaged during the process of drying, whether artificially or naturally dried.—I cannot ascertain that this acid had been noticed by any other person than myself, previous to the introduction of my process of preserving breadstuffs.

Every American is aware of the acid effects of Indian meal and corn upon many individuals and upon some of our domestic animals.

I have in my possession abundant testimonials, which prove that no such acid effects are produced from the use of grain or ground breadstuffs which have been subjected to my process of expelling the moisture.

Grain of all kinds should not in my opinion be gathered until they are fully matured.

Indian corn being more dense than any other cereal grain which is used for human food, requires more time to perfect it and should remain as it grew in the field through the winter.

Dyspepsia in all its forms, may, I think be in some degree attributed to the consumption of immature breadstuffs, the bad effects of wheat flour are now obviated by using it in an unbolted state, then the alkalies in the bran neutralizes the acid of the flour.

As the gathering and disposition of our crops cannot be altered, our only resource is to artificially expel the moisture from our grain, flour and meal, and if this is done by any process when they are subjected to a low degree of heat which is always uniform, to a constant motion and free regulation. Not only must the substances so acted upon be deprived of their moisture, but the acid properties must also be expelled, and no injury can result to the grain, flour and meal.

So far as we are able to judge of this invention from the tests already made of its utility, we are inclined to regard it of very great importance, particularly to the grain growing regions of the west. The amount saved to the government would be large if they would supply the ships of the navy with flour and meal sufficient for a long voyage, with a perfect assurance that they would remain good for any length of time. So of whale ships, &c. Mr. Stafford richly deserves not only the large pecuniary benefit which is already made sure to him, but also the gratitude of the public.—*N. Y. Mechanic.*

From some experiments made at the Agricultural Institute at St. Germain in France, it appears that the sheep which gained in weight three and a quarter lbs. a month, increased double that amount in the same length of time, when about one-tenth of an ounce of salt was added to the food of each per day.

ASPARAGUS.

This plant, the most esteemed of culinary vegetables, is often found wild on the sea shores of Northern Europe. This explains the reason that *salt* is so beneficial to it when applied as a manure in our gardens. It was likewise found in great abundance on the extensive meadows of Russia and Prussia. The stocks however were very small. In Italy it came to greater perfection. It was extensively raised and highly esteemed by the Romans, and so luxuriantly did it grow in the many fields of Ravenna, that three shoots often weighed one pound. It has been raised and esteemed in Europe for an unknown length of time, and hundreds of acres of it have been cultivated around Paris, Berlin and Vienna. A single horticulturist near London, grows annually *eighty acres* of this vegetable.

Asparagus is generally raised from the seed, but, for private gardens, the better course is to procure plants from a nursery. It is a common, though very wrong opinion, that roots will come quicker to perfection if planted out when two or three years old. Thrifty plants of one year's growth are by far the best.

The general custom of arranging asparagus beds by digging them out three feet deep, lining the bottom and sides with planks or bricks, and filling with manure, is very troublesome and expensive. This method belongs to the "olden time," when every thing was done upon a more durable plan. Experience shows that it may be raised in a much easier way, as follows:

Select a good, light, rich piece of ground. Make trenches two feet apart, twelve inches deep and twelve wide. Fill the trenches to within two or three inches of the top with a compost of rotten manure, (that from the cow-yard is preferable) rotten vegetables, refuse from the garden, leaf mould or very rich surface earth. On this arrange the roots carefully at regular intervals, *eighteen inches* apart, and cover two or three inches deep. Place a small stake near each root in order to designate the place and to increase the convenience of replanting in case it should die. The plants of course ought to be watered as soon as set out and occasionally thereafter in dry seasons.

The Spring is commonly considered the best season for transplanting, but in this climate it may be successfully done at any time except during the hottest and dryest summer months. If planted in the Spring, the tops should be cut off. In the fall, after having ripened their seeds, cut off the stems carefully at the surface of the earth, and cover the bed about six inches deep with rotten manure, leaves or other light earth. When coming up in spring keep them clear of weeds and once or twice give a good sprinkling of common salt. The second year pursue the same treatment, and the following Spring they will generally be fit for a moderate gathering. The treatment for the next ten or twelve years should not vary from the above. The yield will, annually, during that time, increase.

To those entirely unacquainted with this plant, I would say, never continue to cut asparagus longer than *two months*.—After that time it should be allowed to run up to seed. A longer cutting injures the plant—and sometimes even destroys it. Near the sea coast, the common seaweed—(*Fusus Vesiculosus*) is preferred as a manure—indeed it is the only manure necessary.

Small vegetables, such as Cresses, Radishes, Spinach and Lettuce may be raised between the rows. When grown judiciously and not in too great quantities they are very beneficial, and they serve to keep the earth loose and moist by shading with their leaves the surface near the roots of the asparagus.

The foregoing article is from the pen of Mr. Robert Nelson, an intelligent practical horticulturist near Macon. The following is the method of Mr. Via, of this city, whose success in raising this delightful and delicate vegetable has been remarkable.

His cuttings, as brought to market, are from 6 to 8 and even 10 inches in length, many of them being from one to one and a half inch in diameter and exceedingly

fine and tender. His method of cultivating this plant, is first to select his seed from giant stalks and sow it in rows, and when the plants are one year old transplant them to ground prepared by making a trench 1½ or 2 feet in width, and eighteen inches in depth, putting in a small quantity of coarse manure and then a rich covering of rich earth and a mixture of fine compost manure. Upon this he sets the plant in rows, a foot or eighteen inches apart, in the row, making two rows in one trench, 8 or 10 inches apart, as in the following diagram:

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He covers with common earth to a sufficient depth for vegetating and leave the remainder of the trench unfilled until the crowns begin to start and thus fills to a level with long or coarse manure, covering it with earth sufficiently to keep from drying. By this means a ridge or continuous mound of earth is raised 12 to 15 inches above the root of the plant which it must penetrate to reach the surface.—Each morning and evening such stalks as reach the surface are taken out with a garden knife for the purpose, the earth replaced, and the weeds, if any, pulled out. He thus obtains a bleached and tender cutting of very large size. Mr. V. says he does not use salt at all on his beds as his land will not do well with it.

BENEFIT OF TOADS.

These animals are very useful in gardens. They live entirely on insects, which they devour without much regard to the species—the selections being made by toads of different sizes, according to the bulk they are able to swallow. While the toad is small he is only able to feed on gnats, small flies, the smallest beetles, &c.; but when full grown he will swallow almost all insects that infest the garden or field, whether in the larva or perfect state. The number of insects which they are capable of devouring is surprising to one unacquainted with their habits. Several years since the writer ascertained that a large toad, which he kept confined for the purpose of experiments, would devour from eight to twelve grubs, the larvæ of the May-bug or cockehafer, (*Melalontha vulgaris*) per day. There is another advantage which they have over fowls, in gardens—they will do no injury to any plants, their mode of taking the insects being such that the plant is scarcely touched in the act. A few boards should be laid round the garden, raised about an inch from the surface, under which the toads will take shelter in the day, as they only feed during the night.

USEFULNESS OF BIRDS.

Few persons appear to be aware of the immense number of insects destroyed by birds. Different species of birds prey on different kinds of insects, or take the same kinds of insects in different stages. Thus swallows, martins, &c., take their food in the air, and catch insects while in the perfect or winged state. They hover much near water, and devour myriads of those insects which live in that element in their first stages. The common apple tree caterpillar is eaten by few birds, but to the cuckoo it seems to be the natural food. One of these birds will in a short time destroy a nest of these injurious pests. They tear open the web with their bills, and besides gorging their craws with the worms, will kill many which they cannot swallow. Robins take their food mostly from the ground—taking such worms as attack grain, grass and garden vegetables. They also eat angle-worms and beetles.

Many kinds of birds may be induced to take up their abode near the habitation of men. They seem to have an instinctive idea that man is (or ought to be) their protector. If they find themselves unmolested, they evidently enjoy a close proximity to the "lords of the creation," and they evince their happiness by their sportive actions and sprightly songs.

From the Genesee Farmer.

CORN AND COB MEAL.

There are few in this section of country who endorse the sweeping proscription of corn and cob meal which lately appeared in your paper. We have heard the subject somewhat extensively discussed since the appearance of that article, but we have yet to meet with the first individual whose experience coincides with the writer's views. "They say," said one man in my hearing, "corn and cob meal is poison to a horse; but, in my view, those horses are the worst off that can't get enough of it to eat!"

I would sooner trust the instinct of the animals themselves than the hasty theories or carelessly conducted experiments of any amateur farmer. Why do they eat them? Perhaps it will be said, as a man is reported to have drunk a pail of water for the sake of the gill of rum which it contained, so they eat the cobs to obtain the corn meal. But, then, the cases are not parallel. The appetite of the man had become depraved, vitiated and unnatural—reason itself was toppled from its seat. His case was an exception, and so would be the instance of an animal (an instance yet to be reported) which should be found to hesitate over a meal tub, because of the presence of ground cobs. Have not our hogs and cattle been observed to eat them in the rough? I have witnessed mine do so, before the cobs had become hardened by age, with evident gusto. May not the fact that the practice is not more habitual, be referable as fairly to the circumstance that other food is generally at hand more easily masticated, as to the supposition of *indigestibility?*

What is the testimony establishing its hurtful nature? Assertions are, doubtless, evidence; but not conclusive proof. The courts generally require, not the inference or conclusions of a witness, but the particular facts within his knowledge, minutely described. We have a right to suppose that, eating so large a proportion of perfectly indigestible stuff, costiveness would be one of the necessary results. Who has observed it? On the contrary, do not the bowels appear more loose and natural than when supplied with corn meal alone? Now, if corn meal tends to constipation, and an admixture of cob meal restores the healthy state, should not the "pounded glass," recommended by our impulsive friend, be substituted, not for the cob, but for the corn itself?

But, while there is a total absence, heretofore, of all experience of the hurtful qualities of cob meal, the testimony in its favor is various and positive:

"Grinding the cob with the corn is said to add one third to its value for feeding."—*Ellsworth's Report.*

"Experiment has satisfied us that a given quantity of corn, ground in the cob, will accomplish as much as twice the quantity fed in the ear, in fattening hogs; provided the meal is *fermented* by a mixture, for a few days, with water. We would recommend that it be thoroughly ground into meal; as we have found from our own experience, a very decided advantage from this mode of feeding, and are fully satisfied that it is not overstated."—*M. B. Bateham.*

"Previous to the purchase of the crusher we averaged 214 ears of corn. Our stock average seven head. One hundred and sixty ears (for the last two years) are now run through the crusher. The different appearance of the horses and their better ability to work, prove, beyond a doubt, that the crusher affords a more nutritious and healthy food. It will also be seen that it places to our daily credit fifty-four ears of corn."—*Dr. A. H. Tyson in American Farmer.*

"We take the present opportunity of directing the attention of our readers to the great value of meal, prepared by grinding corn and cob, for stock; and from the many evidences of practical farmers, as well as from experiments of our own, we cannot but press it upon the attention of the prudent farmer. That there is a nutritious substance in the cob, no one, we think, who has paid any attention to the subject, will pretend to deny. In throwing away the cobs of our corn, we have been wasting very good feed. But, be-

sides the actual economy, there is another advantage in this way of feeding corn, which ought to engage the attention of every farmer. It is notoriously true, that the unground grain of corn is heating to the stomach of all animals, and of difficult digestion, producing colic and other inflammatory disorders, particularly in horses. They are deprived of the benefits derived from the stimulus of distension (so proper to the health of all animals) by being unable to eat a sufficient bulk to produce it before they become gorged. It is believed by many that there is very little nutriment in corn cobs; but as one proof to the contrary we will adduce the following. A farmer in Virginia, a few years since, afraid his corn crop would not be sufficient to last through the winter, determined to try, and did winter his horses on corn cobs alone, pounded in a common hominy mortar with his own hands. They received no other substance except long forage, as hay and fodder.—Upon this they did their work and were in good condition."—*C. N. Bement.*

"Among the evidences of the nutriment contained in the corn cob, the experiment, by distillation, of Mr. Minor of Virginia, showed that five bushels of cobs contained four gallons of spirit. He also found other nutritive matter than the saccharine, as mucilage and oils."—*Amer. Farmer, Vol. I., p 234.*

These testimonials might be extended. It will be perceived they speak from experiment and personal experience, and are from sources entitled to consideration.—That one of these at least, C. N. Bement, possesses the requisite qualities for a successful experimenter, we have the testimony of Henry Colman: "Agriculture has not in this country a more ardent friend to its improvement. His zeal is associated with great exactness of observation."

I am myself making use of cob meal alone, by way of experiment; and altho' not prepared to speak of its nutrition, I can certify to the avidity with which it is eaten by poultry and cattle.

LIVINGSTON.

North Bloomfield, N. Y., 1848.

GUANO TO CORN IN THE HILL.

"How much *guano* will it take to manure an acre of corn in the hill?"

We answer that fifty pounds will be enough, and that it should be mixed with three loads of mould from the woods or the same quantity of rotten manure, and one bushel of plaster to each acre. These should be thoroughly mixed together—the quantity named will give a pint to each hill of corn, which we consider will be sufficient to start the corn plants at the onset, and ensure their rapid and luxuriant growth until the roots shall have got down to the manure which may have been ploughed in. We would not apply guano *alone* in the hill, as the ammonia already formed is in too concentrated a state to be allowed to come into immediate contact with the seed while in a state of germination. By incorporating it with mould and plaster, we render the guano harmless, prevent the escape of its most active and valuable principle, convert what would otherwise be an evil, into a positive benefit, prolong the period of its action, and besides which, add two other ingredients to the soil, which, of themselves, are invaluable as food and as the provider of food to the corn plants. If the land may not have been manured broadcast, it will require double the quantity of mould, or rotted dung and guano, but the same quantity of plaster will answer, even in that event.

We would remark here, that we feel it due to the cause of good husbandry to state it to be our opinion, that nothing but *necessity* can justify any farmer in relying upon manuring in the hill for the improvement of his land, as nothing short of *broadcast* manuring can effect that object; and we will further state, as our opinion, that no system of improvement can be considered good which does not embrace rotation of crops, liming, clover and plaster. Manuring in the hill may, and no doubt will, ensure a single good crop, but it is too partial in the distribution of the fertilizer to effect the general benefit.—*American Farmer.*

FLOUR AND WHEAT.

The following table shows the exports of flour and wheat exported from the United States since 1790. It is from the Commercial List of Philadelphia:

	Bush. Wheat exp.	Bush. Flour exp.
1790	1,124,458	724,623
1791	1,018,339	619,681
1792	853,790	824,464
1793	1,450,575	1,074,639
1794	698,797	846,010
1795	141,273	687,369
1796	31,226	725,194
1797	15,655	515,633
1798	15,021	567,558
1799	10,056	519,265
1800	26,852	653,052
1801	239,929	1,102,444
1802	280,281	1,156,248
1803	686,415	1,311,853
1804	127,024	810,008
1805	18,041	777,513
1806	86,784	782,724
1807	776,814	1,249,819
1808	87,330	263,813
1809	393,889	846,247
1810	325,924	798,431
1811	216,833	1,445,012
1812	53,832	1,443,492
1813	288,135	1,260,942
1814		193,274
1815	17,634	862,739
1816	62,321	729,053
1817	96,407	1,479,198
1818	196,808	1,157,697
1819	82,065	750,660
1820	22,137	1,177,032
1821	25,821	1,056,119
1822	4,418	827,865
1823	4,272	756,702
1824	20,373	696,792
1825	17,990	813,906
1826	45,166	857,820
1827	22,182	868,490
1828	8,966	860,809
1829	4,007	837,385
1830	45,289	1,227,434
1831	408,910	1,606,529
1832	87,304	864,919
1833	32,421	955,768
1834	36,948	835,362
1835	47,762	779,396
1836	2,062	505,400
1837	17,303	318,719
1838	6,291	448,161
1839	96,325	922,151
1840	1,720,860	1,897,501
1841	868,585	1,515,817
1842	817,958	1,283,602
1843	311,685	841,474
1844	558,917	1,438,574
1845	389,716	1,195,230
1846	1,613,795	2,289,476
	16,661,312	54,358,988

TO DESTROY GROUND MOLES.

I recollect an inquiry in one of your papers for some method of destroying the ground moles in gardens, but I do not recollect of seeing any answer, and perhaps but few gardens are infested with them. I have been very much annoyed with them. Last spring they ate my peas and corn that I planted first and pretty early; they followed the rows through and left but now and then a seed. I planted the same rows the second time, but tried an experiment to which I attribute my success. I took a little tar, and put warm water to it sufficient to cover my seed; after stirring the tar and water together until it was well mixed, I then put in my seed and stirred again, and found that the tar adhered to every seed. I then turned the water off and stirred in dry ashes until I could handle the seed without their sticking to my hands. Perhaps lime would be better than ashes. The moles followed the rows through again before the seed came up, but they did not seem to relish the "gravy" that I had served the seeds up in. I have full faith in my experiment, for I treated my cucumber and melon seeds the same way. The hills were examined by the little rascals, but the seeds were not destroyed.—*Cor. Genesee Farmer.*

From the American Farmer.

A SOVEREIGN REMEDY TO PREVENT LOSS FROM WHEAT TURNING TO CHEAT OR CHESS.

I have not the vanity to think it is in my power to convince all to my way of thinking on this much vexed question; for after so much on the subject *pro* and *con*, I have almost come to the conclusion, that "even if one rose from the dead," and denied the favorite theories, without having the most irrefutable evidence, there are those who would still adhere to preconceived opinions; "circumstancial evidence strong enough to hang a man," would produce little or no change of opinion on the minds of some.

Nor do I propose to enter into any ar-

guments to prove the proposition: whether wheat does actually change or "turn to cheat," or whether cheat, by some unexplained and unaccountable freak of nature turns into wheat; for to express my honest convictions, I consider one just as reasonable and probable as the other.—My object is to inform those who are "believers" in the doctrine of transmutation, *either way*, of a plan that has proved eminently successful with me; and if strictly followed, will no doubt produce the same results with others.

I must confess, however, that in my early farming operations, many circumstances occurred that tended to convince others, and what I could not at the time, satisfactorily account for.

In one case, I had sown a ten acre field with very clean seed as I thought; but late in the spring, a storm prostrated a portion of the fencing, and before it was discovered, some half an acre was destroyed by the stock; when harvest arrived, it was observed that on this pastured part, there was "quite a fair crop of cheat; and comparatively but a small portion on the adjoining land, where the wheat was uninjured.

I was told that such was the necessary result of injury to the wheat at this stage of its growth; "as it was sure to turn to cheat."

It certainly *looked like it*, for the wheat sown on that part, was the same as the rest of the field—other cases occurred quite as strong and convincing as this: but notwithstanding, the remedy was persevered in, and I now give the practical result, both in my own case, and that of a neighbor who is a firm believer in the fact of transmutation.

Several years since we both obtained some wheat of a new variety, and, originally no doubt, from the same source. It was (mine at least) anything but seed wheat, although purchased as such; for it had cockle, garlic, rye, and cheat in abundance; the garlic and most of the cheat were separated by carefully swimming in strong brine and skimming the surface; and by a simple addition to the fan,* if may be rendered quite clean from cheat; nearly all the cockle and rye were separated by a hand riddle, being smaller than the wheat.

I continued sowing my own wheat, and my neighbor his; and recently he informed me, that in a crop of 118 bushels, he actually realized *twenty-eight bushels* of pure cheat—nearly one-fourth of the whole crop! and as the razor-strop man says, there was no doubt "a few more left of the same sort" in the ninety bushels of wheat. With a different practice (to say nothing of the theory of transmutation, which he, as well as many other sensible men advocate) my crop of several hundred bushels was so clean of cheat, that it was a difficult matter to find a single grain.

Now for the remedy against transmutation. It is simply to *sow none but perfectly clean seed wheat;* or as clean as it can be made, regardless of the requisite time and labor: for, "such as ye sow, such shall you surely reap."

I would as soon expect to gather *peaches* from *pear trees*, as to harvest a crop of clean wheat, from such seed as some farmers consider "clean enough to sow." If the seed is clean of cheat, and the land also, I will guarantee the crop to be equally so.

Unfortunately, my farm was pretty thoroughly seeded with cheat before it came to my possession, and it required years of care and attention to eradicate it. Farmers cannot be too careful in the selection of their seed; for the increase of cheat is perhaps five fold greater than wheat. If the land is "well set" with cheat (almost certain to be the case, without great and continued care in the selection of seed) and the wheat should sustain an injury, as in the case alluded to, the cheat will spring up, and supply its place.

*Let the wheat pass from the hopper over a board to within 4 to 5 inches of the outer edge of the riddle—in fact using the board in place of the upper riddle—and drop several inches, on to the lower riddle; the cheat is thus blown away, being much lighter than the wheat. This plan is more effectual than the best Fan I have ever seen, used in the ordinary way.

While the pen is in hand, I will notice a communication in the last number of the Farmer, over the signature of "A Subscriber;" he asks, "What is the most approved modern plan of a corn-house? freedom from vermin, and convenience for the easy unloading of wagons, and storing the grain away, to be taken into consideration. The buildings if admissible, to contain an open space for the shelter of wagon, cart, &c." I have not seen a corn-house, which will combine under one roof, all these advantages; but having constructed one that proves a perfect protection against rats and mice—the most important point queried after, will describe it. The cost was $80 to $100, and the annual saving "from vermin" is more than the interest of the cost; with the satisfaction of *knowing and enjoying*, what we eat; valued rather higher than the saving of a few dollars and cents.

The building is 12 by 20 feet; standing on six brick pillars, 18 inches square and 2½ feet high; capped with 2 inch plank, and projecting over the pillars 4 to 5 inches. On the edges of these caps, strips of sheet iron about 5 inches wide are nailed, and projecting 3 inches below the caps. It was tried without the strips of sheet iron, but proved unsuccessful; for the mice managed some how or other to work their way into the house. The sills rest on the caps and the weight of the building precludes all danger from careless backing of the cart or wagon; the eaves project all round about 2 feet in width—the portion devoted to corn is lathed vertically and ten feet in height will hold 120 barrels; the other portion is divided into six tight, but moveable granaries, that will contain about 400 bushels of grain if necessary. Should "A Subscriber" desire further or more definite information, it will be furnished with pleasure.

I am very respectfully,
A Montgomery Farmer.

The urine of horses consists, in every 100 parts, of 94 of water and 6 of urea, and the salts of soda, lime and potash.

PHILOSOPHY OF FARMING.

Here is the secret of good farming.—You cannot take from the land more than you restore to it, in some shape or other, without ruining it, and so destroying your capital. Different soils may require different modes of treatment and cropping, but in every variety of soil these are the golden rules to attend to: Drain until you find that the water that falls from heaven does not stagnate in the soil, but runs through it and off it freely. Turn up and till the land until your foot sinks into a loose, powdery loam, that the sun and air readily pass through. Let no weed occupy the place where a useful plant could possibly grow. Collect every particle of manure that you can, whether liquid or solid. Let nothing on the farm go to waste. Put in your crops in that course which experience has shown to lead to success in their growth, and to an improvement and not impoverishment of the land. Give every plant room to spread its roots in the soil and its leaves in the air.

A friend of ours, who began life with less than one thousand dollars, and who has brought up reputably and well educated a large family, and has now become rich from the profits of farming alone, informed us that one season he expended nine hundred dollars for city manure, all of which he put on twenty acres of land; that he had not a doubt but this manure increased the hay product of that field at least one and a half tons per acre, but he would only calculate it at one ton. Hay was then worth, for a series of six years, the average price of $15 per ton; he thus realized $1,800 more within that six years than he otherwise would have done had he not purchased the manure. He calculated that the grass this field produced, which he fed off after mowing, was an equivalent for the extra expense of cutting and marketing this extra ton per acre; and the land at the end of the six years was in much better condition than before he put on the nine hundred dollars' worth of manure.—*Amer. Agriculturist.*

SUGAR MAPLES.

Few observers have failed to notice that holes bored in maple never heal over, The wood and bark both perish for several inches above and below the hole, and often two inches each side of it; the tree is in consequence essentially injured, and after a series of years ruined. The reason why it does not heal, is probably because of the unfavorable shape of the wound—the new wood not having room to form.

The maple is a beautiful and valuable tree, and sorry I am that so few farmers care enough for the future or those who shall come after them, as to lead them to take pains to save and perpetuate this pride of the forest, this bountiful free-giver of an unequalled and delicious sweet. My suggestion is this: let the manager of the sugar orchard, on the round to gather his buckets, at the close of the season take with him a gouge chisel and mallet, and a basket of well made wooden plugs, or else corks—(the gouge should be some half inch wider than the hole in the tree:) let him cut out a chip slanting inward above and below the hole meeting at the centre of it; then drive in the plug or cork so as to make a smooth and waterproof fit, and the work is done. A healthy lip will soon form and grow over the orifice, and the tree will thus be preserved from decay, an ornament to the grounds where it grows, and a benefit of no little importance, reaching to several generations.

H.

Rome, N. Y., 1848.

THE LOCUST TREE AS A HOBBY.

Mr. Browne, in his "Trees of America," relates the following specimen of hobbyism, by the celebrated Wm. Cobbett—which is certainly equal to any thing of the sort in these days—and throws some light on the character of that man:

"In the year 1823, an extraordinary excitement was produced in England concerning this tree, by William Cobbett, who resided in America from 1817 to 1819, and chiefly occupied himself in farming and gardening, on Long Island, near New York; and during that period, as he tells us in his "Woodlands," published in 1825 to 1828, that he was convinced that nothing in the timber way could be of so great a benefit as the general cultivation of this tree. 'Thus thinking,' continues he, 'I brought home a parcel of the seeds with me in 1819, but I had no means of sowing it till 1823.—I then began sowing it, but upon a very small scale. I sold the plants; and since that time I have sold altogether more than a million of them!' Elsewhere, in the same work, he more especially directed attention to this subject, urging, in his clear and forcible manner, the immense importance of this tree in ship building; and he was the means of thousands of it being planted in various parts of Britain. The name of *locust*, as applied to this tree, before Cobbett's time, was but little known in England, and many persons, in consequence, thought it was a new tree. Cobbett had a large kitchen garden behind his house at Kensington, which he converted into a nursery; and he also grew trees extensively on his farm at Barnes, in Surry. Although hundreds of the Robinia pseudacacia stood unasked for in the British nurseries, the 'locust plants,' which every one believed could only be had genuine from Mr. Cobbett, could not be grown by him in sufficient quantities to supply the demand. He imported the seeds in tons; but when he fell short of the real American ones, he procured others, as well as young plants, from the London nurseries, and passed them off as his own raising or importation. Had the people of England known that locust seeds and locust plants were so easily to be obtained, it is probable that the locust mania never would have attained the height it did. To show the folly or the knavery of this extraordinary individual, we quote the following from Loudon's 'Arboretum Britannicum,' which should be preserved more as a literary curiosity rather than a historical record. 'It is worthy of notice,' says Loudon, 'that Cobbett, apparently without ever having seen a hoop-pole made of locust,

boldly affirms that the tree is admirably adapted for that purpose; that trees from his nursery, after being planted four years on Lord Radnor's estate, at Coleshill, were 'fit for hoop-poles, that will last in that capacity for twenty or thirty years at least; that such poles are worth a shilling each, (that is, nearly double what was at that time the price of good ash poles,) that five acres would thus, in five years produce £529;' and that 'each stump left after the pole was cut down, would send up two or three poles for the next crop, which being cut down in their turn, at the end of another five years, would, of course, produce two or three times the above sum!' that locust wood is 'absolutely indestructible by the powers of earth, air and water; and that no man in America will pretend to say that he ever saw a bit of it in a decayed state.' After this, it will not be wondered at that Cobbett should call the locust 'the tree of trees,' and that he should eulogise it in the following passage, which is so characteristic of the man, and so well exemplifies the kind of quackery in which he dealt, that we quote it entire: 'The time will come,' he observes, 'and it will not be very distant, when the locust tree will be more common in England than the oak; and the man would be thought mad if he used any thing but locusts in the making of sills, posts, gates, joists, feet for rick stands, stocks and axletrees for wheels, hoop poles, pails, or for any thing where there is liability to rot. This time will not be distant, seeing that the locust grows so fast. The next race of children but one, that is to say, those who will be born sixty years hence, will think that the locust trees have always been the most numerous trees in England; and some curious writer of a century or two hence will tell his readers, that, wonderful as it may seem, the locust was introduced to a knowledge of it by William Cobbett.' What he will say of me besides, I do not know; but I know he will say this of me. I enter upon this account, therefore, knowing that I am writing for centuries and centuries to come.' The absurdity of the above passage renders it almost unworthy of comment; but we may remark that, even supposing all that Cobbett says in it of the application of the locust were true, the uses which he has enumerated do not amount to a hundredth part of those to which timber is applied in this country. Hence, were his predictions to be verified, and were the locust to become more prevalent than the oak, we should find its wood a miserable substitute in the construction of ships and houses, for that of our ordinary timber trees. Every experienced planter or timber owner, both in Europe or America, has felt this; and this is the true reason why the tree never has been, and never will be, extensively planted."

WOOD ASHES.

Fresh ashes contain caustic alkali, which, whatever be the form of the ammonia with which it may come in contact, will take from it, by virtue of its greater affinity, the acid which holds it fixed, and thus let it free; therefore fresh wood ashes are highly prejudicial for mixing with farm yard manure, guano, or any other body containing free ammonia. The same reasoning applies to lime, and is undoubtedly correct. Gypsum, charcoal and swamp muck are safe and good absorbents, though not as great stimulants of decomposition as lime.

TOBACCO.

Should the present popular movement in France be able to maintain, as we trust it will, a well regulated republican form of government, there may be expected an alteration of the present monopoly in regard to tobacco—and if so, the best effects may result to the interests of the American tobacco planters, as its consumption there may be expected to be greatly increased by the removal of those restrictions which have hitherto ruled in that country—restrictions which looked to kingly aggrandizement without regard to public interest. And while upon this

branch of the subject, it may not be inopportune to remark, that the British duty, 1000 per cent., is exorbitantly high, and that every effort, compatible with the peaceful relations between our government and England, should be made to bring about a reduction, as the enormous duty now exacted not only serves to deprive our planters of a large portion of the value of the commodity, but to curtail its consumption. As things now stand, under the present rate of English duty, the government there pocket much which should, and would under a more rightful adjustment, enure to the producers here.

FARMERS AND MILLERS.

As farmers cannot do well without millers, nor millers without farmers, it is important to study that policy which is the interest of both. And first, it is very essential that all grains should be sufficiently pulverized, that when taken into the stomach the digestive apparatus has only to separate and absorb the nutritious matter for the system, and remove that which is not; and as food is retained in the stomach a certain length of time, it being pulverized gives a gain of all that time which would be required for the stomach to perform that operation, the more completely to separate and absorb all nutritious matter therein contained. Well, then, as the farmer's first principle in economy should be to save what he has already acquired, and to convert it to the best possible use, (and especially uncooked grains fed to animals,) it becomes necessary for him to have his grains ground fine, and for the miller to insure his custom, to be prepared to grind it fine. And as millers cannot do full justice in their business without the grain is in proper order, it becomes of the highest importance for farmers, in order to receive full justice at the hands of millers, that their grain be dry—not what some men call dry; but if necessary it should be dried by artificial heat. And secondly, their grain should be well cleaned.

One idea in regard to grinding corn and cobs. It is a notorious fact that there is nothing in cobs of the nature of grinding, and for this reason the corn that is with them must help grind them. Now, I would suggest to your kind readers (to those who do not know it by experience) to try a composition of grains for milling, especially corn in the ear. Put with it oats, barley or rye; see if it does not grind finer, and if your horses, cattle and hogs do not like it better. The preparation may be one-half oats, &c., or less, according as you have them. The reason of its grinding finer is, there is more of grinding material, less of cobs, and that a mixture of grains help grinding each other.

S. N. Holmes.

Holmesville, 1848.

KYANIZING WOOD.

This is a method of preserving wood or cloth from decay which is now attracting much attention, and is used to a considerable extent in Great Britain. It is done by immersing the wood or cloth into a mixture of water and corrosive sublimate, in proportions of one pound of the mineral to five gallons of water. The mercury combines with the albumen, the more perishable part of the vegetable matter, and renders it insoluble in the same manner that tan renders gelatinous matter so in hides. Wood thus prepared may be exposed to water for an indefinite period of time without any observable change. It also preserves timber from dry rot.

HYDROPHOBIA.

We have been requested to re-publish the following, said to be a preventive of hydrophobia, as discovered by a French physician, M. Cossar:

"Take two table-spoonfuls of fresh chloride of lime in powder—mix it with half a pint of water, and with this wash keep the wound constantly bathed, and frequently renewed. The chlorine gas possesses the power of decomposing this tremendous poison, and renders mild and harmless that venom against whose re-

sistless attack the artillery of medical science has been so long directed in vain. It is necessary to add that this wash should be applied as soon as possible after the infliction of the bite. The following are the results of this treatment: From 1810 to 1824, the number of persons admitted into Breslau Hospital was 184; of whom only two died—from 1783 to 1824, into the Hospital at Zurich, 222 persons bitten by different animals, (182 by dogs,) of whom only four died."

BUTTER DAIRIES.

Here follows a letter from Mr. A. B. Hall to Mr. B. P. Johnson, on the subject of dairies. Mr. Hall is one of the most successful butter makers in New York. His residence is at Lebanon. This letter contains his method; and as he obtained the premium for the best butter at the last exhibition of the New York Agricultural Society, it will no doubt be read with interest.

"*B. P. Johnson, Esq.*,—Sir: In making a statement respecting my dairy, and farming operations connected with it, I will glance at the causes that contributed to lessen the number of pounds produced. They consist in the small quantity of snow that lay upon the earth during the last severe winter, and the late backward spring of 1847. Sward of meadow or pastures being constantly exposed to such intense frosts and thin coats of ice, they have produced much less than an average quantity of herbage. The consequence of which is, so far as I am informed, much diminished quantities of butter and cheese. In the operations of butter making, the season past, I have made some experiments to ascertain the exact degree of temperature necessary to produce the *very best* butter. Previous to trying the experiments, I became satisfied that one great cause of bad butter was the high degree of temperature at which cream was frequently kept and churned. I applied the thermometer, and churned the cream at different degrees, varying from 55 to 66 degrees, and found I invariably obtained the best butter when the temperature was below 60, say 58 degrees. The great anxiety of dairymen to churn quick, is at the expense of a first rate article. Any person at all conversant with butter making has observed the whitish yellow color and oily appearance it will present when taken from the churn, whenever the cream has been or is too warm when the operation of churning commences, thus forever destroying its rich flavor and keeping properties. The buttermilk cannot be expelled without working too much, which makes it sticky and oily. On the contrary, cream taken from the milk at a proper time, kept and churned at 57 or 58 degrees, will require more time in churning, but the butter will present a high and rich color—will be firm and hard—will not stick, and will readily break when being separated. The buttermilk can be at once expelled, which should always be done before the salt is applied, so that when it is subsequently worked, which should be very little, nothing will be expelled but a little brine, slightly discolored. Another cause of bad butter is the use of impure salt, and that frequently in such large quantities, that lumps not dissolved are frequently found in it. A small quantity only should be used of pure rock salt, perfectly pulverized and incorporated with the butter.—No other salt should be used but such as is perfectly pure. The Salina salt, after repeated trials, I have entirely thrown aside.

I have also tried experiments to ascertain what effects different kinds of feed had on the quality and quantity of butter produced from any given quantity of milk. From 1,500 pounds of milk, weighed when feeding green cornstalks in addition to feed obtained in the pastures, I obtained a little over one-half of one pound, from each one hundred pounds of milk, more than the average produced through the season, and the butter made was of superior quality. For a description of my farm, locality, &c., I respectfully refer the committee to 'Transactions for 1846,' page 144, which contains my statement made that year. I have used, in addition

to the farm there described, about twenty acres of hill pasture and eight acres of meadow, soil gravel loam, bearing red and white clover and herds grass. An average crop of hay on my meadows, that are not ploughed, is about one and three-quarter tons per acre. My dairy has been composed the past season of 20 cows, from four to thirteen years old; 5 three years old heifers and 4 two years old, all of native breed, except three short horn heifers: one of my cows became dry about the 15th September, and I sold one cow and one heifer a little later. I think a fair average through the season would be 27 cows. I had 26 calves dropped by the 16th of April. They were all kept on the cows until the 12th of May, when they were all sent to the Boston market. I immediately commenced making butter, and continued 224 days.

The produce of my dairy was as follows, viz:

3,736 lbs. of butter, sold in the Boston market by C. P. Adams, at an average net price of 24½ cents,	$1,067 13
29 calves, averaging 37 days old,	151 83
Cream and milk used in a family of twelve persons, 16 cents per day,	58 30
Shimmed and butter-milk fed to hogs, 224 days, $1 40 per day,	316 40
	$1,593 66

My cows each gave on an average, as weighed and measured, 4,230 pounds of milk which would make for the whole herd, 164,200 pounds. The quantity of butter to 100 pounds of milk, would be 3 pounds 5 ounces. The feed of my cows, in addition to grass and hay, was two quarts of provender (barley and oats) per day, during the time they suckled their calves, and one feeding per day of green corn or pumpkins from about the 1st of August to the 1st of November, after which they were fed on dry corn fodder.

For a particular account of my method of making butter, I will again take the liberty of referring the committee to my statement of last year, which has not been varied, except in the use of more ice, and a little lower degree of temperature which, together with the use of corn for feed, has improved the quality of the butter.

My sales of young pigs, which were fed on the skimmed milk and butter-milk about two months, and then sent to market,

Amounted to,	$236 65
Pork, lard, &c.,	1,640 39
Net amount of sales,	$1,877 04
Amount paid for hogs,	842 00
Amount to credit for feed,	$1,035 04

I have not yet hauled out their manure, but I think I can safely estimate it at 450 loads."

A. B. Hall.

THE YELLOWS.

At this season, while we are all enjoying the luxuries of that queen of the orchard, the peach, some considerations upon the disease which has done such great injury to the tree that affords the same to us, will not be uninteresting.

It is a disease peculiar to the peach orchards of this country. And even here it was unknown, or comparatively so, till about forty years ago. It made its first appearance in the neighborhood of Philadelphia, where attention was attracted to it by the premature decay and ruin of many magnificent peach orchards without apparent cause. From Philadelphia and the Delaware, it has spread all through the Middle States and as far north as the Hudson river. It has never been prevalent in the colder parts of New England.

Such is the history of the disease. Its symptoms are the production of trifling, wiry shoots but a few inches long, covered with starved ill-looking leaves, which make their appearance, not upon the extremities of the branches, as in the natural and proper manner, but upon the stem itself and upon the larger part of the branches. This is one symptom. Another is the premature ripening of the fruit. It takes place from two to three weeks earlier than it does when the tree is in

its healthy and natural state. The fruit itself does not attain its natural size. The first season of the disease it is less, but the next season it is much less in magnitude. Nor does it retain its natural and healthy appearance, the exterior being marked with spots of purplish red, and the flesh under the skin being more deeply colored than natural, especially near the stone.

Such are the symptoms. Its causes are matters of surmise. But the most probable theory is, that the disease is caused by want of cultivation and long continued over cropping, which has enfeebled the tree. This gave origin to it, and the seed of the enfeebled parent being sown, the disease has been extended and perpetuated.

In other countries more care is taken of fruit trees than in our plentiful land. The peach is subjected to a regular and careful pruning, and it is allowed to bring to maturity only a proper crop. Hence they never have the yellows among them. Few of our peach orchards are either pruned or otherwise cultivated, and they are permitted to retain upon them just the crop that the season sends.—Hence the stock of peaches among us is generally small, enfeebled and degenerate. Or, in other words, they have the yellows.

Whatever may be the cause, it is beyond dispute that the yellows are a constitutional disease. No external cause for the decline and death of the tree can be shown. The disease is popularly attributed to the attacks of the borer. But hundreds of trees which have died of this disease have been closely examined without finding the slightest mark of a borer, either on the root, trunk or branches.

It is also beyond question, that the disease may be and is propagated, by budding or grafting or by the seed. The stock upon which the grafting is performed, whether peach or almond, is also invariably diseased.

It is not so certainly established that the disease is a contagious one, though it is a very general opinion among practical and experienced orchardists that it spreads from tree to tree through the whole orchard. It may very possibly be so; and if the disease can be communicated by grafting, as all admit, there seems to be no reason why it cannot also be communicated by the pollen or flour of the blossoms of a diseased tree conveyed on the wind to the blossoms of a healthy tree.

Frequently only one branch of a tree will be diseased during the first season of its appearance, but the next it will spread through the whole. Trees attacked with the yellows generally last two or three seasons. The roots never exhibit the signs of disease.

The most luxuriant and fast growing kinds of peach trees are those most affected by the yellows. Slow growing sorts are seldom troubled with them. The yellow fleshed varieties have also been found more liable to it than the white fleshed varieties. Soil makes some difference. Trees standing in pathways or in places where the ground is trodden down hard, generally continue healthy, while trees growing in light sandy soils are most constantly destroyed by the yellows.

So much for the pathology of the disease. The remedy is a subject of interest. We have heard of no well authenticated specific remedy, no remedy which will cure the disease after it is broken out. There is but one thing to be done then. The tree is worthless, cut it down.

But the disease may be driven from an orchard and prevented from returning to it by a proper course of management. And who will not admit that the preservation of this most delightful fruit is not worth all the care necessary for that purpose? Here follows the method.

Every tree which exhibits symptoms of the yellows should be immediately exterminated, root and branch.

No other tree should be planted on the same spot where it stood for several years, unless there is a complete removal and change of the soil.

In planting fresh trees the greatest care should be used in procuring the seeds and scions of perfectly healthy trees. For this purpose it would be well to take them from parts of the country in which the disease has not made its appearance. The same precautions should be used in budding and in grafting.

By these means a healthy set of peach trees

may be raised up. To keep them in a healthy condition, it is only necessary to prevent the recurrence of the same circumstances and causes which in all probability originally gave rise to the disease. The earth about the trees should be cultivated and manured, and they should be prevented from bearing over crops by gathering off the superabundance in an early stage of their growth. A proper method of pruning should be sedulously attended to. Every year about the end of February, half the last year's growth, both on the outside of the tree and on the inner branches, should be cut off. This is the method of pruning known as *shortening in*. Pity it is that it is not in more general use among us. It does away with those long, lean branches of which our peach trees are composed, through which the sap flows with difficulty to the extremities, brings the tree into a well rounded shape, prevents over cropping, and renders the fruit superior in size and flavor.

FOOD OF PLANTS.

All thinking, reasoning men have become satisfied that to form one, two, or three tons of any crop on an acre of land in a season, the vegetable vitality which changes earth, air and water into such crop can operate successfully no further than the supply of matter precisely adapted to the wants of each plant extends. The theory is that no amount of hard work can possibly make corn, potatoes, wheat, or apples, or any other living thing, out of nothing. Nor can it form them by any possibility out of other ingredients than the things which God has appointed for that purpose. Hence, if your soil has 99 parts in 100 within reach of a crop of potatoes or corn, of all that is required to make 80 bushels of the latter and 400 of the former, on an acre, these 99 parts go for nothing, just so far as the other *one part is lacking*.—To illustrate: 100 pounds of gypsum have often added 2,000 pounds of clover hay to an acre; and could you fairly estimate the increase of clover roots, and all below where the scythe clips, the net gain would be 3,000 pounds.

Your reason, kind reader, informs you that 100 pounds of sulphur, oxygen, and the metal called *calcium*, (which are the constituents of gypsum,) never created 2,900 pounds of clover out of nothing. The 2,900 pounds of matter, which with the addition of the *sulphur* and perhaps lime in the gypsum, formed 3,000 lbs. of the plants named, existed within reach of the clover as well before as after the lacking elements were applied. But, as no other element in the world can fill the place which God has assigned to *sulphur* in organizing the living bodies of vegetables and animals, wherever and whenever this substance is lacking, such organization cannot proceed. Any bird which can organize a perfect egg without a particle of sulphur to enter into the composition of its yolk, can create and lay a little world, with all its inhabitants! In 100 lbs. of feathers, wool and hair there is 5 lbs. of sulphur. If clover contained not an atom of this substance, how could the sheep, the cow, the horse, or the pig, subsist on food which lacked an indispensable constituent of its brain and nerves, its flesh and hair, and of the milk designed by the Creator to build up every tissue of its young offspring?

You know, for Heaven has made you a reasoning, intelligent human being, that neither children nor brutes can know whether the plants on which they live—the seeds of maize, beans and wheat—the fruits of the apple, pear, peach, and the vine—contain the elements necessary to form their bones and their muscles.—What then? Only this: that Infinite Wisdom protects their lives and health by preventing your crops from growing—organizing grass roots, tubers, seeds or fruit of any kind—one pound beyond the supply of each constituent element required to make the whole body of a man. Think of this truth, and remember God has endowed us with high intellectual faculties, for the great purpose that we may study and understand "how wonderfully and fearfully we are made!"

In using vegetable vitality with a view to organize food for man, you have much to learn. All that the writer can do is to

give a few hints. Salt this remark down in one corner of your memory: Vegetable vitality alone is endowed with the power to combine those constituent elements of plants and animals, called lime, potash, soda, silicia, magnesia, iron, chlorine, sulphur, phosphorus, carbon, oxygen, hydrogen and nitrogen, into living compounds. A man, a bird, a fish, an insect, a worm —all animals—can alike subsist on a slice of good wheat bread; that is, they can organize their bones, feathers, scales, flesh, &c., out of the elements already organized by the vitality in the germs of the wheat plant. Mark well the grand natural distinction between *animal* and *vegetable* vitality. Decompose your slice of bread by burning it, or any other means, into its original mineral elements, (air and water are minerals as much as iron in the language of science;) and collect all the constituents of the bread in a clean glass vessel. Now, neither man, fish, bird nor insect can form a particle of flesh out of the matter which made the bread; but a young plant, under favorable circumstances of light, warmth, &c., can re-organize all the constituents of the bread into nutritious food for animals.—Vegetable life has infinitely greater force than that of animals; but it cannot transmute one element into another—iron into gold, for instance—nor create anew one particle of any element when perchance it shall be lacking and needed this season to organize for you a large yield of sound potatoes. Vegetable life is older than animal life.

That portion of the food of cultivated plants which is most deficient in ordinary soil, viz: bone-earth or phosphate of lime, sulphate of lime, or gypsum, chloride of sodium or common salt, salts of potash and magnesia, we find from a great number of analyses, more abundant in the *sub* than in the *surface* soil. This is a fact of much importance as a purely practical question of tillage. It indicates the utility of breaking up, and making fine the *undercrust*, so that all hungry roots may readily penetrate far into the bosom of their mother earth. The subsoil need not be brought to the surface, unless you prefer so to do. Deep tilth and thorough drainage are still sadly neglected in all parts of the United States. As an ounce of copperas, alum, or other salt will spoil an otherwise good meal for a hungry man, so a compact subsoil that collects moisture and the salts of iron, alumina and other minerals in excess, may truly poison the otherwise nutritious food of your crops. Too much of a good thing, like too much heat applied to the body in a cold day, may be more suddenly destructive than none at all.

We don't know a farmer in the Union who makes the best known use of lime, ashes, bones, gypsum, stable manure, night soil, marl and other fertilizers, such as green sand, forest leaves, salt, and swamp muck. The food given to each plant, not being adapted to its wants—having some elements in excess, while deficient in others—a large share of it is wasted. If a tanner wastes his hides and bark with which he makes leather, every body calls him a dunce; but an agriculturist may waste any quantity of the substances required to form bread, meat and wool, and yet pass for a wise farmer. Nearly all night soil, in every part of the country, is thrown away.—But a small portion of the liquid excretions of man and his domestic animals is ever restored to the fields at the proper season, and in due quantity per square rod.—*Dr. Lee.*

MARKING SHEEP.

A member of the Windsor Co. Agricultural Society, states that the clip of wool sold by the late Dr. Jarvis, of Claremont, one year (known always to be of the first quality and in good condition otherwise,) shrunk 2½ per cent. by clipping off the tar marks; and that the whole loss in consequence of the large amount of tar used, was 3½ per cent.—The writer recommends, as a substitute for tar, a paint that can be more easily removed as follows:

"The materials for marking should be lamp-black and linseed oil. If the latter

cannot be procured, hogs lard will do.—Mix a small portion of turpentine with the lamp-black before mixing with the oil. It should stand twenty-four hours before using. Those who will use tar at all events, for marking, should endeavor to make one small mark answer all purposes."

PRACTICAL HINTS ON HAY MAKING.

Good farmers differ in opinion as to the time in point of maturity, when grass should be cut. Some commence their haying as soon as the plants are fairly in blossom, whether herds-grass, timothy, or clover; while others wait until the seed is nearly ripe. Something is due to the consideration how much work in haying one has got to perform, how much help to execute the task, and how pressing the harvesting of the wheat, barley, oats, and other crops may be, to affect the farmer's arrangements for securing his hay. If one can choose his time, we think that all gramineous plants should be cut while the seed is in the milk, or just at the time when the seed begins to form. At that period, the nutritious elements—those that form the starch and gluten of all seeds, are largely diffused through the stems and leaves of grasses.

Much sound judgment needs to be exercised in cutting grass at the right time, in avoiding rains and dews, in curing hay just enough; or, neither too much, nor too little. If it were practicable, hay would be much better if cured in the shade, and free alike from the decomposing power of the heat and light of the direct rays of the sun. These dissipate much of the aromatic oil and peculiar coloring matter in new made, and badly made hay.

It is a well known fact, that butter and cheese made from milk drawn from cows fed on ordinary hay, is pale and insipid when compared with richly colored and admirably flavored butter and cheese made from milk which is itself made from green and richly scented grass. Indeed, the fact is well known, that some soils abounding in alkalies, and free from an excess of moisture, yield plants of a more fragrant and oily character than others, while better milk than is derived from plants that grow on our wet soils.

Rest assured, kind reader, that the alkalies, potash and soda, and the alkaline earths, lime and magnesia, have much to do, not only in correcting mineral acids in the soil, but they perform in the laboratory of plants, an important function in changing vegetable acids into starch, sugar and soils.

It is better not to cut grass when there is a heavy dew early in the morning, if it can be well avoided. It requires a longer exposure to the sun after it is mown, than is desirable. Get your grass into winrow and cock, as soon as it will answer; and then, by shaking it up light for the air to pass through the heap, finish the curing with as little sun as practicable.

In curing all medicinal plants, they should be dried in the shade.

In stacking, or mowing away in a barn, calculate for yourself how much salt your sheep, cattle and horses will need while eating a ton of your hay, and then spread, as you unload, that quantity evenly over the stack or mow. The writer of this has cured a good deal of hay, and has often put on too much salt to avoid injury to a pretty green mow, which was not exactly hay nor grass. While you put on salt enough, remember that cattle don't need to be scoured in cold weather with salted hay.—*Gen. Farmer.*

AGRICULTURAL SOCIETIES.

Mr. Editor,—The question has often arisen in my mind, are our Agricultural Societies performing their whole duty, and exerting all their influence in well directed efforts to promote the great interest for which they were organized?—Would not the great mass of the farming community receive much more benefit from them, were they to adopt a different course in some particulars?

Assuming, what is evident, that that is best which is most profitable, let them award their premiums accordingly, instead of being governed exclusively by

quantity or size, without taking into the account the cost of production. If any farmer raise eighty bushels of corn to the acre, at a cost of forty dollars, he assuredly deserves more praise for his skill, other things being equal, than another who raises ninety bushels at a cost of fifty dollars, yet it is customary, I believe, to give the premium to him who raises the ninety bushels.

Again: granting that size and symmetry combined constitute a perfect animal, should not more regard be had to symmetry and cost of rearing, and less preponderance given to size, where animals are nearly equal in that particular?

But these things are of minor importance considered in connexion with the lamentable fact, that more light is needed by the tiller of the soil—that following pertinaciously the beaten track of his forefathers, he relies tenfold more on chance than on science in the production of his crops. Now it is greatly in the power of these societies to afford him that light, so far as practical facts are concerned; for certainly they are, or should be, in possesion of many very important facts relating to every branch of agriculture pursued in our State. If they are not in possession of them, it is owing to their own remissness.

Now, Mr. Editor, what I intended in this communication to propose was: that each agricultural society in the State should firmly resolve, that no premium shall hereafter be awarded to any individual who shall not make a written statement of the manner of raising the crop or animal entered, together with a fair estimate of the cost; and that each society appoint a committee to prepare an abstract of all entries deemed worthy, on account of the excellence of the method pursued—and that the report of this committee be published, that the farmers in general may know how these large crops of corn and grain can be raised, with the profits accruing therefrom, and instead of despising every new improvement as emanating from "book farmers," "go and do likewise."—*Maine Farmer.*

AN AGRICULTURAL FACT.

You may set it down as an indisputable fact, that wet stiff clays, if thoroughly drained of their superfluous water, would in many instances be converted into friable moulds and yield one third more grain than they do now—therefore, you may make your calculation whether it be to your interest or not to incur the expense of draining any fields of the kind you may have. But this positive increase of yield will not be the only benefit you will derive; such lands will require less manure, less working, and your winter grain will not be half so liable to die out, or be spewed up by the alternations of the weather, while the grain grown on them will be of an infinitely better quality. It is your interest, therefore, to drain all such lands that you may have under cultivation.

KEEPING COOL IN HOT WEATHER.

Chambers' Journal gives the following devices in hot climates and seasons:

"The means in present use for artificial refrigeration, are very various, some of them very interesting. Among these, the employment of porous earthenware may receive an early place. The Moors introduced into Spain this luxury, in the shape of very elegant vases, wonderfully light and porous. Water kept in these became rapidly deliciously cool, and from some peculiarity in the process of manufacture of the vessels, it acquired, in addition, a very agreeable flavor. In Egypt and in India, and in most sultry regions, this expedient is at the present time a very prevalent one. It has also for sometime been extensively employed amongst ourselves—porous wine, butter, and water coolers, or many elegant designs, being now produced at our potteries. But porous ware keeps water coolest where the clime is hottest, the very increment of heat being made to re-act in the re-production of cold by rapid evaporation. The Moorish names for their earthen jugs was *Alcameros Bucorros.* The Arabs, burnt up with the eternal fire of their scorching

country, make use of goat skins for water vessels, which suffer a little water slowly to exude, and thus keep the remainder comparatively cool. A common method of cool wines in India, is one which will almost appear a paradox; the bottle is wrapped in flannel wetted with water, and placed directly in the rays of the sun; violent evaporation ensues, and the wine actually becomes very cold.

It is a common plan for sailors, in warm latitudes, to cover their wine with cloths constantly wetted. Apartments are cooled on a similar principle, an abundance of water is frequently dashed against the walls with the most grateful effect.—In India, also, the cold, so dangerous and penetrating on a clear night, is often applied in a peculiar manner for the purpose of freezing water. Near Calcutta, in an open plain, there are large shallow excavations made in the ground, and filled with straw; upon this many rows of small, shallow porous pans, filled with water, are placed at sunset. During the night ice forms in thin cakes upon the surface of the pans; it is carefully removed before sunrise, carried to a proper repository, and pounded into a mass there and then covered over with blankets. This manufacture can only be pursued during the months of December, January and February; and in the district where the ice is formed in this manner, it is never produced naturally. This ingenious process must wholly disappear before the new import of Wenham Lake ice. What a revolution has commerce effected in India, when we remember that early travellers in that country were looked upon as liars and impostors for asserting the possibillity of solidifying water into ice?"

INDIAN RYE BREAD.

Two quarts of Indian meal.
Two quarts of rye meal.
Three pints of milk, or water.
Two tea spoonfuls of salt.
Half a pint of strong fresh yeast.

Having sifted the rye and Indian meal into a large pan, mix them well together, adding the salt. Boil the milk or water in a sauce-pan, and when scalding hot pour it on the meal, and stir the whole very hard. If too stiff, add a little more warm water. Let it stand till it becomes only of a lukewarm heat, and then stir in the yeast. Knead the mixture into a stiff dough, and knead it long and hard for at least half an hour. Then cover the pan with a thick cloth that has been previously warmed, and set it near the fire to rise. When the dough is quite light, and cracked all over the top, take it out of the pan; divide the mass in half; make it into two loaves; knead each loaf well for ten minutes or more; and then cover and set them again near the fire, for about half an hour. By this time have the oven ready, put in the loaves directly, and bake them at least an hour and a half. This bread is considered very wholesome.

