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THE  
NEW ENGLAND FARMER;

DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND THEIR KINDRED

ARTS AND SCIENCES.

ILLUSTRATED WITH ENGRAVINGS OF COUNTRY RESIDENCES, FARM BUILDINGS, CHOICE  
FRUITS, ANIMALS, IMPLEMENTS, &c.

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EDITED BY

SIMON BROWN AND STILMAN FLETCHER.

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# THE NEW ENGLAND FARMER

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

JANUARY, 1870.

"JANUARY! Darkness and light reign alike. Snow is on the ground. Cold is in the air. The winter is blossoming in frost flowers. Why is the ground hidden? Why is the earth white? So hath God wiped out the past; so hath He spread the earth like an un-written page, for a new year! Old sounds are silent in the forest and in the air. Insects are dead, birds are gone, leaves have perished, and all the foundation of soil remains. Upon this lies, white and tranquil, the emblem of newness and purity, the virgin robes of the yet unstained year!"



JANUARY, with stately march, commences the grand rounds of the Seasons for another Year. Let us enter the course with a determination to explore their recesses with more earnestness and fidelity than ever before, and store the mind with varied and useful knowledge.

Knowledge that will not only confer happiness upon ourselves and those about us, but will tend to lessen human toil, to spread our fields with abundant crops, and to fill the pocket of the farmer with those "rocks" upon which a great many men split, but which, in

the hands of the cultivator of the soil, usually bring comfort and convenience.

Winter is upon us; mid-winter. Perhaps the snow lies deep in field and forest; too deep for comfortable chopping or safe teaming. Perhaps the January thaw has flooded icy roads; the south wind is drifting worlds of vapor to the north, or is gradually veering round to give us a nor'wester to-morrow that will make all loose things clatter again. We cannot tell. Obligated to anticipate, we lose something of the inspiration which might be caught, if writing these notices of the Months amidst their peculiar characteristics.

While Nature has her sway out-of-doors, let us look back and see how our ancestors regarded the opening of the New Year, and what they did to give it significance and remembrance.

Scarcely any themes have been more charmingly sung by our English ancestors than those of the opening New Year, Christmas, winter scenes and firesides. Many of their peculiar customs were common far back in history, and are enumerated in records of antiquity. Among the foremost of the noisy observances, was the practice of *ringing the bells*. All over merry England, through every valley, and reverberating from every hill top, was the sound of merry, merry bells. To these joyous sounds, sung and danced thousands who were merry on that day, if on no other. Clad in their best garments, their tables spread with

lavish hospitality, they dismissed all care, and found utterance for sweet affections in the "merry New Year," and "happy New Year to you" on New Year's day. These were greetings that moved sceptred pride and humble labor to smiles and kind feelings in former times; why should they not be encouraged in our own?

Why not ring every bell five minutes at a time, morning, noon and evening, in New York, Boston, and every other city in the land, and in every village on hill or in valley, where there is a *tongue* to utter forth the joyful sounds? Would not the effect be a good one upon our people, as it was upon our English brethren, or the people in Italy, hundreds of years ago? No doubt of it. English or Italian, Russian or Turk, the same nature impels us all; the same outpourings of spirit in sorrow or in joy.

Dr. Drake tells us, in his "Shakspeare and his Times," that the ushering in of the new year, or new year's tide, with rejoicings, presents and good wishes, was a custom observed during the 16th century, with great regularity and parade, and was as cordially celebrated in the court of the prince as in the cottage of the peasant.

In Rome, the usual presents were figs and dates covered with gold leaf. Among the Saxons of the North, the festival of the new year was observed with more than ordinary jollity and feasting, and by sending new year's gifts to one another. These practices were prohibited by the Emperor Claudius, who died in the year 54, poisoned by his wife Agrippina.

A writer in "The Popish Kingdom," 1553, after remarking on days of the old year, says:—

The next to this is Newe Yeares day  
Whereon to every friende,  
They costly presents in do bring.  
And Newe Yeares giftes do sende,  
These giftes the husband gives his wife,  
And father eke the childre,  
And maister on his men bestowes  
The like, with favour milde.

It is the opinion of Dr. Drake that the wardrobe and jewelry of Queen Elizabeth were principally supported by annual contributions on New Year's day. Not only the peers and peeresses gave her money, but the apothecary, master cook and *sergeant of the pastry*, had something to send. One lady gave her majesty a little gold comfit-box and spoon Ambrose Lupo gave her a box of lute strings and a glass of sweet water; each of three

other Itallans presented her with a pair of sweet gloves. These may have suggested the lines in the "Winter's Tale," where the country girls are invited to buy—

'Lawn, as white as driven snow;  
Cypress, black as e'er was crow;  
Gloves, as sweet as damask roses;  
Masks for faces, and for noses;  
Bugle bracelet, necklace amber,  
Perfume for a lady's chamber;  
Golden quoifs, and stomachers,  
For my lads to give their dears;  
Pins, and poking sticks of steel,  
What maids lack from head to heel!"