Should you find the dough sour, you may rectify it by kneading in a tea-spoonful of pearlash, dissolved in a little warm water.

PATENT OFFICE REPORT FOR 1847.

We are much indebted to Mr. Burke, the Commissioner of Patents for this valuable document. The Patent Office Reports have always been favorite volumes with us. They present one of the most curious and pleasing views of the progress of society, and constitute the most interesting chronicle of human invention in the world. The present volume is particularly interesting. Mr. Burke has done his duty well, and given the public a report of surpassing excellence.

The mechanical execution of the volume is better than any of those which preceded it. It is well printed and well bound. The engravings too, which are large and numerous, are executed in a fine style of art and the impressions are struck upon good paper.

There is much matter contained in this report which is of importance to agriculturists. From it do we learn the certain results of the crop ending 31st of August, last year, (1847.)

It appears from the returns that the season then passed through was not a favorable one

for wheat, though it was an exceedingly favorable one for corn. Indeed, every season which is less favorable to one of these crops must be more so for the other. Indian corn requiring hot and comparatively dry weather, while a more humid atmosphere and a cooler temperature are better for wheat.

This report shows the great and steady increase of these great staples of America, and exhibits a splendid view of our capacities, not only to supply our own markets to repletion, but also to fill every market in the world, in case of famine. The quantity of grain of all kinds exported during the commercial year ending the 31st of August, 1847, estimated in bushels, was 41,273,998 bushels. Of this quantity, 19,768,579 bushels were wheat, and 20,690,664 bushels were Indian corn, the remainder being, rye, oats and barley. Yet this large exportation did not exhaust our surplus produce by millions of bushels. Mr. Burke says, that on a tour made by himself through several of the Western States bordering on the lakes during last winter, he found the depots of grain filled to overflowing by the remainder of the crops of 1846, and all the avenues of transportation choked up with the immense quantities which were pouring through to the Atlantic coast to seek markets abroad. It will not exceed the truth to say, that the surplus grain in this country, and particularly of Indian corn, is and always will be sufficient to meet any demand which all the grain purchasing countries combined can make upon us under any possible circumstances. The limits of supply beyond our own consumption are from the smallest quantity up to three hundred millions of bushels, *if demanded* by the wants of foreign nations. The only difficulty would be the want of sufficient means of transportation across the Atlantic—a want much felt during the late scarcities in Europe. Already does the wheat crop of this country average one hundred and fourteen millions of bushels, and the Indian corn crop five hundred and forty millions. The former could in the course of two years, if there was a demand for it, be nearly doubled, while the latter might be increased two hundred millions of bushels.

There is a list of agricultural patents in this volume which brings prominently before the eye a singular circumstance in our agricultural practice and science. We have fewer chemical discoveries valuable to the agriculturist than any other people; while on the other hand we have a greater number of mechanical discoveries and inventions belonging to agriculture than any other. In husbanding farm resources likewise, we are much behind European nations, and even, perhaps, that singular people, the Chinese; while in variety, extent and utility of labor-saving instruments for agriculture, we greatly excel. The difference obviously grows out of the differing necessities and character of our people and soil. If records of patented inventions may be considered as a fair exponent of the mechanical facilities enjoyed by the agriculturists of different countries, then Mr. Burke's position is correct, and his comparison striking. The whole number of agricultural inventions is 2,043. From the list we extract the following items:

Plough.—A very novel modification of this implement has been patented, in which the mould board revolves upon a central pivot. The mould board in form is concavo-convex, or shaped like a shallow dish, through the centre of which passes the bearing or pivot, the convex side of the mould board being towards the land.

Horse Rakes.—Two forms of horse rakes have been patented.

In both these inventions the subject of improvement is the mode of liberating the rake before it is turned over, and to check it in proper time as it comes round. In one of these rakes the turning is made upon segment wheels and much facilitated, while the liberating and checking of the rake is effected with great ease and certainty.

Cheese Shelf.—A convenient apparatus for the purpose of turning and drying cheeses, has been patented, in which a number of cheeses are turned by one operation. A frame containing a series of shelves is made so as to revolve upon a horizontal axis, and the whole is readily inverted for the purpose of turning the

cheeses upon the shelves prior to the inversion, shelves are placed over the cheeses, which, after the inversion, become their support.

Fruit Gatherer.—An instrument of this class has been patented which gathers, or rather receives the fruit as it falls from the tree, without bruising, and conducts it into barrels. It is an old practice to hold or suspend a sheet under a tree to receive the fruit without injury. The patentee in this case provides a large sheet, consisting of parts so put together as to form a number of tapering funnels, the small ends of which are let down into barrels to receive the fruit.

Curry Comb.—Several minor improvements have been made in the last year in this instrument. One deserving especial attention has been patented, in which the cleaning of the comb is effected with the greatest ease. A hinged plate, through which the rows of teeth pass, and which catches most of the dirt, is occasionally raised up and brushed off, and as the teeth pass through the narrow apertures in the plate, they are stripped of whatever adhered to them, and thus it is but the work of a moment to clean the comb.

Corn Crushers.—A number of machines have been recently introduced for cutting and grinding corn fodder. In this, as well as many other sections of country where corn is raised with such facility and grass so apt to fail, it is highly important to the farmer to reduce the corn stalk to an esculent form, instead of allowing them to stand in the field or to be wasted in any other way. The construction of machines for effecting this object is simple, and consists mainly of the combination of a straw cutter with two grinding or crushing cylinders, the cutting knives being larger than in the straw cutter to suit the material to be cut. As the corn stalks are cut by the knives into short pieces, these are received into a hopper which conducts them between the grinding or crushing rollers. Two machines of this class have been patented during the past year, promising a successfull accomplishment of the operation.

A SINGULAR AGREEMENT.

Twenty-nine years ago Betty Winal, then residing at Tarlton, bottled a quantity of white currants in their green state, being then in the 33d year of her age. Having kept them some time in a state of preservation, William (her husband) and she agreed, that they should be kept while they both lived, and that they should be made into pies at the funeral of the one who should die first. The wife departed this life on the 2d of this month, and was interred at St. Peter's church, Preston, on the 5th, the family having removed to Dawson street, Preston. Their mutual pledge was fulfilled, and the pies made of these currants were served out, after returning from church, every attendant taking a slice. Though the currants had been kept twenty-nine years, they were as fresh as if just taken from the trees.

Note.—We have frequently preserved gooseberries and currants for 2 months, as fresh as when picked from the bushes. Plums may be preserved in the same way, if taken before quite ripe.

PARING AND BURNING.

Paring and burning the soil, as a means of increasing its productive powers, has seldom been practised in this country.—The reason may, perhaps, be, that in our older settled districts there is not a very large proportion of the kind of land which is most benefited by the process; while the cheapness of new lands has offered such inducements to improvement as tended to check expensive outlays on the old.

But we are satisfied that paring and burning may be practised with good results in many situations, and that it would prove a profitable mode of improvement. The soils most suitable for this process, are those containing a large proportion of inert vegetable matter, combined more or less with clay. But on all soils overgrown with pernicious plants, paring and burning, if properly performed, may be

successfully practised. It not only effectually kills all living vegetation within two inches of the surface, but destroys the greater portion of the seeds which infest the soil. We have seen fields covered with couch-grass, (*Triticum repens*,) Johnswort, wild turnip, &c., rendered very clean for several years, and made to produce fine crops of grain, grass, or root-crops, by the course alluded to.

We find in a late number of the *Farmers' Magazine*, an excellent paper, on the subject of paring and burning, the most important portions of which, with some additional suggestions, are condensed in the following article.

The method of paring and burning consists in paring with a spade or plow, the surface of any lands that are covered with a coarse and overgrown foggage or brushwood, into pieces not exceeding two inches in thickness, and afterwards drying and reducing them to ashes by burning. The operation is most conveniently performed by men with spades made for the purpose, which are formed with a thin blade of about one foot in length, terminating in a sharp point; and the left side of the blade is provided with an upright coulter, which cuts the slices in a straight line, and they are turned off to the right hand side by a twitch which the man gives to the implement. The handle or shaft is about seven feet in length, with a curved bend rising to the upper end, on which is placed a cross-hilt about two feet in length, by which the workman holds the implement and guides the process of cutting. The implement is so constructed that the spade lies nearly flat on the ground, when the hilt rests against the thighs of the workmen, which are guarded by boards or by pads of wool fastened on straps while he propels the implement through the tough surface.

Various kinds of implements to be worked with horses or oxen have been constructed for the purpose of paring the soil; but by none of them can the work be so effectually done as by manual labor, and there are but few situations where the hand plow would not on the whole, prove most advantageous.

The cost of paring and burning, varies according to the price of labor, and the condition of the land on which the operation is to be performed. The expense for paring alone, in England, is set down at an average of 20*s.* or about $5 per acre, and the cost of burning and spreading the ashes at the same sum. It will be seen, therefore, that it is only where land and produce are comparatively dear, that the process would prove remunerative. But in the vicinity of our large markets, it is by no means uncommon to incur a much greater expense per acre for manure alone, than would be required for paring and burning.

Paring may be done at any time from spring to autumn. The turfs are exposed to the sun and air with the earth side up for a few days, and are then set on edge by bracing two pieces together. If the weather is favorable, the slices will soon be ready for heaping; which is performed by placing any combustible materials on the ground and piling the turf over them until a heap of moderate size is formed, when the fire is applied below. A smothering fire is much preferred, and the outside of the heaps should be kept so close that the flame does not burst out. In some cases the sods are piled in large heaps, and in others in small ones, only a few yards distant, but in either case the fire should be kept close. Small heaps, when the turf is so dry as to burn readily, incur less labor and expense both in piling and spreading the ashes. The quantity of ashes is on an average about 2,000 bushels per acre. In dry seasons, and where the pared surface is light and fibrous, or covered with vegetation, the sods may be burned as they lie on the ground, without being heaped: and good pastures have been formed by sowing clover and grass seeds on the ashes, without plowing, where no useful grass or plant had before appeared.

After the sods are burned, the ashes are to be spread, and it is recommended to allow time for cooling them before the land is plowed, which is usually done with a thin furrow, and rendered fine by harrowing before the seed for a crop is

sown. It is preferred to keep the ashes near the top of the ground, for the purpose of affording immediate nourishment to plants.

But though the immediate effects of paring and burning are generally admitted; the practice is opposed by many on the ground that it lessens the vegetable matters of the soil. This objection is answered by stating that it is not a destruction of the vegetable matter that is sought, but only a *charring* or terrefying of the materials exposed to the fire—violent burning being carefully avoided. In opposition to the opinion that the staple of lands is reduced by this operation, and that sterility ensues, may be quoted the authority of many of the most eminent cultivators, who burned the surface of their calcareous, silicious, and argillaceous soils in succession, and at no great intervals of time, and have always reaped great advantages, and never perceived any detriment, but a great improvement accrue to the land.

Green cropping, with sheep feeding, was regularly followed, and dung and composts occasionally applied; and the land being thus improved was invariably laid down to rest with a sowing of good perennial seeds, and depastured for several years with sheep. On soils of better quality, the rest in grass would not be so necessary; but a duly enriching process of cropping must be adopted to afford the animal and vegetable matters to the soil on all improved and cultivated lands that contain the vegetable matter in a reduced and tender form, and in a finely blended and comminuted state.

The great advantage in burning consists in land producing by that process a manure for itself, and in producing crops for the future acquisition of that indispensable article. The opponents of burning nowhere give the system of cropping, and the future management of the land that is said to be reduced to a state of barrenness by that process, nor is there anywhere detailed a comparative and decisive proof of the inferiority of paring and burning to the mode of fallowing and rotting the surface on lands or fields of similar quality, and which have been subjected to the same treatment after improvement, nor the expense and produce of each mode from the breaking of the old turf till the land was laid out to grass. The great part of the controversy rests on mere matter of opinion, and a more fallacious mode of judgment cannot be adopted than to condemn any practice from the results of imperfect performance; for if strictly followed, it would condemn many of the most approved and useful practices in life; and anything that can be effected to good purpose by others, must not be disallowed by those who are incapable of the execution and unwilling to be taught; nor must they allow their avarice and prejudices, narrow judgment and want of energy and exertion to give a limit to the capacities of other men who may see more clearly and can act more vigorously, and who can bring more judgment and discrimination to bear on the point.

Scientific men have reasoned from very obscure causes in regard to the effects that result from paring and burning land; it is thought that clay imbibes nutritive properties from the atmosphere, and that carbonic acid, which in combination with iron is injurious to plants, is expelled by burning. But in the present state of our knowledge of these subjects, we may very properly refer the effects to a diminution of the coherence and tenacity of clay soils, and to the conversion of inert vegetable and other matters into active manures.

But the formation of charcoal may perhaps be reckoned the chief benefit, and some persons have added the oxygenation of the clay by the heat emitted, and also the mechanical effect of the fire in dividing and attenuating the soil; but as the process is above ground and of short duration, and the under-soil is unmoved much effect may not be produced that way. But it has ever been observed that vegetation is very luxuriant on the places where the heaps are burned, and where no ashes are allowed to remain on the ground. There the cause of fertility must arise from the effect of the fire; and the best ashes that could be found on

a field have been carried and spread on pared ground where no ashes had been burnt, and they produced effects much inferior to those on the places where the burning had been performed and the ashes subsequently spread. It has been most judiciously observed that there is a cause or agent in burning, and that a most powerful one, "which escapes the retort of the chemist and the *rationale* of the theorist."—*Cultivator.*

POISONOUS PROPERTY OF BRINE.

It is not to be wondered at that your pigs should be suffering, if, as you state, "a portion of brine got mixed with their wash," and they partook of the same.—We have the authority of the late celebrated veterinarian, Mr. Youatt, for stating that "the brine in which pork or bacon has been pickled is poisonous to pigs;" and that "several cases are on record in which these animals have died in consequence of a small quantity of brine having been mingled with the wash, under the mistaken impression that it would answer the same purpose and be equally as beneficial as is the admixture of a small quantity of salt."

THREE SORTS OF FENCE.

It is amusing to see with what confidence each writer recommends his particular manner of fencing to his *readers.* This is natural to man. One recommends sod fence with two ditches—one Virginia fence—one posts and rails—another wire—another *hedge* of one kind of thorn, another of some other of the genus Crategus—a seventh says stones are best, and calls on his friends to surround their farms with good stone walls; and yet another recommends no fence at all! Now I am not a man to hoe *corn* with a clam shell because my father did so; we live in an age of progression, and we must not expect to see our broad prairies chequered with this or that particular kind of *fence.* People must and will conform to the circumstances they are in, and the means they have at command. Men of capital will set hedge or build solid walls of masonry around their enclosures, all which will beautify and diversify the scenery; but the squatter must use the cheaper fixings which God has placed within his reach, though not so elegant. I have built three kinds of fence in Iowa within four years; and the experience of a man who *knows* what a *poor* man has to do to make a farm, is at the service of my readers, if they see fit to use it.

1st, I have built one mile of sod fence. I cut my sods with a spade, 2 feet by 1 foot by a pattern. From the ditch 3 feet wide set the sods edgewise, one tier at a time, throwing the dirt over until the inside was filled up, setting the sods back 6 or eight inches from the edge of the ditch, slanting them about the same as the dirt naturally slants on the inside as thrown over; also slant the inner side of the ditch at the same angle of the turf—sow grass seed on the inside of the fence and ditch, and you have one of the most permanent structures known to man. Indeed they are all over the West, in the shape of tumuli ridges, &c., of greater or less height; also scattered over northern Europe and Asia—being nothing but banks of earth covered with grass, and surviving the age of history only to create wonder as to who built them. This fence will not stop hogs or sheep without a superstructure, which I make by setting posts 3 feet long, and inserting therein rails 10 feet long, to which I nail with 4d nails pickets 3 feet long and one-half an inch thick, the whole superstructure not requiring more timber, and very little more work, than to stake and rider a rail fence. The whole fence will cost 25 cents per rod calling wages 50 cents per day. When finished it makes a crop perfectly safe from every kind of stock. As to standing, mine has stood three winters, and looks as fair as when made.

2d. I have built one mile of Virginia fence of oak rails, hauling my rails over the ridges 3 to 4 miles. Every body knows how to make this fence, and I will only say that it is abominably hard work; that it must be staked and ridered

on the prairie; that the pigs are apt to crawl through it; and when old is sure to get fire into it somehow or other; also it takes a vast deal of timber to fence a small piece of ground.

3d. I have built and am building 1½ mile picket fence, split posts 6 feet long, split rails 10 feet long, pickets split 4½ feet long, ¾ inch thick, posts driven 2 feet 4 inches, rails spliced upon the top and sides of the posts, and fastened with 10d nails, pickets 2 to the foot, fastened with 6d nails, posts charred at the bottom. It costs 35 cents per rod, paying $1 12½ cents per thousand for splitting the pickets—other labor 50 cents per day—ox work 25 cents per day, hauling timber 4 miles. This is a good, cheap fence, not liable to burn; and as to the "old sow," she can't come it.

Thus you have my experience, and if any of my readers find themselves in the fix I've been in, with nothing but their hands to build fence with, they are welcome to take either of the above modes, or any other, just as they please.—*Prairie Farmer.*

POTASH.

A proper food for Grape Vines.—Having, last year, seen it stated in a paper, that the ashes of grape vines contained a large amount of potash, I caused three vines of the same size to be filled with equal quantities of earth, in which I noted the following results:

No. 1, was watered when necessary with pure water, and in a given time increased six inches in length.

No. 2, was watered with a solution of whale-oil soap, and in the same length of time acquired nine inches of growth.

And No. 3, I watered with a decoction of potash, and within the same period as above, it grew 18 inches in length.

By the beginning of November, No. 1 and 2 dropped their leaves and showed no signs of fruit; whereas No. 3, retained its leaves three weeks longer, and in the course of the season shot forth several branches of fruit, which of course were not suffered to grow. This shows the importance of knowing what kinds of salts go to form wood and fruit, in order that we may apply such manures to the soil as the vine or fruit trees require.

I wish we could have a full analysis made of our great staple, Indian Corn, including the grain, cob, stock, and blades.

R. L. Colt.

Patterson, New Jersey.

CABBAGE AND GREENS.

All the cabbage tribe, which includes cauliflower, brocoli, coleworts, sprouts, and turnip-tops, in order to be delicate should be dressed young, when they have a rapid growth; but if they have stood the summer they require to have felt the influence of the frost to become tender. In order to appear green at table, they must be boiled in hard water. Greens of the above description, when of advanced growth, are better flavored when boiled in two waters which is managed in the following manner:—After they have been about half boiled, take them out of the pot, place them in the colander, and allow cold water to run on them for two or three minutes; then replace them in a fresh pot of boiling water, with some salt, and let them continue to boil briskly till done, cauliflower should boil more slowly, as it is apt to be broken by the force of a violent ebullition. Brocoli, to be freed from its offensive odor, should always be boiled in two waters.—*Prairie Farmer.*

PERIOD OF SUCKLING.

The London Agricultural Gazette contains a conversation on this subject, of some importance, especially as it is one which has not often received attention in the papers. The closing remark of Professor Sewell is particularly worthy of attention. We can conceive no reason why sucking continued till the mother is again in pregnancy should not prove as injurious in the case of animals as in the human subject, when it is known to be often fatal:

"Mr. Wyatt Edgell, of Milton-place, Egham, Surry, addressed to the Council, through the President, a communication on the probably injurious effects arising from the circumstance of allowing young animals to take the milk for too long a period from their dams, especially in the cases of mares and ewes, which he conceived were impoverished by such a lengthened drain upon their constitutions, while their offspring were at the same time retarded in their growth and developement, from the insufficient supply and inferior quality of milk they obtained under such circumstances. Mr. Edgell was led to the consideration of this subject from the perusal of the statements made by the Rev. G. R. Gleg in his travels in Hungary, that the high bred foals at the great stud at Babohna usually dying at four months old, from some vicious quality as it was supposed in the milk, they were removed from the mares at the end of the first month, and fed on boiled carrots, when it was found that not one fiftieth of the number of foals that died under the old system were lost under the new one. Without endeavoring to ascertain from what cause the milk in the case of the Hungarian mares had probably become vitiated, if a change in the quality of the milk had been the cause of the evil, Mr. Edgell thought the period of suckling the young of cattle in this country a subject worthy of consideration. This communication gave rise to an interesting discussion among the members present. Mr. Milward thought it might be assumed as a general rule, that, under favorable conditions arising from the constitution of the mother, a requisite supply of proper food, and consequently an abundant secretion of healthy milk, the longer young animals sucked the better; and he could state from his own experience in the case of short horned cattle, that the calves could not acquire the full size in development and symmetry, unless reared on new milk for at least the first six months after their birth. Sir Matthew Ridley did not think it advisable to leave calves with mothers which had become again in calf; in that case, as in the case of all choice stock, nurse cows would of course be provided. Mr. Fuller, M. P., had found that those calves were always the best which had been allowed to suck the longest. Mr. Tweed considered that foals would be injured by sucking such mares too long as were actively kept at work. Mr. Dyer was acquainted with a large flock master who constantly lost one tenth of his 500 ewes by allowing his lambs to remain with them till July; but who, from having last year weaned the lambs considerably earlier in the season, had lost a much smaller proportion of his ewes. Mr. Dyer conceived that by the middle of May, or as soon as lambs were four months old and enabled to get their own food, when there was grass enough for them in the pastures. they might safely be weaned from the ewes; and that, on the other hand, when the ewes were low in condition, disease must necessarily be occasioned by allowing the lambs to remain too long with them. Mr. Millard thought that the lost sustained by Mr. Dyer's friend arose from the ewes being kept in too poor a condition, and not from the circumstance of the lambs being allowed to suck them for too long a period; it all depended upon the food that a flock master had to give them. Sir Matthew Ridley remarked that there might be an evil in the too early weaning of the lambs, as in that case the udders, from distention, unless milked by hand, would become sore and diseased. He thought that no general rule could be laid down on the subject, but that the weaning might advantageously take place when good grass was to be had by them, and in sufficient abundance, as both ewes and lambs at first destroyed the herbage to which they were put after weaning. Mr. Gleg observed that in Scotland the Cheviot ewes had their lambs removed from them about the 20th of August. Prof. Sewell regarded the subject as one of great importance; and thought that if inquiry was instituted amongst practical farmers and breeders of sheep, much light might be thrown upon the origin of diseases still involved in obscurity, particularly in the

case of young stock, which he considered to become victims to diseases too often attributed to food, soil, situation, or peculiarity of management."

NEW PUBLICATIONS.

"THE PLOUGH, THE LOOM AND THE ANVIL."—The Farmer's Library, the ablest and most voluminous agricultural publication in this country, has changed its name and in some degree its nature also. It is now published under the above title, and, we believe, devotes greater space than formerly to the mechanic arts. It has not yet reached us. We request of Mr. Skinner a continuance of his invaluable exchange.

FROM MESSRS. FOWLER AND WELLS, we have received a number of a new magazine published in New York, called the "Herald of Reforms." It is devoted to the Water Cure system principally. Each number contains thirty-two pages the size of the Planter's, and the price is one dollar a year in advance.

We have also received from the same publishers the Phrenological Almanac for 1849, a well known and amusing pamphlet. Also, the "Tobacco Almanac," which is devoted to the annihilation of that respectable crop. It contains many terrible stories of its effects. But we could collect just as many about the bad effects of bread and milk. These useful articles of food will kill people too, if taken in improper quantities and at improper times. We persist in the belief, that to some idiosyncracies, the use of tobacco in moderate quantities is not only harmless but useful.

TO ASCERTAIN A HORSE'S AGE.

Every horse has six teeth above and below. Before three years old he sheds his middle ones—at three he sheds one more each side of the central teeth—at four he sheds the two corner and last of the fore teeth. Between four and five the horse cuts his under tusks, at which time his mouth will be complete. At six the grooves and hollows will begin to fill up a little—at seven the grooves will be nigh filled up, except the corner teeth, leaving little brown spots in their place. At eight the whole of the hollows and grooves are filled up. At nine there is very often seen a small bill to the outside corner teeth—the point of the tusk is worn off, and the part that was concave begins to fill up and become rounding—the squares of the central teeth begin to disappear, and the gums leave them small and narrow at the top.

TO PRESERVE STRAWBERRIES.

Strawberries for preserving should be large and ripe. They will keep best if gathered in dry weather, when there has been no rain for at least two days. Having picked them all, select the largest and firmest, and spread them out separately on flat dishes; having first weighed them, and allowed to each pound of strawberries a pound of powdered loaf sugar. Sift half the loaf sugar over them. Then take the inferior strawberries that were left, and those that are over ripe, mix them with an equal quantity of sugar, and mash them. Put them into a basin covered with a plate, and set them over a fire in a pan of boiling water, till they become a thick juice; then strain it through a bag and mix with it the other half of the sugar that you have allotted to the strawberries, which are to be done whole. Put it into a porcelain kettle and boil and skim it till the scum ceases to rise; then put in the whole strawberries with the sugar in which they have been lying, and all the juice exuded from them. Set them over the fire in the syrup, just long enough to heat them a little; and in a few minutes take them out, one by one with a tea-spoon, and spread them on dishes to cool; not allowing them to touch each other. Then take off what scum may arise from the additional sugar.—Repeat this several times, taking out the strawberries and cooling them till they become quite clear. They must not be allowed to boil; and if they seem likely to break, they should be instantly and finally taken from the fire. When quite

cold put them with the syrup into tumblers, or into white queensware pots, and cover close with fine paper.

FRENCH VEGETABLE SOUP.

Take a leg of lamb, of moderate size, and four quarts of water. Of potatoes, carrots, cabbage, onions, tomatoes, and turnips take a tea-cup full of each, chopped fine. Salt and black pepper to your taste.

Wash the lamb, and put it into the four quarts of cold water. When the scum rises, take it off carefully with a skimmer. After having pared and chopped the vegetables, put them into the soup. Carrots require the most boiling, and should be put in first; onions require the least boiling, and are to be put in last. This soup requires about three hours to boil.

HAYING.

It is a common fault among us to let our grass get too ripe before cutting. It is generally conceded to be the best time to cut grass when it is in bloom; but if you do not begin to cut till that time, a great deal will get ripe before you finish, unless you have but little to cut, or get lots of help, which in haying time is scarce.

I always mow my meadow grass first, for I find it to be much better; so much so that my cattle will eat it in preference to English grass that has been wet.—Even flags make good hay when cut early, but it takes a great while to cure this sappy stuff.

Much hay, I am satisfied, is got into the barn too soon after the mowing, which is the principal cause of its being smoky. Drying hay isn't curing it. You can often dry hay in one day, but you can never cure it in that time let it be ever so ripe.

The last summer I tried a few hay caps, and found them to work first rate. I used them to cover grain, both loose and in bundles, putting sometimes fifty bundles under one cap by making a sort of stack of them.

These caps have paid for themselves the first season. They not only keep the hay dry but save a goed deal of time and labor; which in haying time is precious. Mine were made with four yards of cloth, with a little stick on each corner, eighteen inches long, to fasten them down with. They were not oiled or painted. The cost of the cloth was seven and a half cents per yard, which made six dollars for my twenty, and I have lost that amount on what hay they will cover in one storm.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

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MEMORANDA FOR THE MONTH.

Again has the circle of the year brought us to the fall of the leaf. Again have we to gather in the fruits of the earth and of our labor. But the most important duties of autumn to many agriculturists are not the gathering in of the crops of the old year, but the preparation for those of new one which is to come.

WHEAT.—To those who deal largely in wheat this is particularly so. Now commence the day of its preparation, and the sooner the farmer sets about the work the greater his reward next summer.

We would remind him that it is useless, or nearly so, to sow wheat on wet lands—lands that are habitually saturated with moisture. Not only is the crop ruined by the alternate freezing and thawing of the land in the early spring, but it is impossible for wheat to thrive when the roots are buried in mud and water. The first thing therefore to be attended to in the preparation of ground for wheat, is to have it properly drained. Water furrows sixteen feet apart and communicating with blind ditches at proper places will do much. But a far more perfect method of clearing the land of its superfluous moisture is by "under-draining," a plan which we have treated of at some length in the preceding volume of the Planter. We have since then become acquainted with a very simple and very efficacious species of under-draining, which is now beginning to be used by some enterprising gentlemen in Virginia. Two pine poles are laid at the bottom of a ditch deep enough to be out of the plough's way, and a third pole laid on the two. The ditch is then filled up to the level of the earth. A sufficient cavity is preserved between the three poles for the water to filter away. We believe that this sort of under-draining is now successfully in operation on the farm of Mr. Ruffin and on the farm of Mr. Wm. Crump, near Richmond.

The next thing to be attended to in the preparation of wheat land is that the said land be well manured. And it should be recollected, that lime in some form, mingled with the soil, is necessary to the production of wheat.

Then the farmer should see to the ploughing of his wheat land himself; see that every inch of ground is ploughed truly; that every blade of grass is properly covered over; and that every clod is thoroughly broken and reduced to a fine tilth by the due use of harrow and roller. A system of half cultivation is invariably an unprofitable one.

SEED.—Select from a good field, and from parcels which you know to be of good quality from experience of its flour. Particular pains should be taken to separate the good grains from the bad, and only those should be sown that are plump, heavy and smooth. It is necessary, also, to separate the wheat from the seed of other plants which may have grown up along with it. For this purpose every half bushel sown should be first immersed in water, and stirred around. The good wheat will

remain at the bottom. The false seed will swim, and by skimming they are separated.

Smut.—If seed wheat be soaked in brine, strong enough to float an egg, for twelve hours, after having been washed perfectly clean in spring water; and after being thus soaked, dried in ashes or lime so as to coat each grain with those substances, it is we believe generally admitted among agriculturists to be much less subject to the disease known as the *smut* than if not so treated.

Fodder.—Watch the time for pulling fodder and cutting tops. They are worth much more if gotten in before their substance is all dried away by sun and wind; being more fragrant, more nutritious, and better liked by the cattle. If layers of straw be packed away between layers of fodder in stacking, a delightful flavor will be given to the former, rendering it as valuable as hay.

Rye.—This crop should now be gotten speedily in. Unless the ground be good, scatter over it some four or five bushels of ashes and lime before sowing. And in sowing put in enough to cover the ground to the exclusion of weeds. One bushel is the usual quantity sown, but it is not always sufficient for this purpose. Five or six pecks would be oftener the requisite quantity.

Timothy.—It is not too late to sow timothy. Nor is it too late to give the meadow you intend putting in timothy its share of lime or marl. Without something of this sort, it is unreasonable to expect a good timothy meadow. We stated the reason at some length in our last number. In sowing put on *enough* seed. Two gallons is the usual quantity, but three gallons will produce a much more profitable crop.

Draining.—Now is the accepted time for the salvation of the lands. True, the drains and ditches seem little needed in this hot dry month, but it is nevertheless the right time for their construction. They can now be cut with half the trouble and half the expense that they will demand during winter and spring.

Orchards.—It is too early for planting out fruit trees, but it is not too early to prepare the ground. Give it a thorough ploughing and harrowing, and a plentiful dressing of compost or stable manure, and nothing will be lost by so doing.

For the Southern Planter.

DUMPLING ON THE TOBACCO CROP.

A great doctor once gave a receipt for dressing and using cucumbers, in about these words: "Pare them nicely, slice them thin, put on plenty of salt, pepper, and vinegar, and then,—give them to the pigs."

My receipt for cultivating tobacco is like this, only more so. I say, don't cultivate it at all.

Tobacco is the unfriendliest of all crops to the improvement of a farm. It is a complete monopolist of manure.—The tobacco lots get every particle from the stable and barn yard, except the few loads that the planter's wife begs for her garden. The very wood-land is often robbed of its dead leaves, and of its top soil, to fatten the tobacco ground. The whole tract is impoverished, starved, cheated of its aliment, to pamper the favorite crop. The wheat's only chance for benefit from the manure, is when it is sown upon tobacco land: then it has the pet's leavings.

The planter's attention too, is taken up by his tobacco. Even if he does not sit up with it of nights, (as they say one of my acquaintances does,) his thoughts, and the cares of his overseer and hands, are so filled with it, that other crops are neglected; particularly the many third and fourth rate crops, such as hay, turnips, potatoes, beets, and pumpkins; and milch cows, pork, mutton, bees, fruits, &c., that bring so much comfort and profit. It is as much as he can do to sow and harvest his wheat, and to plant, weed hastily, and gather his corn: for the months from March to January, are spent in preparing and nursing plant-beds, hoeing and hilling tobacco ground, planting and re-planting, suckering, priming, weeding, worming, cutting, scaffolding, housing, firing, stripping, tying and prizing;—with constant

watchfulness all the time, to profit by or to guard against accidents of the weather.

Tobacco hills entirely spoil horizontal ploughing, and leave washing rains to do their worst. The fine chopping of the ground, and its not being *rolled* (as wheat or oat ground ought to be,) makes it wash the more. As to clover and plaster, lime and compost heaps, I hardly know a tobacco maker who uses them at all. Slovenly farming of all sorts,—bad fences, shabby, comfortless dwellings, rickety barns and stables, fields in gullies and galls, except one or two pampered tobacco lots,—commonly attend that crop.

As the value of a tobacco plantation is sure to grow less and less every year, the planter is, in fact, continually turning his capital into income: he is ripping the goose. He, and his wife and daughters, do not think of this, but suppose what he gets for his tobacco to be fair income; and they spend accordingly. They do not even take the average of his prices: but if he happens one year in five to get ten or twenty dollars a hundred, they take that as the measure of his income; and the carriage, piano, gold watches, and finery and expenses of all sorts, are squared by it. So he grows poorer and poorer, whether he gets high prices or low; only his poverty comes faster if they are generally low, but now and then high. The market for that article is so subject to caprice, and speculation,—its ups and downs are so uncertain—that I do not know any planter who always gets a high price.—It is a mere lottery: and every body knows how seldom any one is solidly bettered by drawing a prize in a lottery.

Some close-fisted people who make tobacco, contrive to keep down their expenses, and save their money—laying it out in land and negroes, or lending it.—But these do not enjoy life as they ought: and forget great the truth, that the safest investment of growing wealth, is in solidly improving land they already own—And the most solid of all improvements is *fattening the soil.*

Tobacco, I agree, prepares the ground very well for wheat; especially new ground, just cleared: leaving plenty of aliment for it, if no washing rains have come, and if you have taken off only one crop of tobacco. Moreover—if you sow clover on the wheat, and use the clover for two or three years as a fertilizer—perhaps you will not lose by the tobacco, if you *get a good price for it.* All the men that stand up for tobacco as not an exhausting crop, refer to that mode of management; rest their plea upon five *ifs* and a *perhaps.* But where is the planter who practises that mode? Not in my county, that I know of. And among the ten or fifteen thousand tobacco growers of Virginia, probably not two hundred practise it. We may therefore set it down as not generally practicable, or advisable.

The effect of this crop upon the whole country, has been like its effect upon the fortunes of individual cultivators. No part of Virginia ever went to ruin so fast or so far, as the tobacco growing part.—In our colonial times, when 60,000 hogsheads used to be made, tobacco was the great crop of the tidewater country, and of many midland counties. Every where it was followed by worn out lands, and piney old fields. Deer grew plenty again, in the oldest settled counties. At this day, desolation has spread most through the tobacco planting regions. In Brunswick, and other southside counties, I am told, there are many large tracts worn out, with good houses on them, left unsold by their owners, who have moved off to the West with their negroes. I own that corn, and bad ploughing—a mere scratching, right up and down hill—with merciless grazing, helped the wearing out: but tobacco, the great mother of ill thrift, was the main cause of all.

My wife Dorothy (who looks over all my writing, to correct the spelling and put stops,) says I must touch on the filth of chewing and smoking. She is dreadfully put out, by the spitting on her floor and carpet, and the stink of tobacco smoke in our dining room. People that consider themselves *gentlemen*, forget that character while smoking and chewing. A methodist preacher lately spit a torrent upon my floor. And a presbyterian preacher, smoking by our breakfast table,

squirted spittle upon Dorothy's tea-kettle that was near the fire; and just missed the tea-pot. The country bucks, as they sit in the gallery at meeting, do not scruple to spit puddles, which run down the sloping floor, and drop on the ladies' bonnets below. My new hat once got into one of these puddles, and was half spoiled. Smoking in court houses, stages, and some railroad cars, is now a thing of course. Dorothy thinks, and so do I, that these breaches of politeness occasioned by tobacco, add heavily to its objectionable nature in a farming point of view: and that good citizens ought to quit using, and quit tending it, as fast as possible.

I do suppose, that the prevalent use of this unwholesome weed is one of the strangest customs in the history of mankind. Its absurdity is well exposed by Doctor Rush, who (they tell me) was the greatest of all American physicians. He says: "Were it possible for a being who had resided upon our globe, to visit the inhabitants of another planet, where Reason govered, and to tell them that a vile weed was in general use among us, which afforded no nourishment—that it was cultivated with immense care, and was an important article of commerce—that the want of it produced real misery to its lovers—that its taste was extremely nauseous—that it was unfriendly to health and morals—and that its use was attended with a considerable loss of time and property;—the account would be thought incredible; and the author would probably be excluded from society, for relating a story so improbable. In no one view, is it possible to contemplate the creature man in a more absurd and ridiculous light, than in his attachment to tobacco."

JOHN DUMPLING.

The views of Mr. John Dumpling will not pass without controversy, in Virginia at least.

A remarkable rose tree called the 'Maiden Blush,' is growing in St. Louis.—Through the centre of each rose upon the tree a stalk or stem has pushed forward producing other roses.

RHUBARB.

This wholesome and agreeable vegetable has become so popular as a substitute for fruit in the early spring, that no garden should be without it. It will grow any where, is so prolific that a few plants will yield a plentiful supply of stalks for a large family. Yet, notwithstanding the ease with which it is cultivated, we often see it badly grown, and sometimes hear the complaint that parties have failed in their efforts to get a crop. Our remarks will obviate every objection, if attended to, and enable our readers to grow rhubarb for themselves with ease and success.

Rhubarb has a hard underground stem, which pushes forth buds plentifully at the crown, or part nearest the surface; every one of these buds taken off with a portion of root adhering to it, will form a large plant in one season. If you wish to make a plantation, get as many buds or crowns as your bed will admit of, allowing each two or three feet every way, according to the habits of the varieties you prefer. The plan generally adopted is to purchase as many roots as are necessary to fill the allotted space, but this is a more expensive and far less eligible method than the one now recommended. Last year a new sort of rhubarb was offered in the neighborhood of the writer at 5s a plant. Some of his friends purchased four or five roots, but he was satisfied with one. On receiving it he placed it in a hole, and covered it up with soil until February, when, on examination, five good buds were developed. The root was then divided into five parts, each of which, at the present time, is a large, flourishing plant, equal to any of those which were not divided. A bed was thus obtained for five shillings, equal, indeed superior, to some costing twenty-five shillings. We are convinced, from actual experiment, that rhubarb may be brought to perfection in one year; that old beds are inferior to new ones; and that fresh plantations should be made every two years. The old plan of making a bed to descend to posterity should be exploded,

in reference to many garden productions. Strawberries, raspberries, rhubarb, &c., &c., should be removed often, if fine healthy produce is wished for.

Having a sufficient number of buds or crowns, let them be planted in a well trenched and manured soil. If the leaves are developed, care must be taken to prevent their flagging. This may be done by placing over them some long litter, sufficient to answer the purpose without excluding light and air. The young plants will soon be established, and will grow rapidly. No leaves must be taken off the first year, as the object is to convey all the elaborated sap possible to the stem for future use. If the ground is good, and kept free from weeds, no more care is required, and abundance of fine stalks can be taken off next spring. An exposed situation, with plenty of sun and air, will of course bring this production to the greatest perfection; but it will produce good crops without having these advantages fully. Every house with a garden, however small, may thus furnish the table of its owner, with little expense and trouble.

But rhubarb possesses the advantage of being forced with as much ease and as cheaply as it is grown in the open air. This may be done by growing it against a wall in a sunny aspect, and covering it when required with pots or boxes, over which fermenting materials must be placed. But decidedly the best method is to take the roots into the house to be forced. For this purpose they must be grown exactly as recommended above, that as much power may be treasured up in the roots as possible. To take up exhausted plants from a crowded bed, which has been stripped of its leaves during the season, is to deprive them of their natural advantages, and to expend the forcing process on weakened and imperfect subjects. Let cuttings, with a crown to each, be now put in, in the best possible situations, and by autumn they will be admirably adapted to your purpose. When the foliage is withered take up the roots, and put them singly into large pots or boxes. These may be stored away any where, and introduced, two or three at a time, into a warm situation. The writer placed his pots this winter in a dark closet, at the back of a kitchen range, and the rhubarb grew rapidly. Every house can find some spot having the advantage of greater warmth than the ordinary temperature. Rhubarb may thus be had at any time, and a good supply kept up until it is produced in the open air. It is very necessary to get it as early as possible, as its value is much lessened when gooseberries are plentiful.—*Gard. Chron.*

CURE FOR SNAKE BITE.

The following, says the Frederick Examiner, we find in a paper published in 1831:

An effectual cure for the bite of a Snake. Last summer, a black man, in Frederick county, was bitten on the finger in the corn house about dark by a snake, supposed to be a copper head, from the fact that one was killed the next day under the house. Immediately his arm swelled to twice its ordinary size. I applied first the breast of a chicken cut open—next a large vial of whiskey—to the wound. We also bathed the arm and hand frequently during the night, and the next day until 10 o'clock with salt water, without any visible abatement of the swelling. At that time a physician arrived, and immediately sent for the root of the yellow poplar tree, (more properly called the American tulip tree;) he had a strong decoction made of the bark, washed the swollen part with it frequently, gave the patient a half pint every half hour, and applied the bruised bark which was boiled as a poultice. The relief was almost instantaneous, the swelling soon subsided, and the pain, which was very excruciating, in a short time ceased altogether.—The Doctor assured me, that had it not been for this simple remedy, the man would not have lived many hours; and I am convinced from what I saw, that had it been applied in the first instance, the suffering would have been very light. I wish this remedy to be generally known, as it may save the lives of hundreds.

DISCOURSE ON AGRICULTURE.

We lay before the reader the following excellent extracts from an agricultural discourse delivered by Dr. Darlington of Pennsylvania, and advise him to read the same. The occasion was the formation of an agricultural society. The principal objects of the speaker were to demonstrate the usefulness of *associated* labor and intelligence, and to show the necessity of a knowledge of the principles which are involved in the practice of agriculture. His observations on these points are given with much force, and we think the following extracts will be read with interest and advantage:

Man is by nature a gregarious animal, and evidently intended for the performance of mutual good offices. Even in his rudest condition, he soon learns the importance of co-operation with his fellows in producing desired results; and as he advances in civilization and refinement, he discovers that the benefits to be derived from combined skill and energy are in a direct ratio with his progress in improvement. The developments of science not only excite a salutary emulation among individuals, but they also show how much more may be accomplished by a concentration of effort—by a skilful union and concert of individual talent and energy. Hence the resort to *societies*, for the promotion of desirable objects. By a judicious combination of their several means and capacities, in the mode best suited to render them all available, men have accomplished purposes which, *individually*, they could never hope to perform.

Associated efforts having been found thus valuable in all great works of art requiring skill and force, and in the prosecution of researches after scientific truth, the inquiry is naturally suggested, why the important business of *agriculture* may not also be benefited by a resort to similar expedients. Is there no sort of knowledge involved in successful agriculture, which may be reciprocated, with good effect, among the members of a society—or promoted by a generous co-operation? Is there no scientific or practical skill requisite in the amelioration of soils—the culture of plants—or the management of stock—which may be advantageously imparted by the experienced for the benefit of young beginners? If there are truths in nature which farmers are interested to know—or processes in art wherein dexterity and economy are desirable—can any good reason be assigned why the cultivators of the soil should not associate to secure to themselves those advantages? It may perhaps be alleged—for the unreflecting do often make such random allegations—that agriculture is essentially a *practical* profession; and therefore has little occasion for artistical skill or scientific accomplishments. I am prepared to admit all that can be fairly urged in behalf of sound experience and plain practical common sense, not only in agriculture, but in all human pursuits. I grant that the cultivation of the soil is eminently a matter-of-fact business. It is true, moreover, that the veriest clod-poll in the land may pursue the beaten track of his annual labors with tolerable success, and may gather in his crops with little more knowledge of the objects around him than the cattle he drives; but I can never believe that *true knowledge* is injurious to the operatives or the interests of any profession or business—nor can I be persuaded that Boorish ignorance is the proper condition and character of a thorough-bred agriculturist. Most assuredly it is not the appropriate character of an *American Farmer*. While I not only agree, but would insist, that a sound practical knowledge of their profession should be the primary object of the cultivators of the soil, I must, at the same time, contend for the feasibility and necessity—in the existing state of the society, and under institutions like ours—of an adequate acquaintance with the laws of nature, and with the properties and true character of the objects immediately concerned in agriculture. That acquaintance, of course, should be based on correct scientific principles—so as to be always available when applied to the useful purposes of life. I hold it indeed to be essential to

the safety and duration of this Republic, that our *yeomanry* should keep pace with the march of general intelligence. As they value their just rights, and would cherish the attributes of freemen, they must take care that their attainments never lag behind the age in which they live—nor they themselves become unfit to mingle and to struggle with the master-spirits who, for good or for evil, are ever seeking to direct the course and control the progress of communities. *Agriculturists* being a majority of this nation, it is perfectly obvious that they must be either the intelligent regulators of its glorious career, or the blind instruments of its destiny in the hands of artful demagogues; and consequently they will be held responsible for the fate of the Republic by their remotest posterity. Ought they not, then, to employ every means, and exert every nerve to qualify themselves for the high duties thus devolved upon them?

There is nothing unreasonable nor extraordinary in the acquirements thus indicated as appropriate and indispensable to the American farmer. In a nation fitted for freedom—or which hopes to continue free—such attainments are enjoined upon all classes and descriptions of the people. Where men stand unfettered on the platform of equal rights, it is justly expected of every one that he shall qualify himself to meet all the responsibilities belonging to his station in society; and this is eminently true of the particular business to which he is devoted. The remark is as correct as it is pointed and forcible, that "where knowledge is a duty, ignorance is a crime." No man should be held excusable for neglecting the opportunity to inform himself of that which it is his interest and his duty to know. Professional men, so termed, are bound to be familiar with the entire history and with every department of their several callings. The jurist must make himself acquainted with the intellectual processes whence our present rule of action has been deduced, in order that he may correctly apply that rule to all cases of difficulty between man and man. The physician is required to know the structure of the human body, and to understand the laws of the animal economy, so that he may avail himself of that knowledge, when called upon to relieve the various "ills that flesh is heir to." And the divine also—whose sacred office it is to minister to our spiritual wants—to expound the objects of our probationary existence here, and "vindicate the ways of God to man"—even he is expected to furnish "a reason for the faith that is in him." Artistes and operatives of every description, who would adorn their several pursuits, find it necessary to understand the *theory* or principles involved in their manipulations, as well as to become expert in the practical details. Such being the unquestionable fact in reference to all other vocations, it may well be demanded why the business of *agriculture*, itself a comprehensive system of natural science, involving more or less an acquaintance with all physical laws and all terrestrial phenomena—and being moreover the great substratum and support of every human pursuit—why should agriculture alone, of all earthly employments, be regarded as calling for no scientific attainments—no intelligent observation of the varied natural objects, the interesting facts and curious processes around us; in other words, no rational exercise of the intellectual faculties with which a beneficent Creator has endowed us? It was, indeed, wisely provided, that an art to which the whole human family is indebted for sustenance, should be so simple in its essential features that even stupidity can make a living and mere muscular exertion can be profitably employed in its prosecution. But, in the nature of things, it cannot be, that a business involving so much of natural history—and controlled by so many of the laws indelibly impressed upon matter—it can never be predicated of such a pursuit that a knowledge of its true principles is superfluous, nor that its best interest may not be promoted by a cultivated intellect. I shall therefore assume, as an established position, that a knowledge of the profession, in all its relations, is requisite to ensure the perfection of agriculture and to elevate it to its proper rank; and moreover, that in a

country where laws rule and yeomanry have a potential voice in their enactment, it is indispensable to the perpetuity of their institutions that an agricultural people should be an educated and an intelligent people.

I would therefore exhort our young farmers to acquire so much natural science as will enable them certainly to know and to discriminate between the more important objects of their daily care and attention, and by means which they may also treat of those objects intelligently and correctly in their intercourse with others They should be so far acquainted with geology and minerals, and understand so much of chemistry and its laws, as to have a general idea of the structure and stratification of the earth's crust, and a just conception of the reciprocal influences exerted by the constituent portions of the soil and the atmosphere. This information may now be readily obtained from elementary works within the reach of every one who has the taste or the inclination to possess it; but, that all might have a fair and equal opportunity to profit by such knowledge, according to their several capacities, it should be made an indispensable branch of the education of youth, and faithfully imparted by competent teachers to every child in the republic. Until such instruction shall be provided, it may be confidently maintained that no better substitute can be devised than is afforded by the intercourse of intelligent, public spirited men in well conducted *associations.*

Similar remarks may be applied to the expediency of a reasonable acquaintance with the vegetable and the animal kingdoms. What sort of an agriculturist is he, in this age and country, who is so ignorant of the interesting *plants* on his own farm as to be continually overlooking the most pernicious weeds when they invade his premises, or mistaking for them those of a comparatively harmless character—and who knows so little even of those he annually cultivates, as to be unable to designate them by a name that is certainly comprehended beyond the limits of his native parish? Is the young American farmer, who can rest contented with such imperfect intelligence in his immediate profession, is *he* calculated, in this progressive era, to advance the interests or maintain the appropriate rank of that first and noblest and most indispensable of secular employments? Surely, it ought not to be thus with *agriculture*, when all the kindred sciences are going ahead with rail-road velocity. The several departments of knowledge are auxiliary to each other. They reciprocate lights by which their obscurest truths are illustrated.—They should, therefore, all proceed with equal step. It is not necessary, neither would it be expedient, for the practical farmer to spend his time in studying the unimportant species of the vegetable creation, nor in tracing the distinctive features of all the various tribes, "from the cedar tree that is in Lebanon even unto the hysson that springeth out of the wall;" but, as his business is especially with the more interesting kinds, with the *culture of useful plants* and *the extirpation of pernicious weeds*, I hold it to be his duty to acquire a knowledge of *these*, and such a knowledge, too, as shall be adequate, both to the proper management of them, and to the delineation, when called for, of their true botanical character. This would be a limited task and an easy attainment, quite within the reach of every ordinary capacity. Some three or four hundred species comprise all the more important plants usually observable on our farms, whether in the forest, the fields or the kitchen garden; and it must be an obtuse intellect indeed which cannot learn to know and distinguish that number of vegetable forms. The juvenile pupils of some of our female seminaries are, every year, demonstrating the ease with which the task may be performed.

I shall not detain you with observations concerning the importance of *zoological* information; for that is a kind of knowledge so intimately connected with our prosperity and comfort, that we cannot well avoid the acquisition of a reasonable share, at least with reference to the larger animals which are domesticated or indispensable on the farm. Our daily habits

and associations force the attainment on us all. The rudest bumpkin that ever trampled on flowers, or worked among weeds, without being able to distinguish one from another, is nevertheless compelled to become acquainted in some degree with both the valuable and the mischievous animals, fowls as well as quadrupeds; indeed, it is wonderful to observe how well and thoroughly such untutored persons do often learn the distinguishing traits, the dispositions and characteristic peculiarities of animated nature. Still, there is a *scientific aspect*, of which every department of natural history is susceptible, under which it assumes a methodical perspicuity, an illustrative arrangement which is exceedingly gratifying as well as instructive and merits the attention of all inquiring minds. There is, moreover, a branch of zoology, embracing myriads of tiny creatures, and many of them of the most destructive character to the hopes of the farmer, which is yet imperfectly understood, and demands the closest scrutiny of every one concerned in the products of the vegetable kingdom. I refer, of course, to the multitudinous *insect* tribes—some of which are occasionally so injurious as to require the most patient observation and the utmost sagacity to ascertain their true history. Even these minute researches, too generally neglected or despised, are demanded by the best interests of agriculture, and to be successful, they must be conducted on scientific principles. A little mental discipline, however, backed by perseverance, will soon enable the curious observer of nature to make valuable contributions to the common stock of information. I would therefore have every American farmer who can appreciate the responsibilities of his position, to cultivate his intellect with the same care and assiduity that he does his acres. Let him habituate himself to note the facts, to observe the phenomena, and investigate the theory of the processes which are continually taking place around him; and let no one delude himself into the belief, nor seek to excuse his deficiencies by the stale and hackneyed plea that he has not *time* for such pursuits. Why, those very pursuits are part and parcel—a very important part too—of his own appropriate business. It is precisely for such business that his time is allotted to him. At this day, and in this land, it will not do to urge the want, either of time or opportunity, for the due performance of our parts in life. Most people contrive to find time for what they really wish to do; and if driven to the necessity are apt to *take* it at any rate for those pursuits which they are resolved upon. But the fact is, we all idle away or waste in frivolous amusements, more time than would be requisite to fit us for the performance of our several duties. We are very prone to mistake the real nature of our *wants*. It is not so much to the want of time as to the want of inclination and of a proper sense of our responsibilities, that we should attribute our failure to possess the accomplishments which justly pertain to our profession and station in society. It is this want—this neglect of the more elevated attainments, and this lack of a just perception of the beautiful, which has hitherto been most striking and conspicuous among the agriculturists of our country. While our farmers have generally attended, faithfully and successfully, to what is truly denominated "the main chance," it must be confessed that too many among them have exhibited a lamentable want of tact and skill in planning and improving, or in availing themselves of natural advantages in the arrangement of their rural establishments.

Next in importance to successful culture and a correct knowledge of the principles and objects involved in the process, is the attainment known as good *taste*—or that refined sense of the beauties of nature which knows how to appropriate her charms in the embellishment of farmhouses or cottages, and to invest them with that witchery and grace which should ever be associated with a country residence. No person who has enjoyed the delights of a tasteful rustic dwelling, embosomed among venerable trees and reposing amid the verdure of flower-spangled lawns, can failed to be shocked at the contrast of a rude, vulgar looking

tenement, awkwardly stuck in some open weed-grown space, without a shade tree or an enclosure to protect it from the rays of a burning sun or the annoying approaches of the trampling cattle; and yet the difference may be entirely owing to the exercise of a cultivated taste in the one case, and a total destitution of it in the other. Fruit trees and shade trees should be regarded as indispensable appendages of every human residence. If duly attended to, the former will amply gratify the palate, while the latter will also minister to our enjoyment, directly by the refreshing shelter afforded to ourselves, and indirectly by attracting to their branches the lovely serenaders of the feathered race. How delightful in a tree-embowered cottage, to be roused from our slumbers by the gushing melodies which in such abodes ever greet the dawn of a summer morning? By providing a shady retreat for the little warblers, and protecting them from the weapons of reckless sportsmen, we not only secure their punctual attendance with the grateful tribute of their vocal strains on each returning spring, but we are rewarded tenfold for all such benevolent offices by the industry with which the welcome visiters labor to rid us of annoying insects. It should therefore be the business and the pleasure of the intelligent farmer, wherever located, thus to improve and adorn his premises."

CHESTNUTS.

Messrs. Editors,—Observing an inquiry in the Prairie Farmer as to whether any person in these parts had raised the chestnut tree from the seed, I would inform the inquirer that Col. R. Gilmore of this county, has two chestnut trees in his garden, of his own raising they have borne nuts the two years past. The plan of raising the chestnut is this: the nuts must not be suffered to become dry. Plant them in the spring of the year. The first winter protect them from the frost, or they are apt to be killed by the freezing. The next spring transplant in the following manner: Select a dry soil. dig a hole 18 inches deep, 3 feet wide: fill it up with small loose stones and clay to within six inches of the surface; set your tree on that; take care of it and it will grow well, and in four years bear nuts; then protect your nuts from boys and squirrels.—*Prairie Farmer.*

THE COTSWOLD BREED OF SHEEP.

As this breed of sheep is now being disseminated to a considerable extent in various parts of this country, we have thought that a brief sketch in regard to their history would be read with interest.

The original stock from which the present improved Cotswolds were derived, has been known on the Cotswold hills, in Gloucestershire, England, for a great length of time. W. C. L. Martin, in his late work on sheep, (one of the series in "Knight's Farmer's Library,") gives an account of the breed, from which we give the following extracts. The name (Cotswold,) by which the breed is known, is said to have been derived from *cots* or *cotes* having been formerly erected in the district occupied by these sheep, for their accommodation. They consisted, we are informed, of "not only rude huts or sheds, but of extensive ranges of buildings, of three or four low stories, communicating with each other by means of gradually sloping ascents or pathways, so that the sheep had no difficulty in ascending to the topmost story. Thus no room was lost, and the most efficient shelter was provided for the flock either by day or by night, during the continuance of winter, or at the lambing season, or when it was deemed advisable to house."

The Cotswold breed, was, we are told, anciently held in such high estimation, that "in 1467, by permission of Edward IV. some of them were imported into Spain, not as some have supposed, to mingle with and improve the migratory fine and short-wooled Spanish sheep of ancient renown, but either to form the ground-work of a new long-wooled stock, or to improve some native long-wooled

breed from which serge-like fabrics, requiring this kind of wool might be manufactured."

"The old Cotswolds were a large hardy race of sheep, big-boned and long-wooled, and well adapted for the hill range which constituted their stronghold. To judge from the relics still extant (though not pure,) they were flatsided, deficient in the forequarters, heavy in the hind quarters, slow fatteners, and covered with a long and weighty fleece; this latter being variable in quality, but always truly valuable as a combing wool. But the old breed is now more or less modified, and though it has not merged into the Leicester [or Bakewell breed,] is in many parts deeply imbued with the Leicester blood; in other parts, on the contrary, where hardiness is peculiarly essential, the cross of the Leicester has been only carried out so far as to give those improvements which we have more than once detailed, as the invariable result of even a single cross with this peculiar strain.

"According to the situation of his farm and the nature of his pasturage, does the Cotswold farmer manage his flock. Perhaps the prevalent breed may be half Cotswold and half Leicester. But in sheltered places and on good land, the strain of the Leicester may be found to predominate; while in more exposed situations the farmer, finding the Leicester cross tending not only to the diminution of the size of his sheep, and the weight of his fleeces, but to the loss of due hardiness and fertility, increases the Cotswold blood in his flock, and proceeds rather upon the principle of selection than of admixture to a rash extent, with the Leicesters. In both instances the farmer is right; in the one case, he has the means of feeding off rapidly, and he is content with the loss and a lessened weight of fleece; his profits arising from early maturity and from the capability of the land for feeding at a given time, more sheep of the crossed breed than the old, so as in reality, to return at a quick ratio a greater weight of mutton than formerly To him wool is of secondary importance. The farmer whose land is exposed, and affords only a scanty pasturage, will find his profit rather in wool than in carcass; he could not, as respects the latter, compete, even if he would, with the farmer of the vale a few miles distant, but he will make up his profits in weight of wool.—He therefore takes care that the old strain shall not prevail over the Leicester cross, (the benefits of which he is not altogether unwilling to lose,) and adapts his management to the circumstances in which he is placed. He does not lose sight of the fattening qualities and early maturity; but he as little loses sight of hardiness, fertility, and size, and of weight of fleece.

A breed which may, perhaps, be called a branch of the Cotswold, has rather recently appeared in England, under the name of the "*New-Oxfordshires*." They have been very successful competitors at the great shows of the Royal Society, and the Smithfield Club, for the prizes on "Long-wooled" sheep, as distinct from the Leicesters.

Mr. ROBERT SMITH, in a prize essay on the breeding and management of sheep, (written for the Royal Agricultural Society,) thus describes the New-Oxfords:

"They are of large dimensions, and have a great propensity to fatten, arising chiefly from their wide frame, quietude, and open texture of flesh, which is of quick growth, and consequently expands itself more rapidly than many others; but they do not possess that exactness of form peculiar to smaller animals, though they have a better carriage. For several years the male animals have been eagerly sought after, with a view to increase the size and frame of other long-wooled breeds."—*Alb. Cultivator.*

THE SUN FLOWER.

This plant has now become valuable both as a sure crop and a useful one. From it is made a great quantity of oil which burns well, and is also very good as a mixture with the best linseed, for painting. By the hydraulic press 19 bushels of sunflower seed has produced 23 gallons of oil.

CHESHIRE CHEESE

Is generally made with two meals of milk.

"The general custom is, to take about a pint of cream, when two meal cheeses are made, from the night's milk of twenty cows. In order to make cheese of the best quality, and in the greatest abundance, it is admitted that the cream should remain in the milk. The more common practice is, to set the evening's milk apart till morning, when the cream is skimmed off, and three or four gallons of the milk is poured into a brass pan, which is immediately placed in a furnace of hot water, and made scalding hot; then half the milk thus heated is poured upon the night's milk, and the other half is mixed with the cream, which is thus liquified, so as when put into the cheese tub to form one uniform fluid. The morning's milk is then immediately added to that of the evening, and the whole mass is at once set together for cheese.

The rennet and coloring* being then put into the tub, the whole is well stirred together; a wooden cover is put over the tub, and over that is thrown a linen cloth. The usual time of 'coming' or curdling is one hour and a half, during which time it is frequently to be examined. If the cream rises to the surface before the mixing takes place, as it often does, the whole must be stirred together so as again to mix the milk and cream; and this as often as it rises, until coagulation commences. If the dairy woman finds that the milk is cooler than was intended, or does not come on account of coolness, hot water or hot milk may be poured into it. This must, however, be done before it is all coagulated, for the forming of the curd must not be tampered with. If it is too hot, the opposite means may be resorted to; but the more general practice is to suffer the process to proceed hot as it is, until the first quantity of whey is taken off, a part of which, being set to cool, is then returned into the tub to cool the curd. If too little appears to have been used, it renders the curd exceedingly tender, and an additional quantity may be put in; but this must be done before the coagulation takes place; for if added afterwards, it will be of little effect, as it cannot be used without disturbing the curd; which can then only acquire the proper degree of toughness, by having heated whey poured over it.

When coagulation is formed, a point which is determined by gently pressing the surface of the milk with the back of the hand; but in this test experience is the only guide, for the firmness of the curd, if the milk be set hot together, will be much greater than that from the milk which has been set cold together. If the curd be firm, the usual practice is to take a common case knife, and make incisions across it to the full depth of the blade, at the distance of about one inch, and again crosswise in the same manner, the incisions intersecting each other at right angles. The cheese-maker with two assistants proceed then to break the curd, by repeatedly pressing their hands down into the tub, and breaking every part of it as small as possible; this part of the business being continued until the whole is uniformly broken small; it generally takes about forty minutes, and the curd is then left covered with a cloth, for about half an hour, to subside.

The bottom of the tub is set rather atilt, the curd is collected to the upper side of it, and a board is introduced of a semi-circular form, to fit loosely one half of the tub's bottom. This board is placed on the curd, and a sixty pound weight upon it, to press out the whey, which draining to the lower side of the tub, is ladled out into brass pans; such parts of the curd as are pressed from under the board, are cut off with a knife, placed under the weighted board, and again pressed; the operation being repeated again and again, until the whey is entirely drawn from the curd. The whole mass of curd is then turned upside down, and

*Spanish annatto is usually employed.—Little more than a quarter of an ounce is sufficient for a cheese of 60 pounds. The annatto is generally put in by rubbing a piece of it in a bowl with warm milk, and then stands a little to drain off the sediment, and is then mixed with the entire quantity.

put on the other side of the tub, to be pressed as before. The board and weight being removed, the curd is cut in pieces of eight or nine inches square, piled upon each other, and pressed both with the weight and hand; these several operations being repeated as long as any whey appears to remain.

The next thing is to cut the curd into three nearly equal portions, one of which is taken into a brass pan, and is there by two women broken extremely fine; a large handful of salt being added and well mixed with it. That portion of the curd being sufficiently broken, is put into a cheese vat, which is placed to receive it, on a cheese ladder, over the cheese tub, the vat being furnished with a coarse cheese cloth. The second and third portions of the curd are treated in the same manner, and emptied into the vat; except that into the middle portion eight to ten times the quantity of salt is usually put. By some dairy women, each portion is salted alike, with no more than three large handfuls to each.

The curd, when put into the cheese vat in its broken state, is heaped above the vat in conical form, to prevent it from crumbling down, the four corners of the cheese cloth are turned over it, and three women placing their hands against the conical part gently, but forcibly, press it together. So soon as the curd adheres together so as to admit of it, a small square board, with a corner of the cloth under it, is put on the top with a 60 lb. weight or a lever is pressed upon it. Several iron skewers are at the same time stuck in the cone, as well as through holes in the side of the vat, from which they are occasionally drawn out and fixed in other spots, until not a drop of whey is discharged. The weight and skewers are then removed, and the corners of the cloth are either held up by a woman, or by a wooden hoop, while the curd is broken as small as possible, and skewering is repeated. The women then take up the four corners of the cloth, while the vat is taken away and rinsed in warm whey; a clean cloth is then put over the upper part of the curd, and it is returned inverted into the vat. It is then broken half way through as before—these operations occupy from three to four hours.

When no more whey can be extracted by these means from the cheese, it is again turned in the vat and rinsed as before in warm whey. The cloth now made use of is larger and finer than the former, and is so laid, that on one side it shall be level with the edge of the vat, and on the other wrap over the whole surface of the cheese; the edges being put within the vat, thus perfectly enclosing the whole mass. In this stage of the business the cheese is still higher than the edge of the vat; and to preserve it in due form, recourse is had to a binder, about three inches broad, either as a hoop, or as a cheese-fitter, which is a strong, broad, coarse sort of tape, which is put round the cheese, on the outside of the cloth, and the lower edge of the binder pressed down within the vat, so low as that the upper edge of it may be level with the surface. The cheese is then carried to the press, and a smooth, strong board being placed over it, the press is gently let down upon it, the usual power of which is 14 or 15 cwt. In most dairies, however, are two presses, and in many, three or four, of different weights; the cheese being by some put first under the heaviest, and by others under the lightest.

As soon as the cheese is put in the press, it is immediately well skewered—the skewers being of strong wire eighteen or twenty inches long, sharp at the points and broad at the other end; the vat and binder having holes, seldom more than an inch asunder, to receive them. As the press always stands near the wall, only one side of the cheese can be skewered at the same time, and it must therefore be turned half way round, whenever that is necessary; but this occasions no inconvenience, as the skewers must be frequently shifted, and many more holes are made than skewers to fill them. In half an hour from the time the cheese is first put in the press, it is taken out again, and turned, in a vat, into another clean cloth, after which it is returned to the vat; but is by some persons previously put naked into warm whey, where it stands

an hour or more for the purpose of hardening its coat. At six o'clock in the evening the cheese is again turned, in the vat, into another clean cloth, and some dairy women pick its upper surface all over an inch or two deep, with a view of preventing blisters. This can be remedied if they occur by opening them with a pen knife, and pouring hot water into the incision; then press down the outer side, put on a little salt, and place a piece of slate with a half pound weight on it.—At six o'clock the following morning it is again turned in the vat, with a clean cloth as before, and the skewers are laid aside; it is also turned two or three times more, both morning and evening, at the last of which finer cloths are used than at first, in order that as little impression as possible may be made on its coat.

After the cheese has remained about forty eight hours under the press, it is taken out, a fine cloth being used merely as a lining to the vat, without covering the upper part of the cheese, which is then placed nearly mid-deep in a salting tub, its upper surface being covered all over with salt. It stands there generally about three days—is turned daily, and at each turning well salted, the cloth being changed twice in the time. It is then taken out of the vat, in lieu of which a wooden hoop is made use of, equal in breadth to the thickness nearly of the cheese, and in this it is placed on the salting bench, where it stands about eight days, being well salted all over, and turned each day. The cheese is then washed in luke warm water, and after being wiped, is placed on the drying bench, where it remains about seven days; it is then again washed and dried as before, and after it has stood about two hours it is smeared all over with about two ounces of sweet whey butter, and then placed in the warmest part of the cheese room.

While it remains there, it is, during the first seven days, rubbed every day all over, and generally smeared with sweet butter; after which it should for some time be turned daily, and rubbed three times a week in summer, and twice in winter. The labor is performed almost universally by women, and that in large dairies where the cheese are sometimes upon an average 140 lbs. each. The details above are for cheese of 60 lbs. weight. The quantity of salt used is uncertain; about three pounds each is the largest quantity, though much of it is wasted, and whether the cheese acquires much saltness in the salting house, dairymen themselves are doubtful, though much salt is there expended. The sponginess and heaving of the cheese, which are sometimes complained of, Mr. Holland thinks are faults to be attributed more to the inattention on the part of work people than want of skill—'three certain preventives being, carefully breaking, good thrushing, frequent skewering, and powerful pressing,'—but may not improbably arise partly from the use of cold and warm milk, which if mixed together will generate gases. Those of pungency and rankness, which are generally imputed to impurity in the rennet, and by some to want of salt, he thinks may be also more properly ascribed to the fermentation occasioned by the imperfect discharge of the whey."

A BEAUTIFUL HEDGE.

The best hedge in the United States, says the Genesee Farmer, extends about a mile along the highway on a plantation of 3000 acres, near Augusta, Georgia. It is the Cherokee rose, which is now in full bloom, presenting a magnificent floral spectacle, and filling the atmosphere with delicious perfume. No animal without wings can get over it or through it.

CHINESE METHOD OF RENDERING CLOTH WATER-PROOF.

To an ounce of white wax melted, add one quart of spirits of turpentine, which, when thoroughly mixed and cold, dip the cloth in and hang up to dry. By this cheap and easy method, muslin, as well as the strongest cloths, will be rendered impenetrable to the heaviest rains without the pores being filled up, or any injury done, when the cloth is colored.

HEN GOSSIP.

"Chanticleer" is wise in hesitating before he consents to banish cocks from his poultry yard and nest eggs from his hen house. The act of laying is not voluntary on the part of a hen, but is dependent upon her age, constitution, and diet. If she be young, healthy and well-fed, lay she must; if she be aged and half starved, lay she cannot. All that is left to her own choice, is where she shall deposit her egg, and she is sometimes so completely taken by surprise, as not to have her own way even in that. The poultry keeper, therefore, has only to decide which is the more convenient—that his hens should lay here and there, as it may happen, about his premises, or in certain determinate places, indicated to the hens by nest eggs. It is quite a mistake to suppose that the presence of a nest egg causes a hen to sit earlier than she otherwise would. the sight of 20 nest eggs would not bring on the hatching fever; and when it does come, the hen will take to the empty nest, if there be nothing else for her to incubate. Any one whose hens have from accident been deprived of a male companion will agree with me in saying that they have not done so well till the loss has been supplied. During the interregnum matters get all wrong. There is nobody to stop their mutual bickerings, and inspire an emulation to please and be pleased. The poor deserted creatures wander about dispirited, like soldiers without a general. It belongs to their very nature to be controlled and marshalled by one of the stronger sex, who is a kind, though a strict master, and a considerate though stern disciplinarian. It does not appear what should make hens lay better under such forlorn circumstances as are recommended in the Aberdeen paragraph. They will sit just the same, when the fit seizes them, and so will ducks; as may be seen amongst those cottagers who, to save the expense of barley, keep two or three hens or ducks only, and procure from a neighbor a sitting of eggs, as they want them. It has been stated by Reaumur, who is a high authority, that clear or unfertile eggs will keep good longer than those that would be productive: but it is doubtful whether the difference is so great as to make it worth while keeping the hens in a melancholy widowhood on this account. The most natural and least troublesome way of having a winter supply of eggs, is to procure pullets hatched early the previous spring, and to give them all they can eat of the best barley, or, if expense be disregarded, of the finest wheat.—*London Gardener's Chronicle.*

BEES.

Give salt to bees by laying it on the corner of the board in front of the hive. They need it as much as cattle or other animals; and when not supplied, they are often seen in the mud around the door.

MATTRESSES OF COTTON AND OF WOOL.

During the hot part of the season, and, indeed, during the whole year, there is no bed more conducive to health than what is called a mattress. The best of these are made of hair so prepared as to be elastic, and to keep that elasticity for a long time. Some are made of the long moss that grows on the trees in the southern forests, but these soon become compressed, and lose their elasticity. Recently, cotton has been used for this purpose; and still more recently, wool has been recommended. We made mention of the fact that wool had been recommended for matresses, in our last. We shall now give such information as we have respecting the preparation of both articles for bedding, in order that those of our readers who wish to give them a trial may have something to guide them in their operations.

Cotton Beds.—In the Report of the Commissioner of Patents, for 1844, we find cotton recommended for beds, on the strength of a communication published in the 'Jackson Southron.' The writer says that the considerations which recommend

this kind of bed, are superior cleanliness; vermin will not abide in it; there is no grease in it, as in hair or wool; it does not get stale, and acquire an unpleasant odor, as feathers do, to eradicate which it is often necessary to put them in an oven and have them re-dried; moths do not infest it as they do wool and feathers; it does not pack, and become hard, as moss does; nor does it become dry, and brittle, and dusty as do hay, straw or husks.

It is cheap, and the most easy and healthful bed of any, and possesses, over feathers, the advantage that it does not cause that lassitude and inertia produced by sleeping upon the latter.

Another writer makes the following statements, founded, as he says, on his own experience:

Cost of a Hair Mattress.—They are generally sold by the pound, from fifty to seventy-five cents per pound—thirty or forty pounds will cost from fifteen to twenty dollars.

Wool.—Forty pounds of wool at thirty cents, will be twelve dollars—ticking and labor of making will add to this cost.

Feathers.—Forty pounds at thirty cents, is twelve dollars—ticking and labor will bring it up to from fifteen to twenty dollars.

Moss Mattresses—Ready made, twelve dollars.

Cotton.—Thirty pounds of cotton at eight cents per pound, two dollars and forty cents—twelve yards of ticking, at a shilling per yard, two dollars—labor, thread, &c., two dollars and seventy-five cents—total, seven dollars and fifteen cents.

In point of cheapness, says he, the cotton is far preferable; in durability, it is equal, if not superior to any of them.—Six years' use of them convinces me of the fact.

Mode of Making.—The mode proposed for making them, is to take layers of cotton batting and place them between envelopes of calico or muslin. An improvement has been suggested of gumming or glazing each side of these layers, as the wadding for cloaks is prepared.—A patent has been taken out for making them with a layer of hair between the battings.

Woollen Mattresses—In the report of the Commissioner of Patents, of the doings of last year, (1847) we find a communication from Mr. Ancrum, of Ashley, Pike county, Missouri, on wool mattresses. He is quite enthusiastic on the subject. He observes, that the human species are obliged to repair, by sleep and repose, the fatigues of the body, every sixteen hours, at least, so that even the laborious pass more than a third part of their lives in bed; the idle, fashionable and luxurious, and women, nearly half their time, and children, in health, sleep most of their time; therefore it is of the utmost consequence what kind of bed we lie upon. The harder the bed, in reason, the healthier we are. Wool mattresses give this hardness and firmness, at the same time yield sufficiently to the pressure of our bodies, and form an agreeable and luxurious bed, and wool does not make marks on the skin, or relax as other bedding.—All great men, warriors, heroes, &c., who have made any noise in the world, from Charles XI. to Napoleon, always slept upon a hard bed. People may be convinced of the impropriety of lying long in soft beds, by knowing that a sound man, in one night of seven hours' sleep, generally perspires fifty ounces avoirdupois or four pounds troy weight. This we cannot wonder at since there are above three hundred thousand millions of pores in the body of a middle sized man, and that in the last hours of sleep one perspires most. Hence the impropriety and the weakness of lying too long in a soft bed, and the necessity of lying on a comparatively hard and elastic bed, such as a wool mattress.

In France, wool mattresses are generally adopted, consequently you never meet with a bad bed there. I have travelled all over France, and never met with a bad bed—and a very recent and intelligent traveller mentions, on his removal from England to France, that he found the French beds delicious, because the beds are wool mattresses.

Mode of making Wool Mattresses.—The first thing to constitute a good, healthy bed is, that it must be absolutely flat, therefore all bedsteads should have wooden slats instead of sacking, which always forms and gives a hollow. The wool is carded (into bats) and all knots and extraneous matter taken out. The great point is to make it thick enough.—The best bed I ever slept in had sixty lbs. of wool in it, but the bed was of a very large extra size. Half that quantity will make a common bed, but if you wish to lie luxuriantly and yet hard, do not stint the wool; it lasts forever. The covering is washed once a year—the wool carded and a few pounds added, and the bed is sweet and new.

We think it would be an improvement on Mr. Ancrum's system of making wool beds, to form them as recommended above in making cotton beds—viz: have a layer of cloth between the layers of wool batting, and perhaps a stitch put through occasionally to keep the wool in its place and prevent its crowding or packing together.

Wool is cheap this year and it is a favorable time, for those who have the article to spare, to try the experiment.

For the Southern Planter.

USES OF SULPHATE OF IRON.

Dear Sir,—For some time I have taken your Planter, and from it have received many valuable hints on the subjects of which it treats. I now venture to make some suggestions, mostly the results of my own experience. For a long time it was my endeavor to devise some means of *fixing* in stable manure its most active principle, the ammonia. This, I think, I have effectually done by the use of sulphate of iron, in common language, "copperas;" my method is to make a saturated solution of that salt and apply by using a common watering pot. This is done in the stable; and the time is when the ammoniacal gas is detected by the strong smell. On applying the liquid, the air of the stable will in a few minutes become pure even where the gas is in such quantity as to be oppressive to the lungs and irritating to the nose. The rationalia of the processis this. The sulphuric acid of the salt combines rapidly with the ammonia, forming a sulphate of ammonia, and the iron is thrown out as an oxide. This salt of ammonia (sulphate) is very soluble in water, and to a great extent inodorous. In addition to this, the ammoniacal gas is most rapidly absorbed by the water of the solution and thus arrested until the sulphuric acid has time to leave the iron and unite with the ammonia.

It is not perhaps so generally known how powerful a disinfectant the copperas is. The manner of its action I do not myself exactly understand; but this I know, that it will usually render inodorous the most offensive privies; their deposit being rendered black as soon as the solution of copperas is applied. I also use it in hog pens and such like places. Some may perhaps object to the use of copperas on the authority of Leibig, who is said to have ascertained that sulphate of iron in excess causes rust in wheat.—This may be so or may not; but if the solution be used judiciously, there will be no sulphate of iron in the manure; it is decomposed, and the resulting compound is sulphate of ammonia and oxide of iron. Others may say that it is too expensive. To this it is answered that it is very cheap, not more than two or three cents per pound.

In this region of marl, we often hear of land over-marled. I suggest that a solution of copperas would afford a remedy; for by actual experiment I know that marl subjected to the action of the solution undergoes a most material alteration. The result is, I suppose, a sulphate of lime (plaster of paris) carbonic acid thrown out, and oxide of iron. The acid is necessary to the growth of plants, and the oxide of iron, to say the least, not hurtful.

I have thrown out the above crude remarks on the uses of sulphate of iron; if they be found useful I shall feel myself more than repaid for my trouble; if not,

at all events I shall not be disappointed, but try to get what information I can from others on the subjects above treated.

C.

Gloucester C. H., July 22.

We are happy to make the acquaintaince of "C," in our columns. From the above specimen, we think he can render efficient service in the cause of agriculture, and we request a continuance of his favors.—*Editor.*

A SOAP PLANT.

At a late meeting of the Farmer's Club, in New York, Lieut. Washington A. Bartlett, U. S. N., presented two bulbs of the *Amole* or Soap Plant, of California.—The bulbs are used throughout California for washing every description of clothing in cold running water. In using them as soap, the women cut off the roots from the bulbs and rub them on the clothes, and a rich and strong lather is formed which cleanses most thoroughly. To propagate the plant, the bulbs are set in a moist, rich soil, and grow most luxuriantly in the soft bottoms of valleys bordering on running streams.

For the Southern Planter.

TO EXTIRPATE GARLIC.

In one of your recent numbers I noticed an inquiry from one of your correspondents as to the best way of extirpating garlic from our fields. I have not as yet discovered an answer to his inquiries and feeling some interest in that subject, I hope you will keep it before the public until some effectual remedy for this growing evil shall be discovered; and the individual who shall succeed in accomplishing the object will be justly entitled to the lasting gratitude of the country. Feeling, as I do, a sympathy for your imploring correspondent, having been pretty much in the same predicament myself, I will state what I have done to get rid of this noisome pest. A piece of ground which I purchased about 4 years ago, containing about forty acres, was well set in garlic, about as thick as clover usually grows. I cultivated it three years in succession in corn, ploughing it up always in the fall and running a heavy harrow over it several times during the winter, when it was not too hard frozen, so as to expose the onion to the action of the frost, which effectually kills them.—The fourth year I sowed it down thick with oats early in the spring. I can now discover no garlic, but I shall keep a good look out, and if any does make its appearance, I will try corn again, because the land cannot be put to a better purpose; and it is a fact well known to my neighbors, that although the land was not manured it continued to produce good crops of corn, the last being absolutely better than the first.

I advise your correspondent (I wish he would give us his name,) and all others to try this experiment and give us the results.

J. Morgan.

Jefferson Co., Va.

WILD FLOWERS—THEIR CULTIVATION, &c.

The great and increasing taste for the cultivation of flowers, has induced us to devote a few pages to the subject, more particularly to the cultivation of our native or wild flowers. In some of our former numbers, we have noticed some new and rare foreign plants, with figures and drawings of them. The interest of many cultivators has been drawn away by foreign productions, "far fetched and dear bought," while our native, many of which are far superior in richness, have been left to bloom and fade, in all their beauty "unknown and unseen, to waste their fragrance in the desert air."

It is our present purpose to endeavor to awaken a greater zeal among cultivators and amateurs, for the growth of some of the brilliant plants and shrubs, which deck our fields and woods. Few persons seem to appreciate or even know to what perfection of culture many of our wild

flowers may be brought in the hands of skilful gardeners.

Here we cannot help remarking, that many flower gardens are almost destitute of bloom, during a great part of the season, which could be easily avoided, and a blaze of flowers kept up, both in the garden as well as pleasure grounds, from April to November, by introducing from our woods and fields, the various beautiful ornaments with which nature has so profusely decorated them. Is it because they are indigenous that we should neglect them?

Floriculture and other branches of ornamental gardening, have hitherto been less attended to in this country than those of a more useful kind, viz: the rearing of fruits and culinary vegetables. A change, however, for the last few years has taken place, of a most favorable character. The hand of nature has scattered the richest beauties of the flowery world around us in every direction, and there is nothing to prevent us from ornamenting our gardens with native plants and flowers, from every wood, from every swamp, from every field, and from every brook side, to which the eye can turn.

Among the great number of wild plants found in this section, we have succeeded in cultivating some of the following named varieties:

Cardinal Flower—*Libelia Cardinalis.* Among other plants found in the United States, remarkable for elegance, is the cardinal flower, which in the last summer months, may be found along our swampy grounds near fresh water streams. From its great beauty and showy appearance, it is a great favorite in Europe, and is generally cultivated in pots. It is a perennial plant, growing in a simple stem from two to three feet high; leaves, from three to five inches long and an inch or more in breadth, with a long tapering base. Flowers of a bright scarlet color, and very showy.

Whoever has travelled on the river road, in the months of August and September, from Waterford to the Borough, could not have failed to observe, in an open wood, on the left hand side of the road, about six miles from the former place, a large number of those splendid flowers in all their native beauty.

Although its habits are wild and is generally found in marshy or wet ground, and borders of rivulets, it grows readily when transplanted into a dry soil, if in a shady position. It is in flower from August to October. We once removed some of these plants to our garden in the month of April, and they grew and flourished finely, producing an abundance of splendid flowers the same season, and were much admired by all who saw them.

Gentian—*Gentiana Augustifolia,* a wild flower of extreme beauty, which grows likewise in swamps, and is worthy of cultivation. Rare in this section.

Andrews Gentian—*Gentiana Andrewsi*—Griseb, a biennial, stem simple, smooth, and rising erect from twelve to eighteen inches high. Leaves about three inches long, and an inch or more in breadth, very smooth except on the margin, which is a little rough. Flowers crowded in a terminal fascicle or head, with one or two in axils of the upper pair of leaves. Corolla, about an inch and a half long, tubular, nearly closed at the orifice, bright blue, sometimes pale.—It is found in low, moist woods, and flowers in September and October. We have found it growing on the borders of the Norman's Kill, in Bethlehem.

Small Fringed Gentian—*Gentiana Detonsi.* This species grows in various parts of British America; "and I have received," says Torry, "from Mr. Lapham, beautiful specimens which he collected in Wisconsin. It is found on wet limestone rocks, Goat Island, Niagara Falls, and near Irondequoit Mills." It is supposed to be annual or perennial. Flowers yellow at base, with a bright blue top, beautifully fringed like the pink. It is a very pretty plant and would show well in the garden.

Prince's Pine—*Chimaphilla umbelata.* (From the Greek *Chima, winter,* and *phileo,* to love, in allusion to the English name, *wintergreen.*)

This little unobtrusive evergreen plant is common in our woods, and it is said

also to grow in the north of Eurpoe. It is reputed to possess valuable medicinal qualities, and has long been used by the Indians as a tonic and diuretic. It is astringent and somewhat aromatic to the taste; it is often used with other plants and roots in the making of small beer.

The root is long and woody, throwing up leafy and flowering stems at intervals, from four to six inches high, bearing from four to six nodding white flowers tinged with purple. Leaves from 1½ to 2 inches long, often in two or three imperfect whorls, smooth, of a dark glossy green, rather acute, sharply serate.

This plant would make a beautiful appearance in a spot, or in the shady borders of the flower garden, and may be cultivated with very little trouble, by attending to its habits, &c.

Round Leaved Wintergreen—*Pyrola rotundifolia*—Linn. This is a very ornamental plant, not rare, found in rich woodlands. Its flowers are something like those of the hyacinth, or lily of the valley, and highly fragrant. This species is also a native of Europe. The leaves are broad and roundish, of a deep green color, often spreading or lying flat on the ground. They would make a handsome show in a flower garden or in pots.

Red Lily—*Lilium Philadelphicum.*—Of all the tribes of wild flowering plants the lily stands pre-eminent. It is noticed in the sacred writings as of great brilliancy and beauty. "Consider the lily of the fields, how they grow; they toil not; neither do they spin; yet I say unto you, that Solomon, in all his glory, was not arrayed like one of these"

The red lily may be found in bushy places, borders of woods; and are growing in abundance on the sandy plain, between Albany and Schenectady. The stalk rises from two to three feet high, supporting one solitary upright flower. It blooms in June and July. The color varies from dark to light red with a tinge of yellow. This is a highly ornamental plant and deserves a place in every garden. Number of flowers increases by cultivation.

Wild Yellow Lily—*Lilium Canadensis*—Linn. This variety is common and is found in moist meadows, flowers in June and July. It grows from two to three feet high, bearing from one to five or six nodding yellow flowers, spotted inside with dark purple. It is a bulbous-rooted plant, and we have transplanted them, when in flower, with good success, some of which are now growing in our garden in full vigor, bearing five or six beautiful flowers on each stalk.

Turk's Cap, or Superb Lily—*Lilium superbum.* This, in favorable situations, is said to be truly a magnificent plant. It delights in moist meadows, and flowers the latter part of July and first of August. It is regarded by some botanists as only a variety of the yellow lily, but its characters seem constant. The stem rises from three to six feet high, leaves narrow, from five to eight, in a whorl, and from two to four inches long. Flowers varying from three to twenty, or in very luxurious plants, to thirty or forty, arranged in a pyramidal manner, or in the form of a chandelier. Color, a bright orange with numerous redish purple spots. We have no recollection of ever having seen any of this variety in the vicinity of Albany. According to the description it would make a splendid appearance in the flower garden, and is worthy of cultivation.

Large Yellow Lady's Slipper.—*Cypripedium pubecens*—Swartz. This much admired flower is found in moist, shady woods, and swamps. There are three varieties of this species, and some rather rare. The root of this plant consists of numerous thick fibres. Flowering stem simple, and rising from one to two feet high. Flowers large and showy, solitary, sometimes in pairs with a large foliaceous bract at the base. Petals greenish, stained with purple, and from 1 and a half to 2 inches long. Upper sepal rather broadly lanceolate; the two lower ones commonly united nearly to the tip, but sometimes distinct. Petals lanceolate linear, undulate and twisted. Lip yellow, 1 to 1 and a half inches long, somewhat obovoid, much inflated.

SMALLER YELLOW LADY'S SLIPPER—*Cypripedium parviflorum.* This and the preceding are very nearly allied, and many of our botanists do not consider them distinct. "I have had no opportunity," says Dr. Torrey, "of comparing them in a living state." The diagonostic characters given are those of Hooker, who has, no doubt, (having examined cultivated specimens) those that are perfectly distinct. The character of this plant dose not differ materially from the preceding. Flowers purplish-brown mixed with green. Petals much narrower and rather larger, undulate and twisted, green spotted, with purplish-brown, or sometimes wholly purplish. Lip 1 to 1½ inches long, somewhat flattened above and below, the sides swelling out. Flowers in May and June. Rare, found in woods, swamps and on hill sides.

NOAH'S ARK—PURPLE LADY'S SLIPPER—*Cypripedium acaule*—AIT. This plant is found in the vicinity of Albany, in woods, in both dry and moist situations; flowers in may. Roots thick and fibrous. Leaves from three to six inches long, from 1 to 1½ inches wide, at first erect, but finally spreading. Stalk rises from eight to twelve inches high, flowers pendulous, with a shallow fissure or indentation in front, greenish mixed with purple.

This plant bears cultivation remarkably well and improves by care and attention. We have had no difficulty in cultivating them, and considered ourselves well paid in their splendid show, for all our trouble.

For the Southern Planter.

EARLY HARVESTING.

Mr. Editor,—In your last, you have two excellent pieces (especially the first,) on harvesting.

In the former, p. 186, you say "most persons cut their wheat too *late*, and their hay too early:" and in the latter, p. 197, you publish an article putting the propriety of "cutting grain before it is fully ripe beyond dispute." Now I propose to let that subject, so far as wheat is concerned, rest, as all farmers seem to acquiesce in the early cutting of *wheat*, and perhaps rye.

But oats: I think every practical farmer will differ with the writer in the time for harvesting them. It is a generally received opinion among the farmers in my acquaintance, that oats, like hay, should be thoroughly ripe. The grain is certainly as good, and the straw soft and sweet, and horses are much fonder of it when fed as "*cut oats.*" When cut in a green state, the straw is hard and horses do not love it.

The article in your last contains "authority" from a distinguished agricultural friend and correspondent . . . . . whose statements, however contrary to the preconceived and incondite notions of the *old regime* farmers, are beyond a doubt. The above named "authority" says he cut wheat some years since quite green, and four days afterwards examined it, and it was "little if any inferior to that which had stood till perfectly ripe in the field." Now whether the first wheat was cut four or fourteen days before it was perfectlyripe, the deponent saith not, but it was no better than the perfectly ripe wheat." Then what has he placed beyond a doubt? So much for wheat.

Now for Indian corn. He says that corn "cut at the roots before the kernels had become fairly 'speckled,' filled even more rapidly than while standing" Did it fill more abundantly?" What signifies a "more rapid filling, if it is less abundant? But this *undoubted authority* proves the less stalk you leave with the corn the more likely to shrivel. But, says he, if the stalks are in a green and succulent condition, the quantity of the circulating and nourishing fluid contained in the sap vessels at the period of the corn's turning, is doubtless, under ordinary circumstances, abundantly adequate to ensure the perfect development and maturation of the grain."

And nothing more? And that too to be under at least "ordinary circumstances" —and that too with an "*if.*" "If the stalks are in a green and succulent condition"

Well, what have we here? "And *if* and *if*" circumstances render it necessary to cut a road through standing corn or you wish to sow the corn land in wheat, you can gain nothing in the way of corn

by cutting it early, but "and *if* and *if*," you *may* loose nothing.

Will any man in his senses "under ordinary circumstances" cut his corn before it is fully ripe?

But oats, says he, "I determined to test the experiment of early cutting."

He says he cut some three days too soon and some five days too late, and the grain of the latter was two pounds to the bushel heavier than the first, and he says nothing about the default in measurement. The green oats of course shriveled, and perhaps lost 50 per cent. by the actual measurement. For instance an acre cut green may measure only 20 bushels, and an acre cut ripe may measure thirty bushels, and yet the green by its contraction in shriveling may only weigh two pounds less to the bushel.

But the straw, says he, of that cut five days too late "was wholly worthless." To say nothing about the utter worthlessness of oat straw as a food by itself; let us see for a moment what was the result of this "undoubted authority."

"Had I defered," says he, "cutting two or three days, I have no doubt the grain would have been equally as heavy as that cut last, while the straw would have been but little depreciated by standing;" *i. e.* had he waited till his oats were ripe he would have made more and better grain, and but little depreciation in the straw.

But as to the straw. In this part of Virginia what we call "*cut oats*" is no small portion of our horse feed the year round. And it is to them I appeal, and wish a candid answer, regardless of their "*preconceived, incondite notions*," not only "of the *old regime* farmers," but a——, mule, and colt.

B.

CLEANING TREES.

Trees and Vines which are kept the cleanest, bear the best; like the human body, the pores of their skin become clogged with dirt, and retain gases which should escape. Trees, the bark of which has been scraped and scrubbed, become more thriving, and more vigorous.

THE EMPIRICAL AND THE RATIONAL SYSTEM OF AGRICULTURE.

The former may be compared with the old mode of navigating the sea, by coasting: and the confidence of its adherents is like the boldness of the "quack," who prescribes a medicine of which he is ignorant for the relief of symptoms, originating from causes that he cannot even enumerate.

The fortunes of "quacks" are frequently referred to as remarkable; but the sum annually expended in nostrums for the improvement of soils in Maryland, would support all the quacks in the United States.

Every year brings some new plan that appears plausible, or some modification of an old one, that has nothing to recommend it but the experience of some half a dozen men.

There are, perhaps, no branches of science that promise more important results than those recently applied to agriculture. We have many facts that appear as interesting and important as the discoveries of Franklin, Davy and Henry; but they want the genius of a Watt, or a Fulton, or a Morse, to apply them.

It was only necessary to state the fact —that Electro-magnetism was applied to telegraphic uses, and every one knew how it was accomplished—could describe the apparatus, and wondered that it had not been used years before.

The expectations with regard to agricultural chemistry, are like those entertained of general chemistry in its origin; every dabbler who sought for some *one* principle (or stone) that would convert *every* thing into gold, was called philosopher or alchemist. Some fertilizing liquid—some rule to improve worn-out lands—some electric wire—is constantly produced or promised, that adapts itself to every soil and produces a double crop. The appetite of the public for these "humbugs" is excited, and must be gratified.

There are two modes by which the best systems are ruined. The first is neglect; the second "ultra" views and expectations. The latter has been the prevailing error on the application of chem-

istry to agriculture; and many men, of sound minds, are turning away in disgust; or, having sifted the matter more thoroughly, discover the elements of a rational system of agriculture, and have determined to develope them by the establishment af agricultural schools and the analysis of soils. It may yet require years of patient investigation; but these years will be shortened, if the investigation is made by men trained for the purpose, aided by those who are familiar with what is already known, and skilled in the application of this knowledge.

It was said of the immortal Louis, that after devoting ten years of his life in the hospital of Paris to pathological investigations, he burned up what he had written, that he might, with an unbiassed mind, look again at the results of disease, and present to the world facts (statistics) that were not selected for the support of any theory, but for the exhibition of truth.

If he was stimulated to so much self-denial in collecting facts from the changeable materials of the human system, what should be the zeal of the agriculturist who has any pretensions to science, when he beholds the fixed constituents of the inorganic world, and sees the interest that is exhibited in every country in determining their relation to the growth of plants which can be scanned amid the health and beauty of a country residence.

The opinion of Liebig, with regard to the effects of Plaster, (sulphate of lime) or Davy or Ruffin, of Lime and Magnesia, or Johnston, of Soda and Nitre, is quoted with as much confidence as if they were oracles. Their theories do harm; they contain some truth, no doubt; but these men, who have risen above their age, describe objects beyond them, of which they have but an indistinct outline; and these objects often "loom long." They attempt to anticipate the discoveries which will soon be made. The world will ever be indebted to them for their research and the value they have given to previous discoveries by the application of them. There are but one or two minds in an age that can grasp the materials already collected; and these men should be satisfied in having done this. It remains, now, for another period of patient research to build up and perfect this beautiful system. The base of the pyramid has been laid, and no power or machinery is sufficient to elevate the superstructure; a "tumulus" must be built around it by the patient labor of many; and when, by means of this inclined plane, the noble blocks are laid in their places, the mound may be removed, but the monument remains a pillar of truth. This tumulus or mound represents the mass of facts (statistics) that we want—not to build up any particular theory, but to elevate the materials for the rational system of agriculture.—*American Farmer.*

For the Southern Planter.

SHEEP-BREEDING IN VIRGINIA.

Mr. Editor,—You ask my views of sheep-breeding—capabilities of our State for that kind of agricultural employment—my breed of sheep—method.

Your paper is altogether agricultural and ought to be the medium for farmers to communicate to each other any experience that may be beneficial. I do not profess ability to instruct, but as I have received pleasure and (I hope) profit from others, I feel the call on me *just* to say what I can in the plainest farmer style—leaving to you to judge what part (if any) may be worthy a place in your valuable paper, and to settle the responsibility with your patrons for any unprofitable occupation of your columns and for them, from such as you may publish, "to separate from chaff the wheat."

I believe, in any part of Virginia where timothy will grow, sheep can be advantageously raised—or wherever any animal that needs grass can be raised—sheep can be *more* advantageously—if a sale can be had for either carcass or wool. I prefer timothy to any of the artificial grasses, though I believe they will flourish upon any grass any other animal will. I know they fatten well and readily on clover.

To the value of sheep.—I must, of course, write of my own, and what I have and could have done with them as muttons. It would not be fair to take my sales as *breeders* into the calculation. I will compare them with cattle—farmers who have cattle will know they can raise them, and compare them and judge for themselves which is most profitable. The farmer lays in his steers one year and sells them the next. I instance good steers and good prices. My muttons were lambed one year and sold the next.

1. One steer cost $22, interest $1 98, say $24—sale $40; profit,	$16 00
One mutton (sold by me, and taken by the butcher from my farm) $10—fleece $3,	13 00
Profit of one steer over one sheep,	$3 00

But give another version. I think I can graze and fatten ten of my breed of sheep upon what I could graze and fatten one steer. It would stand then—

Ten muttons $100—ten fleeces $30,	$130 00
Profit on one beef,	16 00
Profit of sheep over cattle on same amount of food,	$114 00

For fear of over estimating the number of sheep to one steer (I believe with common sheep it is estimated six sheep can be brought into market upon the food of one beef) I will then take less than that number.

Say five muttons at $10—$50; five fleeces, $15,	$65 00
Profit on the beef,	16 00
Profit of mutton over beef on same amount of food,	$49 00

This calculation gives *every advantage* to the beef.

I believe sixteen dollars thus calculated is the amount of profit claimed for a steer. If it is objected that the steer is raised too, so much more against his profit for the mutton will then be entitled to ten or five for each year, which would very largely increase the profit. Put them upon a more equal footing in

No. 2. Ten muttons at $16 66⅔, $166 66; 10 fleeces at $3, $30,	$196 66
Profit on the beef,	16 00
Profit on muttons over beef on same amount of food,	$180 66

I calculate this sum, because another butcher offered it for them to the one I sold to. Surely this cannot be objected to. I feel convinced I can graze and fatten of my breed of sheep ten muttons to one beef—therefore calculate that number. If others think otherwise, let them calculate by the five and see the result.

Another calculation I make upon an assurance from another butcher of their being worth twenty dollars, proved by the fact of the butcher selling some of their carcasses neat for twenty-four and twenty-five dollars each, and refusing five dollars each for the skins to tan with the wool on for carriage and sleigh rugs.

No. 3. Ten muttons at $20, $200; ten fleeces, $30,	$230 00
Profit on the beef,	16 00
Profit of mutton over beef on same amount of food,	$214 00

The butcher calculates his profit in mutton in the fifth quarter—i. e. the offal. Then I am still below the mark—for the neat carcass was sold for twenty-five dollars, and the calculation was made five dollars below the standard, and of course that much more favorable to the beef.—There can be no mistake in this. I saw him sell one of the carcasses and heard him refuse the offer for the skins. I have calculated in all cases my fleeces at thirty cents washed wool, the price I sold at—but even take one half of any of these calculations, owing to location and circumstances, and still the profit of sheep over cattle is immense on the same food, and the location and circumstances that will affect the one, will the other.

These calculations are not made on the-

ory, but absolute occurrences. But to accomplish these results there must be the right breed of sheep for profit. Mine are the Cotswold sheep. They grow early to large sizes and tallow well. I offered ten dollars each for the yearlings back to keep over, which the butcher refused. I had not fed them grain until fattening for the shambles, then only a little over one month, by no means with the view of bragging. The son-in-law of the butcher, who kept the account, assured me, one of them that he tried, gave twenty-two lbs. less than one-third offal. Surely, the fact that sheep can do better than cattle on short grass and requires infinitely less care and trouble, is also of some consideration.

A gentleman of New York has written most ably to prove to the South, that the growth of fine wool would be the most profitable business in the South. I can hardly think so; for independent of all else, he admits, that the northern farmer is abandoning that breed of sheep, wishing larger carcasses and earlier maturity—and where is there a population more alive to their own interest than the northern farmers? The writer also admits, that the long wool sheep are much larger and yield much more wool—but contends that the long wool sheep require so much food to sustain so large a carcass, that he could raise two or three fine wool sheep upon what it takes to support one long wool, and thus upon the same food he would have an equal amount of mutton and wool. Sad experience *proves* to me the very reverse of this. I fed the largest fine wool sheep I have ever seen in a field adjoining the one I fed the Cotswold wethers in, mentioned above. The former had the advantage of pasture, water and age—being five years old. I fed them high until some time in March, and with great difficulty and grumbling by the butcher got them off for four dollars. The Cotswold yearlings went off in January, bragged of. I fed each day almost as much to two of the fine wool sheep as to one of the Cotswold—the former always eating clean, the latter sometimes leaving some of their food. But what will we do with this fine wool? We need a great deal of our wool for our laborers' clothes. We do not manufacture broadcloth; and if we could, who wishes their laborers clothed in broadcloth? And he says, you can sell the wool at a high price in the north; but transportation and commission are to come out of it there, and then it is doubtful whether the farmer gets more neat per lb., than he would get at home for the Cotswold.

A gentleman of Virginia sent me this summer a lock of very fine wool with a message that it sells in the north for eighty cents per lb. I have been noticing the northern papers and see no quotations above "*forty* cents for the *finest* wool."—But in my calculations and comparisons will give them the advantage of the highest price claimed for the wool, even without any deductions for transportation or commission and the extra price of four dollars for the carcass after a whole winter's feeding with grain, and I believe not an instance is known of their selling over two dollars and fifty cents before.

No. 1. Cotswold as heretofore stated under same No. (yearling,)	$13 00
Fine wooled, five years old, four dollars; wool 3 lbs. washed at eighty cents, $2 40,	6 40
In favor of Cotswold over fine wooled,	$6 60

This is more favorable to the fine wooled than the most sanguine advocate has ever claimed—for it is the highest possible price for the mutton, and he must be five years old before he can bring that, (and makes no deduction for transportation or commission on the wool)—in which time I could sell five Cotswold muttons; and shows the Cotswold in the worst position. Let us do more justice to the Cotswold in the calculation.

Five Cotswold at $10, $50; wool $15,	$65 00
Fine wool—fleece for five years, $12; mutton $4,	16 00
Profit in favor of Cotswold on same amount of food,	$49 00

Again—Put the Cotswolds as above; fine wool at their fair proper standard, and a full one at that, viz: at *its quotation for the best*, without making any deduction for transportation or commission. The Cotswold wool is put at the price I sold for.

Cotswold, as before,	$65 00
Fine wooled—mutton $2 50; fleece, five years, fifteen lbs. at 40 cents, $6 00—total,	8 50
Profit of Cotswold over fine wooled for five years,	$56 50
No. 2. Cotswolds, as stated in No. 2, five at $16 66⅔ each, $83 33; five fleeces, $15,	$98 33
Fine wooled, as above,	8 50
Profit of Cotswold over fine wooled for five years,	$89 83
No. 3. For reasons heretofore given under that number—five Cotswolds at $20, $100; fleeces, $15,	$115 00
Fine wooled, as above,	8 50
Profit of Cotswold over fine wooled for five years,	$106 50

Upon any of these calculations let gentlemen multiply by the number they wish to feed, and see what their profits may be of one over the other. Can a farmer hesitate one moment in deciding which is most profitable to him, a sheep that he can bring into market the fall after one year old for $10, or one that he cannot bring into market in five years for over $2 50? It will be seen in the first calculation, in No. 1, I gave more than is claimed by the most sanguine advocates for the fine wooled sheep, and place the Cotswold at what they sold for as yearlings after one fleece—and still a balance is due the Cotswolds; then added after, one Cotswold for each year until the fine wooled sheep came to his prime, allowing the fine wool sheep (as well as the Cotswolds) a fleece for each year, and reducing his price as mutton to what no man can get more for, ($2 50)—and putting their wool to the quotation in the *North* without *any deduction* for transportation or commission—gives a profit to the Cotswold over the fine wool sheep for the five years of $56 50. No. 2 gives $89 83 for the same time—No. 3 gives $106 50. Are not these calculations fair? As far as the Cotswolds are concerned, they are strictly facts. As to the fine wooled sheep, let any person show his getting more than allowed. In not one of the calculations did I take into consideration what I verily believe to be the fact, that I can fatten at least two Cotswolds (even yearlings) on what it would take to fatten one fine wooled sheep (even five years old)—nor did I calculate what is well known to be the fact, that one Cotswold has brought in the United States, upon extra keep, seventeen pounds of washed wool in one fleece.

The New Yorker advocated raising wool as the prime object of the South. I consider it of secondary consideration—amply paying for keep—the better the keep, the more abundant the reward; but the prime object to the farmer is what gives the most money advantageously.

The fine wooled sheep has been tried in this county. A gentleman gave as high as $1500, I think, for one; but they were found unprofitable, and I doubt now if the *best* could be *given* for *breeding purposes*. This county has justly a very exalted character in the markets for fine mutton—probably no county in the Union can exceed it in that particular. Judicious breeders have had crosses heretofore in their flocks of Southdowns and Bakewells, and since I brought Cotswolds in the county, have been crossing with *them*, until they are selling their part breeds (even yearlings) at from six to eight dollars each. I have bought them myself to feed with my through bred wethers at prices ranging from six to seven dollars and a half each. But I occupy too much of your space, probably to the exclusion of more interesting matter from much

abler hands; and with sincere wishes for for the extension and usefulness of your paper, I remain,

Yours truly,

JOSIAH WM. WARE.

Near Berryville, Clarke Co., Va.

The name alone of Col. Ware will be enongh to attract all eyes to the foregoing communication. He is known over all his section of the country of the country as one of the most successful agriculturists in Virginia. Particularly will his views of sheep breeding receive much consideration, as he has become known far and wide as a most experienced and extensive owner and breeder, and as the introducer of the Cotswold breed of sheep into this part of the world.

PROFITS OF CATTLE-RAISING IN EASTERN VIRGINIA.

It strikes us that a judicious system of cattle-raising would redound greatly to the benefit of the farmers in the tidewater section of our State. The present management of stock in that region is generally very bad, and conducted entrely without any profit save that derived from raising a few weak and badly grown work oxen and milch cows, neither being produced in sufficient numbers to satisfy the home demand, or even the requirements of their owners. To judge from the present mode of proceeding, we should say that the manure to be made by means of cattle is merely an incidental matter, and not, as it should be, a main object with the farmers.

This state of things, however natural it may be, as the result of the slave system as it has heretofore existed in Virginia, ought not to continue any longer now that the system itself is essentially changed, and destined to still greater modifications. We no longer clear land, or cultivate one exclusive staple: we are changed from settlers and planters into farmers, with the consequent variety of occupation. It is now a part of our plan to manure not only with mineral and vegetable, but with animal substances; and the excellence of the farmer is estimated very much by the degree of fertility which he imparts to his land. He seeks too to economise labor by growing more crop on the same surface than he did formerly. Yet, strangely enongh, he neglects the main source of manure, though it may at the same time be made a source of direct revenue, enough at least to pay its own cost. The main reliance of every farmer for putrescent manures is cattle; yet how few are raised or kept on the farms in lower Virginia. Let not this be any longer; let the farmer keep more stock, rely upon selling his annnal surplus at a good price in a lean condition. They need not have consumed one grain of corn, unless the owner chooses to feed it out with the certainty of repayment in the price he obtains. All that is necessary is the ordinary care of a "merciful man" in winter and more pasturage in summer, these two items to be paid as with usury in manure and money.

We are aware of the objections made to grazing their lands by the farmers of lower Virginia; but we know that in this they make a great mistake; that they confound the use and the abuse. And we stand prepared to prove that the practice of the most enlightened agriculturists of the world, the farmers of G. Britain, is directly against them; and that the most barren sands in England have been brought to a higher degree of productiveness than our best loams by a mingled system of tillage and cattle husbandry. Indeed, we believe that their own experience and observation would refute their theory; for they admit the necessity of having their lands trodden to give the necessary consistence for wheat; they know that a bullock consumes only about one-third of the grass or clover upon the land, the rest being trampled on and refused by him; and they know, also, that the excrements of the animal, *especially the urine*, restore to the soil a full equivalent for one-third of its herbage abstracted.

The business can be begun without difficulty. The system of Western Virginia can be easily pursued. There, and in the contiguous portions of Tennessee and N. Carolina, vast numbers of cattle are annually raised and driven into the grazing region of Virginia, and sold to men who make their profit in feeding

or grazing them for market. The droves, numbering generally several hundred head, consist entirely of bullocks and spayed heifers not less than three nor more than four years old, and are sold without difficulty for cash. We can see no reason why the tidewater farmer cannot raise an equally good, indeed better, animal at the same age for the same money. True, the Western bullock, feeding for many months of the year in wood ranges, and the balance of the time on the product of cheap land, costs less than the bullock raised in the East, but he cannot be sold cheaper, because his owner loses all or nearly all of his manure, and because he constitutes the sole revenue of his owner, whilst the most inconsiderable part of the income of the tidewater farmer would be derived from the sales of his stock, which are kept, *not for direct income, but for manure*, and which are sold off annually in just such numbers as suffice to keep them down to a level with the subsistence of the farm; thus producing a considerable it may be, but purely incidental profit, the main and direct profit accruing from increased crops and the saving of labor.

If it be objected that the grazier gives for the cattle only one-half of what he expects to sell at, we reply, first, that such is the rule, and western competition will preserve it; next, that the tidewater farmer cannot graze for market, because he is compelled, in order to manure his land, and to keep up his stock, which *distemper* forbids him to recruit from a distance, to keep on hand about five or six times as many as he would annually sell; and, lastly, that he ought not to complain that the grazier has this advantage in the matter of cattle, when he himself has the balancing one of lands cheaper and more easily tilled, and of convenient grain markets and cheap freights.

We might easily expand this article, so full of merit is its subject, and so important at this time to lower Virginia; but enough has been said to call attention to the subject, and we are sure that if it is worth consideration it will have it, whether we write a hint or a volume.

We hope that those who have any thing to communicate in regard to it will speak through our columns.

NOW SAVE THE HOG MANURE.

At this season hogs that are fed high make much manure, and now is the time to secure it by covering it with loam.—Hog pens are exceedingly noisome when nothing is thrown in to neutralize their excrements, and it is a foul practice to suffer them to fill the air and the nostrils of those who pass with matter that is all wanted in our fields and gardens.

How wise the arrangement of Providence that nothing need to be lost. The most filthy matter that can be found about houses, barns and hog-pens is the most important article for the farmer to enrich his lands. Nothing should be lost. All refuse matter subject to decay is useful on impoverished lands. Decaying, rotting matter, properly mixed with loam, goes to form new growths, enters at once into new plants, and nourishes them more effectually than any artificial substances that can be prepared.