The word "pins," in the line above, will have force when it is remembered that they had just taken the place of *wooden skewers*, which ladies were obliged to use for want of something better. Gloves were more expensive than in our day, and were esteemed as more valuable than money.

Sometimes the present would be the medium of a lively joke or a grim rebuke. Honest old Latimer, instead of presenting Henry VIII. with a purse of gold, as was customary, for a new year's gift, put into the King's hand a New Testament, with a leaf conspicuously turned down at Hebrews xiii. 4, which, on reference, will be found to have been worthy of all acception, though not perhaps well accepted. Henry was an old scamp. One good wife is enough for any man; one *à* a time, we mean. He had *eight*, each one of whom was probably infinitely better than himself. So it is no wonder that the stern old Latimer called his attention to the passage referred to in Hebrews.

We began this homily with a piece of prose, sparkling with short truths. Let us close it with a few lines from the good Cowper. If they are committed to memory, and repeated occasionally through the year, they will be found comforting and profitable.

"He who holds fast the *Golden Mean*,  
And lives contentedly between  
The little and the great,  
Feels not the wants that pinch the poor,  
Nor plagues that haunt the rich man's door,  
Embittring all his state,  
\* \* \* \* \*

If hindrances obstruct thy way,  
Thy magnanimity display,  
And let thy strength be seen;  
But oh! if fortune fill thy sail  
With more than a propitious gale,  
Take half thy canvas in."

#### WORK IN JANUARY.

There are duties to be performed on the farm which are appropriate to each month. They cannot be wisely neglected now, and

must not be postponed to February or June, because they belong to the present.

It is the *reason* with which we are endowed that enables us to look to the future, and to provide the means of securing comfort and sustaining life. The mariner would make a fatal mistake, if he were to put to sea without first supplying the "ship's stores" upon which the crew were to be fed. So the farmer may find many discomforts—some of them ending perhaps in loss of life—by neglecting the duties which properly belong to the month upon which he has entered. The old adage is as true as it is trite, that for the want of a nail the shoe was lost, and for the want of a shoe the horse was lost. This directly applies to many of the domestic concerns of the family. Let it remind us to prepare, this winter,

A YEAR'S STOCK OF WOOD.—Wet wood is the cause of much poor cooking. It prevents food from coming to the table in a palatable and wholesome condition. It increases the labor of the already overburdened wife; disturbs her equanimity, tries her patience and prevents her from performing her domestic duties in a prompt and efficient manner. In the use of green wood, they become a cruel task imposed upon her, and she not only loses health and patience, but loses *credit*, as a good manager and skilful wife.

The use of green wood is an extravagance which farmers cannot well afford. It wastes time to kindle and tend it. It wastes wood, because more is applied than would be necessary, if a single stick were used dry enough to kindle into a blaze at once. It smokes, and puts the eyes out; sputters and snaps like some enraged thing, and makes delicate persons nervous and unhappy.

Green wood contains *one-third* its weight of water, and a large portion of the heat made by it is employed in converting that quantity of water into steam. This carries off a portion of the heat with it and is lost.

One pound of dry wood, burned in a stove fitted for the experiment, will heat 35 pounds of water from ice, 32°, to the boiling point 212°. A pound of green wood will only heat 25 pounds from 32° to 212°. From this we ought to learn how much better dry wood is in the stove than that which is green.

Again, a merciful man is merciful to his beast; will he be less so to *his wife*? He

will not, if he lays this woody lesson to heart and acts upon it at once.

He will not neglect the creatures at the barn who are entirely dependent upon him for their daily food.

He will not neglect the best interests of his children, by not engaging with them in their evening readings and question-asking, or by indifference to the lessons they are learning for the next day's recitation at school.

He will not fail to attend the stated meetings of the *farmers' club*, nor to read one or two good works on agriculture during the long evenings.

He will be familiar and cheerful in the midst of the family, encouraging, sustaining, and training all for useful and happy lives.

These are only a few of the duties devolving upon the farmer in January. He will not need suggestions for many of them that will devolve upon him.

#### THE OYSTER-SHELL BARK LOUSE.

While engaged, since the leaves have fallen, in removing new shoots and pruning off occasional limbs that were crossing each other, in an orchard that has always been kept in good shape, we have been surprised in noticing the countless number of the habitations of this insect. We suppose it is called the *oyster-shell* bark louse, because the shell which covers the eggs is similar in shape to an oyster shell, and also, because it gives a roughness, somewhat like that of its namesake, to the bark upon which the scales are placed.