The drain from the dwelling house is full of valuable matter, which at this season is unwholesome enough to produce malignant fevers. Nothing will purify the air so well as fresh loam thrown into the drain. No stagnant water should be allowed to stand about a dwelling at this season of the year. Health and economy require that loam should be used to neutralize the efforts of all such filthy places. —*Massachusetts Ploughman.*

SUN BLIGHT ON FRUIT TREES.

We have seen a good many apple and peach trees whose trunks are wholly or partly killed on the south-west side by the scorching rays of a one and two o'clock sun falling with deadly influence on the same. Make low tops of such trees, that they may shade and protect their trunks. The tops of fruit trees are seldom skilfully shortened in and properly trimmed, so far as our observation has extended. Whilst some are allowed to make too much wood, and over long branches, others are permitted to attempt to bring to maturity an excess of young fruit. Overbearing one year induces sterility the next.

SUBSOILING.

Of the advantages which would result upon a *dry, sound soil* from subsoil ploughing, we do not entertain the shadow of a doubt. The expense of such method of preparing land we know will be looked upon as an insuperable objection by many. True it will cost double to prepare land in this way, but then, as it will increase the product the first season fully twenty-five per cent., or even more, the extra expense will be brought back with compound interest, so that the culturist will be the gainer even in the first crop to say nothing of the superior productive value of his land throughout the remaining years of his course of rotation. A very important advantage results from subsoiling and preparing it for purposes of culture, and thereby enabling the culturist to *deepen* his surface soil without the least danger of detriment.

In the county of Albemarle, there exists a Farmer's Club, the members of which have resorted to the laudable practice of communicating their experience to each other by reading reports of their individual proceedings and enterprises at the meetings of the said Club. Many of these documents would be of great value if communicated to the farmers of the State through the medium of the public press. Understanding that a report upon the profits of cattle raising had been made some time ago to this club by Mr. Ruffin, which contained much useful information, and meeting that gentleman while on a trip to Albemarle a few weeks since, we requested it of him for publication. He has acceded to our request, and here it is. We wish other farmers who have such valuable documents would follow his example.

A REPORT ON THE FEEDING AND SALE OF EIGHTEEN BEEVES,

Made to the Hole and Corner Club, No. 1, of Albemarle, by request.

Stock cattle were so high last year in the Valley and the mountains beyond, that I determined to procure my supply at home. I bought accordingly thirty-three bullocks, of various sizes and ages, at prices ranging from $8 to $24, the whole averaging $13 22. Besides these, I had six of my own, making a total of thirty-nine. One I killed, and selected eighteen of the rest to stall feed for the early spring market. I averaged the eighteen at $16 16⅔. I could not afford to pay for building the stable to accommodate them; and owing to the backwardness of my wheat seeding, and to an unusually heavy crop of corn, on a much larger surface too than I commonly till, it was so late before I could commence building it with my own hands, that it was not finished till the 15th of December. So that my cattle ran out until that time, and when housed they were all losing flesh, a very unfavorable circumstance; some of them were quite thin, and only a few fat enough for my purpose. But I was encouraged to feed them by the cheapness of grain and the low price at which they were bought, and by confidence in the mode of feeding I proposed to adopt.

In stall feeding I consider that perfect quiet is necessary; that each bullock should have a spacious stall to himself, which, when once put up, he should never be permitted to leave, until two or three days before setting out to market; that light and cold should be excluded; an abundance of fresh water be always at hand in a trough; the most rigorous punctuality both as to time and quantity exacted in feeding; the stall kept well littered, both for warmth and cleanliness, and to make manure; the food removed as soon as he has finished his meal; and the trough kept sweet and clean. I complied with these requisites except in one particular; the plank of the stable was nailed on perpendicularly, and being green large cracks were left between each plank, and there was no loft: this made it much too light and cold.

At the end of eighty-four days nine of them were sent to Richmond and sold at $7 50 per cwt. nett; they weighed 647 7-9 lbs. Twenty-eight days afterwards the other nine were sent to Washington and sold at the same price; they weighed 556 1-8 lbs.

Classing them in lots, as they were sold, I submit the following statements—first, of their consumption; and second, of the cost and profit of the whole operation:

days.			
	First Lot of nine, fed eighty-four days, as follows:		
25	17 bushels of corn meal per day	} i. e. 2 wine gallons to each of the mixture,	113 12-16 lbs.
"	1¼ " flax seed meal per day		16 4-16 "
19	15-16 " corn meal " "	} 1¼ gallons to each of the mixture,	24 15-16 "
"	3-16 " flax seed meal " "		3 9-16 "
84	1 " wheat bran " "	1 gallon to each,	84 "
"	6¾ " turnips, pumpkins and cabbages, per day, 3 pecks to each,		567 "
16	shucks, top-fodder and wheat chaff at discretion.		
38	90 lbs. of sheaf oats per day, 10 lbs. to each,		3420 lbs.
	Second Lot of nine, fed as above for eighty four days, afterwards as follows:		
33	1 5 16 bushels of corn meal per day	} 1¼ gallons of the mixture to each.	36 12-16 bu.
"	3-16 " flax seed meal per day,		5 4-16 "
"	1 " wheat bran " "		28 "
"	6¾ " green food " "	as above,	189 "
"	90 lbs. of sheaf oats,	as above,	2520 lbs.

I kept no account of the long food given them except the oats. Not having any hay, it consisted entirely of shucks, tops and chaff, for forty-six days, when I commenced giving them sheaf oats, gradually at first and increasing it as they showed less appetite for the shucks, &c. The oats were somewhat damaged, and I have charged more than I think they ate, because in making a statement which may influence others, it is proper to make it *against* myself.

Their long food was chopped fine and sprinkled with the meal and bran *in* the trough. The green food was cut up also. The meal and flax seed were ground together in the proportion of one to seven. The remnant of each feed was given to my work oxen, and paid them for hauling the litter.

The shucks, tops and chaff are not charged against them, because they are worth no money. The labor of having the corn ground is offset by the difference in favor of the meal; and that of making the turnips by the superior tilth of the land that produced them, its better take in clover, and the probable increase in the crop of oats now growing upon it. The pumpkins grew in my corn field, and cost nothing; and enough were fed to hogs to pay for gathering and storing. The value of the cabbages is estimated according to the supposed product of the land in corn, say 12 barrels, worth 24 dollars, less the value of cabbages sold, or 15 dollars, which makes them worth 9 dollars, which sum for convenience I shall divide between the two lots. The hand that attended them I have charged at a hire of 6 dollars per month, a reasonable rate for the season of the year.

With this explanation, I proceed to state an account with each lot.

First lot of nine beef cattle in account with F. G. R.

1845.

April 1. To gross sale at Richm'nd.		$420 30
To 44 loads (ox cart with 4 steers) manure, at $1 per load,		44 00
		$473 30
By purchase money, $183, and interest from 1st of October, '47, five mos., $4 57½,	$187 57½	
By expenses attendg sale,	26 45	214 02½
By 130 11-16 bushels, say 27¼ barrels corn at $2 per barrel.	55 00	
By 20 bushels flax seed at 90 cents per bushel.	18 00	
By 84 bushels wheat bran at 6¼ cents per bushel.	5 25	
By 567 bushels green food, explained above,	4 50	
By 3420 lbs. oats at 40 cts. per cwt.	13 68	
By salt,	1 25	
By hire of hand at $6 per month, half paid by this lot,	9 00	106 68
To balance,		$153 59½

Second lot of nine beef cattle in acc't. with F. G. R.

April 24. To gross sales at Washington,		$375 38
To 65 loads (size as above) of manure,		65 00
		$440 38
By expenses attend'g sale.	$52 92	
By purchase money, $108, and $3 24, six months interest on same,	111 24	
		164 16
By 175 7-16 bushels, say 35 1-10 barrels of corn, at $2 per barrel,	$70 20	
By 25 bushels flax seed, at 90 cents per bushel,	22 50	
By 112 bush'ls wheat bran at 6¼ cents,	7 00	
To 5940 lbs. of oats, at 40 cents per cwt.	23 76	
By 756 bushels green food,	4 50	
By hire of hand as above, half of last month given to other cattle,	12 00	
By salt,	1 75	
		141 71
To balance,		$134 51

Thus it appears that I have made $288 clear money on the whole operation, or $177 (an average clear profit of $9 28) over and above the manure, which is generally considered to be of itself a sufficient remuneration for stall feeding. This large balance is partly due to the low price of grain, and partly to the cheapness of my cattle. The feeding I think was heavy, but rendered necessary by the incompleteness of the house, the comparatively low order of the cattle, and the short time I had to get them fat. I believe that if I had put them up fat, and fed them from the 1st of November in a warm house, that I would have had better beef, and saved one third of their food.

The whole lot was in fine order, and I learned, accidentally, that the butchers thought they had much less offal about them than usual—a fact doubtless attributable to the mode of feeding.

In conclusion, I will say, that to sell well we must not rely upon good luck or an open market. The only safe reliance is on the order of our stock. They must be fat enough to *command* their value.

All which is respectfully submitted.

FRANK G. RUFFIN.

May 20, 1848.

SALT AS A PREVENTIVE OF RUST

Sir *John Sinclair*, one of the best agricultural writers that England ever produced, has the following remarks on the subject; and as the season is approaching to test, by experiment, the value of the suggested preventive remedy against one of the most formidable enemies of the wheat crop, we copy it, and would be pleased that several wheat growers would give it a fair trial and report the results of their several experiments. In his "Code of Agriculture," he says:

"*It (salt) has a tendency to prevent Rust or Blight in Wheat.*—In the course of a most extensive inquiry into the causes of the rust or blight in wheat, and the means of its prevention, it appeared that Mr. Sickler, a farmer in Cornwall. was accustomed to manure his turnip land with the refuse salt from the Pilchard fishery; and that any ground thus treated, *was never liable to the rust or blight*, though it infested all the neighborhood.

This important circumstance is confirmed in a recent communication to the author, from the Rev. Robert Hoblyn.—He used one ton of old salt, with one ton of fresh fish, mixed with earth, and from twenty to thirty tons of sea sand, and his crops, he states, were always good, *and never infested with rust.*

It is probable that the salt is the only article in this compost that could be of material service in preventing the rust, by its checking putrefaction, the result of too frequent a repetition of corrupted manures. It is well known that the rust does not attack plants in a state of perfect health. Its general cause is, the over-fulness, or over-luxuriance of the plant, from its being glutted with rank and unwholesome food."

TO KEEP A HOUSE COOL.

Open the doors and windows at five o'clock in the morning, keep them open two hours; then close them all—windows, doors and window shades—and the house will remain cool during the hottest part of the day.

CONTENTS OF NUMBER IX.

To Subscribers and Postmasters.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

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P. D. BERNARD, *Richmond, Va.*

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MEMORANDA FOR THE MONTH.

WHEAT.—If the reader has wheat to sow in this month, let it be quickly done. The advocates of late sowing among enlightened agriculturists are fewer every year. It was the course pursued for a long time to avoid the ravages of the fly. But it has been found that more is lost than gained by it. The chance for the fly is certainly diminished; but with it also, the chance for a good crop next year. The average loss from the fly is diminished; but a still greater average loss is suffered from the winter-kill. The crop is unable to bear the sudden freezings and thawings of the winter and spring; and more is lost by that than by the fly. And from having to pass the winter without the necessary maturity, it never acquires that strength and vitality which will enable it to compete with early sowed wheat.

CORN.—The gathering of this crop is a prominent feature of this month. Carts and hands are all employed now in bringing the unshucked ears to the barn yard. After it is all there commences the business of getting it out. The common practice in Virginia is to get together all the negroes in the neighborhood, give them some whiskey, and let them sit around the pile, sing songs, and get it all out in two or three nights. This practice of allowing a "corn-shucking" as the negro holiday of the neighborhood, has come down to us from our fathers, and our farmers allow it to exist because they think it a cheap and quick way of getting out the corn. We are convinced that it is no such thing. More is stolen and carried off from these nocturnal orgies than would suffice to pay a few additional day hands and thus to get it out in a regular manner; while they serve to corrupt the negroes of an entire county.

HOGS.—Whoever has compared the cases, well knows that less trouble and less expense are required to fatten hogs in moderately cool weather than in very cold weather. The reason of it is simply, that when the weather is very cold, a considerable portion of the sustenance which would otherwise go to increase the fat and flesh is consumed to keep up the animal heat. For the same reason human beings require more food in cold than in hot weather. And but for the relaxation of the constitution, and the exhaustion by perspiration produced by heat, it would be much easier to fatten animals in very hot weather than any other. But as heat does produce these effects, it is much easier to fatten animals in October than at any other season. The weather is such that the fibre is braced up, and yet not so cold as to render any considerable consumption of carbon, nitrogen, &c. necessary to preserve the usual temperature of animal warmth.

Pumpkins, roots, &c., together with some corn, fatten hogs quite as well and with much less expense than if fed altogether on corn.

A spoonful of sulphur, given to them mixed with dough, two or three times a week after they are first put up, has a good effect upon fattening hogs. It tends to prevent inflamma-

tion. Ashes or charcoal should be kept within the sty. A still more important matter is a constant and plentiful supply of fresh water; which they will *not* get if trusted to the negroes alone.

It will be found an immense saving, if instead of throwing corn to your hogs in the ear, you have it shelled, coarsely ground, and given to them in the form of dough. Then they eat every particle of it. But when the corn is thrown to them in the ear, they eat only a small portion of it. Some ears they only bite. The rest becomes so rubbed into the mud and filth of the pen, that they refuse to touch it; and corn enough lies rotting about in the place to last them a week if they would but eat it.

Cows.—Towards the latter part of this month, pasturage begins to be scanty. The cows from whom much milk is expected must be fed every night and morning. And here is additional reason for having the corn on which you feed the hogs given to them off instead of on the ear. Corn cobs broken to pieces of an inch, or half inch, mixed with bran, and boiled till they are soft, make one of the best messes on which milch cows can be fed.

Corn stalks cut up and steamed are also excellent food for cattle. They are well worth hauling in for this purpose if for nothing else.

Fodder.—This is generally finished, so far as the pulling is concerned. But many persons have not yet stacked their fodder. We would earnestly recommend to them that they should put up their wheat straw along with it, in alternate layers. The fragrance and sweetness communicated by the fodder renders the straw almost as palatable to the cattle as hay itself.

Orchards.—Just as the leaves have nearly all fallen is the true time for transplanting young fruit trees. Dig a hole sufficiently large and wide to let the chief roots branching off on all sides be placed in it without cutting and in their original and natural position. Then drive a strong stake down into the firm earth at the bottom of the pit, to which the young tree should be tied with a wisp of hay. This is of course to keep it from being disturbed by the winds before it has obtained a sufficient hold in the ground to render such support unnecessary. Then sift in earth mixed with rotted wood or other rich loam, with a little water from time to time, until the whole is full.

Pumpkins.—Gather them in as soon as ripe and before frost if possible. It is a mistake to suppose that frost sweetens pumpkins, or in any way benefits them. Before feeding pumpkins to cattle, par-boil them. The trouble, which is not much, is amply repaid by their increased value as food.

Manure.—Now commences the manure season. The man who does not take advantage of that profuse shower of brown leaves which is now falling in all the woods, can never be called a sensible man or a good farmer—unless he has some better means of getting manure. But you that have not, employ all your time in hauling them together and in building a compost heap. Pile them up with the corn stalks. Add the layers of lime and ashes and marsh mud. Pour over them all the urine which your stable and cattle yard affords; and the compost heap becomes a mine of gold.

SUGAR-CURING OF BUTTER.

Persons who put up keg butter for their own use, or for a distant market, usually salt their butter very high. This high salting necessarily detracts from its quality, injures its ready sale, and reduces its price. If we can modify this excess of salt, by using more palatable substances, of equal efficacy, as preservatives, it will be an improvement. Chemists tell us that sugar is one of these substances; and experience gives us the same information. Who is not familiar with "sugar-cured hams?" If pork can be cured with sugar, why may not butter be so preserved also? is a common sense inquiry. Experience has shown that it may. Dr. James Anderson, the celebrated agriculturist, whose treatise on the management of the dairy, particularly with respect to the making and curing of butter, is still our highest and best authority on the subject, found, from some

years' trial of it, that the following named composition—the properties of which, we believe, were discovered by his amiable lady—was far preferable to salt alone, as it not only preserve the butter more effectually from all taint of rancidity, but makes it also look better and taste sweeter, richer, and more marrowy, than portions of the same butter cured with common salt:

Composition.—Take of sugar, one part; of nitre, one part; and of the best Spanish great salt, (or rock salt,) two parts.—Beat the whole into a fine powder, mix them well together, and put them by for use. The Doctor continues:

"Of this composition one ounce should be put to every sixteen ounces of butter; mix this salt thoroughly with the butter as soon as it has been freed from the milk, and put it without loss of time, down into the vessel prepared to receive it, pressing it so close as to leave no air holes or any kind of cavities within it. Smooth the surface, and if you expect that it will be above a day or two before you can add more, cover it up close with a piece of clean linen, and above that a piece of wetted parchment, or, for want of that, fine linen that has been dipped in melted butter, that it exactly fitted to the edges of the vessel all around, so as to exclude the air as much as possible, without the assistance of any watery brine; when more butter is to be added, the coverings are to be taken off, and the butter applied close above the former, pressing it down and smoothing it as before, and so on till the vessel be full. When it is quite full, let the two covers be spread over it with the greatest care, and let a little melted butter be poured all round the edges, so as to fill up every cranny, and effectually exclude the air. A little salt may be then strewed over the whole, and the cover be firmly fixed down to remain close shut till it be opened for use. If all this be carefully done, the butter may be kept perfectly sound in this climate for many years. How many years I cannot tell; but I have seen it two years old, and in every respect as sweet and sound as when it was only a month old.

"It deserves to be remarked, that butter cured in this manner does not taste well till it has stood at least a fortnight after being salted; but after that period is elapsed, it eats with a rich, marrowy taste that no other butter ever acquires; and it tastes so little of salt, that a person who has been accustomed to eat butter cured with common salt only, would not imagine it had got one-fourth part of the salt that would be necessary to preserve it."

It is to be hoped some of our farmers, on reading the above, will follow its recommendations. The composition mentioned is, we have understood, much used in Goshen, Orange county, New York, a place famous for its superb butter. Great care should be taken to get the purest salt and sugar. That known through the country as the "ground alum" is the best salt. The sugar should be of the purest white—either the loaf or "fallen loaf."—Those excellent butter makers in the Glades of the Alleghanies, would do well to make some experiments for themselves in this matter.—*Farmer and Mechanic.*

A VEGETABLE CURIOSITY.

We have seen a new curiosity in the vegetable kingdom, which is becoming an object of interest to the fashionable world. We understand that many specimens of it have been sent to our National Institute. It is a nut, and called the "vegetable ivory, or nut of the ivory plant." The shell, or outer covering of the nut, is scarcely thicker than that of the common hazel, and of a similar color, and is so extremely hard that no instrument can readily make an impression on it. It is classed among the family of palms, and is common in the Mascareen islands, where it is called tagna plant. It is about half as large again as the horse chesnut. The kernel, in its early state, includes a limpid liquor, which becomes milky and sweet, and at length acquires the solidity of ivory, which it very much resembles in color, polish, and consistency. The English are manufacturing a variety of fancy articles out of the nut, which is

said to be superseding the elephant ivory. One quality of this nut is said be, that its shavings may be boiled into a milky liquor, and not at all gelatinous; and we should not be astonished if some of our ingenious countrymen were to find out some method of reducing large masses of it to the liquor form, and then moulding it into beautiful ornaments of a size much larger than those which are made of the animal ivory.

The gutta percha and the ivory nut are probably not the only vegetable curiosities—susceptible of use, too—which may be found in the islands of the east, and which our enterprising and commercial men may discover in the countries they may visit, and introduce into our arts.—*Wash. Union.*

VINES ON FOREST TREES.

In travelling through the states of Massachusetts and Connecticut a few years since, I was drawn to observe the quantities of grapes growing wild on vines that were climbing over the tops of the forest trees; most of those which I tasted were of good quality, and they grew in abundance without any care whatever. I have often heard people from the above mentioned states, speak of the excellent grapes that they used to gather from vines on the forest trees. A few years since, a friend of mine took the trouble to collect a quantity of cuttings of the best varieties, which he planted in his garden. The vines when they grew were managed with much care, after the manner that Isabella and Catawba vines are, on open trellises. The consequence was, very little fruit was produced, and that of a very poor quality; and as he thought he had done his best, he at length came to the conclusion that it was the change of location that had made such a wonderful change in the fruit. It happened that a few tendrils from one of the vines came in contact with the projecting limb of a plum tree, and in a short time the shoots reached the top of the tree, and the next year the owner was gratified to see good fruit, and of as good flavor as any, that he had ever tasted of the kind in their native place. In several instances I have known Isabella vines to rampant over the tops of large trees, and they have never failed to produce large crops of grapes every year, of better quality than any that I have ever eaten grown on trellised vines, and without any labor being expended. There is one vine now growing in this town, that produces more grapes than any other six that are managed in the ordinary way; and what I wish to suggest is this: why cannot Isabella and Catawba grapes be raised to any extent throughout our whole country, on the tops of the scattering trees in the fields, and along the borders of woodlands, and woody ravines, without any labor being expended or required, except in planting the vines, and training them up a permanent post set for that purpose? There should be three shoots fastened to the sides of the post, with loops of leather, until the beginning of March in the second year, at which time the number should be reduced to one, which is to make the trunk of the vine. It should be protected while it is small with stakes to prevent injury by cattle or other animals. The vine needs the support of the post until the tendrils obtain permanent hold of the limbs of the tree, and the body attains sufficient size to withstand anything that may come against it. The vines should not be set near the body of the tree, because the ground is already occupied by the roots of the tree—but directly under the extremities of the branches on the south side, where the vine will receive the warmth of the sun. If the soil is not first rate, it should be taken away and replaced with at least one cart load of rich sods from the roadside, which is much better than any highly manured soil for the vine or any fruit tree. Much has been written on the management of vines, with many precise rules for pruning, training, manuring, &c., which all amounts to nothing with farmers generally, who have no time to devote to such work. All that our native vines want is plenty of space to extend over, and plenty of air and sun, all of which

they receive perfectly if they are allowed to run over the tops of the trees. Another advantage in planting vines in the situations that I have described, is that they are rendered more lasting, and will produce fruit for several generations, judging from specimens that I have seen growing in different parts of our country. Writers compute the age of the vine at two hundred years, and they have been known to reach a much greater age; hence in planting a vine we are doing work that need not be repeated soon in the same place if properly done.

I. Hildreth.

Seneca, April 7, 1848.

ADVANTAGES OF DRAINING LAND.

Sir John Sinclair, who is one among the best authorities, thus sums up the advantage of *draining arable land:*

"When it is thoroughly drained, land can be ploughed at any season with advantage—it is easily managed, and can be kept clean at a moderate expense,—every exertion of good husbandry is attended with success,—the ground suffers less from the inclemency of seasons,—the produce is generally ample,—the quality of the grain is excellent, and the farmer will thrive, where his predecessor, cultivating a wet and undrained soil, was impoverished or perhaps totally ruined."

Again he remarks:—

"By the removal of stagnant water, and the prevention of noxious exhalations, the climate is rendered more healthy and genial, both to animal and vegetable life. Indeed, since the introduction of draining into this country, *agues* and other similar distempers, occasioned by the humidity of the soil, and the consequent impurity of the atmosphere, have been, in a great measure, prevented, and the general health of the inhabitants has been greatly improved."

Of wet lands he remarks:—

"While land remains in a *wet state*, the manure laid upon it, whether *putrescent* or *calcareous, is, comparatively speaking, of little use;* the seed sown often *perishes;* the crops are sickly, and later ripening; and the operations of harvest are perhaps attended with injury to the soil, uncertainty and danger."

Upon the application of manure to drained lands, he has this precaution:—

"Care in particular should be taken to *render the lands dry* before the application of *lime, dung or compost*, otherwise the attempt will be ineffectual."

For the Southern Planter.

OLLA PODRIDA.

All farmers who take the trouble to write, should keep steadily in view the improvement of the soil or mind. When either is departed from, the work which condescends to be the vehicle of communication loses cast amidst the periodicals of the day, and is much more generative of bad than of good feeling, among those who, though unacquainted personally, ought to be *brother farmers.* This train of thought is induced by an article recently published, where dog-fennel and Methodists are classed together. Have we gone back to the days when any denomination of Christians shall be called or classed with dogs? There are many things said by wicked men, and classed together, and all manner of evil things spoken falsely of all Christians; but shall these be admitted into the journals to which our boys come as text-books for farming knowledge? Dog-fennel and Methodist—Did you ever! Tell it not in Gath! We may expect soon to see wire-grass and Presbyterians, sassafras and Baptists, and sheep-sorrel and Episcopalians, classed together, and an effort, of course, to exterminate them *all* together as pests. In opposition to this class of thoughts, permit me to say that the May No. of the Planter is as far before the generality of Nos. issued by the Planter, as the present is before the last century in the diffusion of knowledge. Go on—such articles as those on Bought Manures—Experiments in Corn Raising, &c., will do good, and make the Planter the *farmer's pride.*

By the way, speaking of sassafras, I

disagree with you somewhat about it.—Few lands are better than Albemarle, and no where does sassafras luxuriate more than there. Mr. Ruffin of that county has, I learn, invented an implement capital for its suppression, and from his known intelligence, and willingness to give as well as receive, will, I hope, favor us with a communication on sassafras.

Your correspondent "I" makes three several brushes at me, which I will answer in order. He says, "Your Irish correspondent who hopes to live to see the death of the Planter," &c. You, Mr. Editor, are responsible for that precise idea; for in leaving out a letter you give the above meaning. I wrote, "While the Planter exists, and I remain yours, &c." Here you see *I* at least did not place the Planter's "*death*" *before* my own; but made them equal. Again he says, "Unlike ——, 'in his sorrow for alterations, omissions, &c.,' he permits you to do as you please." Again I have to complain, as this fact calls for an answer, not otherwise necessary. For the question what does he mean by "Should this method act as well as *when* practised?" &c., you substitute the word *when* for *where;* but the error is so palpable from a general reading of the whole piece, that none but an "Ignoramus" could understand it otherwise. Again he says, I should like to know what conclusions "L." has come to by reading Young's Treatise. "Send it to me and I'll conclude." Does he wish you or me to buy the work and send it to him? But lest it may be out of print and he debarred from its reading, I'll give you a few extracts from

ARTHUR YOUNG ON TARES.

"Tares is a pulse not of general use in every part of the country. Its value is extremely various. In some places they cultivate it for the seed; in others, they mow it green for horses and cattle; in some they use it chiefly for hay, and in others for spring feed of sheep and lambs. But notwithstanding the uses of it being so various, yet it no where forms a crop regularly in a course. From which one would suppose that the merit of it is not great—but such would be certainly false judgment. There are two sorts, winter and spring. The spring variety is that which I used—not from knowing it to be superior, but from the difficulty of getting the true winter tare. I sowed for it several times, but found that I was deceived in the seed. The whole crop did not die, but it succeeded much worse than when sown in the spring.—Tares are called *Thetches*, *Fitches*, and *Vetches*—I at least know of no distinction in these crops."

I have watched the tares of this country, and find them to come naturally in winter, and fail when sown in spring. Hence, as they are grey and black, I conclude them to be the true winter vetch which probably sold in the English or Irish market, in a mixed state, part of which only succeeded with Mr. Young. I know they are not the spring variety, for by the politeness of Mr. Johnston I obtained direct from England the true spring kind, which were double the size of ours, and as before remarked, did not suit our climate. Mr. Young says:

"In this neighborhood they are seldom cultivated for seed, but generally for hay. The farmers mow them when in full bloom or when just beginning to pod.—The latter is a bad custom; for the tares then draw too much virtue from the land, and make not such good food as when in the highest state of succulency."

In this Mr. Young is certainly wrong; for no unripe food possesses the nutrition that ripe does, and especially this legume, which is full of seed from top to bottom. Mr. Y. went through fourteen years of experiments with tares, and I give a few of them:

"Sowed six pecks tares on half acre of land, and expended in seed, labor and rent, 15*s.* 9*d.*; after labor, cutting, &c., 2*s.*—expenses, 17*s.* 9*d.*

Product, 25 cwt., at 30*s.* per ton,	£1 17*s.* 6*d.*
Expenses off,	17*s.* 9*d.*
Leaving a clear profit of	19*s.* 9*d.*

For half an acre, or about nine dollars per *acre*."

This encouraged him to cultivate them every year, and he then observes:

"Their great benefit is to the ground. Barley seldom fails after tares; for as they are mowed before they seed, they do not draw the ground, while the very thick shade they make mellows it to a great degree, and is found to be an ameliorating crop, leaving the ground better than it was before."

His second, third and fourth experiments resulted as follows:

1st, in £2 5*s.* 5*d.* or $10 per acre,
2d, in £4 18*s.* 5*d.* or $22 per acre,
4th, in £6 5*s.* 9*d.* or $28 per acre,

Nett profit for hay at 60 cents per cwt. The land, after experiment No. 4, is prepared for any other crop in a very rich manner. 56 cwt. of this succulent hay caused it to crumble like an old dunghill, it was in such a high state of fermentation. The great produce of this trial proves how excellent it is to manure well for tares. You thereby ensure a crop that will amply repay the expenses and at the same time prepare better for *wheat* or barley than if the same manure was laid directly on the wheat. This husbandry I cannot fail recommending to all farmers solicitous of profit from clean wheat fields.

From experiment No. 5 there was about $8 50 clear profit. He then observes:

"I have every day more reason to think that if our farmers would substitute tares for small spring grain (corn he calls them) they would find their advantage in it.—Corn is known to be an impoverisher, while the leguminous tribe draw a considerable portion of their nourishment from the atmosphere, even when perfecting their seed. But when mown before the seed forms, the land is benefited by them. The thick shade they afford not only kills a vast number of weeds, but breeds that fermentation in the soil which is known to be of such benefit to succeeding crops. A circumstance of high importance is, the immense amount of food for stock obtained from this crop. As it is the food of cattle, that improves the farm by raising large quantities of dung."

This last proposition of Mr. Young is absurd. If the roots and fallen leaves of 56 cwt. of herbage can improve the soil so as to turn it up like a dung hill, the vines themselves would enhance it in a ratio inconceivably great. This seems never once to have entered his head, and *here lies the root of my theory.* My experiment for this year was a failure—as I had no plough large enough to turn under the crop which stood upon the land and had to cut it. When I can succeed in getting a good set and a field to have the tilth and preparation necessary, I will then sow *wheat*, at which time I shall not be afraid to run against James river or any other low grounds, for wheat or any thing else. Mr. Young's concluding remarks are these:

"Wheat, barley and oats would reduce land to a *caput mortuum*—at least to such a condition as not to return seed; but it is not in the power of man to bring the land into the same state by the *pulse kind*, though they were left to perfect their seed, much less when mown green for hay and in a state of such succulency."

Speaking of their fattening qualities, he says:

"No hay exceeds tare hay for fattening beasts of all kinds. Horses thrive better on it than on any hay in the world," [pretty tall this!] "and for cattle and sheep with and without turnips.."

On the application of manure for wheat, he holds the following language:

"A circumstance of great importance is, the laying the manure on the land in such a course of management that it may not render it foul by weeds, which is the common effect in many places. Now by manuring for tares this effect is totally destroyed. The dung, it is true, makes the weeds vegetate; but then the rank luxuriance of the crops kills every thing else but thistles. I have had crops of young tares full of weeds, which at mowing time have appeared as clean as any in the world. All the weeds having disappeared, being rotten, root and branch."

The foregoing is condensed from twenty-eight pages of Mr. Young's Treatise.

Yours, with due regard,

J. H. D. Lowndes.

THE FARMER'S WEATHER-OMETER.

Comprising General Indications and Local Predictions respecting the Changes of Weather, gathered during Travels in America and Europe.

BY A RURALIST.

"A rainbow in the morning
Is the Shepherd's warning;
But a rainbow at night
Is the Shepherd's delight."

A rainbow in fair weather denotes foul—if in foul, fair weather will follow. A double rainbow indicates much rain.

A predominance of the purple color of the rainbow, shows wind and rain—dark red, tempest—light red, wind—yellow, dry weather—green, rain—blue, denotes that the air is clearing.

If the *Aurora Borealis* appear after several warm days, it is generally succeeded by a coldness of the air. If the *Aurora Borealis* has been considerable, either an increased degree of cold is immediately produced, or bodies of clouds are immediately formed.

If, in a very wet season, the sky is tinged with a sea-green color, near the bottom, where it ought to be blue, it shows that rain will speedily follow, and increase; when it is of a deep dead blue, it is overcharged with vapors, and the weather will be showery.

When the sun appears white at the setting, or goes down into a bank of clouds, which lie in the horizon, they indicate the approach or continuance of bad weather.

When it rains with an east wind, it will probably continue twenty-four hours.

The heaviest rains, when of long continuance, generally begin with the wind blowing easterly, which gradually veers round to the south—and the rains do not cease until the wind has got to the west, or a little north west.

While rain is falling, if any small space of the sky is visible, it is almost a certain sign that the rain will speedily cease.

If the clouds that move with the wind become stationary, when they arrive at that part of the horizon which is opposite to the wind, and appear to accumulate, they announce a speedy fall of rain.

A frequent change of wind, with an agitation of the clouds, denotes a sudden storm.

A fresh breeze generally springs up before sunset, particularly in the summer.

The weather usually clears up at noon—but, if it rain at midnight, it seldom clears up till sunset.

The winds which begin to blow in the day time are much stronger, and endure longer than those which begin to blow only in the night.

A hollow or whistling wind denotes rain.

If the wind follow the course of the sun, fair weather will follow.

Weather, either good or bad, which takes place in the night time, is not generally of long duration—and, for the most part, wind is more uncommon in the night than in the day time. Fine weather in the night with scattered clouds does not last.

Violent winds prevail more in the vicinity of mountains, than in open plains.

Venetian author says—"A sudden storm from the north does not last three days."

If it thunders in December, moderate and fine weather may be expected.

If it thunders, at intervals, in the spring time, before the trees have acquired leaves, cold weather is still to be expected.

Thundering in the morning, denotes wind at noon—in the evening, rain and tempest.

If in summer there be no thunder, the ensuing fall and winter will be sickly.

If it lightens on a clear star-light night, in the south or south-east, rain and wind will follow—if it lighten in an evening towards the north, south, or south-west, it indicates wind.

Hot weather generally precedes thunder, which is followed by cold showery weather.

When the wind is south-west during summer or autumn, and the temperature of the air is unusually cold for the season, both to the feeling and the thermometer, with a low barometer, much rain is to be expected.

Violent temperature, as storms of great rains, produce a sort of crisis in the atmosphere which produces a constant temperature, good or bad, for some months.

In a morning, if a mist which hangs over the lowlands, draws towards the highlands, it is a sign of an approaching fine day.

If in the evening a white mist spreads over a meadow through which a river flows, it will be drawn up by the sun in the following morning, and a fine clear day will follow.

When the dew lies plentiful upon the grass after a fine day, another fine day may be expected—but if, after such a fine day, no dew fall nor any breeze be stirring, it indicates that the vapours are ascending, and will soon be precipitated in the form of rain.

It is certainly a surprising phenomenon to see the earth, after a long and abundant rain, to be sometimes almost dry, the roads quite free from dirt, and the lands to become quite arid and parched. This is a sign that the rain has not altogether ceased, and denotes a continued afflux of electric matter, which, being renewed, carries with it, in the form of vapors, all the moisture that falls on the earth. There is sometimes, however, a great deal of dirt, even after a very moderate rain, which, in that case, is a sign of fair weather, because it indicates that evaporation has ceased. Dry stones and moist earth announce fine weather—dry earth and moist stones announce rain.

If the flame of a lamp crackles or flares, it indicates rainy weather. The case is the same when soot detaches itself from the chimney and falls down.

It is a sign of rain when the soot collected around pots or kettles takes fire, in the form of points like grains of millet, because this phenomenon denotes that the air is cold and moist.

If the coals seem hotter than usual, or if the flame is more agitated through the weather be calm at the time, it indicates wind.

When the flame burns steady, and proceeds strait upwards, it is a sign of fine weather.

If the sound of bells is heard at a great distance, it is a sign of wind, or of a change of weather.

The hollow sounds of forests, the murmuring noise of the waves of the sea, their foaming, and green and black color, announce a storm.

Good or bad smells, when usually strong, seeming as if their were condensed, are a sign of change of weather, either because exhalations arise and are dispersed in more abundance, which is a sign of an increase of elasticity,—or because the air does not dispel or raise these exhalations, which indicates that the constitution of the atmosphere is motionless, light, and void of elasticity.

When the spider's web and the leaves of trees are agitated without any sensible wind, it is a sign of wind, and perhaps of rain, because it denotes that strong and penetrating exhalations arise from the earth. These signs are less equivocal, when the dry leaves and chaff are raised into a vortex, and carried into the air.

HEAVES IN HORSES.

I have been acquainted with this disease practically for many years. I think it can never be cured, nor much alleviated by medicines. I am assured, on what I consider good authority, that removal to western Ohio is a certain remedy. I once drove a heavy horse twenty years old, through a journey, going and coming, of eleven hundred miles, in the month of May, June, August and September. The whole was accomplished with fair speed, and a good degree of comfort to man and beast, by the observance of one short and simple rule.—*Avoid dust.* The manger and rack were usually dusted, the hay shook and sometimes watered, and the oats wet before the horse was allowed to approach them.—"A good deal of trouble," says one.—"Yes," I answer, "and a good deal of comfort, too, both to horse and traveller." The worst predicament was in travelling a dusty road with a light breeze blowing in the direction of the journey. Then the poor creature suffered, of course.

PRESERVING CLOVER SEED.

The unusual productiveness of seed in the clover crop of last season, induces me to seize this auspicious moment to offer to agriculturists the following remarks, referring to the supposed deteriorating influence of age on clover seed.

There is a general opinion that seed is not fit to sow which has been kept over one year, or, that its vegetable principle is less active. Acting on this opinion, a farmer will sell his surplus seed at four or five dollars per bushel, and be constrained perhaps, the following year, to supply his farm at the rate of $8, and sometines $10. This often happens, as for the last twenty years in our country we have not had two consecutive seasons favorable to clover seed; this error, therefore, so injurious to the farmer's interest should be at once corrected.

The seed of the second year may be slower in sprouting than the first, I admit; this may be accounted for in the increased hardiness of the hull, a difficulty easily overcome by soaking the seed 24 hours previous to sowing, in a solution of salt water of the temperature of 120 degrees Fah. Then dry it with lime, plaster of Paris, or ashes and with a good season and soil, it must grow and flourish, and no mistake.

Let the farmer then, while seed is plenty, attend carefully to its preservation.—When brought from the mill, (if perfectly dry) put it away in one or two bushel sacks, suspend them from the joists of his granary, when the temperature is equal, and I will guarantee its fertility for ten years or more.

No agricultural paper to my knowledge has ever given a hint on this subject, and should you deem these remarks of any value, you may give them a resting place in your admirable journal.

BEST PLAN OF A BARN.

It has been remarked that no building on the farm in the northern states is of more importance than the barn. Those who have had the charge of cattle during our long winters, can at once see that much time and hard labor could be saved by a judicious arrangement of the stalls, and bays, granaries, &c., so that every creature could be fed by taking as few steps as possible. One very important thing to be considered, is the best mode of preserving as well as collecting manure, so that it shall retain all its valuable properties in the spring, and be easily got out. We like the plan of having a barn on the side of a hill, and so arranged that you may drive your team or cart load pretty near the ridge pole, and thus pitch most of your hay down, instead of up. Having your stalls near, you can continue to pitch the hay down, and if you have a cellar beneath, you can throw the manure down also, and thus make the attraction of gravitation perform much of the labor of transportation from the mow to the manure cart.—*Am. Journal of Ag. and Science.*

From the Genesee Farmer.

THE FARMER—HIS POSITION—RESPONSIBILITIES AND DUTIES.

The district school system is one of the distinguished features of the new world. Its adaptation and fitness for the country, and the almost imperative necessity in view of our political institutions, and their perpetuity, render everything connected with it of decided interest and importance. It is said that the ancient Egyptians inscribed on their libraries—"Remedies for the diseases of the Soul;" and we might write over the door posts of our school-houses, remedies for, and preventives of, diseases in the body politic, and promoters of the morality, good order, and safety of society. As New Yorkers, we justly feel proud of our educational advantages, and, as patriots and philanthropists, we are bound to cherish and labor to improve and elevate them.

Education is one of those indefinite terms which admit of almost any latitude. In its real and true signification, it is a progressive and never ending work. The whole life-time of man is but a movement onward, and it is perhaps safest to believe

the elevating and beautiful idea that, throughout all eternity, man will continue to increase in knowledge and wisdom.—But it is not in this broad view that I now propose to regard the term education. I will define it for present purposes as a disciplinary process, fitting the mind for the business of life; not only the accumulation of knowledge and intelligence, but the acquisition of habits of order, industry and economy in preparation for the active duties and responsibilities of life. This work belongs to the school room; there the boy is to be prepared for manhood. In process of time, nature will develope the full capacity of the physical system, but the mind is not made of the same material, and cannot alone come to its full strength and capacity. Its food and nourishment are made of different matter than that which feeds and invigorates the body; it must have the aid of other minds—must have facts and figures, arbitrary rules, and distinct principles, and obtain them not by instinct, but by hard study, severe thinking, and the rigid application of the mental faculties.

The school-book, the school-house and the school-master are these important requisites in straining the mind, and in bringing out its power and energy. Mind, like the body, is the work of the great Architect, it is the gift of God, and does exist in all its glory, and majesty in the poor man as well as in the rich; it knows no distinction, only in its means of development, and in its educational polish.—Then how glorious to educate all the people—how high and solemn the duty to give to all the advantages of mental culture.

The district school belongs emphatically to the masses; they are the people's schools; they know no caste, nor recognise no distinction, but broadly unfold their beautiful panoply and cover all alike, and say, without respect to person or condition, "come and partake of my benefits." God has given the mind; ours is the duty to unfold the power, and prepare, for systematic and useful action, this richest and mightiest of God's gift.

It is the highest glory and proudest boast of the Empire State, that she has thus provided a system for the education of her children. Rightly does she judge, and wisely act, when she thus provides for the safety of herself and the elevation of her people. And have the farmers no interest in this matter? Yes, they have most of all; for they are more numerous than all other classes. The district school is truly almost exclusively their own; it is to most of them their only school, and it behooves them to look well to these seminaries, so peculiarly their own. Their children, nine out of ten, if not ninety-nine out of every hundred, will be educated in them, for they have no where else to go. Then let the district school be elevated, improved, and made what it should and may be. And as one improvement, almost indispensably necessary to the farmers, there should be, and must be, a department devoted to agriculture. I can discover no reason why it should not form a regular branch of common school education; nor why every college and academy in the State should not have its professorship department devoted to agriculture as a distinct branch of study and education. Is there anything in the subject which precludes this? Is there any difficulty in reducing to a regular science, and of so arranging and classifying its different branches, as to permit its being made a part of the education process of the young? I think not; but on the contrary, agriculture is a science, possessing, in all its ramifications, distinctive features, is governed by fixed facts and unerring principles, which the young farmer should learn by study and close application of his mental faculties. They should be engraven on his mind when it is young and plastic, and capable of receiving and retaining impressions, and this subject may, I imagine, be introduced into every district school in the State, without detriment to those branches now taught in those schools, and without interfering with the regular course of common school education.

Much reflection has satisfied my own mind of the great importance of the subject. I regard it as an essential step to-

wards the elevation of the farming interest—a necessary ingredient in lifting up to their position the farmers of the country. The State has been beneficial in her school funds; but the farmer has not as yet had his full share of the benefits accruing from them. He has been content to look on listlessly, and let other classes reap the harvest which his own industry had provided. Let him now arise from his lethargy, and begin to cast about and see if there be no place where his sons can go and learn to become farmers, as well as doctors, lawyers, and divines. It seems to me that the farmers have a right to use a portion of the money which belongs to them to advance their own calling; not, indeed, to tear down or prejudice others but to elevate their own business to the dignity of a science, to be taught and learned in the schools of the State.

First of all we want agricultural school-books, and agricultural teachers, or persons qualified to teach agriculture.—The very initiatory step, then, is to find men to prepare books adapted to the instruction of children, and then to find competent teachers who can use them.—I would then reverse the usual rule; begin at the top and work down. Begin by establishing and endowing an agricultural school, or schools by the Legislature of the State; and with that, or them, as a nucleus, I would begin the work of making agriculture a regular science—a branch of education for the older scholars in every school district, just as much as arithmetic now. The thing is in the highest degree practicable. It may and should be begun at the present session of the Legislature. That body should be called upon and forced to appropriate a portion of the literature or other fund for this purpose; and then, ere five years shall pass away, the great work will have been accomplished. To me it appears plain and clear, and I ask the farmers of the State to come up to the work and insist on their rights—demand for their children agricultural schools, aided by a fair portion of the literature fund—insist that Daniel Lee and his school, or those of a similar character, be sustained by the funds of the State, as well as Geneva College. Stand up for your rights and you will obtain them, but never until you do.

D. A. Ogden.

CARROTS *vs.* OATS FOR HORSES.

I have worked a horse all winter long on *carrots* and *hay*, with better health, with equal effectiveness and with less expense than on *hay* and *oats*. All horses will not eat them readily at first, especially if mashed fine with a mallet. But all will soon learn; then they are never clogged by them. I think parsnips are equally good; certainly they are equally acceptable to the horse. I leave it to chemists to ascertain the relative proportions of starch and sugar, of phosphates and of nitrogenous matter in each. Carrots are the best root we have for late spring feeding, as they keep better than turnips and most other roots on the approach of hot weather.—With good hay and carrots the horse will hardly feel the want of fresh grass.

C. E. G.

ECONOMY IN SAVING MANURES.

One of the great secrets of success in the culture of the soil, is *Economy*. This magic word is an "open Sesame" to wealth and independence. In order that the agriculturist may realize the largest profit from his labor and skill, he must be frugal and saving. He must be not more careful to avoid manifest extravagance, than he is to practise a system of rigid economy, which shall look in every direction Argus-eyed; and be applicable to every combination of circumstances.

He must *save* not only at the bung-hole, but also at the spigot, and thus arrest the injury wrought by those small dribbling losses, which viewed separately, appear of no account, while in the agregate and long run, they greatly diminish the returns of agricultural industry. In no department of rural labor, is there more to be gained by the exercise of economical in-

genuity, than in the making, the saving and the using of manures. We are too much inclined, if I mistake not, to centre our regards upon the barn-yard, the stable, and the lime-kiln—too much inclined to place our main dependance upon these sources of fertilizing and stimulating agents, to the neglect of others not less worthy of attention. The different manures, and materials for creating manure, which may be secured and made available upon the precincts of every husbandman, are very numerous, and as valuable as they are numerous. Among the sources of manure frequently overlooked, or but partially drawn upon, may be mentioned the privy, the ash-bin and wood house; the hen-roost and pigeon-cote; the sink-drain and wash-tub; the marl-bed and peat swamp; the gullies and forest.

All these are mines of wealth to him who tills the soil, and when brought into full requisition, they have proved instrumental in the production of crops before unanticipated and unknown. The amount of waste that is often permitted by overlooking these deposits of fertilizing substances, cannot be easily and accurately estimated. Yet a single calculation which I have happened upon in my agricultural reading may serve to throw some light upon this matter. "The solid and liquid excrements of a man may be estimated at 1,65 lbs. per diem, or about 614 lbs. per annum. Containing 3 per cent. or 18 lbs. of nitrogen, a sufficient quantity, according to Boussingault, to produce 880 lbs. or about 15 bushels of wheat." Report of the Commissioner of Patents for 1844, p. 384.

Now if a farmer's family consist of five individuals, and the contents of the privy are wasted, there is an annual sacrifice of enough nutrition for growing 70 bushels of wheat. This calculation was made by a distinguished French chemist, and may be relied upon as sufficiently accurate. But even if the contents of the privy were less valuable, by a half, than is here estimated, they ought still to arrest attention and provoke experiments with those who are solicitous to improve their farms and husband their resources.

The wasting of ashes is less common than that of bones. Yet the former are often suffered to lie in useless and unsightly heaps, when thrown from the leach tub; while the latter, of which every house-keeper may command a certain quantity, are seldom subjected to the process of burning and pulverizing, which converts them into an excellent manure. The chief constituent in the bones of all animals is the phosphate of lime, a substance absolutely necessary to the healthy vegetation of plants. The other principal ingredients are carbonate of lime and cartilaginous matter, both of which when decomposed, enter largely into the synthesis of vegetable substances. The cultivator of the soil will not be incredulous as to the power of vegetables to feed upon and digest the hard substances of crushed bones, when he is reminded that the ashes of wheat straw are composed of 61½ per cent. of Silica, or flint, which is much harder than the hardest bone."—Loudon's Magazine of Gardening, vol. 2, p. 319.

By carefully gathering up, from time to time, what is deposited beneath the perches of the hen-house and pigeon-cote, one may not only improve the health and fecundity of his fowls, but may also enrich himself with home-made *guano*, scarcely inferior to that brought from distant foreign shores, which smells so rankly of money as to find but little favor with any but amateur farmers.

The amount of fertilization that is pounded and scrubbed out of our clothes in the course of a year, would probably startle one who should see it written down in truthful figures. The farmer or gardener who suffers the precious contents of the wash-tub to be thrown away and wasted, especially when his plants and trees are withering beneath the heat of the dog-star, has reason to reproach himself with the folly of "spilling at the bung-hole."

Monday is a day of great rejoicing to trees and vegetables, when they are allowed to count on a thorough soaking about sunset, with rich saponaceous liquid, furnished by the laundress.

I have been told of a farmer, who after having suffered the wash-tubs to be emptied into a filthy drain, deliberately proceeded to deluge his pet garden sauce with ice-cold water fresh pumped from the well. I shall not credit the statement without further evidence. Sometimes it happens that peach stones or pear pits, get planted, either by accident or whim, hard by the kitchen door. Trees so situated, almost invariably prove thrifty and productive. Their bearing qualties and the exquisite flavor of their fruit, are extolled by individuals in private, and by committees in public. All the world wonders how it come to pass that trees which seem to have sprung from the soil without asking any body's advice or permission, and which have reached their maturity without any body's nursing, should be so very healthy and prolific.—The true explanation of this wonder, is, doubtless, that the earth which such trees inhabit is fattened by the slops and dregs of the kitchen; and we are thus sharply rebuked for our want of economy in saving a species of manure so precious and so convenient. Nature herself is fond of elaborating manure, and as skilful too, as she is fond. If we were half as industrious and efficient, or were more willing to avail ourselves of her proffered assistance, we should less often be heard to complain of poor and ungrateful soils.—The little stream that divides the pasture or meadows, is ever busy at its task in collecting aliment for grasses and trees.—To the products of its inanimate industry we are always welcome. In the silent woods, again, nature is constantly accumulating stores of fertilizing substance. The leaves which blanket the earth in autumn, are at once brought under the influence of her subtle chemistry, and thus prepared for contributing to other and more durable forms of vegetable growth. The frugal farmer will not forget the forest. He will bring it under stated contribution. If gathered in autumn leaves form excellent absorbents for the precious fluids so abundant in the stable and barn-yard, yet so often suffered to float off and evaporate. Or if left to decay where they fall, leaves make a valuable muck, especially when mixed with lime or ashes.

In Great Britain, where land commands a much higher price than with us, the principles of economy, which I am aiming to recommend, have long since been faithfully tested, and are now generally observed in the management of soils. I have somewhere seen mention made of an English Cottage, whose garden was made to *manure itself*, and at the end of twenty years, without having made the acquaintance of a single forkful of barn-yard dung, the tilth was deeper, mellower, richer; the yield more abundant and of better quality than ever before. The manuring of the garden was managed somewhat after this fashion: All the refuse of the garden, such as leaves, vines, grass, haulm and weeds, was carefully saved and thrown into a pile. Every fragment of rubbish was gathered up and nothing wasted. To this were added scrapings from the road, drainings from the kitchen sink, and soot from the chimney. The liquid from the chambers was daily emptied upon this heap, and the whole was repeatedly turned over and intimately mixed, until the vegetable ingredients were decomposed. Once a year the garden received a good dressing of this manure, and with thorough cultivation the result was what I have indicated.

Before bringing these suggestions to a close, I must be allowed again to refer to the contents of the privy. On account of the repugnance which they inspire, fecal substances are often wholly discarded as an auxiliary of production, or else are so improperly managed as to occasion great waste.

It has been settled by experiment, that the sulphate of iron or copperas, is both efficient and inexpensive as an agent for disinfecting fecal matters, by changing the ammonia into a fixed salt. A hundred pounds of copperas may be had at the shops for eleven shillings, and if a solution of this be occasionally applied to the privy, it will cause the noisome effluvia to disappear.

A two-fold purpose will thus be accom-

plished. By fixing the volatile ammonia, in which resides a fertilizing energy, the value of excremental manures is greatly enhanced, while the imprisonment of all offensive odors, renders them capable of being transported, diluted and applied, without any inconvenience or disgust. It is a point worthy of investigation, whether the application of sulphate of iron in solution, would not be of good service in the barn-yard. If each new layer added to the manure heap were springled with copperas water, much of that most important element, the ammonia (which is otherwise lost by reason of its volatility,) would be changed into a fixed salt, and thus saved.

For the facts which I have here submitted in regard to the employment of copperas as a disinfecting agent, I am indebted to the Report of the Commissioner of Patents, for the year 1844.

GAPES IN CHICKENS.

A writer in the Ohio Cultivator, recommends the following remedy for this disease in chickens: "Steep lobelia and red pepper in hot [not boiling] water, and mix the food with this liquor as strong as they will eat it, until the chickens "*gape* for certain." It is both a preventive and a remedy. We tried it to see if it would kill some hopeless chickens, but they would live in spite of it, and now we have no trouble with this disease.

DITCHING AND DRAINING.

Among the various modes of bringing bog lands into culture, ditching will often be found to be the cheapest and best. The weeds and brakes and wild grass usually grow on an uneven surface which the fires that are set do not make smooth. And when gravel or sand is not handy it is costly carting them on to the central parts of meadows to cover up the old rubbish and roots.

Now if the bottom is peat and can be easily dug, it is less labor to throw up matter from ditches than to cart it from a distance. This peaty matter may be dug in August or September and be suffered to lie till next summer. Then spread it over the surface and mix what high land soil you choose with it to make a proper bed for the reception of the grass seed.

The ditches may be dug at a distance of four rods from each other, and if they are made four feet wide and three feet deep, the mud will go a great way towards covering the whole surface between them.

If it is afterwards discovered that the ditches are too nigh each other and the meadow too dry, it will be quite an easy matter to fill them up partially from the cheeks or edges of the banks, and let the ditches be so shaped as to permit the grass to grow on the sloping sides near to the bottom. Or every other ditch may be filled up with the loose matter that is usually found on land that has been recently cleared.

We know that in many cases the surface may be made even in this way at less cost than it can be by carting earth from a distance; yet we admit that a portion of earth mixed with this mud is better for the grass than any clear peat mud that we find in these bogs.

In many cases the mud is so rich that many harvests of grass may be obtained without any barn-yard manure. And in case there is a good supply of ashes left after burning the cleared ground, they will be found to aid materially the first crops; for nothing is better to be mixed with peat mud than the various kinds of ashes that are made from wood or from peat.

When meadows need but little draining, and when highland earth lies nigh by, it is often best to smooth the surface of the meadow by cutting the bogs and hassocks down as close as may be. Then an ox cart load of earth will be found sufficient to cover a square rod of ground. The cost of covering with earth, in such cases, will not be great; and as long as time shall last, this mixture of highland earth with the peaty matter of the meadow will prove serviceable. Top dressings

will be needed occasionally, but no more earth from the highland till it may be found necessary to use the plough.

When the meadow is high, and hard enough to bear a team, it will be generally best to plough and subdue by planting for a year or two. Potatoes succeed well on such ground, and when a decent crop of these can be raised, the cost of subduing and of preparing for grass is trifling. Early potatoes may be harvested soon enough to admit of seeding down in August.—*Mass. Ploughman.*

LIME FOR GRASS.

A New Jersey correspondent of the Philadelphia Dollar Newspaper says: "Seeing in your paper you receive experiments in agriculture, and as it is a desideratum among farmers to gain the greatest amount of profit from the least amount of expenditure, I will give you some experiments which I have made on a clay soil with lime for grass. I ploughed an old sward deep in the fall, harrowed and spread on from thirty to forty bushels of lime per acre, harrowed again and sowed clover and timothy seed. The following summer I mowed two tons of hay per acre, and obtained considerable pasture in the fall, and so continued mowing and pasturing for five successive years, the ground yielding an average of two tons of hay per acre, at which time I ploughed and limed and seeded as before, and it has yielded an equal burden for the last two years, and I think will continue to yield with similar treatment, except a less number of bushels of lime at each subsequent ploughing, perhaps forever bringing a larger profit than any grain crops I have yet tried."

THE LAW OF MANURES.

We notice that the question—"*Do manures ascend or descend?*" has lately been considerably discussed. For our own part, we should no more think of asking or discussing such a question, than we should whether *moisture* ascends or descends?—It obviously does both; and so it is with manures, unless the term manures is to be restricted to *mineral* substances only.

But though we believe that the valuable parts of manures may be both carried into the air and washed into the earth, we do not admit the propriety of some positions, by which the fact is attempted to be illustrated. For instance, it is said: "the *gases* of manure ascend, but the *salts* descend." The fact is here lost sight of, that the same substances are capable, under different circumstances, of assuming both a gaseous and solid form. Such is the case with carbon,—which constitutes the greatest part of ordinary manures, as well as vegetable substances; and also with nitrogen,—which has formerly been held by chemists, (and is, indeed, still held by many chemists,) as the most valuable and important element in manures.

If a heap of manure is left to ferment on the earth, or without being covered by some absorbing substance, its bulk and weight are greatly reduced. What has become of the lost portion? It has, of course, gone into the air, as it would have done if the manure had been acted on by fire. The manure, or a certain portion of it, has been resolved into its original elements, and the carbon and nitrogen it contained have again become parts of the atmosphere.

The nitrogen in manure is in the form of ammonia, and that it escapes during fermentation, has been proved; it is perceptible by the smell, and has, also, by means of acids, been detected in its ascent. Most people are familiar with ammonia in the form of a salt, and know that in this form it is extremely volatile, and readily passes into an æriform state. It is also easily soluble in water; and is, therefore, readily washed into the earth by rains. Thus the very substance which forms a salt, may become a gas and ascend into the air; or it may become a liquid and descend into the earth.

Manures may be combined with substances which will prevent the escape of ammonia; such as charcoal, charcoal-dust from coal-pits, peat, muck, soil, and vegetable or carbonaceous substances general-

ly. If the process of fermentation is properly regulated, and the manure is combined with articles which will absorb the gases as they are disengaged, there will be no waste. It may be considered a rule, that whenever smell is emitted by manures, some of their valuable properties are being dissipated; hence their odors should not be wasted "on the desert air;" they should be saved and converted into vegetable substances, in which condition they are not only more agreeable to the *olfactories*, but become substantial elements of animal nutrition.

As to the *sinking* of manures, there is positive evidence of the fact. We have in many instances seen its effects to the depth of several feet. On the farm of Mr. Prentice, near this city, it was lately noticed, in digging a cellar near where a compost heap had laid, that the earth, to the depth of three feet from the surface, though it was of quite a compact and clayey nature, was so impregnated with the qualities of the manure that they were plainly perceptible. And the effects of manure are always traceable to a greater or less depth, in proportion to the porousness of the soil and the quantity of manure applied. It is LIEBIG's opinion that the soluble parts of manures, "phosphates, and other salts with alkaline bases," are drawn off, and wasted to a great extent by percolation.

The depth to which manure should be buried is another subject, which, in connexion with the question, whether they rise or fall, has been much discussed; and some, who believe that manures *always* ascend, have arrived at the conclusion that they should be placed from "a foot to eighteen inches" under ground.

We do not suppose it is practicable to lay down any fixed rule in regard to the covering of manures. Some general principles, however, may form a guide.—It is evident that manures can only afford nutriment to plants when they are in a soluble condition. In their application, therefore, the causes which produce solution and decomposition should be regarded. These causes are, principally, heat, air and moisture; though in the elimination and assimilation of food by plants, light and electricity are evidently powerful agents. Most of these principles act with the greatest force *near the surface.*

In some cases, as in dressing grasslands, we would spread manures on the top of the ground. But in such cases, we would use a well-rotted compost, in which the animal manures had been combined with such substances as would absorb the matters that during fermentation might pass off. The reason why we would prefer, for such a purpose, manure that had passed through the first stages of decomposition in the manner mentioned, is, that it would be more readily soluble, than in a fresher state, and would be immediately available to the crop; while at the same time its fertilizating principles would be so far combined and fixed, as not to be liable to waste.

But the practice of leaving manures *entirely* on the surface, is not, in many cases, the most judicious, for the following reason: 1. If it is applied in an unfermented state, uncombined with absorbent substances, some of its valuable properties might be lost during decomposition. 2. With hoed crops, fresh or fibrous manures, on the surface of the ground, would be an obstacle, (more or less according to the quantity,) to cultivation. 3. Manures of any kind, or in any state, when left on the surface, might, from being kept too dry, fail to benefit the crop for which they were intended. Let it be recollected that they are only available to plants when in a soluble state; and to be made soluble, they must be kept moist. We would therefore cover manures to such a degree as would secure the advantages and avoid the objections here indicated, and no more.

On tenaceous soils, a *mechanical* effect is sought to be produced by manures; that is, a greater friability of the soil.—This purpose is best accomplished by plowing in strawy or fibrous manures in a fresh or unfermented state. This is obviously, however, quite a different thing from the application of manures to *feed a crop.*—*Alb. Cultivator.*

HENRICO AGRICULTURAL AND HORTICULTURAL SOCIETY.

The following is the report of the Henrico county Agricultural Exhibition. We are authorized to state in addition, that the Chester county boar mentioned therein—one of the best farm hogs ever south of the Potomac, as we have been informed by those who have seen it—was introduced by its owner, General Richardson, for the benefit of those who raise their own pork. This every Virginian ought to do, but we are sorry to say they do not all do it.

The Henrico Agricultural and Horticultural Society held its public exhibition on Wednesday, the 24th ult.

Prayer was offered by the Rev. George Woodbridge.

Charles Carter Lee, Esq. then delivered an address, at once able and eloquent, practical, entertaining and instructive.—He has politely furnished a copy for publication, in obedience to the request of the Society.

On the 25th, the following premiums were reported from the committees respectively to whom the different subjects had been referred:

For the best brood mare for domestic purposes, a premium of $5 was awarded to Mr. Wm. B. Sydnor.

For the best colt, $5 to same.

For the best bull, $5 to R. B. Haxall.

For the best cow, $5 to W. B. Sydnor.

For the best specimen of cattle 2 years old, $5 to Dr. W. F. Gaines.

For the best specimen of cattle 1 year old, $5 to Dr. F. H. Deane.

For the best boar, (Chester county breed,($5 to Gen. W. H. Richardson.

For the best sow, (same breed,) $5 to same.

For the best ram, $5 to Joseph Vanderventer.

For the best lot of ewes, $5 to John Currie, Sr.

For the best specimen of poultry, a copy of Washington's Agricultural Letters, to Miss Excy Gill—$3.

For the best specimen of vegetables, a copy of same, to Mr. Joseph Rennie—$6.

Fruits—Very fine specimens of strawberries were exhibited by Mrs. Hall of Manchester, Miss Gill, Mrs. Redd, Mrs. G. M. Carrington, Mrs. Mackenzie and Mr. Abernethy; but there being no variety of fruits exhibited, no premiums were awarded.

For the best specimen of rare and beautiful flowers, plants and shrubs, a premium of $10 was awarded to Mr. Abernethy—a copy of Washington's Letters at $6 in part thereof.

For the best specimen of butter, a premium of $6 to Mr. Charles Marx.

For the second best specimen of butter, $4 to Mrs. Joseph C. Burton.

For the third best specimen of butter, $2 to Miss Bessie Williams.

For the best comfort of domestic manufacture, $3 to Mrs. Joseph C. Burton.

For the best quilt, a premium of $3 to Miss M. F. Williams.

For a beautiful knit curtain, (leather stitch,) a premium of $2 to Mrs. Bartlett.

For the best carpet, $5 to Mrs. C. B. Williams.

For the second best carpet, $3, to Mrs. L. P. Redd.

For a beautiful hearth rug, $3 to Mrs. Wm. F. Gaines.

For the best specimen of stockings, $2, to Mr. Joseph C. Burton.

For beautiful specimens of worsted and wax work, a premium of $2 on each specimen was awarded to Mrs. E. A. Smith.

Farming Implements.—The committee appointed to examine farming implements report that none were exhibited except a lot of Watt & Co.'s cuff brace ploughs. They had consequently no opportunity of comparing those with the ploughs of others. But the assortment of these enterprising manufacturers was extensive, the workmanship most superior, and several persons present, who have tried them, (among whom is the President of the Society,) bore ample testimony to the excellence of these ploughs, all concurring in a preference of them over most, and some over all others they have used. The committee have therefore no hesitation in awarding to Messrs. Watt & Co. the premium on their four horse

and two horse ploughs and new ground jumping coulter. They also feel fully justified and take great pleasure in recommending them to the attention of farmers generally, satisfied as they are that they are among the best ploughs of the day, and in point of materials and workmanship, excelled by none.

[Signed,] W. H. Richardson,
P. A. Haxall,
J. H. Mackenzie.

Mr. Marx's Stock.—Having visited Mr. Charles Marx's farm this morning, for the purpose of examining his stock of cattle, I unhesitatingly pronounce them to be far superior to any I have ever seen. His Ayrshire Bull, I think, cannot be excelled, and his stock of young cattle are chips of the same block, *hard to beat!*

The above statement has been made at the request of the Henrico Agricultural Society, Mr. Marx having been unable to get his stock to the exhibition in consequence of there being no bridge across James river.

[Signed] W. B. Sydnor.
May 25th, 1848.

Various and beautiful specimens of saddles, bridles, saddle bags, valices and buggy harness, of his own manufacture, as well as an iron bound leather trunk, also of his own make, were exhibited by C. Z. Miles, Esq., alike creditable to his workmanship, taste and public spirit, and he is commended to the public as a workman worthy of his vocation.

Beautiful settees and chairs of cast iron were exhibited by Mr. George Lowndes, 216 Main street, which, for workmanship and fine finish, were very creditable to his taste and skill.

The above premiums will be paid to those entitled to receive them, as soon as sufficient progress is made in collecting the annual subscriptions now due from members, who are earnestly solicited to pay on the application of the collector, that the engagements of the society may be met in good faith and with promptitude.

Executive Committee.

From the American Farmer.

The following able paper originally appeared in the "South Carolinian," and was forwarded to us for publication in the pages of the "American Farmer," by a correspondent at the South. We feel much pleasure in presenting it to our readers, being satisfied that the facts therein set forth will be found extremely valuable at the present time, when such an enquiring spirit is abroad in regard to the subjects treated by the writer.

SUGGESTIONS AS TO THE SUCCESSIVE CULTIVATION OF COTTON AND INDIAN CORN—ROTATION OF CROPS, &c.

BY THOMAS J. SUMNER.

My attention was directed to the necessity of a correct understanding respecting the constituents of these two important crops, by the planters of South Carolina, from reading Boussingault's Analysis of Indian corn, and I hope to show scientific causes sufficient to render this necessity apparent to interested readers. I will commence by merely calling their attention to the amount of phosphoric acid abstracted from an acre of fertile land, in producing one bale of cotton. We take it for granted, that an acre will yield one bale of cotton, which will give 875 pounds of cotton seed, which, according to my Analysis, recently finished, and sent you by last steamer, will yield 35 pounds of ashes—these 35 pounds of ashes contain 12 pounds of phosphoric acid, 10 of potash and common salt, while the remaining parts are composed of lime, magnesia, &c. The most common application of cotton seed as manure, has been on the small grain crops, for which they are admirably adapted—containing, as they do, all the constituents necessary for the nourishment of these crops. It seldom occurs that wheat is planted after cotton, consequently the soil which produced the cotton seed does not receive them again, and we have 12 pounds of phosphoric acid, taken directly from this soil, which will, probably, not be sown in wheat till the following season, perchance it may receive the seed grown upon it. It is customary after

cotton to cultivate Indian corn, which is followed by small grain, in what has heretofore been the planter's system of rotation. We see thus two crops, which are the most powerful exhausters, taken from the soil before we return directly any of the constituents taken away in the form of cotton seed. To show, conclusively, the injudicious and impoverishing practice of cultivating cotton and Indian corn, as successive crops, I will cite the Analysis of M. Boussingault, who says, that 100 pounds of the ashes of grain of Indian corn contain 50 pounds of phosphoric acid. Now, suppose that one acre planted in this crop will yield 30 bushels—which will be equivalent to 1350 pounds of corn. If these 1350 pounds of grain be reduced to ashes, we have a fraction over 97 lbs., which contain 50 pounds of phosphoric acid, and 30 pounds of soda and potash—making for the production of the two crops of cotton and corn, the enormous amount of 62 pounds of phosphoric acid, and 40 pounds of common salt and potash. Then, suppose the third year we sow wheat after corn. This crop requires about the same constituents as does the cotton crop. If we return to the soil the usual quantity of cotton seed devoted to this crop, we give it back only one-fifth part of the phosphoric acid, &c., which was taken from it in cultivating the two preceding crops. When such are the facts, what reliance can be placed in the generally received and popular practice of cultivating corn immediately after cotton? How long has it been argued that such a system of rotation was beneficial to the soil? The reverse is the fact; for in harvesting 1350 pounds of corn, we take a fraction over *four times* as much phosphoric acid, than we do in producing one bale of cotton. The three crops most extensively cultivated in South Carolina are those which consume the most valuable constituents of the earth in their production, and our planters should at once be awakened to the necessity of remedying the evils resulting from incorrect systems of culture, before it is too late. The first step is, to adopt a better system of manuring, and by the institution of economy in saving, preserve to the crops much that is lost to them by reason of the non-application, or the more general want of knowledge respecting the availability of many substances found on the farm.

As the greatest quantity of these constituents are found in the animal bones, the easist method of restoring them would be to carefully collect all these, and make them subservient to the wants of these crops by converting them into powder or ashes. Bones contain an immense amount of phosphoric acid. My far-famed preceptor, that world-renowned chemist, Leibig, says, that *a single pound of bone dust* contains as much phosphoric acid as *one hundred pounds of wheat.* From this we can easily perceive that there are bones wasted on every farm in the State sufficient to manure the entire wheat crop.—This, to many, will doubtless appear strange, but it is nevertheless true; and if we do not arouse ourselves to a better system of farming, we will find our State in less than fifty years in a more deplorable state of impoverishment than were the wornout lands of our sister State of Virginia, before the industrious farmers who are now working such miracles on them, took hold of them for improvement. The first colonists of Virginia found a soil similar to our own. Abundant harvests of wheat, corn and tobacco were obtained from one and the same field, for near a century, without the aid of manure. But nature exhausted at last, refused to repay the laborious toil of the husbandmen, and whole districts were suddenly converted into arid and unfruitful pasture lands, which, without manure, will now produce neither wheat nor tobacco, and the desolation of which is only heightened by the miserable herds and flocks which find a scanty summer subsistence on these bleak wastes. This is not strange, when we state, that in the production of the standard crops, in the space of one hundred years, there was removed from every acre fully 12,000 pounds of alkali in leaves, grain and straw. It necessarily became unfruitful, because that small portion which during each succeeding year was rendered soluble, was not sufficient to sa-

tisfy the natural demands of the plants. With such an example, why shall not South Carolina make the attempt to preserve her already impoverished fields from a similar fate? We possess over her many advantages, and still in many parts, aided by science and industry, she is renewing the bare bosom of mother earth, by a deep coloring of mellow, artificial soil, which sustains the rich gifts of Ceres. We possess, as a peculiar advantage over the Virginia farmer, a larger amount of forest to supply leaves and litter, to be converted, by a little pains-taking, into good manure; and, secondly, the amount of the constituents of the soil exported in our cotton does not come in the same fearful ratio as they do in the Virginia products—small grain and tobacco. This is truly an important advantage; as we consume the cotton seed and small grain on our farms, very little is exported, and consequently these self-same constituents are obtained again in the voidure of such animals as are sustained on them, and their constituents are re-delivered to the soil, in the shape of manure, in as large quantities as they were originally taken from it, and when combined with vegetable substances in the shape of composts, even in larger quantities, the application of which results in the speedy and certain improvement of the land.

But to all these means, the farmer in South Carolina, where extent of acres is not measured by price, has a third means of remedying the evil of an improper succession of crops. This is fully demonstrated by Leibig, in the example which he cites in his agricultural chemistry of the condition of the country around Naples, which is famed for its fruitful corn land. The humblest villages are situated from eighteen to twenty-four miles distant from each other, and between them there are no roads, and consequently no means for transporting manure to any distance from the residence of the laborers. New corn has been grown on these lands for thousands of years, without any portion of the constituents which have been annually removed from the soil being artificially restored to it. The method of culture, however, satisfactorily explains the cause of this wonderful and permanent fertility—and though the system appears a very bad one in the eyes of our agriculturists, it is, nevertheless, the very best that could be adopted. A field is only placed under tillage once in three years, and in the intervening two years furnishes a sparse pasturage for cattle and sheep. The soil undergoes no actual change in these two years, during which it thus lies fallow, farther than being exposed to the influence of the atmosphere, a fresh portion of the alkalies contained in it are again set free and rendered soluble. The amount of constituents in two years, thus placed by nature at the disposal of the crop of one season, being generally greater than the crop demands, this patient system of rotation without alternation has preserved the fertility of the soil. It may appear to those who do not reflect, that the droppings of the animals pastured on the land might have an improving effect; but this is not the fact, for they yield the soil nothing which they did not drain from it. The grass and weeds, upon which they live, spring from the soil, and that which they return in voidings must, according to the laws sustaining animated nature, be less in quantity than the amount originally derived by them. The fields, therefore, under this system of grazing can gain nothing; on the contrary, the soil must have lost some of its constituents. Experience, as in Virginia, has shown that wheat should not follow wheat, or tobacco a crop of tobacco; for these are crops which speedily exhaust the constituents of the soil. If we take these constituents from the soil, we should return them before we tax them to ruinous production, by artificial manuring, with such manures as would most readily and cheaply effect the object; or, if this cannot be done, why there is still a sufficiency of land unoccupied, untilled and lying waste on every plantation, to allow it to lie at least one year fallow. Why do not our planters do these things, and preserve the rising generation from raising the cry of "Westward Ho!" A country like South Carolina, possessing a climate

suited to nearly all the cultivated crops, deserves to be fostered and improve l. The present age must make the beginning, else we will entail the horrid curse of national poverty upon those who follow us. With the proper energies, and the application of the proper principles to her agriculture, we can make her the garden spot of the world—and such she should be. When I return home, I intend to devote myself to analyzing every cultivated crop of South Carolina, and will feel sufficiently rewarded, if my labors only produce the result of stimulating *the beginning* of a reformation in the agriculture of my native and beloved State.

Germany, April, 1848.

CUTTING DOWN CORN-STALKS.

A new method of performing this operation is now coming into vogue in Virginia. The old plan is to cut them off close to the ground with a hoe. The new method is to arm the field hands with knives and to cut off each stalk about eighteen inches from the ground. Its advantages are superior swiftness, and superior ease in ploughing up the stubb. The cross tree of the plough strikes the piece of stalk left, and bends the whole down. Which done, the stubb is easily pushed from its place by the passing plough.

BEEF-TEA.

When one pound of lean beef, free of fat, and separated from the bones, in the finely chopped state in which it is used for beef sausages or mince meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel from the coagulated albumen, and the fibrine, now becoming hard and horny, we obtain an equal weight of the most aromatic soup, of such strength as cannot be obtained, even by boiling for hours, from a piece of flesh. When mixed with salt, and the other usual additions by which soup is usually seasoned, and tinged somewhat darker by means of roasting onions or burnt sugar, it forms the very best soup which can in any way be prepared from one pound of flesh.—*Leibig.*

INDIAN CORN.

Indian corn is an ancient, well known, and indispensable production of nature. It consists of a number of varieties, which are thought to owe their distinctive characters to the accidental modifications of climate, soil and culture, rather than to any original differences. When due regard is paid to the varieties, it may be considered a sure crop in almost every portion of the habitable globe, between the latitude of 43 degrees North, and a corresponding parallel South. Its principal culture is confined to the U. States, Mexico, the West Indies and most of the States of South America. It is also cultivated with success in Southern Europe generally. It is likewise found to thrive in India, China, Japan, Australia, the Sandwich Islands, groups of the Azores, Maderia, the Canaries as well as other ocean isles. Roulio, Humboldt, Bonpland and others, have noticed the plant in its indigenous state in America, and hence have concluded that it was first derived from this country. All the early historians, both of North and South America, give the surest testimony that this grain is of American origin, and speak of it as having constituted a great part of the food of the Indians, from time immemorial. Mr. Schoolcraft, in a late report, says it is conceded on hands that it is a tropical, or at least, a Southern plant. He remarks that it was not known in this country before the discovery of this country, and that we learned the mode of cultivation from the Indians, and not they from us. It was cultivated by the Iroquois in fields sufficiently large to entitle them to the name of agriculturists; and was undoubted highly praised by them as an essential article of support. Mr. Schoolcraft states that the warriors of the Six Nations were in the habit of undertaking journeys of thousands of miles in extent, carrying no other food

than a little meal from parched and pounded corn, relying on the forest game for meat. One table-spoonful of this meal mixed with a little sugar and water, will sustain a warrior for twenty-four hours, without meat. Maize contains less nutritive matter than wheat, barley or oats, but more than either rice or potatoes. In fact, it has about three and a half times the quantity of nutritive matter found in potatoes, a much larger proportion of starch, and less water. The proportion of oil found in corn, as far as it has been examined, varies, from an entire absence to 11 per cent., according to the varieties employed. Oily corn makes a dry kind of bread, and is not sufficiently adhesive to rise well without an admixture of rye or other flour.

The varieties of Indian corn are very numerous, exhibiting every grade of size, color and conformation, between the shrubby reed that grows on the shores of Lake Superior to the gigantic stalks of the Ohio Valley; the tiny ears with flat, close-clinging grains of Canada; the brilliant, rounded little Pearl, or the bright red grains and white cob of the eight rowed hæmatite, to the swelling ears of the large white and yellow gourd-seed of the South. There are something like 11 principal varieties cultivated in the United States, which may be distinguished by the number of rows of grains on the cob, and the color, shape or size of the kernels.

ON THE ECONOMICAL USE OF BONES AS A MANURE, AND ON THEIR SOLUTION IN SULPHURIC ACID.

Our horticultural readers are, perhaps, even more fully aware than most farmers of the value of bones. *Phosphate of lime* is so essential an organic constituent in the *pear*, and some other fruit trees, that no good orchardist or gardener will henceforth be guilty of the extravagance of *wasting bones*.

The difficulty, however, hitherto experienced by many persons, has been to bring the bones, easily collected upon every farm and about every slaughter house, to a fit condition for applying to the land. Bone mills are only to be found here and there; and in some parts of the country, the cost of transportation of bone-dust has been so considerable as to put a stop to its use. Fortunately, this difficulty has been overcome lately by a cheap, simple, and rapid mode of *dissolving* bones by sulphuric acid, now largely employed by English agriculturists. The mode of effecting this is so important to nine-tenths of our readers, that we extract the formula from Professor JOHNSTON's essay:

METHODS ADOPTED FOR INCREASING THE SENSIBLE EFFECT OF BONES.

Without referring much to the effect which bones might theoretically be expected to produce, it has been observed by practical men that they may be be made to act more quickly and more beneficially by the adoption of certain previous precautions, such as,

1. *Reducing them to fine powder.*—I have already alluded to the fact ascertained by experience, that the finer the powder, the more immediate and the more sensible the effect of bones. But practical men were afraid to venture too fat in diminishing the weight of manure, added to the soil. Bulk was considered to enter as an element into the fertilizing capabilities of any substance. Many leases even prohibit the addition of less than sixteen or twenty bushels of bones, when used alone in raising turnips. But under the guidance of science, both tenants and proprietors will, by and by, learn to estimate more correctly what the crops really carry off, and what the soil therefore requires. Thus a strictly scientific economy will be established, and no more of anything will be added to his fields than the farmer knowns and *understands* to be necessary to maintain them in a state of permanent fertility.

2. *Heating the bones.*—In some districts their action in hastening forward the young turnip, and bringing it quickly into rough leaf, where it is safe from the attacks of the fly, is increased by laying the bones in a heap, and covering them over with earth, for a week or ten days before they are drilled into the land. Left

in this state, they heat, soften, and begin to change or decompose; and thus, when laid in the drills near the seed, they are ready to furnish nourishment to the young plant as soon as the roots first thrust themselves downwards from the sprouting seed.

3. *Fermenting them with dung*, or the same decomposition is effected and carried further by mixing the bones with farm yard manure, and leaving the mixture awhile to ferment. It was the result of trials made by thirteen different persons, and which are recorded in the Doncaster report, that a given weight of bones, when mixed and fermented with farm yard manure, invariably produced a more beneficial effect, than the same weight of dry-bone dust, applied to the same crop and upon the same soil.

The advantage which results from these several methods, arises from the effects which they produce, either in diminishing the mechanical coherence of the particles of the bone, or in altering by incipient decomposition, the chemical state of the organic matter it contains.—None of them, however, sufficiently effect these objects, though I do not doubt that fine bone-dust, fermented for two or three months with farm yard manure, and occasionally turned over, would be brought into a condition more nearly approaching to guano, in its fertilizing virtue, than any other form of bones which has hitherto been generally employed.

Decomposing and dissolving bones by means of sulphuric acid.

But another mode of preparing bones has recently been introduced, and for two or three years has been extensively employed as a part of the ordinary husbandry, especially by some of the Scottish farmers. This mode consists in decomposing, and more or less dissolving bones in sulphuric acid, (oil of vitriol.) This may be done in various ways, and the prepared bones may either be applied in a liquid state with a watering cart, or may be dried and sowed with a drilling machine, or broad cast, like ordinary bone or rape dust.

a. The bones in the form of bone dust, or where bone mills are not at hand, simply broken in pieces with a hammer, may be put into a cast iron, stone, earthenware, or strong wooden vessel, mixed with half their weight of the strong oil of vitriol of the shops, stirring constantly while the latter is slowly poured in. A powerful boiling up takes place which gradually subsides.

By occasional stirring, the whole assumes the appearance of a thick paste, the pieces of bone gradually disappear, and after a week or ten days the whole may be taken out and mixed with a little charcoal powder, charred peat, saw dust or fine dry earth, to make it dry enough to pass through the drill, and may thus be immediately applied to the land. It would, however, be better to prepare the bone at least a month before using them, and lay them up in a heap for a while, with a view to their more perfect decomposition. When the pieces of bone are large, this is especially desirable, as otherwise they will not be fully decomposed without a larger addition both of water and acid.

b. Or the acid and bones as above, may, after a couple of days, be mixed with a quantity of light, friable soil, and laid up into a heap for seven or eight weeks with occasional turning. The bones thus heated, decompose and dry up, so as to be ready for putting into the drills without farther preparation. This method, however, requires more acid, and it is not unusual, in employing it, to take equal weights of acid and bones. It may be, some practical men, indeed, employ invariably equal weights of acid and bones, while others are satisfied by mixing the bones with one-third or even one-fourth of their weight of acid. I would myself employ not less than a half.

c. Or equal weights of bones in the form of dust, of boiling water and of acid* may be mixed together and occasionally stirred for a week or ten days, and when the particles of bone have

*A gallon of water weighs 10 lbs., a gallon of acid 17 or 18 lbs.

nearly disappeared, from fifty to one hundred times more water may be added to the mixture, and the liquid thus diluted may be applied by a water cart. If it is to be used upon grass land in the spring, or to young corn, it will be safer to dilute it with two hundred waters, but fifty waters (by weight) will be enough if it is to be applied to turnip drills. A common watering cart used for other liquid manures, will serve for the former purpose—for applying it to the drills a very ingenious addition of tubes to this cart has been contrived by Mr. Wagstaff and employed by him under the direction of the Duke of Richmond at Gordon Castle.

This method of applying the bones in the liquid form, is, no doubt the most perfect, but it is also the most troublesome and expensive, and may not, therefore, come so soon into general use, though it may ultimately prove the most profitable.

Instead of sulphuric acid, the muriatic acid or spirits of salt, has been, indeed was first, tried for the dissolution of bones, but the former appears at present, for several reasons, to be preferred.

We will add to the foregoing, that a number of experiments with dissolved bones were made by the Highland Society of Scotland, the result of which were:

"1. That four, and in some cases, even two bushels of dissolved bones, will produce as good a crop of turnips as sixteen or twenty bushels applied in the usual form, (dry bone-dust.) The crops also start more quickly, and grow more rapidly.

"2. That the more complete the state of solution or subdivision of the bones, the greater the effect. Hence, when applied in the liquid state, the benefit is most apparent."

The Horticulturist remarks: Those who cultivate heavy compact soils, have no doubt been quite disappointed in the want of effect of bone manure upon such soils, compared with their admirable action on lighter and more porous soils.—Professor *Johnston* has suggested, in the following paragraphs, the cause of this want of action on heavy soils, and the remedy:

10. Ought any other substance to be mixed with the dissolved bones?

Bones are known to exercise a comparatively feeble and uncertain action upon stiff and undrained clays, and it may, therefore, be reasonably asked by some if the action of dissolved bones will be more certain upon such soils than the bones in their natural state? We may, I think, answer this in the affirmative, since the principal cause of the less conspicuous effect of bones upon such soils is to be found in their tenacity and coldness, by which the particles of bones are shut out from the air, and their decomposition is retarded.

But, inasmuch as bones do not contain the whole of the substances which plants require, and as some of those which are present in bones, the salts of soda, for example, are in small quantity only, it may be reasonably asked again if the dissolved bones would not be improved, and their efficacy increased, and rendered more *sure*, were an addition of certain substances to be made to them. Of this I think there can be little doubt, though the necessity and nature of such additions will depend much upon the nature of the soil to which they are to be applied. A small per centage of pearl ash or wood ashes, of nitrate of soda, or common salt, and a sulphate of magnesia—5 lbs. each of the potash and soda salts, and 10 lbs. of the magnesia salt to each 100 lbs. of bones—would render the mixture more suited to every soil and crop. At the same time, if the soil like those formed from the felspar rocks abound in potash, or like those which border the sea, be rich in soda, or like those which owe their origin to the slates, or to magnesian limestones, contain already too much magnesia, any addition to these several substances would obviously be thrown away. The principle of adding such things being recognised as sound, the knowledge and discretion of the farmer must be exercised in determining how far such additions are likely to be profitable, or to make a small preliminary experiment by way of trial.

From the Albany Cultivator.

MANAGEMENT OF BEES.

I have read much written on the subject of bees, their management, the bee moth, &c., with but little benefit. I think, (judging from my own experiments, as well as from trial of the recommendation of other,) that a different mode of operation, from what is generally laid down, is necessary to guard against the enemies of bees.

It will be unnecessary for me here to enumerate the many plans and inventions that have been sought out, to guard against the moth, but I would suggest a different plan; though I do not know as it will answer for any other place than the section in which I live. Other places may be far more troubled with them, but I would just say, if they are any worse in any other place than here, they must be bad enough; for few keep bees here but a short time before they are very much injured or entirely run out, if kept on the old plan. When I speak of the old way, I mean letting them swarm as often as they will, and putting swarms into hives by themselves, without any regard to their size or the time they come out.

Most people seem to think the greater number of hives they can count, the better *luck*, as they term it. Now from the experience I have had in keeping bees, a different course should be pursued in order to succeed well; and my own conclusion is not a hasty one, for I have kept bees about twenty years; though during several years of the former part of that time I did not succeed very well; for I used to manage upon the old plan, and at the same time tried many experiments with them, some of which did not succeed as well as I had anticipated; but during the last ten or twelve years I have realized my most sanguine expectations.

My plan is not to count my army by the tents they occupy, but by the working men in them. I have all my hives strongly peopled, that they may not only repel an enemy, but drive them away.—When a hive is strongly peopled, none of their common enemies will attack or injure them; at any rate, it is only weak hives that are attacked by the bee moth, or robbers. I never knew an instance of a strong hive being injured, unless some accident had happened to the comb.

I may be asked how I can have all my hives strongly peopled? It can be easily done, but it requires some experience as well as skill, to do it successfully; but in this the main secret lies. Nearly all the first swarms, which come out before the twentieth of June, will be sufficiently strong, and will not only make honey enough to winter on, but in good seasons will make from two to four boxes (of twelve pounds each,) of surplus honey, that can be removed without impoverishing the hives; but nearly all second swarms need to be reinforced; however, it frequently happens that a third swarm comes out so as to put one of them with a second swarm, which generally makes them large enough. (I sometimes put three and even four small swarms together.) The size of a colony will be better understood by measurement in a hive than any other way. My hives are twelve inches inside and sixteen high in the clear, and when the swarm all settle in the hive, I want them two-thirds full at least; and when they fall short of this standard, I reinforce them till they come up to it. No fears need be entertained of their being two many bees in a hive, for the more bees the more honey they will make in the boxes. I have frequently had two of the first swarms go together, which have filled the hive of bees; such hives generally do best, and make far the most surplus honey; and are much better to go into winter quarters.

Hives frequently cast two and three swarms apiece, which reduces the stock in the hive so low, that they are unfit for wintering; I let them cast their late and small swarms until all my swarms are sufficiently reinforced, and then, what comes out afterwards, I manage in the following way.

I take a small hive and set it on a table for hiving, put the bees in front of the hive, and start them in moderately,

and with a goose quill separate them until I can find the queen, which I destroy. It is necessary to keep a close watch until they all go into the hive, for sometimes there are two or three, and even more queens, in second and third swarms, which, if not destroyed will remain in the hive, and not return to the one from which they came. If they do not go back by night, there is generally a queen left, and when that is the case, just at dark I take the hive and strike it pretty smartly on the table, and jar them out, and examine for another queen. The next morning they generally return to the parent hive.

Hives that have overswarmed themselves, are the ones the bee moths or robbers attack. Now these old feeble hives must be reinforced, or there is danger of their being destroyed by their enemies; or if they escape these there is danger of their dying in the winter in consequence of the want of warmth, being so few in number. It frequently happens that some of these over-swarmed hives are old, and unfit for wintering. I take the bees out of such hives, to reinforce weak ones with. This should be done soon after the swarming time is over. With the hives that I have to reinforce, (when I have not old hives to reinforce them with,) I go to some of my strongest hives that have boxes on the top full of honey and bees, and take one or two boxes just as seems necessary, and put them on weak ones, in order to make them sufficiently strong for wintering. The bees in the boxes hardly stir for a day or two, then they all agree and go on to work with renewed vigor.

I might here state that I never destroy any bees. Weak hives seldom ever quarrel with their new companions. In swarming time, different swarms seldom disagree, unless the first swarm has been a considerable time in the hive, and the one put with them a much smaller one. If they ever do quarrel, an easy way to stop them is to run a small wire in their hive, and just start the honey in their comb. The uniting swarms should always be done just in the dusk of evening, and by morning they will all be united, when the hive should be returned to its stand. Now I have but little hesitation in saying, that any one keeping bees, whose motto is, "strong hives or none," will have but little cause for complaint from the bee moth.

LOTAN SMITH.

WEIGHT OF LIVE CATTLE.

It is frequently a matter of importance to ascertain the weight of living cattle, when the means of weighing them are not at hand. It may be obtained with sufficient exactness by the following *measurements*.

Take a string and put it round the animal, standing square, just below the shoulder blade. Measure on a foot rule the feet and inches of its circumference. This is called the girth.

Then with the string measure from the bone of the tail which plumbs the line with the hinder part of the bullock, directing the line along the back to the fore part of the shoulder blade. Take the feet and inches on the foot rule as before. This is called the length.

Then work the figures in the following manner. Girth of the bullock, say 6 feet 4 inches. Length, 5 feet three inches. Multiply them together, and the result is 31 superficial feet. That again multiplied by 23, (the number of pounds allowed to each superficial foot of cattle measuring less than 7 and more than 5 in girth,) makes 713 pounds. And, allowing 14 pounds to the stone, is 50 stone 13 pounds.

When the animal measures less than 9 and more than 7 in girth, 31 is the number of pounds allowed to each superficial foot.

Again, suppose that a pig, or any small animal, should measure 2 feet in girth, and 2 feet along the back, which multiplied together make 4 square feet. That multiplied by 11, the number of pounds allowed for each square foot of cattle measuring less than 3 square feet in girth, makes 44 pounds. Which, divided by 14, to bring it to stones, is 3 stone 2 pounds.

Again, suppose a calf, a sheep, &c. should measure 4 feet 6 inches in girth, and 3 feet 9 inches in length. These multiplied together, make 16½ square feet. Which, multiplied by

16, the number of pounds allowed to each square foot of cattle measuring less than 5 and more than 3 feet in the girth, makes 264 pounds. Which, divided by 14, brings it to stones, and makes 18 stone 12 pounds.

The dimensions of the girth and length of cattle, sheep, hogs, calves, &c. may be as exactly taken in this way as is necessary for any computation or valuation of stock, by any one who knows the rudiments of arithmetic, who can get a string and procure a piece of chalk. A deduction of one stone in twenty must be made for a half fatted animal, from the weight procured by measurement of a fat one.

CHARLES COUNTY (MD.) AGRICULTURAL SOCIETY.

A meeting of the Charles County Agricultural Society was held on Thursday, 20th ult. The meeting was called to order by the President.

The proceedings of the last meeting having been read, the Corresponding Secretary stated that he had notified the Hon. JOHN G. CHAPMAN of his appointment to deliver an address before the first annual meeting of this Society, and that Mr. C. had accepted the appointment.

The Corresponding Secretary stated also that he had received a Circular from the Commissioner of Patents, a copy of which he presented to the Society, requesting certain information in regard to the agricultural products of the county.

Walter Mitchell, Esq., offered the following resolution:

Resolved, That the communication of the Commissioner of Patents be referred to a special committee consisting of five members, whose duty it shall be to collect such information as is required in said communication, and report the same to this Society at their October meeting.

On motion of James Fergusson, Esq., the chair was authorized to appoint said committee. The following named gentlemen were appointed: George P. Jenkins, James F. Neale, F. B. F. Burgess, John F. Gardiner and James Fergusson, Esqs.

On motion of Col. Jenifer, the Treasurer was authorized to call upon the members of the Society, by advertisement, for the amount of their subscriptions.

Richard Barnes, Esq., offered the following preamble and resolution, which were adopted:

Whereas, much of the success in agricultural life depends upon the industrious and judicious application of the principles of agriculture as a science—

Resolved, That as one of the surest and most effectual modes of disseminating a knowledge of those principles, and as a proof of the high estimation in which those journals are held by this Society, the "AMERICAN FARMER" and "SOUTHERN PLANTER" be cordially recommended to this Society and to the agriculturists of this county generally.

BILLS OF BRISTLY MORTALITY.

The slaughter of hogs in the pork state of the West for five years is given as follows:—

1843	912,000
1844	642,000
1845	955,588
1846	800,000
1847	1,492,824

Doctor Johnson's words were true—"Pig has not been wanting to man, but man has been wanting to pig. Nearly a million and a half of these interesting animals in one short year, developed, as the transcendentalists would say, from the state of pigdom into that of porkdom.—Let no lean skeptic say, "Credat *Judæus*."

MANAGEMENT OF A DAIRY FARM.

Mr. Chauncey Beckwith, of Columbia, Herkimer county, New York, presented to the Agricultural Society of that county in 1847 the following statement of the product and expenses of his farm for that year. It affords an excellent example of the advantage of system and economy, and shows what even a "slender man not able to do heavy work," may accomplish, provided he has the MIND for it. We

copy from the Transactions of the N. Y. State Agricultural Society:

"My farm consists of 100 acres, situated seven miles soath of the Erie canal, and is about nine hundred feet above its level. I have 85 acres under improvement, on which I have kept 2 horses and 21 cows; 37 acres to pasture, 35 to meadow, 8 to oats, 2 to corn, 1 to wheat, 1½ to sowed corn, 8½ to potatoes.

ACCOUNT CURRENT.

Made 12,000 lbs. cheese, sold at 7 cts. weighed in the fall and well cured,			$840 00
Sold apples,			40 00
do. butter,			20 00
Calves' skins,			10 00
			$910 00
Int. on $4,000 pd. for farm,		$250 00	
do. 400 do. cows,		28 00	
do. 150 do. horses,		10 50	
do. 150 do. utensils,		10 50	
		$329 00	
One hand 7½ months, $12,		90 00	
Paid for days' works,		40 00	
do. hired girl, 35 weeks,		39 38	
do. mechanics' bills,		20 00	
do. shorts for cows,		20 00	
do. plaster,		12 00	
do. cheese boxes and bandage,		35 00	
			$585 38
			324 62
Permanent improvem'nts, stone wall, &c.			50 00
			$374 62
Seed grain not taken into account, as it is the product of the farm from year to year.			
Family expenses, besides appropriating a portion of the products of the farm for such purposes,			120 00
Nett profit,			$254 62

I make this statement not for the purpose of boasting, but with a hope that other common farmers will be induced to make similar statements. It is believed that the statements usually made and published are of farms in a very high state of cultivation, and if not extravagantly made show a large yield and large profit, better calculated to discourage than to encourage farmers in moderate circumstances. The soil of my farm is gravelly loam, the timber mainly beech and maple, with elm and basswood, eighty acres under improvement. I have kept cows two seasons. When I commenced, the farm had been for several years fed close by sheep, and was not in a good situation for keeping cows. My family consists of myself, wife, and four small children. I am a slender man, not able to do heavy work; have made the cheese and done some chores. Have kept my cows always in good condition; have fed hay usually during winter; when I feed straw, some meal is fed, so as to make the keeping equal to good hay. From about the first of March, I feed two quarts of corn or barley meal to each cow per day until the pasture is good. They are kept in good stables, and during summer are put up night and morning in a milking barn, near and convenient to the cheese room, and fed the whey with meal or shorts, the quantity depending on the situation of the pasture. Commence feeding corn about the middle of August once a day, and the whey with shorts or meal once.

This fall after the corn was injured by the frost, fed a half bushel of apples to each cow per day, and late pumpkins, continuing to feed the whey, with shorts or meal, until they were dried off; have kept twenty cows for the dairy and one for the family. The yield of cheese per cow the past season, six hundred pounds, sold at seven cents; I think the extra feed made at least one hundred pounds per cow. The cost of shorts was one dollar per cow; the meal being the product of the farm has not been in any manner taken into the account. The season has been dry and not favorable for dairying. I am convinced that good feeding pays well. The milk drawn from the cow is a monstrous draft, and if they are not well fed, they will run down and be poor in the fall, and the yield of milk small during the latter part of the season. The practice of sowing corn to feed in the fall, should, and I think will become general; if cows are well fed, they will be in good condition in the fall, which enables us to turn our old cows and such as are not good milkers, for beef to good

advantage. I should put the cows up to milk if I did not feed; the trouble of feeding after they are up is not great.—The whey runs from the box in which the cheese is made, into a vat, and from that, by pump logs, it is drawn into pails in the alley of the milking house. The cows being in two rows, with their heads to the alley, and a tub for each; the meal bin is at one end of the alley; from this to the cheese room, a distance of some ten feet, plank are laid to walk on, and a temporary roof over, so that we pass from the milking house to the room where the cheese is made, without being exposed to rain or mud; still this space is open for circulation of air. I should feed my cows during summer, if it did not add to the quantity of cheese, as it is a satisfaction to see them look fine, and in knowing that they feel comfortable.

CHAUNCEY BECKWITH.

From the Prairie Farmer.

OSAGE ORANGE.

In relation to your enquiries about the Osage orange, I know not what to say more than has already been said in the Horticulturalist, the Prairie Farmer, the Ohio Cultivator, the Sangamon Journal, and in short, almost every paper of note that takes any interest in agriculture in the United States. All the writers in all these papers who pretend to know any thing about this plant, agree that it is in all respects unrivalled as a hedge plant in quickness of growth, the stubbornness and density of its branches and thorns and the extreme beauty of its foliage, flowers and fruit. They all agree that it will prove perfectly hardy in any climate where the 'Isabella grape will ripen in the open air.' And there are hedges of it standing in State from the latitude of Boston to the mouth of the Rio Grande.

Hundreds of rods of it have been put out in Ohio, even amid their dense forests of timber, and it is doing first rate. There are pieces of it in this State and in Missouri quite to the north of us, which are doing finely. I have had the plants on my ground ten years, and have them now of almost all ages and sizes, from ten years old to one month.

I have one piece of hedge three years old next fall that will turn any stock I have, from the smallest chicken or rabbit to the horse and ox. I have received letters on the subject from all parts of the Union and have not received one unfavorable account, from any one who has made a proper trial with plants raised from the seeds in this climate. In some one or two instances, plants brought from the south, or allowed to freeze the first winter, have been injured afterwards, as of course might have been expected. I have some two or three miles of hedge put out around my *pet* farm and orchard, and have this spring enclosed my house lot of four acres on College Hill. In transplanting thousands of plants this spring, I have had to replace only three. All who have seen my hedges intend to get them next spring; especially the English who were accustomed to hedges in the old country, are quite taken with it. They say there is nothing in England that can be compared to it as a hedge plant. The desire to get it here is great. I shall go next week and break eighteen or twenty miles of new prairie around some lands in Haverly, for which we shall prepare plants and set them next spring *without any protection.* About six miles of this fence belongs to me, and the rest to others. I have agreed to guarantee all the plants, if set according to my directions. We expect at least to double the value of our lands by this operation in three years. I have an application from another man to put out eleven miles for him in the same way. Another thinks he shall want two hundred miles, as indeed he will, if he fences all his lands.

As to its cost: it will not cost more than 25 to 50 cents per rod to make the best hedge in the whole world for all farming purposes—according to the kind of fence made. For one kind it will take 1000 plants, and from that to 2500 for every eighty rods of fence. And had I the time, I would agree to fence the whole Mississippi valley for 25 cents per rod of

one kind, and 50 cents per rod of the other kind of hedge, all complete and all cost included, and to perfect the whole in three or at most four years from the time the plants were set in the hedge. I find by experience that a mile of fence can be set much easier and quicker than I had supposed. My Englishman, with a boy to put in the plants, set fifty rods per day after the plants were prepared. which the nurseryman ought always to do before he sells. But there is a right and a wrong way, after all, in this as well as in other matters; and all those foolish methods of sowing the seeds in the hedge row, trimming at two years old—setting out little, feeble, ill-assorted plants, &c. &c., will prove worse than nothing.

On the whole, my advice to you is to prepare as much ground as you can—select good plants, and if possible put your farm all under this fence next spring. Before that time, I shall write a pamphlet giving specific instructions for setting, cultivating and trimming the hedge until it is complete, or three years old; or if not, I will keep you and your friends duly informed as far as needful; so you need not have any fears but you will get a first rate hedge, which will double the value of every acre of land you put it around. Plants will probably be cheaper next spring than they will be again for ten years. The demand will increase every year, and but few hereafter will raise them at the prices they will probably bring next spring; besides the comfort and convenience of having all your stock and fruit of all kinds entirely secure from all depredations and thieves, is too great to be postponed without a better reason than a probable cost of 25 or 50 cents per rod for a fence lasting as time and beautiful as the fabled walks of the Elysian fields. If you wish any further information on any particular point, I shall at all times be happy to communicate with you.

J. B. TURNER.

Illinois College, June 20, 1848.

Farmers should write communications for agricultural papers, as a duty.

TO MAKE GOOD SOUP.

The delicate and proper blending of savors is the cheif art of good soup making. Be sure and skim the grease off the soup when it first boils, or it will not become clear. Throw in a little salt to bring up the scum. Remove all of the grease. Be sure and simmer softly, and never let a soup boil hard.

Put the meat into cold water, and let it grow warm slowly. This dissolves the gelatine, allows the albumen to disengage, and the scum to rise, and diffuses the savory part of the meat. But if the soup is over a hot fire the albumen coagulates and hardens the meat, prevents the water from penetrating, and the savory part from disengaging itself. Thus the broth will be without flavor, and meat tough. Allow about two table-spoonfuls of salt to four quarts of soup, where there are many vegetables, and one and a half where there are few. Be sure not to leave any fat floating on the surface. A quart of water, or a little less, to a pound of meat is a good rule. Soup made of uncooked meat is as good the second day if heated to the boiling point.

If more water is needed, use boiling hot water, as cold or lukewarm spoils the soup. It is thought that potato water is unhealthy; and therefore do not boil potatoes in soup, but boil elsewhere, and add them when nearly cooked. The water in which poultry or fresh meat is boiled, should be saved for gravies, or soup, the next day. If you do not need it, give it to the poor.

Keep the vessel covered tight in which you boil soup, that the flavor be not lost. Never leave soup in metal pots, as sometimes a family is thus poisoned. Thickened soups require more seasoning; nearly double the quantity used for thin soups.

CORN AND BUCKWHEAT FOR HENS.

It is believed that a bushel of corn will last twice as long in feeding hens as a bushel of buckwheat, but the latter will make them lay eggs more than other grain, the profit thus overbalancing the cost.

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TERMS.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

☞ All Communications, concerning the Planter, must be addressed

P. D. BERNARD, *Richmond, Va.*

☞ For Terms see last page.

MEMORANDA FOR THE MONTH.

Winter commences its work in this month. November blasts are stripping the trees of their last remnants of clothing; the frost is embrowning the meadows and pasture grounds; and the crust upon the earth before sunrise each morning warns the farmer that if he has anything more to do with the ground, he must do it speedily, or wait many a long and weary month before he will again have a chance at it. If the droughts in the early part of the last month have put back any seeding work, every nerve must be strained to finish it quickly now. If your potatoes are still in the frost's way, spare no pains to get them out of it immediately. In short if there is any work left undone which belongs to last month, it will be gotten through with, by every sensible farmer, without a moment's delay.

November is the month in which each farmer will be able to tell with accuracy what he has made by his year's labor. We can congratulate those who have made good use of their time and of the favoring season, and who have in consequence made good crops, on the prospect which now opens before them. There is every reason to believe that a permanently high price will now be established in the European grain markets, and that an immense deal of produce will be shipped from this country during the coming winter and year.

WHEAT.—There is now needed but one word on this important matter. If there is any wheat in your possession which is still *above* ground, but which you intend to put *under* ground this year, why sow it soon and as fast as you can. A top dressing of some manure would also be advisable for wheat put in this late.

HOGS.—In our last number we expressed our opinion upon the propriety of fattening pork in the early part of the winter instead of the middle, later, and colder portion of the season. It has been suggested to us, that by putting up our hogs so early in the year, we lose the benefit of the acorns and other mast which are now falling so profusely in all our woods. This is certainly true. But it is also certain that hogs are fattened with much more ease, much more quickly, and at a much less cost in the milder portion of the cool weather, than when it becomes intensely cold. The farmer then has to take his choice between these alternatives—either to lose the additional weight and substance which his hogs will obtain by being kept in the woods until January, or to pay the additional expenditure necessary to fatten them in colder weather than the present. Of course each man's location will determine his judgment.

In another part of this number the reader may find something upon the fattening of hogs.

MANURE.—We are entering upon the *harvest of manure;* and it is one of the most important of all our crops. Out of it come all the rest. No good farmer will neglect to use all his spare time and labor in collecting the material which are going to waste in the marshes

and woods, out of which a fine crop may be obtained next year. Go to work now. Commence your compost heaps immediately.—Set your boys and carts, so soon as they can be spared from hauling in the corn and pumpkins, to collecting leaves, marsh grass, marsh mud, corn stalks, and trash of every description into your yard, and out of them build a compost heap. That heap, if judiciously worked, will prove a mine of gold richer than those of California, about which every body is now going mad. See that the drains from your cattle stalls and stables are all opened and that they all lead to some receptacle in the yard where that most valuable manure, the urine, may be secured. The useful substance in urine is ammonia. This is exceedingly volatile; but it may be easily secured by mingling a quantity of gypsum or lime with the urine. Ammonia has a strong affinity for lime in all its forms, it quickly forms a union with it, and may be thus retained without difficulty.

Cattle.—Humanity, justice, reason and interest, all enjoin it upon you to make some provision for your cattle of every description immediately. The cost of erecting a row of sheds in your barn yard will be paid back to you double and treble by the increase in the number and in the carcasses of your beasts. Every cent of it indeed, we may safely say, will be secured to you, in the smaller quantity of food necessary to keep cattle through the cold weather which are well housed and protected against the elements.

Sheep.—The truth of the foregoing remarks will be generally admitted with regard to cows, calves, and oxen; but we have met with many, who would say that it does *sheep* no good to be shedded and cared for through the winter beyond salting. Such is not our opinion. And if the reader will follow our dictate, he will give to his sheep during this and the coming winter months a large yard, well supplied with water and pine bushes, and have a long wide shed erected at one end thereof. Here he will supply them with several pounds of hay or straw apiece every day throughout the winter, if he wishes them to pay the expense of their keeping, in wool and mutton.

Apples, Pumpkins, &c.—These will now be gathered in. The apples should be left together for some weeks in a dry place, to get rid of some of their superabundant moisture. Then wiped and packed away with layers of straw in barrels.

Fences.—Nothing should prevent the farmer from giving his gates and fences throughout a personal inspection, in this as in every other month of the year. An immense deal of money may be saved by it. There is no propriety in trusting negroes, or any other people.—See to them *yourself*. Interest wonderfully quickens the eye sight, and no bad rail will escape the man out of whose pocket is to come the money which the hog that gets through there will take out of it. So let the owner of the farm go round his fences himself.

Firewood.—If you cannot spare your regular farm hands, employ some extra laborers, and during this month secure to yourself a good supply of fire-wood. The roads are now good; but next January and February they will be nearly impassable. *Now* your carts pass without difficulty any where; but *then* they will break down your teams, and waste your time.

Getting out Grain.—We are strongly of opinion that an immense advantage is secured to him who has out his corn and wheat, and is ready for the market early in the season.—He then commands the opportune moment, and can throw his produce into the trade just at the time when he perceives the crisis in the price.

THOUGHTS ON AGRICULTURE.

That the system of farming generally pursued in this country is susceptible of great improvement, will not be denied by any man of common intelligence. Agriculture is far behind most other arts and sciences at the present day, and why this is so I am at a loss to conceive, since it is the source from which all classes and professions must derive their support. The farmer is truly the 'bone and sinew' of the community; his occupation, if pursued with energy and skill, gives life and motion to all other departments of industry.

Seeing, then, that agriculture is the master wheel of our whole political machinery—the foundation and support of our wealth and prosperity—how is this, that the occupation of the farmer has come to be looked down upon by man as degrading, or less honorable than the "professions," or even the mechanical pursuits? This is a common and hurtful error among farmers, inducing them to send their sons to study a profession or learn a trade, instead of training them to their own calling, and endeavoring to elevate that calling by bringing into its service more of INTELLIGENCE and SCIENCE.

Let the farmers of this country pursue their business with increased energy and skill, and let our young men be induced to see that *farming is a science*, which invites them to bestow upon it the best powers of *educated minds*, and our profession will no longer be held in disesteem; farmers will become respected as men of high intelligence, of education and true science, and their sons will be proud to follow the occupation of their fathers.

Another great evil among farmers and one that bears heavily against the progress of improvement, is the *spirit of speculation* which too generally prevails in this country. Occasionally a farmer is seen who invests his surplus income in improvement of his farm, thereby increasing its productiveness and beauty, and affording increased means of enjoyment to himself and family; but the great majority expend all their means in the purchase of more land than is useful to them—even incurring large debts for this purpose, on which heavy interest must be paid, with increased taxes, and generally much trouble and vexation.

TURNIP MEAL.