As a general rule, insects first attack vegetables and animals that are not in a thrifty condition. This is the case with the apple trees. Trees standing near walls, where the surface under them was swarded over, were literally covered with these scales. The bark had a hard, dry, and shrivelled appearance, and the whole tree looked diseased, although the roots had plenty of room to run out into a rich soil. But these pests were not confined to such trees alone; they were on trees that have always stood in rich, cultivated ground, and that made a growth of more than eighteen inches the present year, in some of the leading branches, and an average growth all over the tree of perhaps five or six inches. That is enough for an apple tree to do in one year, so far as growth is concerned.

On a part of a branch now lying before us, half an inch in diameter, and one inch long, we count *fifty-six* scales. Examining them to-day, under a microscope of high power, we could not see the eggs with sufficient distinctness to count them. They are probably not yet enough developed. Last May it was easy to count the eggs. Some accounts state that under each scale there are many eggs. Allowing only six to each scale, would give 336 eggs to the inch, or 10,080 to the whole twig lying before us, which is 30 inches long. Or, if containing 35 eggs each—as indicated by Harris—the single twig has 58,800 eggs upon it.

If an orchard of one hundred trees should be infected as this branch is, the number of eggs would be absolutely inconceivable by any power which the human mind possesses. As well might it attempt to conceive of the distance of the planet Uranus from us, whose light, though travelling at the rate of 192,000 miles per second, is, nevertheless, more than eighty years in reaching our earth!

In considering these things, the questions come to the mind, What influences have this vast family upon the apple trees?

Do they poison the bark upon which the eggs are placed, and retard, or destroy, its proper action?

Do they exhaust the moisture in the bark, and cause the dry and shrivelled appearance which it presents?

Do the insects, when hatched, march forth in countless legions, and feed upon the newly-formed wood, or by their presence act in any way to prevent the trees from fruiting? Who can tell? Who is wise enough for these things? Have we any power over these predatory hordes, or must we sit idly by and let them run, unmolested, over plants which have cost much care and labor?

Dr. Harris suggests the application of a wash made of two parts of soft soap and eight of water, with which is to be mixed lime enough to bring it to the consistence of thick whitewash. This is to be put upon the trunks and limbs of the trees with a brush, and as high as practicable, so as to cover the whole surface, and fill all the cracks in the bark. This must be done in the early part of June, when the insects are young and tender!

But—bless the memory of Dr. Harris—who is able to do these things! Consider the little

twig before us,—only thirty inches long, and containing 58,800 eggs, and from 50 to 200 such twigs on a good sized tree! And the enemy is *on* the twigs, where the wash must come, or be ineffectual. When any of our brother farmers possess as many dollars as there are pebbles in a gravel pit, we hope they will commence the work, and allow us to witness the operation.

But we are not altogether powerless yet. Read the following article, furnished to the *Western Rural*, by Mr. J. W. ROBSON, who suggests a remedy so cheap and so easily applied, that all may avail themselves of its advantages. The "*white-fish barrel*" of which he speaks, was probably a barrel in which the celebrated "*White-fish*" of the lakes had been salted. He says:—

This insect has engaged much of our thought, and received much attention from us during the last fifteen years. Remedies composed of alkalies and oils have been tried with varied success. Our first attempts in fighting the enemy was with the brush, using liquid applications of various descriptions, solutions of sal-soda, potash, soft soap, whale oil, lard, tobacco, lime, &c., all of which will destroy the insect, but the mode of applying the mixtures always proved wearisome, and, likewise, consumed too much valuable time.

Late in the fall of 1867, the idea impressed us that if some cheaper remedy in a liquid form could be discovered, and that at the same time, some means of applying it quickly to infected trees could be obtained, farmers and fruit-growers generally would be induced to make an effort to eradicate the foe which was sucking the life giving sap out of their apple-trees, and restore their orchards to their pristine vigor and fruitfulness.

Being very anxious to deliver ourselves from a troublesome pest, and in our humble way to benefit our generation, we set to work accordingly to carry out our ideas. We procured a large tin syringe, which our tinsmith made to order. It was a very primitive affair, but it answered the purpose admirably, costing only fifty cents. We commenced operations about the beginning of December, when the leaves had fallen from the trees, mixing up all kinds of decoctions and applying them faithfully. Some were successful in the work of destruction, but too costly for general application. The cheaper mixtures failed of success. One day while cleaning a *white-fish barrel* we thought we would try fish brine. Having a young apple tree close at hand, completely covered with lice, we began experimenting, taking a common wooden pail, and filling it with boiling water, dissolving therein one pint of brine. When sufficiently cool to handle, we syringed the infected tree, thoroughly drenching every branch and twig.

Early next spring, on close examination, we found every insect dead and the scales dry and shrivelled up; placed under the lens of a powerful microscope, they presented the appearance of half burned chips of wood. Other applications since then have proved quite successful.

Those who have made this insect a study know that the young lice are hatched about the latter end of May, or first week in June, being earlier or later according to the season. Immediately on issuing from under the scale they commence their

upward march towards the ends of the shoots, never making a retrograde movement unless in case of storms, when they face right about and seek the cover of the old scales. Their ability to move continues only for a few days, when they lose their legs and tails, assume the scale like form, and become a fixture on the shoot.

During the last week of May, 1868, the young brood began to move, and in greater numbers than in previous years, so numerous that the shoots appeared to the naked eye as if sprinkled with fine particles of corn meal. Anxious to try the fish brine cure, we syringed a large tree with two pails full; it took two minutes by the watch. Result—every louse was killed, and so was every leaf and every green shoot and apple on the tree.

The second mixture tried was half a pint of common salt to a pail of water. Result—the insect lived, but leaves and shoots were destroyed.

The third and last mixture was a quarter of a pound of whale oil soap, dissolved in the same quantity of water. Time expended in syringing, two minutes. Result—death to the insect, health and vigor to the tree, and a handsome and abundant crop of apples.

Before closing, we will mention a fact which we noticed last year, which perhaps will be interesting to entomologists, and certainly of value to fruit-growers. While looking at the movements of the young lice through a powerful magnifying glass, we discovered a round shaped, black lady bug, with four distinct white spots on the back, feeding upon the young lice, completely cleaning the shoot as it went along. Farmers, spare every one of them, for they are our best friends.

#### DEATH OF B. D. WALSH, ESQ.

The Western papers announce the death of this gentleman at his residence in Rock Island, Ill., November 18, aged 62 years. At the time of his death he was senior editor of the *American Entomologist*, and held the position of State Entomologist of Illinois. He was born in England, and was a graduate of Oxford. He emigrated to this country in early life and settled on a farm in Illinois, and was subsequently engaged in the lumber business. From his boyhood his favorite study has been natural history, especially that branch of it known as entomology, and by his writings upon this subject his name has become familiar to the readers of the agricultural papers of the country, and especially to those of the *American Entomologist*. He possessed the rare faculty of writing on the subject of insects in a manner to interest both the scientific and the unlearned reader. His story of a bug had all the interest of a romance, and all the precision of a jaw-breaking technologist. For several years past he has devoted himself almost exclusively to his favorite science, and at the time of his death had the most extensive private collection of specimens in entomology in the country. His death was occasioned by injuries received from an engine while walking on a railroad track. The *Prairie Farmer* says, "of his family in England, we only know of one member, a brother, the present editor of the *London Field*, and the well-known author of the best work on the horse, in the language, written under the *nom de plume* of 'Stonehenge.'

#### CHOKED ANIMALS.

Every autumn animals are choked by turnips, potatoes and apples. They are often relieved by thrusting a fork handle, a broomstick or whipstock down the gullet. This operation is not without danger, and it sometimes fails. A case occurred in our neighborhood, a few days ago, in which the stick was pushed through the side of the gullet of a fine heifer, and the operator supposed the obstruction was removed; but the animal died in two hours. On opening her, the fact was revealed that there were two holes made in the gullet, while the turnip remained impacted in the passage.

The following simple apparatus should be kept on hand by every farmer, and will generally be found effectual. Take a piece of smooth wood, about ten or twelve inches long, and nearly as large round as a man's wrist, to hold open the animal's jaws. Bore a hole near each end, large enough to receive a strong cord. Then bore a hole in the middle large enough to receive a common broom handle. Put into one of the end holes a cord a yard or more in length, tying it with a firm knot, and the gag is complete. Get a smooth broom handle or other wooden rod, and after fastening very firmly upon the end a small ball or covering of cloth, as represented by the cut at *a*, but not so large as not to slip readily through the middle hole in the gag, and lay them up together, where they can be readily found. To prevent their being separated, it may be well to tie them together, when put away.

When an animal is choked, take the gag and put it into the mouth above the tongue, and bring the cord over the head behind the horns, and tie it firmly into the hole at the other end, and you have a perfect gag which the animal cannot shake out of her mouth. Then pass the broom stick through the middle hole, and push it gently into the gullet until the obstruction is reached, then tap it gently and repeatedly until the obstruction gives way. Never use violence in any case. This apparatus in careful hands will seldom fail. It may be prepared by almost any one, is easily used, and should always be kept ready.

SALES OF IMPROVED STOCK.—James S. Monroe, Lexington, Mass., has sold a half Dutch cow that gave on Thanksgiving Day,—nine weeks after dropping her calf,—twenty quarts of milk on a common feed of hay and one pint of oil meal.

Winthrop W. Chenery, Highland Stock Farm, Belmont, Mass., has recently sold to S. B. Emerson, Mountain View, Santa Clara County, California, one Lincoln ram, four rams and sixteen ewes of the Texel or Mouton Flandrin breed of sheep; two bulls and one heifer of the Dutch or Holstein cattle. These animals went overland by rail, and

are probably the first consignment of improved stock that crossed the Rocky Mountains by the Pacific Railroad.