A kind of meal made from turnips, has been introduced in Scotland. It is made by passing Swedish turnips through a potato starch mill. After having been passed through the washing machine, they are ground down by the rasping apparatus, and the pulp is passed between rollers which squeeze out the greater part of the moisture. The squeezed fibre is then dried on a kiln and ground into meal by mill stones. The liquid which is expressed is evaporated, and the dry, solid part is mixed with the meal. The meal therefore contains nearly all the solid parts of the turnip in a state which prevents decay, and in a light and portable form. It is confidently expected that this article will prove a good subsritute for grain for feeding stock in that country. Prof. Johnston, analyzing it found it to contain 13,68 per cent. of protein compounds, 48, 72 of sugar, 4,14 of gum, and 1,11 per cent. of oil.

ACCEPTABLE.

Mr. J. H. D. Lowndes has left at our office some of the finest red skinned sweet potatoes we have ever seen. The finest both in size and in substance. We expect from him an account of his method for raising the same.

We have also received from Mr. James Via (near this city) a specimen of some very fine corn raised by him.

From the Farmer's Monthly Visiter.

TOO MUCH LAND.

Why do so many farmers complain that they find farming poor, and unprofitable business? Because they try to cultivate *too much land*. Farming, when rightly managed, is as profitable business as a person can pursue, but while our chief aim is to be constantly adding acre to acre of our already uncultivated fields, we shall find the business poor enough.

As you pass through many of our New England counties observe how some of the farmers conduct their affairs. They seem to think their farms are hardly large enough to turn upon unless they contain from one hundred to five hundred acres, and this they usually have scattered around in various places, so that they actually lose as much time in going from field to field, and from lot to lot, as would be required to keep ten acres under good cultivation.

However, let us watch them for a few months and see how things go on.

In the spring they plow up so much land that they cannot prepare it for planting till their neighbors are nearly ready to commence hoeing.

They have manure enough for but little of their land; and therefore their crops are small and late.

Their fences are not repaired in season, and consequently their fields are covered with the flocks and herds of neighbors.—The edges of their mowing fields are clothed with blackberry bushes and briars.

Their orchards are neglected till they are completely buried with dead wood, and suckers, or robbed of their foliage by the caterpillars.

Now is any one at a loss to discover why such farming as this is unprofitable?—Not in the least.

And yet this is precisely the way in which many farms are conducted. But perhaps you may inquire how the evil is to be remedied? I will tell you how.—Sell your land; and if you cannot sell it I had almost said, give it away, till you have reduced your farm to such a size that you can cultivate it properly. Plow up no more land than you have sufficient manure for, and can prepare for planting in season. Repair your fences in season to prevent your neighbors cattle from encroaching upon your fields and pastures. Remove all unnecessary trees and bushes from your fields. Set out young fruit trees, and keep them free from insects and useless rubbish; and you will find that farming is far from being an unprofitable business.

AGRICOLA.

New Gloucester, Maine.

HOUSING MANURES.

There are probably few investments which would pay a better per centage than the amount necessary to protect manure from the sun, the dew and the rains. While exposed, many of the most nutritious substances are wasted. A part of this waste is by evaporation. Every farmer knows the power which this agent has. If you permit a heavy dew to fall upon your hay, after it is partially made, the color of it will be changed, although not a drop of water has fallen from it.—If permitted to lie spread for a few clear days, and clear nights, it will be ruined; its soluble matter being carried off by evaporation. Now this soluble matter is valuable, as nutriment for other plants, and all organic matter must be brought to a soluble state, before it is fitted for nutriment for vegetable life. If, therefore, a series of evaporation be carried on, as the vegetable manures decompose almost every thing valuable will be carried off. But another and more direct source of loss, according to common opinion, is to be found in the washing produced by the rains, saturating the manure with water, and then passing off. This is indeed the only source of loss, in view of many, but we doubt whether it is much greater than that by evaporation.

But when manure is sheltered, there is probably an absorption of valuable ingredients, to some extent, from the atmosphere. We know that if the earth from under any old building is examined, it is found rich in nitrate of potash, (saltpetre,) one of the most valuable of the inorganic substances for vegetable nutrition. If then, instead of loss from wash and evaporation, we can get an accumulation of valuable ingredients, the subject is surely worthy of attention.

ANTIDOTE TO POISON.

A correspondent of the London Literary Gazette gives the following antidote:

"I may venture to affirm there is scarce even a cottage in this country that does not contain an invaluable, certain and immediate remedy for such events—nothing more than a dessert-spoonful of made mustard, mixed in a tumbler glass of warm water, and drank immediately. It acts as an instantaneous emetic, is always ready, and may be used with safety in any case where one is required. By making this simple antidote known, you may be the means of saving many a fellow creature from an untimely end."

For the Southern Planter.

WHEAT AND CHEAT.

Mr. Editor,—As most of your readers are now engaged in *seeding wheat*, I may be pardoned for making a few enquiries on the subject of "transmutation," and excused for making a few statements of matters of fact in regard to wheat turning to cheat.

In the first place, I should like to know if the correspondent of the Ohio Cultivator succeeded in preventing his "wheat turning to timothy," and his "corn and potatoes to weeds." One of my neighbors' tobacco is turning to what he calls "*walloon*." Another's flax turned to cheat by sowing the same land in flax for seven successive years. A third sowed the seed of a "*summer sweet*," and it turned to a "*winter crab*." A fourth sowed the seed of a large *cling stone*, and it turned to a small *open stone*.

I understand one of the largest farmers in Campbell, Mr. S. P——ll, raised a barn in a wheat lot during the winter and a beautiful crop of cheat was harvested where the wheat was crippled, and comparatively none any where else.

Another very successful practical farmer of the same county, Mr. A. H——t, told me, in sowing a field of wheat, he sowed a part of a cotton patch adjoining, which was not ploughed in. The result was, the part not ploughed produced a fine crop of cheat and perhaps not a grain of wheat, and that ploughed was as clear of cheat as usual.

Again, Rev. W. J——n says, a few years since he sowed a field in wheat that had been in wheat, and not having pastured it, he had a tolerable prospect of volunteer wheat, which he fallowed; but not being done well, he discovered after sowing that much of the volunteer wheat was still living, and at harvest, so far as he could discover, every plant had "*turned to cheat*."

Now, as I have no "preconceived opinions," and I presume "A Montgomery Farmer," who appeared in your August No., p. 233, has none either, I wish to know if any of these give "circumstantial evidence strong enough to hang a man."

Now, I know in the case of tobacco turning to mullin, you will insist mullin was planted. But when it turns to something else, which is neither tobacco nor mullin, what was it planted? Perhaps you will say it was tobacco, and it is tobacco still. And so of the apple and peach; an apple and peach still, though of a very different sort. So I say of cheat; it is wheat still, though of a very different sort.

"A Montgomery Farmer" gives "a sovereign remedy to prevent loss from wheat turning to cheat or chess," which you have cut from the "American Farmer," and placed in large capitals. Says he, "it is simply to sow none but perfectly clean seed wheat." He confesses, however, that in his early farming operations many circumstances occurred that tended to convince others, and what he could not at the time satisfactorily account for. Neither has he subsequently satisfactorily accounted for them. How does he account for the circumstance of grazing a part of a field which he states was sown with *clean seed*, producing quite a fair crop of cheat, and comparatively but a small portion of the adjoining land, where the wheat was uninjured? Where did the cheat come from, if it was not produced by injuring the wheat? For he sowed *clean seed*, as he thought, and as appeared from the part of the field uninjured. What became of the injured wheat, if it did not turn to cheat? It was not killed.

Cheat is not so delicate a plant as not to thrive with wheat unless the wheat is grazed or trod; for its increase "is perhaps fivefold greater than wheat," and if sown together, as in a reported case, "in a crop of 118 bushels, 28 is cheat—nearly one-fourth." It cannot be "*well set*" in our land; for in the case of a cotton patch being sown by Mr. H——t, with wheat and not ploughed, proves it was produced by sowing the seed wheat on the ground. What else could it have been? We cannot suppose the cheat among the wheat when we cannot see it,

and when we sow the wheat and no cheat springs up under ordinary circumstances, and we cannot fail to believe it produced by wheat turning to cheat, particularly when the wheat disappears at the approach of wheat.

If such evidence as this will not "hang a man," it will surely convince those who have no "preconceived opinions."

Is there no convincing some without one rising from the dead? Cannot some experimenter make sure a small quantity of seed wheat clear of cheat, and sow it, and expose it to *treading*, or *grazing*, or *not being ploughed in;* and if neither of these produce the "*desired effect*," I, for one, will not believe that *tobacco turns to mullin*, or *potatoes to weeds*, without some proof.

B.

Charlotte, Oct. 1, 1848.

OUT-HOUSES.

If these have not been cleaned and white-washed since spring, have it done now. Let your *poultry-house* receive the benefit of a thorough cleansing and white washing, inside and out, nests and every other fixture about it. In a place convenient to your henhouse, under cover, provide a sufficient quantity of lime to last your fowls through the winter. Pounded oyster shells, if reduced very fine, would probably answer better than lime. To facilitate the operation of pounding the shells, it would be well to half or three-quarter burn them. Thus prepared, they can be very readily pounded. It will be well too to have a load of sand and gravel placed near the hen-house; and to induce your hens to *lay* in winter, you should give them occasional messes of fresh meat, chopped up fine, as a substitute for the worms with which they provide themselves when the earth is not frozen.—Chalk pounded and mixed with dough once a week will answer in the place of oyster shells—an ounce of chalk is sufficient for a quart of meal. *Buckwheat, oats* and *corn* should be alternately given them to eat.

BUTTER.

Butter that *is* butter—and a great deal that is not—is screwed up to a pretty high figure, in spite of all our railroads bringing us within a day's ride of myriads of cow pastures. Why is it that good fresh butter sells readily in Boston for 30 cents a lump and nets the farmer 25, while the great mass of butter commands but 14 cents a pound and dull at that? Every pound of the whole might have been made as good as the best without costing a cent more—certainly not two cents more. Why this immense sacrifice, waste, bad feeding, or whatever you may please to call it?

It is because not one-fourth of the farmers and farmer's wives and daughters—we beg their pardons, but they must know we have been a farmer and have had made *some* butter in our day—who undertake to make butter do not know their business. Butter making is an art—a nice chemical art. It requires a knowledge of certain facts and principles. It should be studied. It ought to be taught in common schools till parents understand and teach it to their children.

A few words will not suffice to show that it is an art, but they will suffice to show that it is an art, and requires *gumption.*

A word about great chemical laws.—Every kind of matter exists in three forms—solid, fluid and æriform or gaseous, the state depending on the temperature. What is solid at a low temperature, becomes fluid at a higher, and gas at a still higher. The degree of temperature at which these changes take place differs for different substances. As fluids will mechanically mix themselves with solids, as water with meal, so that both will occupy no more space or not much more than either did separately, so gases will mix with fluids, or be absorbed by them, to use the chemical term. The result of this absorption of a gas by a fluid is frequently a still more intimate union, changing the properties of both bodies, and forming a new compound differing from either, but sometimes it seems to be no-

thing more than a mechanical mixture. Different liquids differ very much in the avidity with which they absorb gases and as to the quantity which they are able to hold. Milk absorbs almost all gases more readily and to a greater amount than water.

Now remember that all matter, any kind of filth included, can and will exist as a gas, when the temperature favors it. At any temperature above freezing point, filthy solids and liquids are constantly throwing off gaseous exhalations. If the exhalations come in contact with fresh new milk they are absorbed by it and alter its taste and quality, just exactly as much as if the solid or liquid filth from which the exhalations arose had been thrown into the milk pans.

Now here is one of the grand causes of bad butter. We have the charity to believe that our fair country-women do generally—not always perhaps—keep their milk pans and pails and churns tolerably clean and sweet. But they set their milk for cream, without much regard to the exhalations which may be absorbed by it. Perhaps it takes the odor of a cellar, or of a kitchen in which there are all sorts of stewing, roasting, boiling and frying, perhaps in some pantry overlooking a yard redolent of some vault or other. Now if you were to make a villanous compound of burnt gravy, rotten apples and onions, mouldy cheese, antique soap musty dish cloths and other filth not to be named, and offer to put a teaspoonful of it into any dairy woman's milk pans wouldn't you get a broom-stick over your head? It is our private opinion that you would. Yet if there is any truth in chemistry she does get about a tea-spoonful of just such filth as we have mentoined mixed in with each quart of her cream, and in such a shape that it cannot be churned out. It gives her butter a bad flavor, which salt may conceal but not sweeten, and what is worse it gives it a bad chemical constitution, which hurries it into rancidity. Her butter will not pass muster in the market; it cannot *honestly* be made into lump butter, but is sold in the firkin to enter into the mysterious processes called cooking.

To make good butter, then, it is absolutely necessary not only that all the vessels used should be perfectly clean and sweet, but that the milk should be kept in a pure atmosphere, for which purpose the locality of the dairy should if possible be quite apart from the house and all its appendages, unless every thing about the house is kept cleaner than—common.—The butter of Philadelphia market—the best in the Union—is much of it made in dairies or "spring houses" at a distance from the dwelling.

Again, in butter making much, both in regard to quality, quantity, and labor, depends upon the temperature. It is difficult to "fetch the butter," that is to convert the cream into butter by churning, except at the right temperature, which is about that of spring water, 54 deg. or 56 deg. of Fahrenheit. To make good butter that temperature should be maintained in the dairy by means of water streams, summer and winter, not only for the churning but for the whole process of raising the cream. This done there is a great saving of labor in the churning, whether patent churns are used or not.

If these principles are duly tended to, with healthy cows and sweet close fed pasturage, bright hay and a little Indian meal in winter, our farmers may always be sure of getting a good price for their butter. They will gain enough in quantity to pay the interest on the outlay for a separate and proper dairy building, and till the knowledge of the art becomes general they will get double price on account of quality.

As matters now are, very little of our highest priced butter is the thing. It too often consists of a villanous compound of bad tastes conceale l with rock-salt.—Rock-salt is an article which can be purchased for much less than 25 cents per pound.

CHEESE.

The States of New York, Ohio, Vermont and Connecticut, have become famous for the produce of this article, and large quantities of it are manufactured

for shipment to England, where it has superseded much of the Dutch and Irish Cheese, with which for a century back, the aristocracy of England have supplied their tables. This cheese is made very rich and solid, so that it will keep a great while, and is in its highest state of excellence, when having been ripened by a year's keeping. It is seldom seen in the northern markets, as a much more inferior article is more saleable here. What little there is of this cheese consumed in the United States, sells at about ten cents a lb. by wholesale. In England, it readily brings from seventeen to twenty cents, and has pretty uniformly paid a handsome profit, over cost, frieght, duties and other charges. The reduction of the duty in England, which has enabled us to send such large quantities of cheese there, within a year or two, has added considerably to the depression of Ireland, by breaking up many of her dairies, and it has lessened materially the profits of the Dutch farmers, who formerly from their proximity enabling them to watch the English markets, supplied most of the foreign cheese consumed in it.

We have before published some statistics of the great cheese making counties in New York, in which this article is the staple product.

The commissioner of produce of Ohio has recently given a statement showing the export of butter and cheese from that State, which is set down at twelve millions pounds of cheese and four millions pounds of butter. The product of cheese of the five great counties of the Western Reserve, settled originally by emigrants from Connecticut, but in which many Germans have since located themselves, amounts to eleven millions four hundred and fifty thousand pounds, that of the county of Ashtabula being five millions pounds, and that of Trumbull four millions.

SUB-SOILING.

Of the advantages which would result upon a *dry, sound soil* from sub-soil ploughing, we do not entertain the shadow of a doubt. The expense of such method of preparing land we know will be looked upon as an insuperable objection by many. True it will cost double to prepare land in this way, but then, as it will increase the product the first season fully twenty-five per cent, or even more, the extra expense will be brought back with compound interest, so that the culturist will be the gainer even in the first crop to say nothing of the superior productive value of his land throughout the remaining years of his course of rotation. A very important advantage results from sub-soiling and preparing it for purposes of culture, and thereby enabling the culturist to *deepen* his surface soil without the least danger of detriment.

AGRICULTURAL.

We make the following extract from the address of David Thomas, before the Buffalo Horticultural Society:

We are far north for some kinds of the grape, such as the Bland Isabella, Catawba, and Alexandria,—for though they ripen here, and are good, they attain more sweetness in the South. Others are very excellent. Mildew, however, is often a great drawback in wet seasons; and there is a mystery about this malady that I profess not to understand, for W. Wilson, of Clermont, elevated the Sweet Water on poles twenty feet high, and had fair fruit, while on the contrary, I prostrated mine with equal success. In a dry summer, the whole crop, high, low, or midway escapes; but when we have frequent rains, there appears to be a zone in which mildew prevails, contracting or expanding according to the weather; and I have seen where it approached within one foot of the ground. I dislike the trellis; but I had one near which an exotic vine sent up a shoot, crossing a bar three feet high, and bending down on the opposite side. The next year was bad for mildew. Such grapes as grew near the root, however, were fair: and so were those where the top of the stem rested on the ground; while the intermediate portion, only two or three feet high, were blighted and ruined.

Some years ago it was recommended to remove a part of the main leaves so as to let in the sun on the fruit, and though I knew that these were important appendages—that in them the sap was elaborated—and that no fruit could be well flavored without them—yet I knew not but a part might be spared to advantage, and tried the experiment. It proved to be a wet season, and they were ruinously mildewed. Afterwards, I thought that the leaves would have been useful in turning off the rain. Grapes under a roof have been fair in the worst seasons; and it has been proposed to give them a south aspect under a shed, only two or three feet wide, with a close back. Such a structure would afford reflected heat, repel the cold winds from the north, and keep the fruit dry, while the rain was nourishing the roots.

I have no recollection of having seen a mildewed grape where the vine was supported by a live tree. Ten years ago I had a Burgundy that spread over a bush only eight or nine feet high, and the fruit was always fair; but two years ago it was raised on a pole to the hight of sixteen or eighteen feet, and ever since mildew has ruined the whole of them.

The vigor of the vine may be increased and prolonged by layering thrifty shoots, which form roots of their own, and in effect become new and independent, though still attached to the vine. The importance of this method may be better understood, when we learn that young vines are generally free from mildew. For four or five years after my first planting, the fruit was always fair, while others in the neighborhood suffered much. This result occasioned great surprise to some horticultural friends, who understood the cause of this singular exemption, no better than I did. Time, however, unravelled the mystery in part. When the wood became older, and the plant in consequence diminished in vigor, my grapes were blighted as badly as theirs.

I have observed the same thing in regard to the gooseberry. The more thrifty the variety, the less danger from mildew; and generally they are exempt till the bushes are several years old. We may, therefore, consider this shrub, like the raspberry, an *imperfect perennial;* and we ought to prepare new plantations in time, so as always to have a supply of this fine fruit.

I never think without regret that so few people have apricots—so easily raised, and so delicious when ripe. It comes in, too, when neither plums nor peaches are to be had, with rare exceptions. I obtained a sort from Flushing, many years ago, under the name of "peach apricot," which some pomologists pronounce a misnomer; but whether true to its name or not, I should like to see the peach that is half as valuable. In every door-yard there ought to be one or two of such trees.

There is another fruit, too much neglected, which I would take the liberty to recommend. It is the American Mulberry. There is a very old and a very good-natured maxim, to wit: "There is no disputing tastes,"—so when pomologists tell me there is another sort "incomparably finer," I can only say—not in reply, but in excuse—that I procured the genuine English Mulberry, and that the fruit is so sour that I do not eat it. Well, some folks like sour fruit, such as the Cornelian Cherry, but let me have the American Mulberry in preference to either. The native trees in Western New York, however, bear much smaller fruit than some varieties do that are found three or four degrees further south; and there is one in my fruit garden from that quarter, though probably not the very best kind, that I value as highly as any other tree within that enclosure.

Many people like the mild flavor of the huckleberry; but generally our land is unfavorable to its growth. There is a low bush, however—the dwarf service berry,—*Aronia ovalis*—that yields a fruit somewhat similar, and grows well in heavy though not in sandy soils. It is as easily cultivated as the currant, and bears moderately well.

But why do we want so many sorts of fruit? For the same reason that we want so many sorts of food; the pleasure that springs from variety. Another, not

less cogent, however, might be given.—In proportion to the number of kinds cultivated, are the chances for a supply in unfavorable season,—for the frost often destroys one sort, and leaves another; and continued rains induce decay in some and not in others, especially among plums and cherries. Some fair-skin varieties of the latter, have been almost worthless this year; and some of the black have suffered, while the acid sorts, as the May Duke and Morello, have generally escaped. Let us, therefore, have many kinds; and if the best sometimes offer nothing, let us have a second best.

On a former occasion, I noticed how much the best flavor of fruits depended on culture: and that two of my pear trees yielded nothing fit to eat, until the land was cultivated around them, when the products became excellent. I have now another instance to relate. Into the branches of a May Duke surrounded by sod, I inserted scions of the Belle de Choisy; and for two years the cherries were insipid. Not suspecting the cause, as the May Dukes were fine, I wondered how it had ever attained such a reputation. At last the hogs rooted up and destroyed every spire of grass in it, the ground was well pulverized, and ever since the fruit has been delicious.

Although I have gone much into detail, and not without apprehensions that I was trying your patience, yet I want to mention one circumstance more. Last fall I had many late planted cabbages that formed large tufts of leaves, but not good heads; and I had a hope that if I could preserve them till spring, they might grow into something useful,—so they were set in a trench, very closely side by side,—some straw was thrown on them —and over that about two inches of earth. As the trench was ten or twelve feet in length, two tubes were set in each end, to let off the bad air—just such as every cabbage depot under the ground, or potato heap ought to have. In the spring, I was surprised at the result. Every green leaf had disappeared—the larger plants had formed good heads, though not so compact as they grow in the open air, and all were beautifully blanched, and fit for use.

One item more, and I have done. No insects, no birds, and no malady among fruit trees have discouraged pomologists so much as the depredators of our own species—thieves in the proper sense of the word. Laws have been made sufficiently stringent, but a better public sentiment on this subject, can only repress such outrages effectually; and to Horticultural Societies must we chiefly look for its general introduction. Your splendid exhibitions silently urge the spectators to produce fruit of their own. Every one that makes the attempt, enlists on the side of virtue and true civilization; and if there is room for it, become more moral. The man whose tree is robbed, feels a sympathy for his plundered neighbor, that he never felt before; and the boy that guards his melon patch, feels more like a man, and learns to respect the property of others. In accordance with these remarks, a late writer has pithily said, "I never knew a boy to steal fruit, whose father raised fruit himself."

PREPARATION OF BONES.

To test the efficacy of dissolving bones through the agency of sulphuric acid, we took a given quantity of bone, broke it into fragments with a hammer, procured half its weight of the above acid, and added to the acid ten times the weight of the bone, of water, mixed, and poured the whole on the bone. The effect was that the bone became *dissolved.* We permitted it to remain exposed to the atmosphere, by which the water became evaporated, leaving behind a soponaceous body, resembling in feel and consistency, very thick soft soap.

Thus prepared, it could be mixed with loam, mould, ashes, or well rotted manure, and would immediately give out its virtues to growing plants—or instead of evaporating it to partial dryness, ten hundred parts in weight of water may be added, when it can be applied in a liquid state.

If applied simply in a ground state, though the bones might not yield up so

readily its principles to the plants, its effect upon the soil would be more permanent, in consequence of the decomposition being slower.

Sulphuric acid can be bought for less than two cents per pound.—*American Farmer.*

FALL AND WINTER PLOUGHING.

Stiff clays intended for spring crops should be ploughed through the fall and winter: care must be observed not to plough either when the ground is either wet or very dry. If ploughed at the right time, and submitted to the action of the frost, the texture of the soil will be greatly improved, be easier to work, produce better and more grain. It is but candid, however, to state that stiff clays ploughed when saturated with water become intractable and remain so during the whole of the ensuing season.

Having thus enumerated the things of most immediate attention, we will ask permission to suggest to such of our patrons as may not have done so, to LIME their lands. If their land is thin, twenty-five bushels to the acre will be enough—if in moderate heart, forty or fifty—if strong land, well supplied with vegetable matter, they may put on sixty, seventy-five or one hundred—but they must bear this truth in mind, it is indispensably necessary to sow clover seed on all limed lands.

In speaking of the benefits resulting from the application of lime, *Mons. Puvis*, one of the most intelligent writers upon the subject, says:

"It would then result from all that has been said, that lime modifies the texture of the soil, makes it more friable—invigorates it—renders it more permeable—gives it the power to better resist moisture as well as dryness—that it produces in the soil the humate of lime which encloses a powerful means of fertility—that lime increases much of the energy of the soil and of plants to draw from the atmosphere the volatile substances of which plants are composed, oxygen, hydrogen, carbon and azote—that the limed soil, in furnishing to plants the lime which they need, relieves the soil and plants from employing their powers to produce it, and finally, that lime promotes the formation of fixed substances, earthly or saline, necessary to vegetation."

From the American Farmer.

PRIZE ESSAY ON THE RENOVATION OF WORN-OUT LANDS.

BY EDWARD STABLER,

Of Sandy Spring, Montgomery County, Md.

In submitting the following essay upon the "Renovation of Worn-Out Lands," it is deemed proper to state, that the writer understands the main object in view of the Editor of the American Farmer, to be, the eliciting of such information as is best adapted to the wants of the great majority of farmers; those who are dependent on the product of the soil for a support, and whose resources are comparatively limited: for although it may be equally desirable to those with more ample means, to improve their lands at the least expense of time and money, yet the number of such is comparatively small: and it is not perceived why the same plan may not suit both; the one who "lives by the sweat of his brow" improves his ten acres, while he with the "plethoric purse" may, in the same time, enrich his hundred acres. With the view, therefore, to adapt it to the more numerous class of readers, the effort will be made to condense the essay as much as possible; and so plain and free from technicalities, that "he that runs may read."

It is almost impossible to establish a theory or mode of farming that can be made to suit alike all localities—of soil, climate, and the facilities of obtaining the various kinds of manure now in use in different sections of the country. But it is believed that with proper energy and industry on the part of farmers, and even with the present facilities of transportation, an increase of double, if not quadruple, the lime, marl and bones might be used to advantage; the two former in many sections of our country are inex-

haustible for generations to come; and a much greater amount of the latter might be obtained in sections where they are not used, but greatly needed, if more attention was paid to their collection and preservation.

The first step I would advise towards the "Renovation of Worn-out Lands," is a complete and thorough draining, both surface and under drains, where the location and nature of the soil render it too retentive of moisture late in the spring. It retards early seeding—the winter grains and grass roots are very liable to be thrown out and injured by frosts; and on such land the injury from drought is much much more severely felt. The writer has not known a case where this operation was performed with ordinary skill and judgment, that did not fully repay the expense; and in some cases the product was increased from five to tenfold.

To go into a full description of the methods used in different sections, to accomplish this most important branch of the husbandman's duty, would require diagrams, and also too much space; nor is it considered necessary; for in the "American Farmer" (which every tiller of the soil ought to possess) very full and ample information may be obtained on the subject. A few general observations here may suffice. If the soil is rendered too wet by springs, whose *sources* are lower than the surrounding land, the drains must be extended to at least the same level, be the distance or depth what they may; or to a sufficient depth below the surface to admit of under-draining clear of the plough. This may sometimes be effected, by going *through the clay* sub-soil, and without much expense of ditching; as the water can then pass off through the under stratum of gravel or sand.

Wherever the *under* drains will answer the purpose, they should be adopted; for the land thus reclaimed is often the most profitable for cultivation; and where the expense of brick, or tile, is too great, or suitable stone cannot be had to construct trunks, a good substitute is generally within reach, by 12 to 15 inches in depth of small loose stones; covering first with leaves, straw or small brush, to prevent filling the interstices with the returned earth. Logs or poles, laid lengthwise, also form good under drains; but are more liable to clog from decay.

The next important step, in my opinion, in "Renovating Worn-out Lands," is to plough deep, and thus expose a *new* surface to the action of frost and atmospheric influence, in order to *make* a soil in place of the one provided by nature; but which, either from cupidity or bad management —perhaps both—man has destroyed. It is considered *one* of the most certain means to attain this desirable end; and although sub-soil ploughing is fully approved of, it is considered less important than to break up the earth from 7 to 10 inches, if the subsequent treatment is properly attended to.

The writer is well aware there is a strong feeling of prejudice in the minds of many individuals against this practice. What are the arguments of the advocates of shallow ploughing? They say, in so many words, "our soil is only a few inches deep, and if we do not plough shallow we shall turn up so much clay or *dead earth*, as to raise no crop at all." If two or three inches of soil is buried in the spring, under a bed of five or six inches of clay, and thus left without further aid, the result would be as stated. That shallow ploughing enables the farmer to get clear much more readily of the little soil or mould he may have on his worn-out lands, is susceptible of easy demonstration; nor is it less so, that either in a very *wet* or very *dry* season, the crop from this cause generally suffers.

During the summer months, the greater portion of the rains fall hastily; and whenever the ground is not opened and pervious to a sufficient depth to imbibe the whole, before the surplus water can penetrate and be absorbed by the compact subsoil, a large portion of the surface becomes *fluid*, and rapidly passes off or "washes away," unless the land is perfectly level. What remains, after being so thoroughly saturated, has a tendency to settle into a compact mass; soon parting with its scanty supply of moisture

under a hot summer's sun, and rendering it impervious to the roots of plants. If a drought succeeds, a soil in such state can afford but a meagre supply of moisture to nourish a crop; and at a period, too, when the greatest amount is needed.—Nearly all plants imbibe more or less moisture from the earth by their roots; and if this support is withheld, they cannot continue in a healthy and vigorous state: indeed, so necessary is this element, that many of our grass seeds and plants will not only vegetate, but grow vigorously for a considerable period, with no other support to their roots than what can be derived from pure water.

I am confident that in most of our lands that have become sterile, the cause is to be attributed more to *shallow* ploughing and *washing away* of the little soil they possessed, than to the extraction of the vegetable nutriment by the growth of plants; in fact, it is almost a necessary consequence of this pernicious practice. If the toiling farmer or planter is able to purchase a dressing of mineral manure, or fortunate enough to scrape together a scanty supply of vegetable matter from the resources of the farm, a large portion of it is carried off by the first dashing rain, to enrich still more the beds of *creeks* and *rivers*.

Having stated some of the disadvantages which attend shallow ploughing, we will briefly enumerate some of the advantages of deep ploughing, when judiciously pursued.

In the successful cultivation of all our crops, it is necessary that ample *food* be provided, and in an accessible form; and that moisture, equally necessary, be administered in neither too *great* or too *small* quantities. This will probably be admitted by all, and it is presumed the admission will also be made that the greatest amount of nourishment derived by all our field crops is from the earth. By deep ploughing, it rarely occurs that a fall of rain is so great or sudden, as completely to *saturate* the body of earth acted on by the plough; and until such is the case, but little danger is to be apprehended of "washing away;" and just as little that the plants will so soon require a renewal of moisture, caused by evaporation. The soil much longer retains its loose and friable texture, and enables the roots readily to extend in all directions, in search of their appropriate nourishment; for the same reason, deep tilth admits of closer proximity of the plants, without sustaining equal injury from drought and turning yellow, or *firing*, in common parlance.

I would ask the advocates of shallow ploughing, or the *skinning system*, as it has been aptly termed, if they have not observed the beneficial effects of earths taken out of cellars, wells, pits, &c. when applied to very poor land? And have they not observed a luxuriant growth of grass and weeds on ditch banks and mill races; even to the highest points, when level enough to retain the moisture that falls? I have often noticed such effects, and have almost uniformly observed, that if earth thus taken from below the surface was capable of being pulverized by frost or tillage, increased fertility was the result. Such being the case, is there any valid reason for supposing that still nearer the surface so much difference can exist, that while one will render the same land sterile, the other will positively enrich it? If advantage will result from mixing with the soil the earth taken from many feet below the surface—and that such is the case I have had repeated evidence, and using it for this express object—I cannot perceive why a portion of the same fertilizing property may not be found in the earth only a few inches or a foot below the surface. And last, though not least, in the catalogue of advantages, the all-important item of manure is rendered more available, and consequently the land is both immediately and permanently benefited.

But deep ploughing alone, much as it is advocated, will not speedily make poor land rich. It also requires some judgment when and to what extent it should be carried. Lands that are to be ploughed much deeper than usual, should be broken up in the fall; no crop should be seeded the ensuing season that does not admit of frequent ploughing or harrowing; and if

PRACTICABLE give it a dressing before planting, (unless previously prepared for the operation by liming a year or two in advance,) of lime or some other kind of manure.

These two branches, viz: Draining and Ploughing are considered important in the system of renovation, and more might be added; but perhaps sufficient space has been devoted to them, with the further remark, that no land with a clay sub-soil should be ploughed either deep or shallow when in a state too wet to crumble or break freely before the plough. The injury is irreparable, at least for that season, as nothing short of a winter's frost will effectually pulverize it.

We will now proceed to the third important step in the process of "renovating worn-out lands." The proper kind and application of manures, viz: stable manure and vegetable matter produced by the farm; lime, marl, bones, ashes, guano, plaster, and turning in green crops.

It may be considered almost an axiom in farming operations, that no one should go in debt for any kind of manures, unless in favored situations where the price is very low, and the transportation cheap, (except perhaps for lime,) without first having fully availed himself of all his own resources; and his manure heap too should be his first care. No farmer need ever be at a loss for *profitable* employment for himself and hands, in adding to his stock of this all-important requisite to successful operations; and in preventing the loss and waste of what is already accumulated. When not necessarily otherwise engaged, the time is well employed in many situations by hauling the rich earth, and decomposed vegetable matter, which has accumulated in the marshes, leaves, &c., and incorporating them with the contents of his barn yard; independent of their own fertilizing properties, they are valuable as absorbents, to receive and retain the more volatile ingredients that otherwise might be lost in the process of fermentation and decomposition; a few bushels of plaster may be used with much advantage for the same object.

It was the maxim of a wise man who began the world with nothing and became independent—and that too without the charge of dishonesty or extortion ever having been alleged against him—that "a penny saved is two pence gained." It is emphatically true with regard to the saving and judicious application of manure.

As an evidence of what care and attention in regard to making and saving manure will accomplish, it is within the knowledge of the writer, that two loads of manure (with two yoke of oxen) have been hauled out this season for every acre of arable land on the farm; and with a small exception, produced on the farm itself, without extraneous aid.

As germain to our present purpose and object, I will here remark that many farmers whose lands most require "renovating," keep too many horses in nineteen cases out of twenty, and for nearly all farm purposes one or two good yoke of oxen are decidedly preferable. They cost no more at first, and will perform twice the labor, save in expense of harness and still more in keeping; and after working five to six years under good management, are usually worth more than the first cost for the shambles.

Marl.—I can say but little from experience, in the use of calcareous manures; but am fully satisfied both by information derived from others, and from personal observation, that wherever it abounds, it might be made a MINE OF WEALTH to the proprietor, and the adjacent districts which admit of water transportation.

The only apparent reason why they are not more so, is, either ignorance of its great fertilizing properties, or a lack of the necessary enterprise and industry TO BECOME RICH, when every facility for the purpose, is as it were, laid at their very doors. The quantity of marl required to the acre, to produce much beneficial result, does not admit of extended land transportation: but there are thousands. if not tens of thousands of acres, bordering on, and near tide water, both in this, and neighboring States, now thrown out as waste lands, because they will no longer yield even a stinted growth of vege-

tation; most, if not all of which, might readily be reclaimed by the judicious use of marl; and at one-fourth the cost per acre, that lands in the interior,—originally no better, if so good,—are made to yield 10 to 12 barrels of corn, or 30 to 40 bushels of wheat to the acre. I have been informed by some of the large landed proprietors—not owning, nor residing within less than 8 to 10 miles of the marl beds—that a boat-load of a thousand to twelve hundred bushels of marl, rich in carbonate of lime, could be delivered at many of their landings, at an expense not exceeding 8 to $10. Yet not one bushel was ever used!!

But as was justly remarked, by one of these very intelligent and hospitable gentlemen, "it's no use to preach to a *deaf* congregation," and a further remark or two will only be added; not altogether without the hope that *something* will eventually "stir them up," and induce a trial at least, of this valuable manure. It matters less, how, when, or what quantity of marl or lime is applied; only MAKE THE APPLICATION, and that pretty liberally. Its application, like lime, is best made one, two or three years, and on the surface, before breaking up the land; and thus give it the benefit of the winter's frosts and snows to dissolve and incorporate it with the soil.

Lime.—This, next to the proper draining (when necessary: for even lime will not enable us to dispense with it) and deep tillage, I consider the most certain and permanent agent in "renovating worn-out lands," of any other substance with which I am acquainted; whether mineral, animal, or vegetable; and when it can be obtained at a reasonable cost, even with some miles hauling in addition, it is generally to be preferred, if only one kind of "bought manure" is to be used. It may however be used freely in conjunction with all other manures, and with decided advantage, if done with judgment.

After many years' experience in the use of lime, I would advise in all cases where it can be accomplished, to spread it on the surface from one to three or four years, before the land is broken up. The effect of a single winter's frosts and rains, will more effectually dissolve and bring it into action, and benefit the succeeding crop, as also the land itself, than is attained in a longer period, by ploughing it in as soon as applied. In this way also, a much larger quantity may be safely applied to the same land at a single dressing. As there is no loss to lime from atmospheric influence, it should be kept near the surface: and the *proper* quantity to use to the best advantage, can only be determined by the price, and the state the land may be in, at the time. With a good sod of grass roots to receive it, 100 or even 150 bushels to the acre, *will do no harm:* but on stiff clays, with little soil or mould on the surface, 50 bushels would be a very liberal application as a first dressing, if put on immediately after ploughing. It would be better to apply a less quantity at first, and renew it as soon as an increased growth of vegetation could be obtained.

When lime is applied in very large quantities, and immediately incorporated with a poor soil, having little or no vegetable matter in it, the effect is to combine with the silicious particles,—abounding more or less in all clay soils—and form hard compact masses, that are not separated by years of after tillage. This mode, therefore, to say the least, is like "burying the talent;" for so much capital lies dormant, and neither benefits the farmer or his land. Twenty-five or thirty bushels as a first application, particularly if aided by even a light dressing of vegetable manure, will make a much quicker return for the outlay.

As to the *modus operandi* of lime much has been written; and various, if not conflicting theories put forth; nor do all agree as to the most judicious mode of application.

I consider it altogether unnecessary here, to attempt any explanation of the chemical changes produced in the soil by its use, or to give my own opinion on the subject, though formed after careful observation and from years' experience. To the inexperienced, however, it is of much more importance to be informed how to use it to the best advantage. And as

previously remarked, it is of still less consequence, *how* or *when* applied, *so that it is done.*

Lime will act very beneficially, as I know from experience, on stiff, tenacious clays, and so near a state of sterility, as scarcely to re-produce the seed sown on them. But if used under such circumstances, and without the aid of any kind of manure, considerable time must elapse before much amelioration of the soil need be expected.

Theory without practice does not often carry much weight with it; and on the mind of the farmer, generally speaking, it acts with less force perhaps than with most other classes in the community; for unless an array of facts or good evidence is adduced to inspire confidence, he is slow to change; the more so when he knows that even a partial failure in a single crop from experimenting will be sensibly felt in the slender income, and perhaps for a year to come. This feeling, to a certain extent at least, is all right and proper; for experiments to test any new theory are best undertaken on a limited scale: *time* may be lost thereby, but *money may be saved in the end.*

I will now briefly give some account of the *practical* operation of my theory. My first application of lime to any extent was 200 bushels, mostly air slaked, hauled six miles, and applied to four acres just broken up for a corn crop, and harrowed in. This portion of the field particularly was so thoroughly exhausted by bad management, that the yield in corn was only some five or six bushels to the acre; nor was the crop sensibly increased by the lime. As the main object in cultivation was to set the field in grass, the corn was followed by a crop of small grain, and a liberal supply of clover, timothy seed and plaster; the latter produced no visible effect whatever, and nearly all the grass seed perished, leaving the surface as bare as before. But before the field again came in course for cultivation, the good effect of the lime was so evident by the growth of white clover—a *new* variety in that vicinity—that I was encouraged to lime the whole field, containing about twelve acres, and also including this four acres; put on as before, just after breaking up for corn. The crop on this portion was increased fully five to sixfold over that adjoining and but recently limed; thus liberally paying all expenses, and has continued ever since to produce profitable crops. Plaster now acts on it with marked effect. The first application was made some eighteen to nineteen years since; and to test the *durability* of lime, these four acres have been kept for experiment, and without the addition of other manure, except a portion intended for still further experiment. About two acres were sown in broadcast corn, with 200 lbs. Peruvian guano—then followed wheat on the four acres, and with 200 lbs. guano to the acre, leaving two lands without guano.

The corn was materially benefited by the guano; but the wheat was *not* benefited by the previous application of it, though it was nearly or quite doubled over the two lands left without any guano: the wheat was harvested two years since, and no one could now point out by the growth of the clover, uniformly good on the whole, and equally limed, which portion had and which had no guano—the conclusion is, that the "renovating" effects of lime are thus far TEN times as durable as guano; how much longer remains to be seen.

Some nine or ten years since I determined to reclaim an adjoining field, at whatever cost. I was told long previous by one of my neighbors, who sold his farm and removed to the west, in order to settle on better land, that the attempt would be futile; or, if it ever was made productive, it would cost a great deal more than the land was worth. The prospect *was* forbidding; for the larger portion was as much reduced as could be, by shallow tillage, no manure, no grass seed sown, and constant washing, even to gullies, producing little else than running briars. It was broken up in the fall and winter to a much greater depth than it was ever ploughed before; sixty bushels of quick lime to the acre were applied in the spring, the ground well harrowed and planted in corn; such portions as required

it having been well under-drained—some two to three acres—and which were about the amount that produced any thing of a crop, or that more than paid the expense of ploughing. A crop of oats and grass seed followed; as it was not considered worth the trouble and expense to put in a crop of wheat on two-thirds of the field. After six or seven years, the same field again coming in course, exactly the same plan was pursued, as to ploughing and lime, but rather increasing the depth than otherwise.

The crop of corn, though injured by the bud worm, was good—enabling me to do, what I had rarely or never done before, *sell* from one-quarter to one-third of the crop. Oats followed on about two-thirds of the field, with some five or six bushels of bones to the acre, and wheat on the balance, with guano; both heavy crops, and lodging over the greater part of the field. Then followed a wheat crop on the whole; manured as much as possible from the barn yard, and then on the balance a light dressing of guano of some eighty to one hundred lbs. to the acre.

The average yield of the field was over thirty-three bushels to the acre.

These results are attained with certainty; for every field and lot are accurately surveyed, and the contents noted on the plat of the farm; and the product of this field was kept separate, threshed and measured by itself. The greater portion suffered from the drought early last year; and the harvesting was badly done, owing to the fallen and tangled state of the grain from a storm about the time of ripening; but I have no doubt several contiguous acres might have been selected on the lowest ground (the portion under-drained) on which the yield was over forty bushels to the acre.* This season the same field yielded the heaviest crop of grass I ever harvested; and even on what was originally the poorest part, there is now a luxuriant crop of second growth clover, and

*It was gleaned with the horse rake, and by the hogs; yet sufficient seed was left on the land to produce this year a *volunteer* crop of wheat with the grass, estimated by many who saw it as well worth harvesting.

intended for seed, that is lodging over the whole extent. We will estimate the profit and loss by figures.

To 60 bushels of lime, cost at kiln 16c,		$9 60
7 years' interest (though it paid in pasture in less time,)		4 03
60 bushels of lime, cost at kiln 12½c,		7 50
3 years' interest,		1 35
6 bushels ground bones, at 50c,		3 00
100 pounds guano, (African,)		2 00
		$27 48

CONTRA.

By 33 bushels of wheat, average price sold at $1 31	$43 23	
Estimate increase of corn crop at least 6 barrels, at $2, (entirely owing to the lime,)	12 00	
Estimate increase of oat crop 20 bushels, at 40c, (owing entirely to the lime)	8 00	
Estimate increase of hay 1 ton, (owing entirely to the lime,)	10 00	
Estimate *value* of clover seed, (there would have been none without the lime,) 1½ bushels, at $4,	6 00	
		79 23
		$51 75

Making, in round numbers, $50 per acre in favor of "renovating;" nor is the estimate a forced one. The actual increase of the crops is greater than the amounts assumed, and if a fair average was made of the wheat, in the joint crop of oats and wheat, the aggregate result would be increased some five to six dollars per acre.

There should, perhaps, in the view of some, be a charge for draining, and for hauling and spreading the lime; also for the manure for the crop of wheat; and and for the expense of harvesting the *increased* crops.

The two former are amply paid for in the increased pasture; and the manure was no more than the actual yield of the land itself, after the use of lime, &c. which are charged in the account and at more than the cost; and it is believed the increased product in straw and fodder fully repays the expense of harvesting; to say nothing of the present state of the land, as compared to what it was originally. It is now *radically* and *permanently* improved.

When lime has been freely used, plas-

ter will generally, if not always, act promptly and efficiently; and thus, at very small expense, materially aid in perpetuating the improvement. Previous to its application in this case, plaster was liberally used, but with no visible effect whatever; now its action is as marked on the *same* land as I have ever seen any where.

Wherever lime can be obtained at a reasonable price—say from 12 to 20 cents per bushel in a caustic state, (or at half price if air slaked,) with even five to ten miles hauling, it may be used to much advantage on most if not all stiff clay soils.

In some sections these prices are paid, and it is hauled fifteen to twenty miles, and by a class of men unsurpassed for industry and thrift. The writer has known no instance where its use was persevered in, under whatever disadvantage it might be, in which success, to a greater or less extent, did not crown the effort; and many who borrowed money to procure it in the first instance, have mainly by its use become independent and money lenders themselves.

Bones—Composed principally of phosphate of lime and gelatinous animal matter, when crushed or ground form one of the richest manures. It acts well, either alone or with other manures, and is particularly valuable to aid the growth of clover; for this reason I class it decidedly before guano, at an equal expenditure of money, for "renovating worn out lands." Although not so prompt in acting, it is far more durable, and more likely to produce a good crop of clover to turn under. Clover being almost the only 'green crop' that I have ever found much advantage from turning in.

I prefer its use following the lime and on the oat crop, at the rate of from six to ten bushels, or as much more as the renovator may please, for an increased quantity will do *no injury*. On the wheat succeeding the oats, my practise is to apply a light dressing of guano—say eighty to one hundred pounds to the acre—to mature and perfect the grain, and only on such portions of the field as the manure from the barn yard will not extend to. By the time the clover requires the aid of the bone, it will have become sufficiently disintegrated and incorporated with the soil, to give the clover a vigorous start—and its effect on the grass crops is generally more durable than the vegetable manures.

The supply of *ground* bones is a limited one; but when to be had at a reasonable price (usually selling at 40 to 50 cents the bushel) it may be used to advantage on all crops and on all soils; but with decidedly *less* advantage, after passing through the *alembick* of the glue manufacturer (as I have proved, at least to my satisfaction)—thus depriving it of much of its fertilizing property. It is usually harrowed in with the seed, as it loses less by exposure to the atmosphere than most kinds of putrescent manures.

Guano.—This is one of the most active of all manures; and if the price would justify the application in sufficient quantities, it might aid very materially in "renovating worn-out lands." But considering the evanescent nature of its most active principle, ammonia, and the present high market price, viz: the Peruvian, at $60 to $70—and the more inferior kinds at $45 to $55—for the ton of 2000 lbs., it is much doubted whether the ultimate advantage calculated on by many will be realized. If the Peruvian could be obtained at about *half* this price—and it is believed such would be the case with a fair competition in the Peruvian market—the case might be different.

The writer has made liberal use of guano, and generally to profit as to immediate return; but in no case has much benefit been derived beyond the first crop, and rarely was any material effect perceived after the second year.

This opinion, so different from that entertained by some others, is not lightly formed, nor without several years' careful observation; and also testing the matter by numerous experiments, and on a scale sufficiently extended to prove the truth or fallacy of the doctrine held by some that it is only a stimulant. Reference to one experiment may suffice, as they all tend

to the same result and nearly to the same degree.

In a field of some ten acres, one acre was selected near the middle, and extending through the field, so as to embrace any difference of soil, should there be any. On this acre two hundred pounds of Peruvian guano, at a cost of about $5 00, were sown with the wheat. Adjoining the guano on one side, was manure from the barn yard, at the rate twenty-five cart loads to the acre; and on the opposite side (separated by an open drain the whole distance) ground bones were applied on the balance of the field, at a cost of $6 00 to the acre—the field equally limed two years preceding. There was no material difference in the time or manner of seeding, except that the manure was lightly cross-ploughed in, and the guano and bones harrowed in with the wheat.

The yield on the guanoed acre was thirty-five bushels; the adjoining acre with bone, as near as could be estimated by dozens, and compared with the guano, was about twenty-seven bushels, and the manured about twenty-four bushels. The season was unusually dry; and the manured portion suffered more from this cause than either of the others, the land being considerably elevated and a south exposure.

The field has since been mowed three times; the *first* crop of grass was evidently in favor of the boned part; the second and third, were fully two to one over the Guano, and also yielding much heavier crops of clover seed. On a part of one land, eighteen bushels to the acre of the finest of the bone were used; on this, the wheat was as heavy as on the guanoed, and the grass generally lodges before harvest, as it also does on much of the adjoining land with twelve bushels of bone.

The action and durability of guano, probably vary on different soils; and although it may generally be used to advantage in aid of a single crop, I have as yet, no satisfactory evidence, that its fertilizing properties are very durable: unless applied in such quantities, as may in the end, "cost more than it comes to."

Guano should not be used with caustic lime, or ashes; nor very soon succeeding their application. It may with decided advantage be mixed with plaster, to fix and retain the ammonia; and for nearly, if not all crops, it is best to sow it broadcast, and *plough* in immediately.

Leached Ashes.—There are few, or none, who are ignorant of the value of this article as manure. But as the supply is rarely, if ever equal to the demand, much need not be said on the subject.—At 8 to 10 cents per bushel, if the cost of transportation is not too heavy, they may always be profitably used; in durability they are next to lime, and the action immediate. Few comparatively, except within the vicinity of cities or villages, or those with water or railroad facilities, can procure, or afford to use them.

Poudrette.—Much profit has not resulted in the use of this (the merchantable) article, so far as I have observed its effects on my own, or the crops of others. Such as I have purchased, has as yet but slightly beneficial results on the crops to which it was applied. Its fertilizing property was diffused through such a mass of inert matter, that I concluded with half, if not one-third of the expense, more benefit might be derived from the purchase of some other kind of manure.

In the neighborhood of cities, where a supply can be obtained without so much adulteration, its use may be made very profitable.

Turning in Green Crops.—This plan of "renovating worn out lands," has long been advocated by many. I have also given it a fair trial; and with the exception of *clover* as the green crop, little advantage has resulted from its adoption: *very poor* land, without some extraneous aid, will not produce a green crop worth the turning in. It is questionable, whether the same amount of time and labor (supposing the occupant without the means to purchase manure of any kind) could not be better employed on such land in adding to his stock of manure, by composts; prepared from decaying vegetable matter, alluvial soil, &c., &c., abounding more or less on all farms. If the land possess fertility to produce sufficient clo-

ver for pasture, the use of plaster either without, or certainly with the aid of lime, will, with good management, make it yield a luxuriant crop. But it should be borne in mind, that to improve in this way, little mowing, and less pasturing, must be permitted. The land is not only benefited by what is *turned in*, but is also materially aided in the process of renovation, by what is *left out*, and on the surface; to shield and protect the soil from a parching sun, prevent throwing out the clover roots by the winter frosts, and washing away of the soil, by heavy dashing rains.

This brings to mind another matter, though perhaps not strictly "in the bargain," but which is of much more importance than many seem to be aware of; and as yet only incidentally alluded to.—It is the *preservation* of the land after it is renovated, from washing away of the soil, and into gullies, and galled places, as they are called: this is best done by regular water furrows made with the barshare plough, and throwing the earth on the lower side. I will attempt a brief description of my plan of operations; but without a diagram, some may possibly be at a loss.

The points to *commence* at are determined by the eye; a cheap spirit level, costing but a trifle, will soon give the termination with precision, and the proper inclination. The operator takes a station some 80 to 100 yards distant from the designated point; the assistant, having the staff, with a moveable target, and also a bundle of stakes, some two to three feet long, places one in the ground, and by its side raises the staff and moves the target up or down, to range with the sight from the level: the target is then *raised* six inches and confined by a screw; the assistant walks seventeen steps, and raises his staff: the operator by merely turning his level, and not otherwise varying its position, soon determines the point for the second stake, by the assistant moving the *staff*, backwards or forwards, (keeping his distance from the first stake) until the target again ranges with the level; then set another stake, and raising the target six inches at each station, throughout the field. One position for the level, if selected with judgment, will serve for eight or ten sights; they should be taken in *advance*, and on, or near the *supposed* line of the furrow. With a little practice the levelling is done very expeditiously, and by any person of ordinary capacity.—When ready for the plough, the leveller walks before it, (the ploughman guided by his steps) picks up the stakes as they are reached,—and if necessary by much inequality in the land—varies the line a little between the stakes, still more to preserve the level.

This gives a uniform escape for all surplus water, with a regular fall of about one foot in the hundred. My experience has proved, that if the furrows are not too far apart, (one for each fall of five to six feet will generally suffice) they effectually prevent washing; and the gradual descent of the water does not form gullies. They are made directly after seeding wheat—are as carefully attended to as the seeding itself—and remain open until the land is again broken up. They are valuable on all lands liable to wash, and have materially aided in my efforts in "renovating worn out lands." All the unsightly "gullies and galled places" have disappeared.

Rotation of Crops.—This is also a subject of importance; and it is also one on which much diversity of opinion exists. Nothing short of the concurrent testimony of a neighborhood, will establish one plan as the best: yet in another, a different one has equally strong advocates: for in some sections of the country "the three field shift" is preferred—in another, five, and a third will adopt the six or seven field rotation. Different "localities," and other circumstances, may perhaps afford good grounds for this variety of opinion. But as a general rule, it is believed that where the latter mode is adopted, or nearly so, other circumstances being equal, the farming is better done, is more profitable, and the lands more permanently, if not more rapidly improved: close pasturing, and "renovating worn out lands," may do in theory, but are not very likely to suc-

ceed in practice. The seven field rotation, certainly admits of a better opportunity to benefit by the aid of the artificial grasses; and whenever they can be successfully invoked, the good work is more than half accomplished.

Before taking leave of my readers, the majority of whom perhaps are engaged in agricultural pursuits, I would again briefly recur to the important subject of manures,—one of scarely less moment to the tiller of the soil, than is the Mariner's Compass to the tempest-toss'd sailor—for mainly to their agency in some form or other, must we be indebted for success, in the renovation of worn out lands. My preference, as may have been seen, is given to lime over all others, when an expenditure of the slender resources of the farm is devoted to this subject; and although it is not a Panacea, to cure all the ills incident to the calling, nor will it, like the fabled Satyr, "blow *hot* and *cold* with the same breath," yet on all soils to which I have seen it applied,—from the stiffest clays, to the blowing sands,—does it appear to be a renovator in a greater or less degree: the one, it will lighten and mellow, while the other is rendered more compact, and more retentive of moisture. I would therefore strongly advise the use of *lime*, as decidedly the most efficient and durable agent for improving most kinds of soils. If its action may be considered comparatively slow, *it is sure* in its fertilizing effects; and will generally in the end, prove also to be the most economical, whenever it can be obtained at a reasonable price. The three kinds of bought manures most extensively in use in this State for improving our worn out lands (plaster of course excepted) might be classed somewhat like the following: Lime for the *landlord*, Guano for the *tenant*, and ground Bones for *both*. All may be used to profit under favorable circumstances; but they are believed to differ materially in their relative values, in proportion to the amount of money usually expended, if the improvement of the land, is a primary object with the husbandman.

Experience, however, in this, as well as in most other things, is the best teacher; provided we do not pay too dear for it. And without intending in the least degree, to check the energy and spirit of agricultural improvement, now so widely extending, I would venture a caution to those who have but little money to expend for the purchase of high priced manures, to do it rather for such as are *known* to be durable; and which will eventually, be the most certain to return both principal and interest. I feel confident that all I have expended for lime has been returned in the increased product of the soil; and with nearer six times six, than six per cent. interest. If the market value of the land, has not been enhanced in equal proportion (most probably the case) it certainly has not *deteriorated* any in quality.

As remarked at the beginning of my essay, no exclusive method of improvement, is alike suited to all locations, and circumstances; but I trust a plan is submitted that will very generally succeed if persevered in; it will not only make the grain, but the grass grow; and will at the same time, effectually "RENOVATE WORN OUT LANDS."

EDWARD STABLER.

Harewood, 8th mo. 28, 1848.

FENCE WIRE.

No. 11 is probably the best size for ordinary purposes. One hundred feet would cost at Pittsburg or in the Eastern cities about twenty-five cents. A fence to turn cattle or horses could be made with six strands—seven would be better. To turn sheep, nine or ten would be necessary. For ordinary cattle fence run the plough along the line two or three *bouts*, turning the furrow to the centre, you thus raise the surface and save one strand. Put the lowest wire one foot from the ground, which, if properly raised by ploughing, as above directed, will be twenty or twenty-four inches above the ordinary surface; then, counting from the lowest wire, put them, if you have but six, 6, 7, 8, 10 and 12 inches apart, making 43 inches added to the 12 below the lowest wire is 55

inches, over four and a half feet: to this add the elevation of the ground by ploughing, and your fence will exceed five feet high, abundantly sufficient for reasonable cattle, and none other should be kept. Nor would any well bred horse show his lack of sense by essaying to jump it a second time.

If you use seven strands, then put the lowest one ten inches from the ground and the others 6, 7, 8, 10, 12—50 inches, or five feet with the lower space added.

We believe a *hog fence* made of wire is out of the question.—*Prairie Farmer.*

COMPOST MANUFACTURE.

The best, and in the end, the cheapest way of making compost, is to have a pit dug in your stable yard, say four or five feet deep, twelve feet long and six broad, which should be cased with brick or stone and with cement. This will preserve the whole, whereas by the common method of throwing together the materials in a pile, a great quantity of the best substances in the manure is lost—by the action of rain, &c. Into this pit, put all the trash, the straw, the litter and dung of the yard, together with the slops of the kitchen, the night soil and other manures collected in the place. Have drains made from the stalls of the horses and cattle ending in this pit, so as to secure the urine; and put into it from time to time a quart or so of guano. By these means, though you are at little expense, a large quantity of the most exciting compost can be prepared. The pit should be covered with a shed to keep off rain, and if no ground be ready for it when the pit is full, it may be preserved for any length of time by putting over it a layer of earth.

TO TAKE INK OUT OF LINEN.

Take a piece of tallow, melt it, and dip the spotted part of the linen into the melted tallow. It may then be washed, and the spots will disappear without injuring the linen. This is said to be a certain recipe.

For the Southern Planter.

"PROFITS OF CATTLE-RAISING IN EASTERN VIRGINIA."

Mr. Editor,—An editorial appeared in your valuable journal for September, upon the "Profits of Cattle-Raising in Eastern Virginia," advocating an increase of stock and the propriety of grazing our lands. In the conclusion of the article, you hope that those who have any thing to communicate in regard to this subject will speak through your columns. Presuming you invite discussion, and wish all the arguments on both sides of the question, I propose in a few desultory remarks to give some reason why we of Eastern Virginia should not keep a large head of cattle.

The farmers in this worn-out part of the State are already sufficiently disposed to graze their lands without encouragement from one holding your important position and wielding your extensive influence, and I for one must dare to raise my voice against a system which I confidently believe has done much to impoverish the lands of our good old mother, and is now doing much to keep them poor.—That cattle-raising in Western Virginia should be profitable, we can very well imagine. Their lands are naturally of better quality than ours, and much better adapted to the growth of grass. Besides, their extensive mountain ranges afford in the summer good support for large herds, and thus protect their fields from any bad effects of over grazing. Another important difference between us is, that they of the West have an indifferent access to markets, and the only way they can make their produce profitable is in the form of beeves driven to Eastern cities—while the people of lower Virginia have almost at their doors a market for every variety of forage and grain they can raise.

That the hoof is very beneficial to our light lands, we all know; but we also know it must be used under certain restrictions—that is, upon land with a coat of vegetation intended for fallow for a short time before the fallowing process. Your calculation, Mr. Editor, that stock

will only graze off one-third of the grass upon a field, is, with all due deference, only true under certain circumstances. It may be true where there is a good growth of clover, and where the stock is few in proportion to the size of the field. If you had seen some of our fields after a large number of cattle had been grazing on them all spring and summer, leaving them almost as clean as a plank floor, you would scarcely suppose they had only eaten off one-third of the vegetation. If the grass is of a short kind, they eat all off clean, and graze it down as fast as it puts up.

The position, too, that the manure and urine returned to the land compensated for the grass taken off, cannot be tenable, when we recollect that the cattle return to the soil nothing which they did not procure from it, and that a portion of this food must be appropriated to their nutriment, growth and fattening. As to the profits of manure-raising, this depends very much upon the expense with which we can maintain our cattle. Much of the provender fed to them in the winter can be profitably sold, at least by all those nearest to market, or may be fed to our horses with a saving of grain, which grain may be sold. The abundance of *marl* in lower Virginia makes the improvement of land certain, and I am disposed to believe cheap, in comparison with the expense of making and hauling out manure. The writer is so situated, together with many other farmers within his knowledge, as to be able to marl an acre of land with as little expense as it can be manured with putrescent manure; in fact, I may say with less expense, if the labor and time for collecting the materials for making the manures be taken into consideration. The expense of digging and carting the marl from banks is probably about the same as digging up and carting out the manure. This will not appear strange when it is recollected that much of our marl contains seventy and seventy-five per cent. lime, and that one hundred bushels is a good application to the acre, whereas manure has to be put on in large quantities to have any durable effect. When it is recollected that the effect of marl is permanent, that a farm may be enriched by marl without manure, that it cannot be with putrescent manure without marl, unless the farm be a small one, or the farmer have large means and capital, for no farmer ever hopes to raise manure enough to put over a large farm, and that experience and observation prove that grazing impoverishes our lands, are we not warranted in warning our brother farmers from keeping a large head of cattle, particularly where their labor can be devoted to hauling marl? I am aware that some farmers are under the impression that land cannot be enriched by marl alone, without putrescent manure. But this idea is now exploded; and observation is daily teaching that the proper application of marl, clovering, and not gazing, will soon wonderfully improve our poorest lands.

Respectfully yours,

A Farmer of Lower Virginia.

October, 1848.

Our sensible correspondent greatly mistakes our views of grazing if he supposes that we would permit cattle to remain upon any field long enough to graze it clean. By so doing, any land may be grazed to death. The very first principle of our grazing system is to have the land divided by cattle fences into many lots, and to change the cattle from one to another in time to prevent any from being too harshly dealt with.

He is also mistaken, we think, in his supposition that nothing is done for the soil by the conversion of the provender into dung. If the provender be left to decay upon the soil, a much larger quantity is wasted and carried off by the atmosphere, and a much smaller quantity unites with the soil itself, than after it is digested and formed into dung by the action of an animal's stomach.

We agree with our correspondent that the farmers of lower Virginia will make their lands rich much more expeditiously by their marl than by their cattle——*when they have got the marl.* But he should recollect that very many farmers in lower Virgininia have no marl, and can get none, except by putting themselves to much expense and by hauling

it from a distance. If they have no other manure accessible, we think these will find it to their advantage to try this grazing plan. By it the farmers of Great Britain have made their island the garden of the earth, and by it the farmers of Western Virginia have made their country the true El Dorado.

Our correspondent is right in supposing that we wishsd discussion upon this subject in our columns. We wish it still, and we wish it upon every other agricultural topic. We shall be always glad to hear his intelligent observations, even when we cannot altogether agree with him, and we therefore request a continuance of his communications.

DEEP TILLAGE, &c.

After thorough draining, deep tillage and always having a growing crop on the land, are matters of inestimable importance. This subject can hardly be too much talked of and studied by practical farmers. Deep tillage, what is it? How does it enrich the surface soil, and augment the annual crops of the husbandman? It enables the atmosphere, with its natural moisture, its oxygen, carbonic acid and ammonia—with all the gaseous elements of plants and animals which die and decompose on the ground—to penetrate deep in the earth, loosened and mellowed as it should be by sub-soil ploughing. Porous loam, clay, mould, marl, and even sand and gravelly earths, have the power to condense both the vapors and pure gases contained in the air—to absorb and fix them in the soil, where they perform most important chemical functions in the laboratory of nature. In the first place, we desire the reader to bear in mind, that the gases which pervade the atmosphere are the elements of wheat, corn, clover, and flesh, for which God has given to the earth a strong natural affinity. Hence, if a dead pig be buried in a soil a foot deep, you get no smell from the same, which is not the case if the carcass lie and rot on the ground. A shallow soil with the hard-pan close to the surface, will absorb a small dose of these fertilizing constituents of dead plants and animals. No matter how richly laden a shower may be with the elements of a crop, a poorly ploughed, a shallow tilled piece of ground can absorb and hold very little of the much needed moisture and other food of starving grain.

During the heat of summer, when the farmer makes his crops, an immense quantity of insensible moisture evaporates from the surface of the earth, and especially from the leaves of the trees and smaller vegetables. A tight vessel that will catch and hold all the rain that falls during the six warmest months in the year, standing out fairly to the weather, will be dry more than half of the time in ordinary seasons. Evaporation greatly exceeds the fall of rain during the time when cultivated plants are grown. This excess of evaporation causes springs to dry up and creeks and rivers to run small in summer and autumn. As a tight jug will prevent water from running in as well as running out, so a compact, impervious sub-soil will prevent the ascent of moisture in dry weather to supply the roots of plants with their indispensable water, as well as obstruct the descent of water when in excess on the fields.

Nothing is plainer than the fact, that when the rains of spring and fall and the snows of winter, saturate the earth with moisture for many feet in depth, the water that descends into the ground carries in solution all the soluble organic and inorganic elements of plants down so far as it runs. Dissolve an ounce of salt in a gallon of water, and wherever the water permeates the salt goes with it. You must evaporate the water to separate the salt.

Providence has made the sub-soil and the earth below it a vast reservoir of water, more or less impregnated with those things that combine in cultivated plants—in human food—to form ultimately the bones, brains, flesh and blood of man and of inferior animals. Kind reader, would you organize these constituents of grain and grass largely and cheaply in your growing crops? Then break the undercrust, that the moisture below, with its salts of lime, its dissolved bones, potash,

soda, magnesia, chlorine, sulphur, phosphorus, iron, carbon and nitrogen, may come up to the thirsty roots of your plants and fully nourish the same. A deep tilled soil imbibes more solar heat in summer than a shallow ploughed one. Being warmer, chemical changes are more rapid—more food is prepared for your crops in a given time.

After corn is planted, or the seeds of wheat, barley, rye and oats are covered, there is an advantage in rolling the ground to compress the earth about the seeds and to check the too rapid evaporation at the surface of the tilled land. We have studied this matter of solar evaporation with care, in more States than one.

To enrich a farm, by accumulating thereon the materials for making cheap bread, milk, meat and clothing, every acre, forest, meadow, pasture and plough land, should have, during as much of the time as is practicable, a large burden of *growing* vegetation to organize and fix in a tangible shape all the constituents of crops as they exist in the ever moving air, and in the surface and sub-soil.

If not fixed, they will be lost to the farmer. Air and water are never stagnant and still over and in the earth of a healthy neighborhood. So soon as one crop is off, another should be in, to collect and save the dissolving mould, the salt of lime, potash, &c. in the soil—to extract fertilizing minerals from the sub-soil, and gases from the atmosphere. If these auxiliary crops are not needed for hay, nor pasture, nor soiling, nor to sell in market, plough them in and sow more seed, still further to enrich your land. Vegetable vitality, constantly adding weight and substance to the sum total of organized matter on your plantations, is the great and mysterious power which God has provided for industrious and reasoning man to work with, and supply his ever increasing numbers with an abundance of food and clothing. Vegetable life, to be useful in the highest degree to our race, must be active in the highest degree—not dormant most of the year, and only half developed when cultited plants are pretending to grow.—*Gen. Farmer.*

HINTS UPON HOGS.

This is undoubtedly the best season to fatten hogs. The mild yet bracing temperature is favorable to the accumulation of fat; the dampness of the atmosphere has a good effect upon the pores and tissue of the skin; while they are ready for slaughtering at a period when it will be cold enough to preserve the meat until perfectly salted.

There is no doubt either that corn is after all the best substance on which to fatten them. Apples, mashed potatoes, pumpkins, all these are good food for hogs; but good, sound corn will be found after all experiments the quickest means of putting them in order, and their meat will be found infinitely superior to the meat of others fattened in a different manner.

It will probably be found the best plan to let hogs remain in the woods till very nearly the close of this month, and until within a short time of the period at which the farmer intends to slaughter them. Then put up and feed them plentifully on good, sound corn.. It will fatten them at the rate of two pounds a day, if not delayed until the weather becomes too cold. This will be cheaper in the end than keeping them a long time in the pen, or soft corn and pumpkins.

The great secret for fattening hogs, as well as for fattening every other animal, is to give them the food at regular intervals. The digestive organs acquire habits as well as the limbs, and the whole frame. By feeding at regular hours, they acquire habits of exertion at those hours, and are able to digest more readily and more perfectly at those hours than at others. If the reader doubts the theory, let him try the experiment upon himself. Let him accustom himself to taking his breakfast at six and his dinner at twelve, and then change the hour of the one to eleven and of the other to five, and he will find a great lack of power in his digestive organs until they become accustomed to the change.

Very numerous experiments have shown the superior facility with which hogs fatten that eat at regular intervals, over those that are fed irregularly. But to make the meals regular, it is necessary to give the food in small quantities and frequently. If a large

quantity of corn is thrown into the pen only twice a day, the hog will eat but a small portion of it when first thrown in. The rest will be eaten at fits and starts, and irregularly. A great deal of corn is wasted too by this improper plan of feeding in large quantities and at long intervals. Much of it becomes covered with dirt and mire, and then will be left untouched.

DRAINING.

As the subject of underdraining, and the manner of constructing drains is justly engaging the attention of many, I wish to state a plan which I think in the absence of better materials, answers a very good purpose. Every farmer who has loose stones on his farm, has the materials at hand; while at the same time he may be ridding his land of a great detriment to its proper cultivation. Dig a ditch from two to two and a half feet deep, sixteen inches wide at the bottom; lay stones six inches in diameter on each side, which leaves a water course of four inches in the centre. Take stones of larger dimensions and cover over. By drawing a quantity of stones along the line of the ditch, a selection can be made, and after placing some on each side of the top-stones, should they not fill out to the sides of the ditch, the remainder can be thrown in at random, on which can be strewed some shavings or straw, and then covered. A team and plow will greatly facilitate the covering operation. Flat stones would be preferable for covering could they be obtained, which would also prevent the necessity of digging so deep.

W. Ansley.

Rushville, N. Y., August, 1848.

SAWDUST CHARRING AND CLAY BURNING.

Having been repeatedly applied to for instructions for charring sawdust, and also for burning clay sub-soils, containing little or no organic matter to act as fuel, I take the occasion of Mr. Whitmore's paper at the Royal Agricultural Society, as lately reported by you, to bring the two questions together, and let them answer each other. Charred sawdust is a form of charcoal particularly adapted for manure, but the difficulty is to keep so light and loose a substance from falling into the fire and burning away, if put on sparingly, or if heaped up, to prevent this from filling and choking the air-way, and thus extinguishing the fire. The clay sub-soil of stiff soils, turned up and burnt, not only manures by yielding its alkaline and other fertilizing ingredients, but at the same time both deepens and loosens the soil; three benefits of great importance. But such sub-soils, rising in heavy clods, as contain very little combustible matter, require fuel to keep them burning; which is not always at hand, nor to be had cheap. When sawdust is within reach it is just the thing; the clay will supply the knobs to build up with, and support the sawdust with air way between; the skill of the burner being exercised in so proportioning and arranging them, that the sawdust shall fall in fast enough to keep up the fire, and moderate the air-way to the charring point, without filling in so as to extinguish it. And this may be done by varying the arrangement according to the proportions. Where clay burning is the object, one ton of sawdust would probably suffice for one hundred tons of clay; and where the object is to char the sawdust, I think with skilful management, two tons of clay would do for one ton of sawdust, considering that the clay does not consume and will shrink but little, whilst much sawdust falls in through the hollows, as it becomes charred; where clay is not at hand sods of peat may be used instead. Both are improved by the charcoal being disseminated through the substance of the clay, which may be easily done with the shovel before burning and while the clay is soft, but this may hardly pay for the labor unless in garden culture. There is yet another method of charring sawdust for manure, on a different principle; that is, by the heat produced in slaking lime. If wet sawdust be heaped up with fresh burnt lime, the wet will be drawn out by the lime for

slaking, and the heat produced may fire the heap, and burn the sawdust to ashes; but if the proportion of sawdust to lime is very great, keeping the stones of lime far apart, the heat of slaking will be too much weakened by dispersion to produce fire. By keeping a medium, then, and covering well in from the air, we may attain a point at which fire will be produced in the heart of the heap, but prevented from breaking out to destroy the charcoal. The medium must depend more or less on the quality and dampness of the sawdust; but for that of fir, in its ordinary damp state in the saw-pit, by the changes of weather, we might try twenty bushels to one of lime, laying one fourth as a bed, mixing one-fourth of the wettest with the lime, and covering in with the remaining half. If the fire break through, more sawdust might be heaped on, and so much more charred; or if no more, the holes may be stopped with earth in the usual manner.—*Ag. Gazette.*

SHELTERING FARM LANDS.

The practice, almost every where prevailing in the United States, of removing every tree from the ground, in clearing new land, shows that the importance of affording shelter to farms exposed to high winds and biting blasts, is not sufficiently appreciated. When interspersed with strips or masses of plantation, not only are such lands rendered more congenial to the growth of grass and grain, and the health of pasturing animals, but the local climate is thus improved. The fact that the climate may be thus improved, has in many instances been sufficiently established.. It is, indeed, astonishing how much better cattle thrive in fields even but moderately sheltered, than they do in an open, exposed country. In the breeding of cattle, a sheltered farm, or a sheltered corner in a farm, is a thing much prized, as, by affording them protection lrom the keen winds of spring and autumn, they uniformly feed with more freedom, and much better, than if they were exposed.

The operation of screen plantations, observes Marshall, is not merely that of giving shelter to the animals lodging beneath them; but, likewise, in breaking the uniform current of the wind—shattering the cutting blasts, and throwing them into eddies; thus meliorating the air to some distance from them. Living trees communicate a degree of actual warmth to the air which envelopes them. Where there is life there is warmth, not only in animal but in vegetable nature. The severest frost rarely affects the sap of trees. Hence, it appears, that trees and shrubs, properly disposed in a bleak situation, tend to improve the lands so situated in a three-fold way, for the purposes of agriculture; namely, by giving shelter to the stock; by breaking the currents of winds; and by communicating a degree of warmth, of softness, to the air in calmer weather.

Nor ought it to be altogether kept out of view, that the retaining, and judicously engaging, a portion of growing timber on a farm, confers a richness and picturesque beauty on the landscape. We have seen some lands, on which nothing was sought for but profit or shelter, where the greatest beauty was produced by adopting this system. Where, however, trees for shade may be requisite for agricultural purposes, they should be sufficiently open to admit a free circulation of air. For this purpose, trees with lofty stems and large heads, pruned to single stems, are preferable. To shelter live stock, the screen should be open at the bottom. Otherwise it is injurious rather than beneficial. The blast not only acquires additional current, but snow is liable to be blown through, and to be lodged in drifts to the leeward side, to the annoyance and danger of sheep that have repaired thither for shelter.

CHEAP PAINT.

An Ontario farmer gives the following recipe for a cheap paint. He says he has tried it on brick, and prefers it to oil paint, and says it will last longer on the rough siding of wood than oil paint will on plain siding of boards.

Take one bushel of unslacked lime, and slack it with cold water; when slacked, add fifty pounds of Spanish whiting, seventeen pounds salt, and thirteen pounds sugar. Strain the mixture through a wire sieve, and it will be fit for use, after reducing it with cold water. In order to give it good color, three coats are necessary on brick and two on wood. It may be put on with a brush similar to whitewash. Each coat must have sufficient time to dry before the next is applied.

For painting inside walls, take as before, one bushel of unslacked lime, three pounds sugar, five pounds salt, and prepare as above.—*Genesee Farmer.*

TRENCH PLOUGHING.

There has been much said about trench ploughing. I have never known it to succeeed to any great extent. If attempted in the summer in stiff soil, it cannot be done—the labor and expense are too great. The only proper time to trench-plough is late in the fall, when the ground is saturated with water. But I think there is no need of a trench plough.—Three good horses to a good three-horse plough will be able to turn a furrow twelve inches deep. This is the true plan to commence on. The stiff clay sub-soil, thrown up to the action of frost, is broken down, and by being thoroughly mixed, next summer, by frequent ploughings, a deep soil, well fitted for the nourishment of plants, is secured. But it must in no case be ploughed in summer when wet. All lands inclining to be wet are greatly benefited by being ploughed very deep late in the fall.

WM. TODD.

Utica Mills, Md. 1848.

SEEDS OF FRUIT TREES.

There are very few seedling fruits, out of the great number grown, which are worth the place they occupy, as compared with those which are propagated by budding and grafting; and no man should ever think of relying on these for the supply of fruits for the family. Still every man desires to know how to propagate the different varieties of fruits from the seed, that he may be able to supply himself with stocks if he chooses, on which to graft or bud those he may select for his own culture.

The seeds of the apple, pear and quince, may be treated substantially alike. Those of the first may be taken from the fruit itself, or if more convenient, washed from the pomace at the cider mill, as soon as possible after the juice is extracted. The cider mills in these parts are very few, and it is much more common to obtain them from rotten apples. This may be done by mashing them in a plentiful supply of water, and running them through a sieve, by which the pulp will be carried off, and the seeds retained. Pomace may be washed by macerating in water, and then running it through a long spout, when the seeds will fall to the bottom, and the refuse matter pass off. This is quite easy, when there is a small spring of water with a fall, or even a pump to be used. Pear seeds are more difficult to manage, and should be taken from the fruit as soon after it is well ripened as convenient. The seeds of the poorer sorts, such as the common Choke pears, are most plentiful, and best.

The seeds of the apple, pear and quince, may be planted as soon as washed out, in good, moist, peep and rich soil, where they will vegetate freely with the ensuing spring. Those of the pear are much the most difficult of all; and the young plants are the most tender and precarious.

It is of very little use to plant pomace or rotten apples, and not at all to plant rotten pears. Not one in a hundred, if in a thousand, will come. It does not destroy the vitality of these seeds to dry them and keep them over; though we have found them more difficult to vegetate than those planted in time. They are often kept dry for several years, and then sown with success; though a proportion of them will alway in such cases fail.

Pears and apples are ready for the bud the second year, provided they receive a good growth and are well treated.

Though quinces may be grown from

the seed, a better way is to use the cuttings. We have been nearly as successful with them as with those of the currant; and they may be propagated in this way indefinitely.

The stones of the peach, cherry, and plum, after being taken from the ripe fruit, should be immediately planted in the seed bed, when they will make their appearance in the following spring. It is sometimes recommended to put cherries into sand, and keep them till spring before planting out. This is an unsafe mode, from the fact that they are liable to start before being planting; and when this is the case, their removal is their destruction. If the stones of either of these fruits are allowed to become dry before planting, they will not open again, though exposed to the frost and wet of winter. There will be exceptions, and only such, to this, among the peach stones, but none, or next to none, with either of the other named fruits. The vital powers of a peach seed are not destroyed in many years by being dried, and if the stones are broken, the dried ones may be grown; but without this care, not one in a hundred will germinate.

After standing the first season in the seed beds, all these fruits should be removed to nursery rows, setting them therein about one foot or fifteen inches apart, having taken the precaution to cut off one half the length of the tap root.—The peaches will be ready for the bud the first season, and the others the second.

Some prefer grafting all these fruits, with the exception of the peach; but budding is so much easier, and quite as sure, that it will probably be adhered to instead, both by nurserymen and those who cultivate for themselves; though the former, as a saving of time, will practice all the usual models of propagation.

During the past year, we have received many letters asking us to send the seeds of the cherry, plum, quince and pear, in letters. We hope this will meet the notice of such as desire to procure fruits in this way, and put them upon a more feasible way of accomplishing their ends.—*P. Farmer.*

PICKLING OR PRESERVING BEEF.

A subscriber, who has recently commenced house-keeping, met us the other day, and among others things, mentioned that he found himself "rather green" in the new business of taking care of himself. He stated that he had recently lost a quantity of excellent beef, by not working it right, when salting it down, and desiring us to publish any rules that we might know by our experience, or might find mentioned in reliable sources, referring to the preservation of beef.

The mode of preserving beef in salt, is very simple, and consists in putting in sufficient salt to absorb the juices of the beef. The beef, however, should be perfectly sweet and good, when packed down. We, last spring, published the rule adopted by the butchers and packers of beef in Brighton, and other towns in Massachusetts, as required by the laws of that State. Some think that in the mode there directed, viz: by using dry salt alone, too much of the juices become absorbed or exhausted by the salt, and the meat is rendered too dry; and hence they add pickles or brine, made by dissolving salt in water.

Dr. Cooper recommends, in Willech's Domestic Encyclopedia, the following mode, viz: If the meat be intended for family use, and to be used in two or three months, take, water, one gallon; salt, nineteen ounces; saltpetre, one ounce and a half; sugar, half a pound; if a teaspoonful of Cayenne pepper be added to each gallon of pickle, it will increase the preserving power. Enough of the above pickle should be made to cover the beef when packed down.

He also says that having killed an ox in the middle of August, at nine o'clock in the evening, it was cut up at three o'clock in the morning. The pieces were rubbed with a mixture of *ten* parts of salt and *one* part of saltpetre, and then packed into a barrel.

A brine was then made of one and one-half pounds of salt; two ounces of saltpetre, and half an ounce of common pepper, to the gallon of water, dissolved over the fire, and when the beef was all

packed in the barrel, it was poured on boiling hot. This prevented and destroyed all fly-blows. In a week, the pieces were taken out, dried and wiped, the pickle was boiled over again, scummed, and again poured boiling hot upon the beef when unpacked. The process answered the purpose completely.

We should not like the trouble of unpacking and repacking, but as the weather was warm, perhaps it might be the safest mode.—*Maine Farmer.*

GRAPES.

A correspondent of one of our exchanges gives the following method for preserving grapes through the winter:

"The mode which I think most preferable, and which I have adopted, is to take a box that will hold about a dozen pounds, and lay upon the bottom of it a thick piece of glazed wadding, then a layer of grapes, placing them so that the bunches will not touch one another, then alternate layers of glazed wadding and grapes until the box is full. If too many be put into one box those at the bottom will be jammed and of course injured. The cooler they can be kept without freezing, of course the better."

Another and a neater plan is filling a glass jar, corking tight and covering the cork with sealing wax. Grapes may be kept more solid and plump in this way, but they will not be so sweet as those kept according to the first plan.

SMALL POX IN SHEEP.

While a new disease has seized the potatoes, something like the small pox is breaking out among the sheep also. A correspondent of Col. Hodges, the British Consul at Hamburg, thus describes the form it assumes. It appears to be prevailing among the sheep in many parts of Europe to an alarming extent at present:

In this disease the sheep suffer previously internally, with loss of appetite, heaviness, and indisposition to move, difficulty of breathing, swelling of, and discharge from the eyes, and of a vicious matter from the nose; in from three to five days, spots appear on the bare parts of the legs and body, which become large and form blisters, in the centre of the red circumference of which yellow spots come, and at last fill with yellow matter. If these spots become blue, or blackish, they unite, and a thin matter issues from them, which is the height of the disease; but death ensues, if the pustules should not come properly out, or should strike in again. The last stage of the disease, when it terminates favorably, is marked by the drying away of the sores, on which a black scurf forms and fall off.—The animal has the disease, as with man, only once; in a flock, it is contagious, but not so among cattle.

During this disease, good hay and drinks of a decoction of barley, are good, to which a little common salt may be added. At the commencement of the disease, the nose and mouth must be kept clean with vinegar and water; the eyelids are to be often washed with warm milk, and an electuary of three parts flour of brimstone, and one part common salt and honey, is a useful remedy. But I am decidedly of opinion that inoculation of the whole flock, the moment the disease shows itself, even in one in the neighborhood, is the only preservative.

"THE FARMER'S LIBRARY"

Is no more; but in its place stands "The Plough, the Loom, and the Anvil," a work conducted by the same editor, but in a superior style. The October number is before us, filled with many most valuable articles. We regard it as one of the first, if not *the* first, agricultural journal in the United States, and we earnestly recommend it to our readers.—But we also earnestly recommend Mr. Skinner to keep politics out of it. He is destroying much of his great usefulness by the course he has been lately pursuing in that matter.—We do not and we cannot approve of discussion upon the tariff in an agricultural journal.

CONTENTS OF NUMBER XI.

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TERMS.

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☞No paper will be discontinued, until all arrearages are paid.

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THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

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P. D. BERNARD,

PUBLISHER AND PROPRIETOR.

JOHN M. DANIEL,

EDITOR.

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TO OUR SUBSCRIBERS.

We would respectfully inform the patrons of the Planter, that being framed like the rest of the human race, we find it absolutely necessary to eat; that to buy food we must have money; and that the only means which we possess of getting money are our labors.—These we have spent upon the Southern Planter. But the subscribers to that paper have not spent their money upon us. A very great majority of them have either forgotten to send us their subscriptions, or have regarded it as a useless ceremony. We find ourselves compelled to recall the matter to their memories, and to assure them that money is quite as indispensable to ourselves as it is to them. They are therefore earnestly requested to send us the amounts of their several debts to this paper. Very many of them have paid us up punctually. Many owe us for several years. Others owe for the past year alone. One and all will oblige us much by settling up their arrears. The sums may seem small and insignificant to them; but they may rest assured they do not seem so to us.

We have sent with this number of the Planter bills to the amount of $2500. Our readers must perceive how much this amount of capital thrown into our business would enable us to improve the paper which we are sending them. For their own sake then, if not for our own, we earnestly urge upon them to pay up their dues. It is impossible to procure any thing without money; and it is impossible to make a good *Southern* agricultural paper without the aid of Southern farmers.

We dislike to make duns, and many who have punctually paid up their subscriptions from the first may dislike to receive them; but we are forced by the necessities of business to do the disagreeable duty.

MEMORANDA FOR THE MONTH.

The chief duties of December are, attendance upon cattle, winter ploughing, fattening hogs, and the gathering of manure.

It is to be presumed, that by this time all have gotten in their corn, shucked and stored it away in the granaries; though we greatly fear, in six cases out of every ten, it is an incorrect presumption. Such it should not be however. And when corn is seen in shocks about the field, or laying in large piles about the barn yard, waiting for a "corn-shucking," at this late day, it is a fair ground for supposition that the owner either has mismanaged or neglected his business. The sooner he gets it in, and the less said about it, the better.

WINTER PLOUGHING.—Now is the time to push this work to the uttermost. Every plough and team that can be started should work steadily at it while the ground remains unfro-

zen and unincumbered with snow and sleet. This winter ploughing is a wonderful thing for the stiff clayey soils intended for cultivation next spring. Frost ameliorates the soil, and makes it friable to a degree which nothing else will. There is no way so sure either, for the destruction of garlic; a great pest to some fields.

Fattening Hogs.—We have already expressed our preference for doing this part of farm work early in the season, and we have stated the reasons for the preference. We can now only urge our readers to go ahead with it as fast as they may. Get your pork ready and watch the market well. By having it on hand you will be able to seize the crisis without difficulty.

If your hogs have not yet been put up, and if you have therefore lost the early and warmer part of the winter, the next best thing you can do, in order to save time and money in fattening them, is to give them good warm pens. Let a portion of the pen be covered with a good tight roof, and the sides sheltered with plentiful heaps of pine bush. Few take the trouble to put a floor to their hog pens; yet by so doing so much manure may be saved. The floor should be made of plank or poles, and slanted considerably to one side. See that the pens of your hogs are well supplied with ashes and charcoal.

Care of Cattle.—We wish we had the power—we certainly have the will—to make the farmers of Virginia pay more attention than they do the compost of their horned cattle. The neglect manifested by them every where almost, astonishes the Yankee or the Englishman who chances to pass through the State. It does not seem to occur to many of them that they ever need any shelter at all; and it is certain that they get very little. We are no advocate of stabling cattle. We regard a plenty of free cold air as essential to their health. But we deeply regret to see them standing about in an uncovered pen, with icicles on all sides, in the cold sleety weather of this and the coming month. It is a false economy, we repeat, it is a false economy, to deny your cows and steers the few boards and two or three days' work necessary to give them a sufficient shed. Much more than their cost is lost to you in their weight, in their utility, and in their shortened life.

Sheep.—There is nothing appertaining to sheep economy so necessary, and so essential to the profits of the farmer who relies upon sheep husbandry as a part of his agricultural speculations, as the matter of which we have been speaking—protection from the weather in winter. Shelter improves the fleece, both in quantity and in quality. The wool improves both in softness and evenness of fibre, while the cost of keeping and the number of losses will be diminished by a third at least. It is certainly unadvisable to pen sheep up, or in any manner to force them into shelter; but the plan of leaving them to find it as best they may in our pine woods, cannot be too strongly condemned.

Shelter will increase the number of the lambs, by improving the condition of the ewes. It will also save a large quantity of provender.

Food of Sheep.—Hay is the best staple food for sheep, and each full grown animal should receive three full pounds of good hay, or its equivalent in other vegetable matter. It is best varied with potatoes, turnips, cabbages, &c. There is, however, as much nourishment in two pounds of potatoes as in three of hay. But if they are fed on straw, it should be recollected that thrice the quantity is only an equivalent in nourishment. Cornstalks cut fine and steamed, or corncobs pounded and steamed, constitute an excellent winter food for sheep. Some recommend peas and beans ground to meal and mixed with a small quantity of water, as the best of all food for sheep, because they more nearly correspond with the elements of fat and are best calculated to bring a good quantity of wool. It should be always borne in mind, however, that *no* sort of food will do the flock the slightest service unless they have a plentiful supply of water and of salt.

All long food should be given to sheep in racks. *Reason.*—It saves half.

Manure.—The winter is the harvest of manure. The man who would allow his wheat or his oats, or his corn, to lie in the field upon

which it grew, and to decompose into its original elements, would be thought an idiot. Scarcely is he worse, who permits the masses of manure collecting in every corner of the fences running through his woods, at the head of every creek, in every spring branch, in his hog pens, his hen houses, at the back of every kitchen and every negro quarter, to pass off in the atmosphere, and in the stream of rain, without an earnest and an untiring attempt to collect and save them. Now is the time. Set every negro boy, and every idle hand to this work. Fill every wheelbarrow, every cart, and every spare hamper with these unsavory, but rich materials. The true alchemy is that of the plough. The fabled science was thought to convert lead into gold. The true alchemy changes even meaner materials into that precious metal.

For the Southern Planter.

FREDERICK SHEEP WOOL.

Mr. Editor,—Two or three weeks ago, when I sheared my sheep, I determined to send you a small sample taken from several coats, as I have on a previous occasion been much interested and instructed in examining the various specimens in your office from different sections.

I am aware that this would not be considered fine, suitable for the manufacture of cloths and cassimeres and other fine fabrics; but it is fine enough for all our domestic purposes, such as clothing ourselves, children and servants; for, generally, about here we make at home all the clothing for our children and black family; as also blankets for our servants. My sheep are of that breed known in this section as the Frederick sheep, which was produced by that judicious breeder, R. K. Mead, Esq., of the county of Frederick, Va. The average clip of wool taken from my sheep, at the last shearing, was five lbs. fourteen and a half ounces; and I am satisfied, that if we would bestow a little more attention to their keep through the winter, that this average might be doubled; for a neighbor of mine who is a good manager and has fine stock, has cut an average of more than seven pounds. Almost the only attention which our sheep get in the winter, is a little blade fodder or sheaf oats, scattered on the snow when the ground is covered; at other times they are left to take care of themselves. A little more attention in the shape of meal mixed with cut oats, would increase our wool by fifty per cent.; as Mr. Mead's average ranged from eight and a half to thirteen pounds washed on the sheep before shearing. This average of five pounds fourteen and a half ounces, though not large, I believe will more than double that of a majority of flocks in this county. No extra pains were taken to increase the average, for the lambs of the last year were sheared in July. I do this that their fleeces may thicken for winter, and make better wool at the next shearing. This breed of sheep suits our region better than any other with which I am acquainted. I think it is our true policy to breed that kind of which the fewest number will give the requisite quantity of wool for our family purposes. From my experience, I don't think we can here grow wool for market at the present prices of twenty-five or thirty cents.

What success had Mr. Nowlting with his importation of sheep a few years ago? They, it was said, yielded heavy fleeces.

G. M.

Buckingham County, 1848.

Mr Nowlting informed us a short time ago that all of his sheep died.—*Ed. S. Planter.*

APPLE JELLY.

Take good winter apples, not too mealy, pare and cut them in slices, put them into a deep stewpan, with as much water as will cover them; boil them gently till they will mash, and then strain them through a jelly-bag; to every pint of liquor add one pint of loaf sugar: boil it till it comes to the top for ten minutes, then pour it into a mould with or without sliced lemon peel. A quart only should be done at a time. This jelly will keep, and make a pretty dish at any time.

PORK MAKING.

We copy the following article from the late Report of the Commissioner of Patents. It is from the pen of the Hon. H. L. Ellsworth, of Indiana, formerly at the head of the Patent Office:

EXPERIMENTS IN FEEDING HOGS.

On the 24th of May, 1847, I purchased four hogs of the following weights:

No. 1 weighed 131 lbs. 4 oz. } Together weigh-
No. 2 " 150 lbs. 4 oz. } ing 281 lbs. 8 oz.
No. 3 " 157 lbs. 4 oz } Together weigh-
No. 4 " 120 lbs. 4 oz. } ing 277 lbs. 8 oz.

I fed Nos. 1 and 2, to each three and a half pounds of Indian meal cooked, making in both seven pounds per day—The food I prepared as follows: I took fourteen pounds of meal, enough for two days, wet this with cold water to prevent lumps; then put it into a five-pail iron-kettle, (full of boiling water, stirring it well,) covered over the kettle with a tight board; let the mush stand till morning; putting up dampers, the heat of the kettle and arches makes the mass boil for a long time without wood.

On the 8th of June, fifteen days—

No. 1 weighed 149 pounds 13 ounces, —a gain of 18 pounds 9 ounces. No. 2 weighed 165 pounds, 13 ounces—a gain of 15 pounds 9 ounces.

Both together having gained 34 pounds 2 ounces in fifteen days, and consumed 105 pounds of meal. If pork is worth 3 cents per pound gross, the gain in the hogs, viz: 34 pounds 2 ounces, is $1 02, equal to very nearly 1 cent per pound for the meal, viz: 56 pounds per bushel, say 55 cents per bushel.

No. 3, as above on the 24th of
May, weighed 157 lbs. 4 oz.
No. 4, as above, on the 24th of
May, weighed 120 lbs. 4 oz.
Both together weighing, 277 lbs. 4 oz.

These I fed on 14 lbs. of corn, 7 lbs. to each der day, with water.

On the 8th of June, fifteen days—

No. 3 weighed 179 pounds 13 ounces —a gain of 22 pounds 9 ounces. No. 4 weighed 146 pounds—gain 25 pounds 12 ounces.

Both together gained, in fifteen days, 48 pounds and 5 ounces; and consumed 210 pounds of corn—just double the quantity of meal fed to the other two. The 48 pounds 5 ounces of pork, at three cents per pound gross, amounts to $1 45, making corn 38½ cents per bushel of 56 lbs. The hogs, generally, had salt, in cakes, composed of ashes, three parts clay, one part saturated with salt—a most excellent method of salting all kinds of stock. Those fed on corn drank freely of water. Those that ate much would rarely drink any. After fifteen days the food was changed for twenty days; those that previously had corn lived on mush, and *vice versa*. No. 3 was much affected by the too rapid change from dry corn to mush, the stomach having been contracted by digestion, only required by the concentrated nourishment of dry corn, could not bear the sudden extension which mush gave it, each hog having about eight pounds of mush three times per day, equal to twenty-four pounds per day.—Here I may remark, and what seems almost incredible, that fourteen pounds of corn meal, thoroughly cooked, will make ninety pounds of mush, so thick as not to run when taken out of the kettle. In the further experiment I omit No 3, from the cause above, since being unwell, he did not gain over five pounds in twenty days. His case is added as a caution against too rapid change of diet. I proceed, therefore, with Nos. 1, 2 and 4, and weighing as follows:

No. 1 weighed on the 8th of June 140 pounds 13 ounces; on the 28th June, 179 pounds—gain 29 pounds 3 ounces. No. 2 weighed on the 8th of June, 165 pounds 12 ounces; on the 28th June, 189 pounds—24 pounds 3 ounces.

Both together having gained 52 pounds 6 ounces in twenty days, and consumed (at the rate of fourteen pounds per day) 280 pounds, equal to 52 pounds 6 ounces of pork, at three cents per pound gross, as before, which gives $1 57, equal to 31 cents per bushel. This gain was less than the other experiment on corn, which is accounted for by the change of diet.—No. 4 weighed on the 8th of June 146

pounds; on the 28th of June, 166 pounds —gain 20 pounds; just one pound per day. He consumed seventy pounds of meal, cooked—twenty pounds of pork, at three cents per pound gross, amounts to sixty cents; making the corn ground and cooked, worth forty-eight cents per bushel.

Had not No. 4 suffered somewhat by a too rapid change of diet from corn to mush, he would, doubtless, have made the second experiment with the meal equal to the first experiment. Taking both experiments together, which is hardly fair, as the change from highly concentrated food to that which is far more expansive, is disadvantageous—more so than from expansive to concentrated, raw food is to the cooked food as 68 to 103, making the gain by cooking about fifty-five per cent. over uncooked food—or, three bushels of dry, hard corn. It is generally estimated, that if corn is cut up and fed to hogs, that fifteen bushels will fatten each one—that is, give one hundred pounds of flesh. If hogs, at gross weight, should be worth $3 per hundred, this would make corn worth just twenty cents per bushel. The hogs, in this case, were not confined in pens. If confined in pens, dry corn is worth thirty cents, and meal, cooked as above, is worth over fifty cents; so that there is a gain, by grinding and cooking, feeding in the field, of one hundred and fifty per cent. The expenses, however, are to be deducted, and these depend on the price of wages, wood and milling. I am about to try Bogardus's mill, which it is said will, with two horses, grind three hundred bushels of corn and cob in a day.

I further design to fix the mill, so that the meal will fall into a tub or vat, where the grist (corn and cob) can be cooked by steam, supplying the boiler and tub with water from a spring, making the mush just thin enough to run from the tub into troughs, thus avoiding all labor in drawing water or carrying the food. If one-fifth is deducted for offal, which is a fair estimate, net pork at $3 50 per hundred, is about equal to three cents gross; or it is as two hundred and eighty is to three hundred.

I am about making further experiments to test the value of feeding corn on the stalk after being cut up, and also by turning hogs into the field. My present impression is, that the most profitable way to feed corn, all things considered, is to cut the corn as soon as it begins to turn hard; then hogs will eat corn, cob and stalk; then, too, the weather is mild, and swine will thrive much faster in September, October and November, than in December, January and February.

Where land is cheap and easily tilled, and labor dear, as in the west, it may be best to make hogs their own harvesters. Thus, prepare clover, oats, early corn and buckwheat, and let hogs eat them in succession. Rye, also, may be raised. The advantages of rye for stock have been underrated. It is a better improver of land, if fed off, than oats; its roots are thicker and grow deeper; it affords nourishment (if sown in August) from November until the autumn of the following year. Young, green rye has one great advantage over green wheat or green oats; the two last are apt to scour the stock, while rye is more nourishing without the relaxing qualities. Some highly respectable farmers prefer rye to clover. One thing is certain, rye can be sowed upon new land successfully where clover would fail—rye can be scattered before the last ploughing of corn. In this way calves can be wintered cheaper than in any other manner. Hogs will thrive remarkably well on green rye, and fatten on it when ripe. Taking, therefore, all things into consideration, rye should be placed much higher than it now is, in the comparative scale of valuable fodder plants. But to return to the subject of field feeding of hogs.

I mentioned the preparation of various crops, as clover, oats, early corn and buckwheat, to be fed upon in succession by the swine. These crops will last till the ordinary field corn is ripe enough. If a movable fence is provided to confine hogs to a small quantity, little is lost by field feeding, unless the weather is wet, when so much will be tramped in, that it is advisable to feed corn cut up and carried to a dry lot where there is water.

There is a general mistake in putting in oats too late. It is well to plough the ground in the fall, when the work on the farm does not press, and then seize the first moment to harrow in the oats in the spring. If peas are added to the oats, as was practiced on the North River, New York, when pork was the great staple there, it would be an improvement in the West.

A great error likewise has been committed in giving hogs too much age.—At the West, hogs average over twenty months, thus subjecting the owner to the expense of wintering; at this age their average is not two hundred and fifty lbs. More than half the fat made is run off by labor and travel; little food is allowed in winter, and less in the fall and spring, and the hogs have to work for a living. In many cases they get stinted, and never recover. It may here be mentioned that pig pork is worth more for domestic use or shipment to England and France than pork from older hogs. Indeed, a pig should be kept constantly growing, and ought, (and will, if properly attended) to increase one pound a day until killed, at ten or eleven months old, when he will weigh three hundred pounds if the breed is good. The doctrine that the breed is in the trough is not wholly correct—good hogs must also be fed; but there is as much, if not more, difference in hogs as in cattle, as to taking on fat. I have some so much inclined to fatten, that it is difficult to reduce them sufficiently for breeders, if they were placed even in common short pasture. Hogs to fatten best should not know what liberty is; they should have a warm dry bed—their feed at regular hours and in sufficient quantities. As soon as the meal is over, they then lie down and rest till the next feeding time comes round. Pushing hogs, however, only to those intended for early killing; if extraordinary weight is desired, pigs should not be confined too closely or be too highly fed for the first year; room and moderate exercise are favorable to the growth and muscle. A pig that has been pampered for one year will, if taken then, fall far below one of the same weight that has not been crowded, if both are allowed the same diet afterwards.

I cannot omit to notice a fatal error among farmers in hazarding all by new crosses. Many of the first breeds in this and other sections of the country have been spoiled by mixtures with the Berkshire, for while a cross with the Berkshire and Wood breed of hogs could not but improve the stock, an equal improvement has not followed in crossing the former with the improved kind. When *a good breed has been obtained, it should be kept* till there is a certainty of getting a better. Crosses often do not improve stock; the experiment should be first made with a few hogs. There is another important fact to be attended to. It is desirable to breed in and in for one or two litters, until the breed becomes *established*. One cross may produce an improvement in the appearance of the pigs, but their progeny may partake fully of the male or female, neither of which is wanted. The great deterioration in hogs does not follow so much from breeding in and in as from injury to the male by excess The male should be kept up and not allowed more than one or two connexions. If farmers would be particular on this point, they will have better hogs, and also that the number of boar pigs will be increased *fifty per cent.* Such is the result of experiments in Europe, as most fully tested.

After a full consideration of the subject, I am satisfied that stock raising at the West is much more profitable than growing small grain—indeed, an examination of the present circumstances in the North-Western States shows a vast difference in the wealth of the graziers over those who crop with grain. The profits of wheat appear well in expectation on paper; but this prospect is blasted by a severe winter, appearance of insects, a want of harvesting, bad weather in harvesting, in threshing, (for there are few barns at the West,) or transporting to market; and, lastly, a fluctuation of the market itself. Some one of these is likely to happen, for very fortunate is that farmer who escapes them all. There is, too, another very important fact to be noticed.

Constant cropping of corn and small grain carried from the field will of course diminish, gradually at least, the fertility, and the farm is at length worn out. On the contrary, by feeding the crop on the land, the farm *every year grows better.* I am making several experiments with stock, but shall not be able to complete them in time for your report this year. I have now on my farm one hundred breeding sows, which are expected to produce six hundred pigs in March and April; these I design to fatten by January, 1849, spaying the old sows and killing them at the same time as the pigs, reserving one hundred young sows (and a few extraordinary old ones) to stock the farm for another year. This mode of farming enables me to gather my rent from distant farms with the least trouble and most profit, as I can notify the tenant when the rent gatherers are coming, and so continuing the collection of rent, leaving the farm nearest market till the last. It may seem to Eastern men incredible that such amounts of corn can be raised or purchased so cheap. It costs $2 50 to $3 per acre to hire land tilled in corn—the crop averages fifty bushels; thus making the corn in the field six cents per bushel, inclusive of rent of ground, which to a purchaser is very inconsiderable. One young man with two horses will tend easily forty acres, and raise two thousand bushels by three and a half months' labor.

I mentioned in a former letter, (published in your agricultural report of 1845) that I had six teams (five yoke of cattle to each) to break up the sod without any help but one boy to drive, the plough being fastened to a short axle, so as to graduate the depth of furrow or to keep the plough in a proper position; two boys attending upon the six teams to drop the corn which was covered by the sod—this gave a sod crop, without tending, of thirty or forty bushels per acre. I wish now to say, that with two stout horses I have this year broken up two acres per day of similar land by using a steel plough called the "Chicago Clipper." The chief advantage of it is the angle of the mould-board and its smoothness. In very hard soil three horses may be required to do the work of five yoke of cattle, with the old plough. The Chicago Clipper is not a patented article, and is therefore open to all. I have requested Mr. Burrel of Geneva to improve upon it by adding his friction roller.

PROVENDER.

See that nothing in the form of provender for cattle is suffered to go to *waste*—a long and tedious winter is before us, and those the most plentifully supplied will have full demand before spring comes for all they have. The best way to prevent *waste*, and the consequent suffering of one's stock, is for the *master* to visit his stack-yards, stables and cow-yards at feeding times, and see for himself that neither he nor his stock are cheated out of the food allotted to them.

TOMATO—ITS CULTIVATION AND USES.

This plant or vegetable, sometimes called *Love Apple*, or *Jerusalem Apple*, which belongs to the same genus with the potato, was first found in South America. The use of this fruit as food, is said to have been derived from the Spaniards. It has been long used also by the French and Italians. The date of its introduction to this country is unkown. It is said that the tomato has been used in some parts of Illinois for more than fifty years. Its introduction on our tables, as a culinary vegetable, is of recent date. Thirty years ago, in this vicinity, it was scarcely known, except as an ornament to the flower garden, and for pickling. It is now cultivated in all parts of the country, and found either in a cooked or raw state on most tables. In warm climates it is said, that they are more used than in northern, and have a more agreeable taste. It is now much used in various parts of the country, in soups and sauces, to which it imparts an agreeable acid flavor: and is also stewed and dressed in various ways, very much admired, and many people consider it a great luxury.

We often hear it said that a relish for this vegetable is an acquired one; scarcely any person at first, liking it, but eventually becoming very fond of it. It has, indeed, within a few years come into very general use, and is considered a particularly healthy article. A learned medical professor in the west pronounces the tomato a very wholesome food in various ways, and advises to the daily use of it. He says that it is very salutary in dyspepsia, and indigestion; and is a good antidote to bilious disorders, to which persons are liable in going from a northern to a warmer climate. He recommends the use of it also in diarrhœa, and thinks it preferable to calomel.

The tomato is a tender, herbaceous plant, of rank growth, but weak, fœtid, and glutinous. The leaves resemble those of the potato but the flowers are yellow and arranged in large divided branches. The fruit is of a light yellow, and a bright red color, pendulous, and formed like the large squash-shaped pepper. There are smaller varieties, one pear-shaped, both red and yellow. These are eaten and relished by many from the hand. The red are best for cooking; the yellow for slicing, like cucumbers, seasoned with pepper, salt and vinegar, and eaten raw.

The seeds should be sown in the early part of March, in a slight hot-bed, and the plants set out in the open ground early in May. In private gardens it will be necessary to plant them near a fence, or to provide trelices for them to be trained to, in the same manner as for Nasturtians; they will, however, do very well if planted out four feet distant from each other every way. But a nice way to keep the plant erect, and the fruit from the ground, is to drive down four stakes, so as to make a square, say two feet each way, around the plant, and then wrap three or four wisps of straw around the stakes.—These will keep the vines from falling, and expose the fruit nicely to the sun for ripening. They will bear till frost.

Its Uses.—There is, perhaps, no fruit or vegetable, now cultivated that can be converted into so many palatable dishes as the tomato; and to aid our female readers we subjoin several recipes, some of which have been tested on our table, and pronounced good.

Stewed Tomatoes—Peal, slice and stew them slowly. When done season them—thicken a little with bits of bread or crackers, and put in a small lump of butter, and eat them as you would apple-sauce. When thus prepared, with good roast beef, green corn and lima beans, you'll find them first rate.

Tomatoes with beef-steak.—Cut them in two, lay the flesh side upon the gridiron, over pretty hot coals, for a few minutes, turn them, season them well with pepper and salt, and when done dress them with butter, or eat them with gravy, as suits you best.

Tomato Omelet.—Slice and stew your tomatoes. Beat half a dozen fresh eggs, the yolk and white separate; when well beaten, mix with the tomato—put them in a pan and fry them, and you will have a fine omelet.

Tomato Tart.—Roll out your dough very thin, and place it on a plate in which you intend baking your tart, and slice your tomatoes very thin; spread them over the dough very thinly, take two table-spoons full of brown sugar, and one of ground cinnamon bark, spread the two over the tomatoes, bake it well, and you have a delightful tart.

Pickled Tomatoes.—Place your tomatoes in layers in a pickling jar, with garlic or shred onions, mustard seed, horse-radish, red pepper, spices, &c., as wanted, until the jar is filled. A little salt must also be added, as the layers are put in.—When the jar is filled, pour over the tomatoes good cold cider vinegar, till all are covered, then close up tight for use.

Tomato Preserves.—Prepare syrup by clarifying sugar, melted over a slow fire with a little water, boiling it till the scum appears. Take the tomatoes when quite green, peal them and put them in cold syrup, with one orange sliced to every two pounds of your fruit: take pound for pound of sugar; simmer them for two or three hours over a slow fire. When a superior article is wished, add fresh lemons

sliced, and boil with the tomatoes a few peach leaves and powdered ginger in bags. Tomatoes even when ripe, make a fine preserve, treated as above; but unless great care is used in the process, they will fall to pieces.

Tomato Figs.—Take six pounds of sugar to one peck, or sixteen pounds of the fruit. Scald and remove the skin in the usual way. Cook them over a slow fire, their own juice being sufficient without the addition of water, until the sugar penetrates, and they are clarified. They are then to be taken out, spread in dishes, flattened and dried in the sun. A small quantity of the syrup should be occasionally sprinkled over them while drying; after which pack them down in boxes, treating each layer with powdered sugar. Boil the remainder of the syrup and bottle it for use. They will keep from year to year, and retain a nice flavor. The pear shaped, or single smooth tomatoes, answers the best purpose.

Tomatoes instead of Cucumbers.—Peal and slice them as you would cucumbers; season with plenty of salt, pepper and vinegar to your taste. A few slices of onions added will improve them very materially.

Tomatoes for Winter.—They may be preserved for winter use, by placing them in layers with salt, in jars or tight boxes. When wanted, they must be soaked in water, as you soak cucumbers preserved in the same way. Some stew the tomatoes till well cooked, then spread the mass on plates, or other smooth surfaces, and dry them fully, when they can be put in bags, and kept in a dry place.

Tomato Sauce.—Slice a quantity of green tomatoes and onions in proportion of one-fourth. Put a layer of tomatoes in your preserving kettle and a layer of onions; sprinkle over them a few green peppers, sliced, with cinnamon, cloves, black pepper and any other spices; also a little salt and ground mustard. Repeat the process until the kettle is nearly full. Then fill with vinegar, put over a plate and let it boil, and when cool put in jars for use.