ROCKINGHAM, N. H.—The report of the Treasurer of the Agricultural Society of this county made at the annual meeting at Exeter, Nov. 13, as we learn from the *Mirror and Farmer*, shows the receipts to have been \$2,114, expenditures \$1,846, cash on hand \$268. The net profit of the late fair was \$111; the first fair for years that did not involve a loss. The next fair is to be held Sept. 13-15, 1870, but the place not decided upon.

The officers elected for the year are as follows:—

*President*.—Darius Towle, Kingston.  
*Vice Presidents*.—Benjamin F. Haley, Newmarket; W. Norris Dow, Epping; George W. Sanborn, East Kingston; James K. Leavitt, North Hampton.  
*Secretary*.—Andrew J. Hoyt, Exeter.  
*Treasurer*.—Jacob Carlisle, Exeter.  
*Directors*.—Charles E. Smith, South Newmarket; John S. Bennett, Newmarket; J. Frank Lawrence, Epping; Henry P. Wingate, Stratham; Ezra Currier, Fremont; Gideon Webster, Kingston; Harrison Rowe, Kensington.

*For the New England Farmer.*

#### THE GARDEN FOR JANUARY.

Again we are permitted to stand on the threshold of another year, and to present the "compliments of the season" to all the readers of the FARMER'S Garden Calendar. That the year now commencing may be to each and all a "Happy New Year," and a prosperous one in all that pertains to the culture of the garden and the farm, is the earnest wish of the writer. May it be happy and prosperous to him who cultivates only the least spot of a garden for a few vegetables, as well as to him whose garden and farm embraces many broad acres.

To the end that the greatest profit and satisfaction may result from our labors, we must plan in advance, and work from system. Order, neatness and economy are virtues that are not to be overlooked in the smallest of things; and will greatly enhance the profit and satisfaction resulting from our labor. Let each one, then, with pencil and paper in hand, set down, this new year's eve, and note down the work for January, and in the order it should be done, taking into calculation the probable interruptions, delays, &c.

In our northern climate, the season is such as to preclude much active out-door operations in the garden, and the present is the farmer's and gardener's resting season; yet with a judicious plan of operations, there is always something to do. The garden will need visiting occasionally to see that everything is right. If mice are girdling trees, shrubs or vines, snow should be piled around injured places and be heavily tramped, to remain till other remedies can be applied; if water stands in any places occupied by crops, &c., it should be drained away by opening surface drains.

See that fences and gates are all in order and kept close. A hungry stray animal will spoil a tree or shrub that has cost you time and money, and which perhaps you would not lose for the value of the animal.

BEAN-POLES, STAKES, PEA BRUSH, &c.—Now, while there is leisure and you are hauling timber, &c., from the woods, is the time to lay in a supply. If you wait till later, other work will begin to press and a much poorer stock may be selected, if indeed you have time to get any at all. Cut bean poles eight feet long, trim them smoothly and sharpen them neatly. A straight limb, or young tree, of close growth,  $1\frac{1}{2}$  to 2 inches in diameter, if of strong wood, is as good as any. If one has the wherewith and desires to make them more durable, they can set the lower ends of the stakes, &c., in a kettle of tar and boil them, taking them out and rolling them in fine dust, and repeating the boiling. Set them away carefully to await their season of use. White birch makes the best pea brush. Cut and pile them up. A heavy weight placed on the pile gives the brush a better shape for use.

COLD FRAMES.—These will need coverings of straw, mats, boards, shutters or other protection during severe weather. When the weather is mild and pleasant the plants should be ventilated, admitting light and air, in the middle of the day. Care must be used not to keep open too late in the day, or to give too strong light after having been kept dark some days.

CUTTINGS OF CURRANTS, GOOSEBERRIES, GRAPES, &c.—If these have not been previously made and are desirable, a supply may be taken at any time, when not frozen. Bury them in fresh damp soil, brought in for the purpose, in the bottom of the cellar. The reason why I say "fresh soil," is, that many scions buried in the dirt of old cellar bottoms are lost, from the saltpetre or other poison often found in such dirt. The soil to bury them in should be only moist enough to keep them fresh, without soaking the bark or buds.

HOT-BED FRAMES AND SASHES.—New ones should now be made or purchased, and old ones repaired. No garden can be complete without one or more hot beds; they are cheaply constructed and easily managed by any one of ordinary good judgment. With a hot-bed a variety of garden vegetables may be easily obtained some weeks earlier than in any other available way.

SEEDS.—Did you save a supply of your own growing? If so, look them over and see that they are all safe and sound and in every respect perfect of their kind. Is there any variety you desire that you have not heretofore grown? Send for the seedman's catalogue as soon as out, examine and order early, while there is a full stock to select from.

W. H. WHITE.

South Windsor, Conn., 1870.

## AGRICULTURAL ITEMS.

—In 1860 the live stock of Connecticut was valued at \$11,311,079; in 1863, at \$13,012,699, and in 1869, at \$24,687,141.

—One of the Sandwich Islands claims to have the largest orchard in the world, some of the trees bearing fifty barrels of apples.

—The Champaign County, Ill., correspondent of the *Country Gentleman* says that nine-tenths of the "drive wells" put down in that section for the purpose of watering stock, have proved failures.

—Tennessee is wool-growing. One thousand sheep passed through Nashville for Warren county the other day, and were quickly followed by three thousand more.

—The New York Farmers' Club says that a cellar that cannot be drained may be made as tight as a jug by covering the sides and bottom with cement, and then adding a coat of the plastic slate.

—Dr. Randall, Cortland Village, N. Y., is preparing and will soon have ready, blank petitions to Congress for the signatures of wool growers, which may be had by addressing him as above.

—Col. Alexander writes to a Glasgow paper that the Paris police are furnished with lactometers, by which milk is tested as it is brought into town. If found watered, it is thrown upon the road and imprisonment follows.

—There is a colony of Japanese in California, who, it is said, will give their attention to the culture of the tea plant and of silk. They think that the soil and climate are well adapted to the tea plant.

—The Deerfield, N. H., Farmers' Club met Nov. 12, and reorganized. The officers for the year ensuing are:—President, E. P. Chase; Secretary and Treasurer, H. O. Walker; Directors, J. Chapman, J. Dearborn, and J. K. Gerrish.

—A correspondent of the New York Farmers' Club having asked how to clean cucumber and tomato seed, was told to spread on a piece of paper in the sun to dry. They will be clean enough for home use; for commercial purposes, it is necessary to wash out the pulp and dry them.

—Fred Boetner and his wife, of Otisco, Mich., raised and harvested seventy-five acres of grain the past season. From these acres they obtained 1252 bushels of wheat, 1,035 bushels of oats, and 64 bushels of barley. He and his wife did all the labor except a portion of the threshing.

—Prof. Johnson says, in the *Western Rural*, that marls, like the purer limes, act more energetically if aided by the occasional addition of other manures; and like them they finally exhaust a soil from which successive crops are reaped without the requisite return of decaying animal or vegetable matters.

—Mr. Rodolphus Thompson, of Jay, Me., has manufactured 7000 pounds of cheese and 500

pounds of butter from the milk of thirty-two cows the past summer. He sold over 6000 pounds of cheese at 18 cents a pound, and considered it more profitable than butter at 50 cents.

—Rev. Mr. Dunham, Bryant's Pond, Me., raised this season from a single pea the following remarkable crops: Twenty-five were grown at the first crop, and two thousand nine hundred and forty at the second; making in the whole, by actual count and measurement, 2965 peas, or three pints!

—A correspondent of the *Country Gentleman*, who has recently travelled through northwestern Ohio, northeastern Indiana and southern Michigan, says, be the cause what it may,—wet summer, luxuriant vegetation, insufficient drainage, or all combined,—certain it is that the ague and kindred diseases, have prevailed to an extent unheard of in these late years, and have demoralized farming this fall more than did the short crop or the heavy freshets of the spring time. The many shivering forms, despondent hearts, pinched-up faces, and do-less hands, account for the general backward state of farm-work in the sections visited.

—The quantity of milk drawn from a cow per annum, depends more than some imagine upon the milker. The best cow in the world may soon be spoiled by careless and irregular milking, whereas an ordinary animal may be made to yield much more of the delicious beverage than usual, by the right performance of this simple operation. To find a good cow is not an easy thing—but more easy than to find an accomplished milker.

—A correspondent of an Eastern paper suggests the following plan, to prevent the sagging of gate posts: "Set the hanging post three and a half feet in the ground, tramp well at the bottom, on the side opposite the gate; then dig a trench six inches deep from one post to the other; in this put a three-by-four scantling, or a pole of white oak, black mulberry, or some other lasting timber, seeing that it just fills the space between the two gate posts and cover with earth, and the gate will stand as you hang it until the posts rot off."

—To MANAGE A REARING HORSE.—Whenever you perceive a horse's inclination to rear, separate your reins and prepare for him. The instant he is about to rise slacken one hand and bend or twist his head with the other, keeping your hands low. This bending compels him to move a hind leg, and of necessity brings his fore feet down. Instantly twist him completely round two or three times, which will confuse him very much, and completely throw him off his guard. The moment you have finished twisting him round, place his head in the direction you wish to proceed, apply the spurs and he will not fail to go forward.



DESIGN FOR A COUNTRY, OR VILLAGE HOUSE.