Tomato Catsup.—To one gallon skinned tomatoes put four table-spoonfuls of salt, four do. of black pepper, two of allspice, eight of mustard seed, and eight pods of red peppers. These to be bruised fine and simmered slowly in a pint of vinegar three hours. Then strain them through a fine sieve, and stew down to half a gallon.

Another.—To half a peck of peeled tomatoes, put four table-spoonfuls of salt, four do. black pepper, half do. allspice, three of mustard, and eight red peppers, all ground fine, and simmered slowly with the tomatoes in sharp vinegar, for three or four hours. Use as much vinegar as to leave half a gallon of liquor when the process is over. Strain through a sieve, bottle and seal from the air. It may be used in a fortnight, but improves by age, and will keep for years. Those who like the flavor may add, after the ingredients are somewhat cool, two table-spoonfuls of the juice of garlic.

A quick mode of cooking Tomatoes.—Boil the tomatoes a quarter of an hour, with milk sufficient to cover them; add, while boiling, a little batter made of water and wheat flour, and season the dish according to your taste. The advantage of this mode over those usually practised are, that the tomatoes are rich, though less acid, and are much sooner cooked.—*Amer. Journal of Agriculture.*

For the Southern Planter.

TO EXTIRPATE GARLIC.

Mr. Morgan of Jefferson county, and another writer in the Southern Planter, desire to be informed of the best manner to extirpate "*Garlic.*" I will give him my own experience on this subject, and he may rely on the truth of my statements. Some twenty-five years ago I had a piece of land of clay soil and very poor, so completely taken with garlic, as to be the subject of laughter to a friend, who said he took it to be a fine field of wheat. This land has been freed from this pest by the following method.

I ploughed it in November, so regulating the depth of the ploughing as to let

the ploughshare pass just below the bulbs of garlic. By this method they were most of them exposed to the air and frosts of winter. When I supposed the freezing had destroyed the power of the bulb to vegetate, I drew an iron-tooth harrow over the surface, by which operation the bulbs were separated and another portion divested of earth, and brought to the surface for the action of the frosts. This operation was from time to time repeated. The land in the spring was cultivated in corn, and repeatedly ploughed. Since this, I have had no garlic in this land to injure the crops of wheat. There is yet some garlic in it, but scarcely perceivable, and in no way injurious, unless by inviting the cows in early spring, who prefer it to clover, with which this land is now well covered. Garlic cannot be destroyed by *deep* ploughing, because it is sheltered by the overlaying earth; it is by *winter* cultivation and *very shallow* ploughing that it is mostly injured. Should I aid your correspondents by this communication, I shall be gratified.

I am and have been making experiments with Guano,* and will give you next summer a statement of them. I have applied it to oats, corn and wheat. On the last named grain it has produced great benefit in my vicinity.

PLOUGHMAN.

November, 1848.

*The Spanish pronunciation of this word is, I believe, as if written *Gwano*, giving to *a* its broad sound. Some folks twist their jaws out place by trying to sound both vowels, giving the *a* the narrowest sound. To prevent *accidents* I have made this note.

We shall be pleased to publish a statement of our correspondent's experiments next summer; and in the mean time will be happy to hear from him upon any other subject.

TOOLS AND IMPLEMENTS.

Let every description of tools and implements be examined, have those requiring it repaired, and those not in use carefully put away under cover. Such attention saves both time and money.

THE MEADOW.

BY WM. BACON.

The importance of the hay crop to the American farmer can never be too highly appreciated. Indeed, the same may be said of *all crops* in climates where they will attain perfection, for all are not only useful but extremely valuable, insomuch as they go to improve the condition of the earth or minister to the comfort and happiness of man. After all, the hay crop rises in importance, especially in our northern regions, and stands above all others, for it may be termed the fostering mother of all other crops. Common sense and the every year observation and experience of the farmer teach this, for if the hay crop is short, the stock kept upon the farm must be reduced and consequently, the quantity of manure in the farm-yard is deficient, so that less land must be put in corn or wheat, or a less quantity of the *fertilizing medium* applied to the usual quantity of land, and as the consequence of either operation, a diminished harvest will be the result, which, of course implies that there is less of the commodity for market, and though a higher price may sometimes be the consequence, yet, on the whole there is a serious falling off in the returns to the farmer's pocket. This makes him, not only sad of countenance, but less inclined to employ labor or invest money in improvement, for the fact is, he has not the usual means to do either.—Here is one loss, then, whose influence must be felt, perhaps for years. There is another, collateral with it, which may well claim a notice. The corn field being contracted in its limits, or from not receiving its full supply of necessary aliment, is in a worse condition than it should be for successive tillage, consequently light crops may be expected in this part of the premises. So it may be seen that a short crop of hay in one season, inflicts a calamity for future ones, and beyond the wearisome and disheartening prospects of the farmer, as he looks upon his sparsely covered meadows and diminished hay mows.

How, then, shall the meadows be im-

proved so as to furnish a uniformly good or a successively better crop? This is a question which the farmer cannot ponder too deeply and an operation which he cannot seek too sedulously to perform.—No prescribed rule or set of rules laid down by theorists or chains of experiments satisfactorily made and fraught, in particular circumstances and various localities, with desirable success, will serve as infallible criterions to his system of operations. They may *aid* in deciding the best processes of renovation but they cannot decide what is best.

There are some causes of renovation which may be adapted to all soils and all climates, provided nevertheless that the soil in question is not too wet. It is supposed, however, that natural meadows or such as are annually flowed by streams bringing rich deposites and spreading them over their surface. Such lands are usually provided with sufficient nutriment to facilitate the growth of luxuriant crops. But meadows which experience no such gift of nature, must depend on the liberality of man, who strips them of their burthen, for means of giving sustenance to new crops. Among these means and of those which come within the reach of every farmer, we notice, first, the compost heap, which consists of various accumulations of all the decomposable substances which can be collected and thrown together into one common heap in the farm yard, where they are subject to frequent trampings of the stock, heaving up by the powerful agency of the swine's snouts, absorbing the liquid which pour in upon them on every side, until they become a mass of highly pulverized matter, equal in fertilizing properties to the rich deposits of the Nile. This is as valuable for a top dressing for manure, load for load, as common yard manure, and should be applied in similar quantities by the acre. The best time for us to carry it upon our lands has been late in autumn, giving just time to fill the yard with a new supply of turf, muck and weeds to act as absorbents during winter and spring. All manures should be carried to the meadow and spread just as the heavy fall rains are setting in. By so applying them, they become thoroughly incorporated by those rains with the soil, and while nothing is lost by evaporation or exposure to hot sunshine and high drying winds, the grass will show their influence early in spring.

Another general method by which meadows to a certain extent may be improved, is by turning water from the highway upon them. This water becomes valuable in a greater or less extent, to be sure, by the amount of travel over the road from which it is taken. On large public roads it must necessarily be very rich from the quantity of manure which in the succession of dry times become thoroughly incorporated with the dust of the highway. On all roads, from the earth's being reduced to fine particles, it becomes very valuable. How much better to open small channels and turn the earth with the water which is bearing away upon the adjoining lands, than to see it run off into dismal ditches by the way side, or in being borne lengthwise of the road until deep gullies are formed to be the perpetual annoyance of the traveller. We insist upon it, that the fertilizing power which may be taken from the highway every year, will compensate for the few minutes' labor three or four times in a year in more than a sixty-fold proportion, and at the same time operate as an essential benefit to the highway; and we firmly believe that in seventy-five cases in a hundred the farmer will find ample remuneration by these little services, for keeping the highway through his premises in good repair.

The use of gypsum or plaster on meadow lands is another medium of keeping them in a productive condition. Though this substance has already come into much use among the best farmers, its general adoption is not so great as the profit of the cultivator demands. From mistaken application, or some other cause, many still doubt its utility, while others may perhaps overrate its fertilizing qualities. It is but a few days since we heard a farmer of good observation and close calculation observe, that every ton of plas-

ter sown upon his meadows gave him five tons of hay. This is surely handsome profit. A ton of ground plaster, three-fourths of a mile from his farm, costs seven dollars; allow for hauling to the farm and sowing, two dollars, which at the ordinary prices of labor would be too high, and the ton of plaster when sown stands at nine dollars. Take the five tons of hay and estimate it at seven dollars per ton, and he is benefited by a net profit on the ton of plaster of twenty-six dollars—a very handsome profit, to be sure, on the investment. In many other instances as great a one may undoubtedly be realized, while in others it will no doubt fall short, and in some perhaps prove an entire failure.

These circumstances must depend on the quality and condition of the soil, two facts with which every farmer should be well acquainted, especially on his own premises. As a general rule, however, plaster may be profitably used on lands adapted to the growth of clover and the winter grains, or corn. That it has, in some instances, failed on such lands may be true, and these failures may be and probably in most cases are owing to a misapplication. If sown in a windy time, it is liable to be blown away; if sown in a very dry time its influence is checked if not lost. We have known instances when it was sown and a dry season followed and its effects were not visible until the next year. We have sown it when threatening clouds were stretched over the horizon, promising to drench the earth with their watery treasures, and despite the warning voice of neighbors and friends that it would wash away, so that we should lose our money and labor too, and when the rains descended in torrents we began to think ourselves that something would happen to our plaster, and in fact we think there did, for having sown in haste lest the rain should catch us with our work unfinished, we were rather partial in our bestowment and sowed in streaks. The grass told every looker-on what we had done, and in two weeks those streaks were visible in the different color of the grass for two miles.

With regard to the condition of land at the time of application of plaster, we fin that it is the opinion of many that it should be new stocked and recently manured. These things may be well, and in some cases necessary; we have sown on old stocked lands where there had been no recent manurings, with a good effect. But a light dressing of manure before the application of plaster is probably in all cases advisable, where it can be given, and in such applications the quantity less manure and less plaster will be found necessary than where either are applied alone. In the application of plaster to meadows, we have found a benefit in dividing the yearly allowance, sowing one-half in the spring and the other half immediately after taking the grass off in summer. The rationale of the latter process is this: the earth has partially exhausted its energies in bringing forth the crop, and the roots have in a measure expended theirs in giving it perfection.—They are like a hungry man, when the labor of the day is over, needing food for nourishment before they go to rest. Plaster furnishes this, and enables them to weave a blanket for their protection from the cold of winter, and enable them to shoot far in new and rich luxuriance at the earliest touches of spring.

Plaster upon meadows is beneficial in eradicating foul and noxious weeds.—Johnswort, wild wormwood, and even the tenacious strawberry, so prone to spread itself caressingly over vast tracts of exhausted meadows shrink from its application and quit their firm hold at its bidding. Even the white daisy, which has shown itself so universal a pest the season past and given large territories the appearance of spacious flower gardens in the distance, may be fairly ousted on a few applications; and had the use of plaster been liberal on lands infested with this weed last spring, many farmers would probably have joined in hearty response to the exclamation, "my ton has made five tons."

Experiments, without noting the actual circumstances connected therewith, avail but little.

For the Southern Planter.

"OLLA PODRIDA."

Mr. Printer,—You will pardon a few more questionings from one who does not know every thing. Your October Number, page 294, contains answers to some put when I was a boy, to wit, June, 1848. I had almost forgot what I wished to know; but I am exceedingly glad to learn that Mr. J. H. D. Lowndes "did not place the Planter's '*death*' before *his* own, but made them equal." Be so good as to let us know what sort of a constitution this Mr. J. H. D. L. seems to have, and what is his age, &c., and be sure and don't leave out an "I."

Again, I am still unable to know to what conclusions Mr. L. has come by reading Mr. Young's Treatises; for, in the few extracts he makes, in one he says "Mr. Young is certainly wrong;" in another, "absurd;" and in a third, "pretty tall this." He certainly does not mean to conclude, that because Mr. Young says he "knows no distinction in these crops," that this is sufficient "identification," particularly when he gives a few extracts and pronounces them "certainly wrong, absurd, or "pretty tall?"

Mr. L. asks, "Does he (your humble servant) wish you (Mr. Printer) or me (Mr. L.) to buy the work and send it to him?" This reminds me of an anecdote I heard of an overgrown urchin who found his way into a Sabbath school, and after sitting some half a day poring over the pictures of a primer which had been placed in his hands, he was called up by an old maidish matron of great piety "*to say his lesson.*" "What is that?" says the mistress, pointing to the first letter of the alphabet. The chuckle began to spy with great earnestness, and drawing his shoulders to his ears, and thereby leaving his legs (already thrust too far into his breeches, or rather out of them) entirely exposed, dropping his shoulders and relaxing his whole system, he confessed at last, "I d'n know marm." "Don't know?" "No marm." "Why, that's A." "It is! Well, I'll be darned! And that's A? Well, I'll be darned!" "O don't talk so; that's ugly." "Yes marm." "Well, what is that?" pointing to the second letter of the alphabet. "I d'n know marm." "Don't know? "Why, that's B." "It is? Well, I'll be darned if it is any more like B than my foot." "Sit down, Sam."

I'll be darned if I don't feel like the long-legged boy. Young's Treatise is a *work* is it? Why I thought from Mr. L.'s notice of it, that it was a small treatise on partridge peas? For Mr. L. "has no doubt Mr. R. may see it, but should any others desire the information, Mr. Young's treatise might not not be unacceptable to your readers generally." I humbly claim to be one of your "readers," and Mr. L. talks about buying a work and sending to me. Be so good as to tell Mr. L., if Mr. Young is "certainly wrong, absurd, or pretty tall," he will please not send it, as the "I's" may get knocked out, and then the conclusions may be drawn imperfectly, by

Your friend truly, and respectfully, his humble servant,

IGNORAMUS.

P. S.—Be sure and have my "whens and wheres" and whys and wherefores all right, and it matters not whether "the tare is a pulse," or "are *thetches*, *fitches* or *vetches*," or whether they are "*gray* or *black*, or *winter* or *spring*, or the *partridge peas* or the black "*I*." Print plain, so every body can understand it, and also

I.

CORN AND COB MEAL.

Much diversity of opinion seems to prevail as regards the value of cob meal, for food for cattle, horses and hogs. It has been the opinion of most farmers that the cobs of corn were of little or no value, and they have either been used for fuel, or thrown aside as of little use except for manure. We have for a long time been much in favor of corn and cob meal, not only from our own experience but that of others. It is a great saving in point of economy; and it is generally asserted that horses, mules and cattle are not near

as subject to cholic when fed on this kind of meal. Corn meal in its pure state, is generally considered too heating and too concentrated, particularly for working horses, but when mixed with the cob forms a very superior and nutricious food. It is supposed to act mechanically too, by distending the stomach, by which digestion is rendered much easier and more perfect. It renders the meal more light and bulky, when well mixed with the grain, by which the meal is more thoroughly acted upon by the gastric juice of the stomach, consequently more perfectly digested.

When it is considered how many thousands of bushels of corn cobs are annually thrown away, or wastefully used for fuel, it becomes a matter of deep interest to every farmer to know the value this offal of the farm is entitled to as food for cattle.

As to the benefit of grinding the corn with the cob, we thing it varies with the nature of the corn—being greatest with the hardest and most flinty varieties.

By a nicely conducted experiment made some years since, by P. Minor, of Virginia, it was ascertained that five bushels of cobs yielded four gallons of spirit. But this experiment does not settle the question as to how much nutriment the cobs contain. Besides the principle of *alcohol* to be found in all *grain*, and most vegetables, there are other substances, or principles in all, possessing nutritive qualities, among which may be enumerated the saccharine and oleaginous properties of infinite value, as these are known to be active agents in the production of fat, et cetera.

By an analysis, which is now being made in the laboratory of Dr. Emmons, by Mr. Salisbury, we are informed that the cob of corn affords over two per cent. of albumen and casein, besides other nutritive matter.

The opinion expressed of those who have given it a fair trial, is altogether in its favor. "We cannot," says the editor of the American Agriculturist, "too earnestly call the attention of our readers in those portions of the Union where labor is cheap and fuel dear, and mills are found for the purpose, to the importance of grinding or crushing their corn cobs for horses, cattle and sheep, and when it can be cooked, for swine also. Sufficient experiments have been made to establish the great benefits of them when so used in proportion to their weight. Boiling or fermenting them after crushing, adds to their value."

TO POLISH MAHOGANY TABLES.

Grate very small a quarter of an ounce of white soap; put it into a new glazed earthen vessel, with a pint of water; hold it over the fire till the soap is dissolved; then add the same quantity of white wax cut into small pieces, and three ounces of common wax. As soon as the whole is incorporated, it is fit for use. When used, clean the table well, dip a bit of flannel in the varnish when *warm*, and rub it on the table; let it stand a quarter of an hour, then apply a hard brush in all directions, and finish with a bit of clean dry flannel. This will produce a gloss like a mirror, and to those who dislike the smell of turpentine or oil, will be very useful.

THE CIRCLE OF FRUIT.

Are our farmers—or such of them as have abundant means for this purpose—supplied with good fruit during the whole twelve months? Is there any one commodity, more calculated to increase the pleasures of the country, and to render home attractive to young people, than fine, fresh fruit, of one's own raising, during the entire season?

Many have adopted a very erroneous opinion, and suppose the "fruit season" to be a small portion of the year. A good selection would extend the period of actual bearing and ripening in the open air, to nearly six months; and such kinds as possess keeping properties, if in sufficient quantity, would supply the other six.—The first fruits ripen, even so far north as Albany and Rochester, by the first day of summer, and two weeks earlier at Phila-

delphia and New York. Three varieties of the cherry,—the Early May, May Bigarreau, and Early Purple Guigne,—mature stimultaneously with the Duke of Kent and large Early Scarlet Strawberries; a host of other fine varieties of both these kinds immediately succeed them.—Currants and Raspberries soon join the list, the Primordian plum, the Amire Joannet and Madeleine pears, and several delicious Apricots are on hand by wheat harvest; after which the profusion of peaches, pears, apples, plums, grapes, &c., furnish the richest supplies through autumn. Grapes and pears may be kept till spring, and apples till the succeeding summer. But, let it be remembered, that if the *long-keepers* are not laid in very liberal quantities, the stores will soon be exhausted. The less by unavoidable decay, as well as by consumption, must be allowed for. An excellent mode of keeping winter and spring apples, in the absence of a better, was this: "Lock them up in a cool, dry cellar, and hide the key." The error was in the limited supply; its correction, is to supersede the necessity by an abundant store. Every cultivator, therefore, while he plants liberally of the earliest ripening varieties, must plant still more liberally of long keepers; for while the former are soon succeeded by others, the latter must extend their benefits through a long and otherwise dreary period.—*Albany Cultivator.*

BENEFITS OF MACHINERY.

Fifty years ago wages were no better, in fact less, than at the present day, and comforts and luxuries of life were far more difficult to obtain. Articles needed by the poor man cost, in those days of comparative freedom from machinery, from twice to three times what they do now, and often more, and you will find that the greatest reductions are in those articles to which machinery has been most successfully applied. There is no article of luxury or comfort to which machinery has been extensively and successfully applied, of which the poor man cannot now get more for a day's labor than he could before such application of machinery. Salt is now less than one-third, iron less than one-half, shirtings and calicoes and cloth generally from one-half to one-fourth, pins, needles, shoes, hats, every thing in similar proportions.

Forty years ago, such articles of use or ornament as locks were scarcely known, and could be afforded by the rich only.—Farmer's wagons were chiefly sleds; their houses, cabins; their chairs, stools and benches; their bureaus, pins drove in the wall or poles hung across; and their windows often an old sheet or blanket. Nails and glass cost money in those days, and labor commanded little.

Since machinery has been applied, better roads, turnpikes, railroads—all of which are a species of machinery—have been constructed. Steam has been made to propel the boat and the great ship, and to give power to the mill, to the jenny and the loom. Production in many articles has been more than trebled, and every thing the laborer needs has fallen, while his wages have risen or remained stationary. The clock, which the farmer had not and could not afford, now adorns the mantel of his poorest tenant, and summons him to his meals.

There have been less improvements in agricultural implements than in machinery for manufacturing purposes—but this is the age of improvement. Let machinery be applied to husbandry also.—Let bread and meat be as cheap as clothing, and if the distributing is not as equal as it might be, let us rejoice that if the rich man has more, so also the poor man much more.

The cottager has now, by the aid of machinery here, what great kings have not in Africa, and what the kings of England had not before the introduction of machinery. The great Alfred sat upon a three-legged stool, while many an English or American tenant now reclines on a gilded sofa. If the poor of England and America are not so well off as they should be, machinery is not at fault. It has saved them from much greater misery, and the reforms which they need are chiefly governmental and social.—*Sci. Amer.*

CONVERTING WHEAT FROM AN ANNUAL TO A PERENNIAL PLANT.

The attempt has been made to convert wheat from an annual to a perennial plant, and it is said, with some degree of success. The account given is, that it was discovered by the steward or director named Kern, of an estate at Constance. After he had ploughed and manured the land, he then sowed it with summer or winter wheat. In the spring, before the ear makes its appearance, he mows it. This he does repeatedly several times in the course of the season, using it as a kind of hay. After this he allows the plant to grow and be harvested as usual. The next year it ripens earlier and bears a much larger crop than wheat cultivated in the usual manner. In autumn it is manured like grass of meadows, and in the spring the weeds are removed. The effect is stated to be such, that from one field four successive harvests have been gathered. The subject is one of considerable interest, as no doubt, if rendered perennial, it would be useful for the purpose of forage. It might be well for some of our enterprising farmers to test the principle, as it is so easily done, and fuller information relating to it is needed. We have sought for some more satisfactory history of the matter, but as yet have been unable to light upon any thing which will give it. At present it is too vague to entitle it to much reliance, though the particular fact does not appear to be at variance with analogy in regard to improvements quite as great of numerous plants, by particular cultivation.—*Patent Office Report.*

MANURING GRASS IN MOWING LANDS.

Mr. Editor,—I have seen, in the editorials of your valuable paper, speculations and recommendations as to the best method of manuring or dressing grass on mowing lands; one article recommending it to be performed late in the fall, another, immediately after mowing. But the late fall application would be liable to two objections; the washing of the manure from the hills into the hollows during the fall and winter rains; the other, the danger of losing the whole, in low lands, from freshets; but I know of no better mode than the following: If the manure be put on in the spring, sow from 100 to 150 lbs. plaster to the acre some time in the month of May, if the land is sufficiently moist to decompose it—it would of course be useless to put it on wet land. Plaster begins to take effect in four or five weeks, and effectually prevent the drying away of the manure. I have known manure applied to meadow land without the addition of plaster, so dried, as to remain undecomposed during the next winter and spring; but in my view it is of the highest importance that it be dissolved the season it is applied—otherwise a great proportion is lost. It answers equally well to manure immediately after mowing, with the application of plaster.—*Boston Cultivator.*

CLUCKING HENS.

I have known one or two doses of jalap to relieve hens entirely from a desire to set; and, in my opinion, it is far better for the purpose than the cold water cure. I have known English fowls to lay in three weeks afterwards.

THE HABIT OF READING.

Young men should always cultivate a habit of reading, for it may be to them, not only the means of information, but the perennial source of many of the finest and highest enjoyments of life. They who make good books their constant companions, will never want good and faithful friends in their prosperous days, or their seasons of reverse. There can be no blank in the lives of those persons, who, from active love, hold daily fellowship with the wisest and best of the race. We think we could hardly be tempted to exchange our habit of reading for any other friend it may be our fortune to find on the earth. And we are sure that any young man who shall make this habit his

friend, will ever esteem it among the very wisest steps of his life; and so we counsel the young, from our own experience, among all their gettings in this world to get the habit, and the love of reading,—and always to have at hand a good book with which to fill up every leisure hour. In this way they may come at last to know, that the gems of life are found in its waste places.

From the Boston Cultivator.

LIME FOR PEACH TREES.

In the Cuttivator for 29th January last, I find my article on the then appearance of a peach orchard belonging to Mr. Daniel Dager of Spring Mill, Montgomery county, Pennsylvania, which had been treated with hot lime from the kiln, applied to each tree, and left to boil up. I also noticed his intention to double the dose, observing, "What the result of this double dressing will be, I know not; but hitherto, nothing but good has resulted from measures that may be considered severe;" concluding with the remark, "how far the quality of fruit may correspond to present appearances, another year will show." I now resume my pen to redeem the tacit promise which may be considered as having then been made, and to add the following notice, after a visit to the Delaware orchards of the Messrs. Reybold, which has enabled me to speak conclusively on the subject. I found the general condition of the limed trees most deplorable; not one of them but was shedding its untimely fruit as well as leaves, and I have no idea that a single peach ever came to maturity. Whether these trees will ever recover their health, is a question that cannot now be solved, but from present appearances, I am inclined to say, never; a large proportion having already gone dead, without the intervention of the worm or the yellows.

I am sorry to add, the excellent and amiable proprietor has himself just been removed by death, leaving a chasm in society in the neighborhood that will not admit even the hope of being supplied. His character as a man, a magistrate and an improver of the soil, is indelibly impressed upon the heart of every one who had the happiness to know him—a mournful memorial that will long be cherished by a very large circle of friends and dependents.

P.

Bucks county, Pa.

WIRE WORM.

A successful farmer of this vicinity, Mr. D. D. T. Moore, states that he has tried various substances for preventing the ravages of the wire worm, none of which excepting sulphur, proved of any use. An Irishman told him that sulphur had been used with advantage in Ireland. Before planting his corn, Mr. M. wet it and rolled it in flour of sulphur, and afterwards coated it in plaster to prevent the sulphur from wasting. He saved a crop by this means where he had failed for three years before. We see no reason why the sulphur might not be equally effective for any other grain.

Albany Cultivator.

CULTURE OF TEA IN THE UNITED STATES.

We find the following in the National Intelligencer:

An attempt is about to be made on an extensive scale to raise, or grow tea, in this country. For this purpose an importation of tea plants arrived a few days since in this city. There are about five hundred in number, and they are generally from one to two feet in height. The gentleman who is engaged in this enterprise is Mr Junius Smith, a native of the State of Connecticut, but a resident for many years in London, where he was largely engaged in trade and commerce. He was also one of the early and efficient advocates of the practicability of navigating the ocean by steam, and did much in England towards forwarding that enterprise.

Having turned his attention to the subject of raising and curing tea, and the

nature of climate and soil adapted to that plant, he thinks there is no reason why it should not be produced in this country, not only for home consumption, but exportation. Mr. Smith left here three or four months ago, and went to London to increase his information on the subject, and had all the facilities granted him for that purpose which London could afford. And, having completed his store of knowledge on the subject, he has now returned here with five hundred tea plants to attempt to carry out his enterprise. For this purpose he will, in a few days or weeks go South, perhaps to some part of Georgia or Alabama, having ascertained that soil and climate in that section of the country are precisely what the plant requires. He thinks there is no reason why tea should not become a great staple growth of our country—says it may be raised for six cents a pound. He will keep the plants he now has for seed plants three or four years, in order to spread the cultivation rapidly, and after that keep them for the crop. It is an important enterprise. How he will succeed time must determine.

TO STOP BEES FROM FIGHTING.

I am a peace man, and a teetotaller, and will make known the best use to which spirits can be applied. Put a little alcohol, or almost any kind of spirits, on the bottom boards around, and under the hive of belligerent bees, and it will allay their fury like a charm. Having heard of this remedy, I was induced to try it, and I found it a "fixed fact."

POISONOUS SUBSOILS.

Mr. Editor,—A Seedsman in your last has opened to me a field of observation. I plead guilty to the fact, of having discontinued my business transactions with an old friend, for the same very unsatisfactory reason, the want of vitality in the seeds obtained of him, when it evidently arose, as I now firmly believe, from the cause there pointed out, although the immediate destruction of the young plants might have been brought about by the *Bugs*—a sort of general name for every animal from about the size of the top of one's thumb, to that of the point of a pin. But let me tell you what I mean, by relating the following occurrence.

Examining, some time since, in company with the owner, a field of Ruta Baga Turnips, I noticed a blighted strip running across the piece, which I attributed to a blast of poisonous wind from the north east; but my friend informed me, it arose from a stratum of cold and wet clay in the subsoil; which was the cause of disease in the plant, and its consequent crop of *Bugs*, sent to prey on the vitiated juices which no longer circulating, had of course become putrid—according to the doctrine, first promulgated, I believe, in your columns, at any rate, as there sustained by certain of your correspondents. And on pulling up and examining some of the Turnips, grown to the size of walnuts, we found their tap-roots, that had penetrated into the clay, say to the distance of six inches from the surface, black, and quite decayed. But my friend assured me that wheat could be grown on the soil, even on the immediate removal of the turnips, with perfect security, the plant rooting near the surface, from whence its spongioles are fed, out of the way of the deleterious effects of a poisonous subsoil. And this fact I have since verified, by a view of the land, now covered with a most luxuriant growth of wheat—I have therefore concluded to return to my Seedsman, and cry *'cavi.*

Boston Cultivator.

From the Saturday Evening Post.

HEN MANURE.

Gentlemen :—I noticed in your paper of April, 22d, an inquiry by a young farmer how hen manure should be used. Should he not have received more satisfactory information, the result of my experiments are at his service.

I have used hen manure for the last four years, pulverized with a hoe, or shovel, upon my barn floor; then to the pro-

portion of ten bushels unleached ashes, and five bushels plaster, mix it well and leave it in a close pile or packed in barrels a few days, until it acquires the smell of pretty good hartshorne—when I get ready to plant corn, I drop on each hill about one gill, before I cover with earth. Corn thus dressed will yield nearly double over the usual method of cultivating that crop. I also use it upon my potatoes with good effect. To distinguish this compost from other manures, I call it "Guano."

Yours, &c., R. P. C.

Ithaca, N. Y., Sept. 18, 1848.

For the Southern Planter.

EXPERIMENT IN CURING HERDS-GRASS HAY.

Mr. Editor,—As Secretary of the Henrico, Hanover and Chickahominy Farmers' Association, I was requested at the last meeting of the Club to report to you for publication, the result of an experiment made by Dr. John R. Garnett, in curing Herdsgrass Hay, for the purpose of ascertaining the most desirable time for cutting. Dr. G. reported to the Club that he cut seventy-five spires immediately after the dropping of the bloom, and then seventy-five spires when the seed was fully ripe, and after cutting both samples exactly the same length and curing both carefully, there resulted a difference in favor of the greenest cutting of 121 grains on the seventy-five spires.

With respect, your obedient servant,

JOHN H. MACKENZIE, *Sec'y.*

Henrico Co., Nov. 12, 1848.

ATMOSPHERIC BUTTER CHURN.

Mr. Editor,—Your request for further information regarding the atmospheric butter churn, induces me to put pen to paper. I was member of a delegation appointed to attend a public trial in Philadelphia, conducted by the owner of the patent right of this churn for the State of Pennsylvania—and for which he demanded the sum of ten thousand dollars—in a box, eleven inches square and deep, containing four gallons. The cream had been placed in the churn before we arrived, and might already have been operated; which consideration, induced me to demand another trial, that we might witness the whole process. In the first trial, the butter *came* in fifteen minutes, and the operation appeared quite satisfactory; but in the second trial, after spending three quarters of an hour over it, the operator choose to throw a pitcher of cold water into the churn, when I left, with the impression that the object in view, namely, the certainty of bringing the butter in a given time under any circumstances, had *evoporated*, and that the atmospheric churn was no better than other churns, to say no less. I am aware of the disadvantages attending such a trial, with city cream taken from a milk wagon, &c.; as also, that the mode adopted by the operator of fronting it up at the commencement, was highly improper; but nevertheless, unless there be a greater certainty on the subject than has ever yet been discovered by even the first of our chemists,—who are not, any of them, able to inform me how long, after the commencement of churning, it will be before my butter will come—I see no advantage in adopting the atmospheric churn in preference to others of much longer standing, and enjoying a large share of public opinion and confidence.—*Boston Cultivator.*

THOUGHTLESSNESS.

A gentleman of our acquaintance in the country, built a few years since, a large and fine house, costing three thousand dollars. He subsequently was occupied in laying out and planting the grounds, and we ventured to suggest to him the propriety of setting out fifty or a hundred ornamental trees or shrubs, tastefully arranged about his dwelling. "O, he could not *afford* it!" His grounds were to be wholly planted with *fruit trees*, all in rows, particularly the front of his house. Now, we know nothing more pleasant than an abundant supply of fruit—but the

inconsistency was the expenditure of from three to five hundred dollars to give an ostentatious finish to his house, and then declining to pay one hundred in purchasing, planting and tilling its immediate environs, in a manner somewhat in accordance with the rest of his operations. Why is so much reliance placed on building—so little on tasteful planting? A retrenchment of a sixth part of the cost of the house ($500) would scarcely have been felt or noticed; the application of one-sixth of this fraction ($83) in judicious planting, would have made almost a little paradise around it, and contributed more to an air of comfort, respectability and beauty, than any amount of architecture without it, or with only four straight rows of plum trees.—*Albany Cultivator.*

WILLIAM COBBETT ON INDIAN CORN.

Cobbett was fond of prophesying. It was an ill habit with him, for prophecies did not suit his style. He had a knack—awkward enough for a prophet—of fixing names and dates. He prophesied that the Reformed Parliament of Great Britain would meet in March, 1818, it did not, and the prophet fell into disrepute. When his predictions failed, however, it was his wont to take no notice of them, but to go on making new ones; like the people who look to see what sort of weather there is in the almanac for next week, though it has been out of its reckoning every day of the last. Nevertheless some of his multifarious prophecies have already come to pass, while others now seem to be in course of accomplishment. Among them, there is his oft-repeated and insisted-on prophecy, that Indian corn would eventually become the main subsistence of the poorer classes of England and Ireland. After years of prejudice and disgust, famine has forced it into favor, and each day the quantity exported from this country increases.

An English bookseller has lately re-printed his book in defence of and in elucidation of Indian corn. He drew it up shortly after his return to England from this country. It was read—as was every thing else that he wrote—but it made no impression on the public mind of that day. *Now* it will be very differently regarded by his countrymen. As it has never been published in America, and is totally unknown, the following extracts will be read with amusement by the Virginia planter:

Mr. Cobbett maintains that the maize is the corn of Scripture—"At that time Jesus went on the Sabbath day through the corn; and his disciples were an hungered, and began to pluck the ears of corn and to eat"—Mathew, chap. xii, v. 1. "I thought it in the first place rather strange," observes our arch commentator, "that they should have gone *through* the corn; for we do not say *through* wheat or through barley, as we do through a *wood*, through an *orchard*, or through a *coppice*. But I thought it still more strange that they should have eaten *ears* of wheat, of of barley, or of rye. When I came to walk or ride through the corn-fields of America, I understood how Jesus and his disciples might have gone *through* the corn in the neighborhood of Jerusalem; and when I came to eat the *ears* of corn and to find them so delightful, all the mystery was explained; and when I observed how careful the American farmers were to preserve the produce of their corn-fields, I was not at all surprised that the Pharisees, who were, I presume, the Quakers of Palestine, should have been so angry, and have picked such a German quarrel with our Saviour and his disciples, on that memorable occasion. Though I was very young at that time, I had been a great reader of the Bible; upon which the parsons will remark, that it is a pity I omitted to learn from it that tithes were instituted by God himself. I beg pardon of their reverences, for I did observe it; but I observed at the same time, that those who were to receive the tithes were forbidden to have any inheritance in the land, and were commanded to share the tithes with the poor, the widow, the orphan, and the stranger; a forbidding, on the one hand, and a command on the other, which their reverences seemed to have wholly overlooked. But not further to digress, I had read in the 2d book of

Kings, and in the 2d verse of the 4th chapter, that "there came a man from Baalshalisha, and brought for the man of God twenty loaves of barley, and full ears of corn in the *husks* thereof, and said, give unto the people that they may eat." Now I could understand the utility of giving them barley bread; but what was I to think of giving them *wheat* ears, or *rye* or *barley* ears to eat? And then, as to bringing the corn in the *husks*; how were the ears to be brought otherwise than in the husks? The husk of wheat or of barley *makes a part of the ear*; so that the next text, taken altogether, I should have called nonsense, if I had found it in any other book. Finding it where I did, I regarded it as extremely mystical; but when I came to go to "husking frolics" in New Brunswick, which I did, for the first time, at the house of a farmer, of the name of Smith, who had come from Rhode Island, who was a loyal man, had left the rebels in the United States, and who had, in my esteem, the additional recommendation of having brought a very pretty and gay daughter along with him; when I came to go to this *husking frolic*, I found that the husk consisted of the delicate leaves which envelop the ears of corn, and since that time I have seen scores of wagon loads of corn in the green state, with the husks on, for sale in the markets of Philadelphia and New York. Now then, I understand why the man brought from Baalshalisha full ears of corn in the husks, and why it was that he tendered them to the people that they eat. I found another text of Scripture to puzzle me even more than all these. In Leviticus, chap. ii. v. 14, I had read an injunction to offer as a "meat offering of first fruits unto the Lord, *green ears of corn* dried by the fire, *even corn beaten out of full ears*." These last words, which I have put in *italics*, must be an interpolation; for, how could they *beat* the grain out of *green* ears? And how could the ears be *full* if they were *green?* Besides, what a curious meat offering to parch green grains of wheat by the fire! And why not say whether they were to be of wheat, barley, rye or oats? Why call it *corn*, when all the other instructions were so minute? Oh, no, this meat offering was to consist of ears of green corn—that is to say, corn in the milky state, *roasted* before the fire; and no wonder that it was chosen as an offering, for the most delicious thing it is that ever delighted the palate of human being. I shall by and by show, that the general way of cooking these green ears, as the Americans call them, is to boil them and to eat them as bread alone with meat, or sometimes with butter; but at present, here is quite enough to show that this was the corn of which the Scripture speaks, and that it was always in great, in universal use in the countries which were the scenes of the events and transactions recorded in the Bible;" and so with other texts of Scripture which he handles in the like manner.

The following is Cobbett's account of a *corn shucking* in New England. It is different in detail, but the same in principle as our own negro jubilees:

A parcel of these ears together is, I think, one of the most beautiful things that man ever saw, especially when associated with the idea of the mass of bread and malt that it in reality contains. The general color of the outside of the grain is a bright yellow; and there is frequently a plant that produces purple ears, or rather a shade between a purple and a red. This mixture of colors in a heap of ears adds to the beauty, but that is all the advantage that I know of, for the flour of both is of the same color, and of the same quality; and it is curious that, while there are always some red ears, as the Americans call them, in a field of corn, if you plant the red grain, the fruit will not be red, except in the usual proportion.—The variety of colors is, however, attended with one delightful circumstance to young people in particular. All those who are not naturally fond of work, (and that seldom happens to young people,) like to work in company, and it is the fashion with the American farmers to call the husking a "frolic." The cunning fellows know, that if they were to call dancing *work*, it

would be a pretty hard matter to get a party together.—There can be no other reason than this for all the families of a whole neighborhood collecting together to husk farmer Jonathans's corn to-night, and farmer Ebenezer's to-morrow night, and so on; for it is as plain as the nose in your face, that twenty families would do the same work in twenty nights, each family sticking to their own corn. Long headed farmers know that they would not stick to it, and therefore they resort to this system of frolics; and I dare say that the same will be done in England after a little time. Young women and their sweethearts do not think about toping, and yet there must be something to amuse, something to prevent the mind from entertaining the gloomy idea that this is work.—The *red* ears come very opportunely for this purpose, for the man that has the good fortune to fall on a red ear, is entitled to kiss any of the girls that he pleases—and if a girl find a red ear, she must submit to be kissed by some of the males of the party. So that there is a constant looking out for these red ears, and a laughing and joking upon the circumstances attending the success of the parties who happen to get them.—In the case of my corn, however, where the proportion of red ears is greater, ten to one, than it is in the American corn, this amiable regulation must not be adopted, for it would be a frolic: indeed, there would be *nothing but* kissing, which is by no means what a farmer would aim at when he assembled his congregation of huskers. Nevertheless, and so it would be found upon experiment, the frolic system is a good one: the privilege of kissing might be *modified*. "Modified!" exclaims the bouncing dairy-maid, "What do you mean by *modified?* You were young yourself once!" "Yes, yes, but life cannot last forever. Therefore one might modify in this way: the valuable privilege might be attached to every ten red ears, or something of that sort, otherwise the kissing would certainly be beyond the endurance of mortal lips."

Upon the whole flock of feathered thieves, Cobbett cometh down in a style somewhat similar to that in which he was wont to let fly at the Whigs and Tories, Radicals and Conservatives, Catholics and Protestants, Americans and English of his day; and the farmer who has witnessed the ravages of our crows will say amen to every one of his maledictions:

Your first attention, as soon as the corn begins to make its appearance, is to be directed towards the birds and the slugs. I have before spoken of the trees which harbor the former, and of the hedges which harbor both. These are to be avoided round a corn field as much as possible, but, at any rates, the birds and the slugs must be kept off. Birds come by daylight, and are extremely susceptible in the affair of powder, which is the only effectual remedy. Shoy-hoys, though equal in the field to Burdett and others in a place which it would be, in a rustic work, inapplicable to name, exercise their influence but for a very short space of time. The birds, full as quicksighted as boroughmongers, or the agents of boroughmongers, quickly perceive that their guardianship of the treasures of the farmer is a mere *sham;* and, like the sparrows in my neighbor's garden at Botley, they will, in a short time, make the top of the hat of a shoy-hoy a table whereon to enjoy the repast which they have purloined. Strings and feathers and flying rags, are of equally transitory influence. Powder is the only thing of which they continue to be, for any length of time, seriously afraid. Every part of the corn, from the time of its generation till it becomes flower, blades, blossoms, stalks, have great sweetness in them.

We know that fowls of all sorts eat grass with as much avidity as pigs or sheep do. All birds do the same, to a certain extent, in all wheat-fields, and in fields of other grain. But, generally speaking, they here do little injury, because there is always such a superabundance of plants. It is not thus in a corn-field where there is not a plant too many, and, therefore, the birds must be kept off, until the plants be three or four inches high, and have lost a part of that sweetness which is contained in the younger

spear, proceeding, as this latter does, immediately from the seed. Rooks, partridges, pheasants, crows, magpies, jays, blackbirds, thrushes, larks, and several other birds, but particularly the numerous and impudent sparrows, not forgetting the pigeons, and their first cousins, the *innocent doves*, which last are the most mischievous and most cunning of all, seem equally fond of the spear of the corn; a thing which I was wholly unaware of until they had done me great mischief, which it was by no means in my power to repair. An innocent dove will come peeping round the field, and after having settled, in the most modest manner, amongst the thickest branches of a tree or a bush, as if to disguise from the admiring farmer her spangled dress, with the white ruff round her neck; and her pretty blue and love-inspiring eyes, will, the moment his back is turned, slip down upon the ground, get upon a row of corn, and trip along like a Circassian, from spear to spear, till she has got twenty or thirty in her craw. These are *done* for; for, though they will shoot up again, they will be feeble, backward, and short, the crop is almost wholly destroyed; the lady dove does not devour the top of the spear, but regulated by the maxim, that nearer the bone the sweeter the meat, she plucks it as nearly to the ground as possible, or a little way into the ground, swallows the bottom and rejects the top. The mortification which the wretched creatures gave me last spring, made me a hundred times think of the scripture, and so that if I must have one of the two, give me the cunning serpent in preference to the *harmless* dove; for anything so mischievous as these, of the feathered race, I know nothing of. The rook always keeps above board, and his color causes him to be seen from afar. Rooks move in battalions too; but these melancholy doves are like private stealers, that depend upon their powers of deception. They are as silent, as nimble, and as demure as the pickpockets. All the others make some noise or other, but the doves make none; and there is no way of watching them but being continually, during the hours of day-light, in the field with a gun. Larks are very bad, for the fields are their roosting-place; but a gun fired off now and then in the field, and in various parts of it, will keep the whole of the feathered race away. I did not discover this until it was too late to prevent great mischief; and if I had not discovered it at all, I verily believe I should have lost nine-tenths of the crop. When I did discover it, I had a man constantly in the field with a gun, firing off powder now and then, and the depredations instantly ceased. But observe, the gun must be heard in the field not only as soon as it is light, but a little while before it is light, or the guardianship is totally useless, for birds go to bed before it is dark, and they move from their roost at the very first gleaning of light. This however, is no very great thing to do, seeing that the danger lasts for only about a fortnight, for by that time the plants become no delicacy to the birds. Most farmers have a son who would rather be shooting a gun off all day, than be at the plough or harrow; and even if it be necessary to hire a man for the purpose, the cost is not very great.

One more extract, and we have done:

"This wagon and pair is kept by every farmer of substance, for carrying things to market especially, and not unfrequently (twice every week in the year, at least,) taking the wife out visiting, as before mentioned, to take a comfortable cup of tea, and a gossip. My horses went very frequently to New York, and were much about on a par, in point of strength and swiftness, with those of the general run of my neighbors, who, amidst all their long-faced gravity, and absence of ambition and rivalship, have, nevertheless, this one species of folly; that in going upon the road, it is looked upon as a sort of slur on one, if another pass him going in the same direction; and this folly prevails to as great a degree as among our breakneck coachman; and you will see an old Quaker, whom, to look at, as he sets perched in his wagon, you would think had been cut out of stone a couple of hundred years ago, or

hewed out of a log of wood with the axe of some of the first settlers, if he hear a rattle behind him, you will see him gently turn his head; if he be passing a tavern at the time, he pays little attention, and refrains from laying his whip upon the "creatures," seeing that he is morally certain that the rattler will stop to take *a "grog"* at the tavern; but if no such invitation present itself, and especially if there be a tavern two or three miles ahead, he begins immediately to make provision against the consequences of the impatience of his rival, who, he is aware, will push him hard, and off they go as fast as they can scamper, the successful driver talking of the *glorious achievement* for a week." Mr. Cobbett is good humored enough to confess that he got into this kind of folly himself, and used to drive his own team at the rate of something more than ten miles an hour.

For the Southern Planter.

WHEAT AND CHEAT, AGAIN.

Mr. Editor,—A great deal has been written about wheat turning to cheat. I look upon it as rather a misfortune that such an opinion should be entertained by any person. Wherever such is the case, there will be but little effort to extirpate the hated plant. If wheat turns to cheat, any effort of man, I suppose, cannot prevent it, and hence any effort to get entirely rid of it would be useless.

I would, myself, just as soon expect a horse to turn to a mule, or a sheep to a goat. If it does turn, I suppose the rule in nature ought to work both ways—so argued a man in this county, remarkable for his extravagance in talking, who sowed, as he said, a bushel of cheat and made some bushels of pure wheat. The account that "B" of Charlotte gives in the last Planter, of a farmer in Campbell having raised a *beautiful* crop of cheat where the wheat had been injured by the raising of a barn, is accounted for by the argument of the writer in the Ohio Cultivator, in the Planter of last May: "When the wheat is killed, the cheat stands out far and wide." In this case, the wheat being more tender than the cheat, received the greater injury, and gave the cheat room to flourish. The wheat, sown by "a successful farmer," in the same county, on a cotton patch, and not ploughed in, where there was not a grain of wheat produced, did not come up perhaps, and the *fine* crop of cheat was no doubt produced by the land's being "well set," *previously* with it. So in the case of the reverend gentleman, spoken of in the same place, who sowed wheat on fallowed land that had previously been in wheat. He says, "*so far as he could discover* at harvest time, every plant of the volunteer wheat had turned to cheat." Now, I would ask, how could he, at harvest time, tell whether the cross of cheat was actually produced from the volunteer wheat or not? All "this *is not* sufficient evidence to hang a man." The sovereign remedy of the Montgomery Farmer is right, as far as it goes, viz: simply to sow none but *perfectly clean* seed wheat. Now, if there should be none in the ground on which that kind of wheat is sown, I venture the assertion that not one grain of cheat will be produced. "Cheat is not so delicate a plant as not to thrive with wheat unless the wheat is grazed or trod." No, it is not so delicate as the wheat plant, and hence when wheat fields are grazed or trodden, the wheat is injured, and the cheat being more hardy, more tenacious of life, flourishes in its stead. I hope farmers will give up the erroneous opinions, which many of them entertain, and make a strong effort to root out this evil of our wheat crops. Millers can effect a great deal in this matter. Let them make such a difference in the price of clean wheat and that containing cheat, as to cause some exertion to be made to eradicate it; and not many years hence will the farmers and millers themselves be benefited by such a course. It is the custom of some farmers to have cockle, cheat, &c.; pulled up and thrown on the ground where it grew, as if they cared to have no crop clean but *that* one. If, in harvest time, some of the "little gang," almost always found on most of

our farms were to accompany the pickers-up and receive from them all kinds of cheat, to be bound up to itself and stacked with the wheat until hauling time, when it can all be piled up together and burnt. Farmers would complain less of their wheat turning to cheat, and millers would be under no necessity of making a deduction in price, in consequence of being compelled to buy that which is *not* wheat. I have been raising wheat for twenty-five years. All which I ever procured to sow, with one exception perhaps, contained cheat. But I never sowed it many years before I would get rid of by making war against it in *every way* that would be of any avail. This turning of wheat into cheat is a very good excuse with many a farmer for having filthy wheat. I never exchange seed wheat with any of my neighbors who entertain that opinion. Were I to do it, I should always let off clean for that which is filthy. The sowing time is past for this year, but I do not view this communication as being out of time.

W. W. H.

Chesterfield, Nov. 18, 1848.

For the Southern Planter.

"DUMPLING ON THE TOBACCO CROP."

Mr. Editor,—Be so good as to permit me to profit by your print so far as to present my profound respects to your correspondent John Dumpling, Esq. For although he is of an humble family, judging by his name, it requires but half an eye to see he is a real singed cat. I like such specimens of human nature—men of decision of character—who taking truth and good sense for their motto, are bold enough to assail the most hoary errors, and thereby give proof of their claims to moral courage—a trait of higher stamp than personal bravery.

Mr. Dumpling's views upon the subject of tobacco are so congenial to my own, that I cannot resist the conclusion, considering the likeness in our family names, that there must be a relationship between us—at any rate, we are descended from the same patriarchal head, and accordingly shall indulge my peculiar pride of "kith and kin," to claim, upon the foregoing allegations, John Dumpling, Esq., as my cousin John, whether he acknowledges me as such or not.

Now, Cousin John, you are the first man here South, who has been bold enough to lead, what may seem to some, a forlorn hope, in a war against tobacco. But I am satisfied you have right and reason on your side, and I am willing to enlist under your banner—and although I have nothing to offer but zeal and faithfulness in the cause, and a clear conviction, that God is, and our country ought to be, on our side, I hold myself in readiness to aid and abet you in this righteous warfare.

Believers think, that the signs of the times indicate the approach of the period when swords shall be beaten into ploughshares and spears into pruning hooks, and that the bloody wars of former years are to give place to wars of another kind: wars of opinion. These wars of opinion require in their leaders as high a degree of moral courage, as the wars of blood and carnage require in their leaders physical courage. Then why may you not magnify your office? and boldly declare that you are about to enter upon a great and noble enterprise—an enterprise that a king (when kings were much more exalted beings than they now are) thought worthy of his high mightiness, and having failed, has left more glory to all who may aid in vanquishing the deadly enemy to the prosperity of our beloved Ancient Dominion. I would not presume to lay down a plan of operations, as that would be unbecoming the station I have chosen as an humble auxiliary; but I will throw out a single hint for your consideration, my dear Cousin John, to be taken for what you may deem it worth, and this is, that measures be taken "to keep the subject before the public mind." To accomplish which, command the services of

Your friend and kinsman,

DICKIE DODGER.

Fluvanna, Nov., 1848.

For the Southern Planter.

APPLICATION OF GUANO.

Mr. Editor,—Several of my neighbors and myself intend to use largely of guano for the next crop. Our crops consist chiefly of corn, melons and sweet potatoes. It is our practice to use all our strong manure in the hill, and we desire that you, or some of your experienced correspondents may communicate through the Southern Planter, the best method of applying guano to the above crops. Also how much and in what way it should be applied to the hill, to succeed well. Is it well adapted to vines, such as watermelons, cantelopes, cucumbers, &c.; and does it forward the maturity of these crops? Is guano adapted to the making of compost, and would it be well to use it with our woods' dirt and stable manure as such—if so in what proportion? In fact we have every thing to learn as to the use of this important manure; and we look to your valuable publication for instruction and information, which will be thankfully received.

Yours, very respectfully,

WM. GRIMES.

Norfolk county, Va.

Mr. Willoughby Newton has already favored us with one valuable communication on the foregoing subject, which has been much read and widely circulated. Will he not give us another, meeting the wants of our correspondent? We are loth to touch what he can do so much better than we can.

IRON FENCING.

In all thickly settled countries, it has long become a fixed fact, that if wood be used for fencing as well as for the purposes of ordinary building, its consumption will be greater than its growth, and the land will speedily be made bare of trees. In the state of New York for instance, nearly one hundred cords of wood are annually decomposed and rendered valueless by the decay of fencing timber in the form of posts, rails, and boards. The cheapest and the best substitute for wood in fencing has therefore long been a problem among agriculturists; and it appears as a matter of certainty, that iron, in some form or other, will eventually supersede it almost entirely. Indeed, the mineral seems fast taking its place in every thing. We have iron carriages, iron bedsteads, iron houses and iron ships; and the position of any nation in the scale of intelligence and of civilization is to be measured by the quantity of iron consumed by it, and the various uses to which it is applied. Its application to fencing is now the most prominent point in its advance.

We have already introduced to our readers the wire fence. A fence of iron posts and wooden panels, invented by a Mr. Coon of New York, is now attracting much attention. The post itself does not contain more than seven or eight pounds of iron, and is inserted in a stone of any shape, having a two-inch hole drilled into it for four or five inches deep. This stone is buried in the ground even with its surface, by which the action of the frost upon the fence is prevented. For it is a known fact that a stone or stick of timber placed in a wet soil, even with the surface, does not raise any higher or sink any lower from freezing and thawing. For as the ground rises with the frost the stone rises with it, and when it falls is left precisely in the same position as before. The wooden panels are made of rails or bars twelve feet in length. No pins or bolts are necessary. The peculiar construction of the post secures the rails firmly in their place.

This fence may be used as a hurdle or portable fence, by inserting the iron posts in blocks of wood two and a half feet long, and laid upon the ground transversely with the fence. The panels are put together by placing a post where the fence is to commence, and hanging the panel on to it. The next post is then placed, and the other end of the panel hung on, and so on. A man and a boy, we are told, can erect half a mile of this fence in a day. It forms a permanent barrier against ordinary domestic animals, may be taken up in pieces and conveyed to shelter in winter, if necessary, and its first cost is less than any other hurdle fence known. Of its durability there can be no question.

These cast iron posts may also be used in the construction of wire fence. This kind of fence is cheap and durable. It is constructed by placing the posts firmly in the ground, and stretching the wire from post to post, secured in holes cast in the post for the purpose. The posts are inserted in stone or wood as before mentioned.

Iron rods thirteen feet long and three-quarters of an inch in diameter, may be used, instead of wooden panels or iron wire. They are bent at the end in the form of hooks and hitched on to proper contrivances cast in the post.

The name of the inventor and manufacturer of these things is M. P. Coon, whose address is Lansinburgh, N. Y.

TOMATO CATSUP.

Take a bushel of ripe tomatoes gathered when dry, and boil them three or four hours over a slow fire. Then add half a teacupful of salt, and of ground cloves and pepper each six ounces, and three quarts of vinegar. Then strain the whole through a fine sieve. Then boil one hour —cool and bottle. It must be boiled in a tinned vessel. No other will do. Remember that.

SPEED OF HOUNDS.

Youatt states that a fox-hound run the Beacon course, four miles, one furlong, and one hundred and thirty two yards, in eight minutes. Sixty horses started with the hounds, but only twelve to run with them. Flying Childers had run the same course in seven minutes and thirty seconds.

TO PRESERVE CLOTHES.

As clothes, when laid up for a time, acquire an unpleasant odor, which requires considerable exposure to the atmospheric air to remove, it can be prevented by laying lumps of recently made charcoal between the folds of garments; and even when the odor is already fixed, the charcoal will absorb it.

FRITTERS, QUICKLY MADE.

One egg, two spoonfuls of flour, a little sifted sugar and ginger, milk sufficient to make a smooth batter; cut a middling-sized apple into thickish slices, and put into the batter, and with a *spoon* put them into the frying-pan, with just the batter which is taken up in the spoon; have a sieve with the bottom up, and, as fried, lay the fritters upon it to drain. The above quantity is sufficient for a small dish.

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