This design and plan, by Mr. Geo. E. Harney, was drawn and engraved for the NEW ENGLAND FARMER, and is intended more expressly for a small milk farm near a city or large town, where the cultivation of flowers and plants might also be made a profitable business. But aside from these peculiarities, the arrangement of the rooms are suggestive of comfort and convenience. The conservatory might be omitted entirely, and the milk room used as a store-room, or for other purposes.

As indicated by the plan, A shows the portico; H the front hall, 7 by 16 feet; B the parlor 14 by 16 feet, and opening out of this is the conservatory, G, for plants and flowers, 14 by 18 feet, fitted up with shelves at the sides, with a stand in the centre and a passage way of three feet in width all around it. From personal observation, Mr. Harney recommends the following plan as the most effective way of heating a small green house: A furnace made of a common air-tight stove is

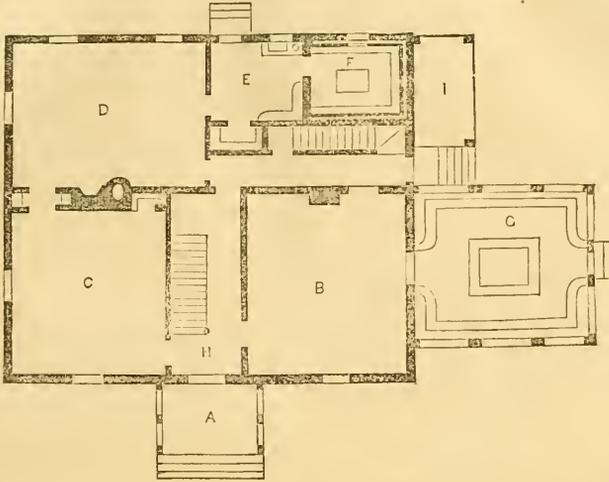
placed in a brick air-chamber underneath the floor, the heat passing up through a single pipe running from the *top* of the chamber to the floor—while from the floor at the farther end of the conservatory, near the door, another pipe extends downwards, and terminates in the *bottom* of the air-chamber, thus producing a thorough circulation of air all the time, with a regulated supply of fresh air from out of doors conducted by means of a box like a common furnace box, to the chamber. The six upper sashes of the roof have pulleys and cords by which they may be lowered or raised at pleasure.

At the further extremity of the front hall a glazed door opens into the back entry. This hall opens out upon a back porch, I, 6 feet wide, and into the parlor and kitchen, D, which is 12 by 18 feet. The dining room C, 14 feet square, also connects with the kitchen by means of a small passage fitted up with shelves. On the right of the chimney is a good-sized china closet. Opening out of the

kitchen is a pantry, E, 6 by 8 feet, with sink, pump, cupboard, &c. This pantry opens out upon a platform at the rear of the house.

The plan of the milk room, F, was invented

necessary to enter into the particulars of finish, height of rooms, cost, &c., as all of these can be varied to suit individual taste, convenience and circumstances.



by H. Wing, of Morris, N. Y., and applied to his own house. A window on the north admits cold air. The room is over a cold cellar, from which air is admitted by slatted openings running nearly the entire length of the room under the shelves, and of about the same width, closed by a board with hinges like a trap door. Near the ceiling, and opening outward and upwards on the north side of the house, is a similar trap door, three or four feet long, and about a foot wide, with an elevating stick with notches, by which it may be raised as desired. When the upper ventilator is opened, the heated air passes out, and cold air from the cellar rushes in to fill its place. A ventilated space of about seven inches surrounds the room, and prevents the heating so often resulting from confined air in the adjacent walls. The shelves are not flat boards, but are formed of strips, to get a free circulation of air on every side.

The second floor of the house contains two front chambers, each fourteen feet square; a kitchen chamber, twelve by fourteen; another chamber over the pantry and entry, nine feet square; and a small room over the dairy.

As these plans are designed to be suggestive,—to afford hints rather than to furnish models or working plans,—we do not deem it

#### EXTRACTS AND REPLIES.

##### VALUE OF OYSTER SHELL BEDS LEFT BY INDIANS.

I saw it stated in the last MONTHLY FARMER that oyster shells were of no account to the farmer. To me it does not seem as if that was so. In the past twelve years I have carted more than one thousand loads of oyster shells, from an old deposit left by the Indians. I have always raised good crops; better than could have been expected from my land without them. The shells have been put into a barn cellar and mixed with other manure. I have never tried them alone. But this is a fact, that wherever we find shells, the grass grows much better and keeps green through the season, and this year I have raised good corn, without any dressing, in almost a solid heap of shells. Now on the Cape there are numerous deposits of shells, and I think it will pay to cart them. I think the Indians roasted the oysters, as the shells have that appearance, and crumble at the touch. A few bones, ashes and coals are found with them, and if the shells are a foot under ground the soil will be as black as any Western land. I would like to see what some others think about it.

SUBSCRIBER.

Osterville, Mass., Oct. 18, 1869.

REMARKS.—As the article alluded to by our correspondent was written by Dr. Jas. R. Nichols, of this city, the above communication was submitted to him, and he has furnished the following reply:—

“As regards the remarks of your correspondent at Osterville, it may be said, that there are but one or two points worthy of comment or reply. He says he has carted thousands of loads of oyster shells upon his land, and has raised ‘good crops.’ He has ‘never used oyster shells alone,’ but al-

ways mixes them with the manure in his barn cellar. This proves, not that oyster shells are fertilizing agents, but that mixed with manure, the manure is not *injured essentially by their presence*. It should be said, once for all, that oyster shells are composed of carbonate of lime; and carbonate of lime is *not a manurial agent*. It is hard, insoluble marble, and of no value in agriculture. The Indians left upon the coast in certain localities, great heaps of these shells, and mixed with them is found charcoal or carbonized wood, and some leaves and other organic matter, partially decomposed, which gives to some of the heaps a dark hue. These heaps, and all other heaps of clam and oyster shells, are valueless to farmers and should be let alone."

May not the bones, ashes, coals, leaves and other organic matter which would naturally find its way from the wigwags of the Indians, who fed on the oysters from these large deposits of shells, and which give them the dark color spoken of, add sufficient value to the mass to justify its use, although the carbonate of lime of which the shells were originally composed may be valueless in agriculture?

#### IRRIGATION OR FLOWAGE.

I do not propose to speak in this article of that branch of irrigation by which water is conducted along the brows of hills by means of ditches, but I desire to call attention to the winter flowage of natural meadows or swamp lands, through which a stream of water flows. Often only a short dam is needed near the outlet, to effect the purpose, with a bulk-head by which the water can be let on or off and its depth regulated. Land thus flowed would not only be enriched by an annual deposit of fertilizing matter, but the roots of grass would be protected from injury by frost.

Millions of tons of hay might be added every year to the crops of the New England States by this method. Almost every farm of any extent, contains many acres of unsightly swamp, now considered worthless by many, but in reality by far the most valuable of all its acres, which if cleared and flowed would not require artificial or barnyard manures to produce annual crops, as is the case with high land fields, from many of which much of the manure is yearly washed into the streams and lost.

Nature in all cases provides the means of restoration to her own exhausted energies, if short-sighted mortals would not pervert her course. When the upland pastures and fields become almost worthless by a suicidal mode of skinning, kind Nature would spread a growth of forest trees over the exhausted landscape, restoring potash to the soil, and bringing it back to its primeval state of fertility in a few years.

The low lands she would restore by the element of water as well as by fallen leaves. Snow water, according to the best authorities, contains ammonia, and perhaps other enriching qualities. These principles were well understood by the nations of antiquity. The flat fields of old classic Egypt were fertilized by the annual overflow of Father Nile, while her once productive lands, lying above the reach of the enriching waters, became barren sands which are not only unproductive, but are gradually drifting around and covering up the stupendous ruins which still attest the former prosperity and greatness of that country. Ancient

Rome, too, has remains of vast works which show that the value of water was well understood by the farmers of old. Virgil, in *Georgic 1st*, says:

"Lo! on you brow, whence bubbling springs arise,  
The peasant, bending o'er the expanse below,  
Directs the channeled waters where to flow.  
Down the smooth rocks melodious murmurs glide,  
And a new verdure gleams beneath the tide."

The following circumstance, quoted by Warton, from Montesquieu's *Spirit of Laws*, is to the point:

"When the Persians were masters of Asia, they permitted those who conveyed a spring to any place which had not been watered before, to enjoy the benefit thereof for five generations; and as a number of rivulets flowed from Mt. Taurus, they spared no expense in directing the course of their streams. At this day without knowing how they came there, they are found in the fields and gardens." Isaiah testifies to the same sentiment—"as the rain and the snow that cometh down from heaven returneth not thither again, but watereth the earth and causeth it to bud and blossom, and bring forth seed to the sower and bread to the reaper." M. J. HARVEY.

*Epping, N. H., 1869.*

#### A NEW OUTLET TO THE MISSISSIPPI VALLEY.

The following paragraph is going the rounds of the papers in this section:—

"A project is to be brought to the attention of Congress at the next session, to make for commerce a new mouth of the Mississippi river, by a canal of great capacity, on the line of the unfinished James River and Kanawha canal, across the mountains of Virginia. The proposed work would be 400 miles long, and would make a continuous water communication from the sea westward to the 17,000 miles of navigation in the Mississippi valley. It is claimed that such a work would increase the value of Western produce a hundred millions a year, while cheapening bread in the East; because, as estimated, Western grain would save fully two-thirds of the freight now paid by the consumer and producer to the carrier."

In my opinion there is no projected improvement in the whole country that will compare with this in importance both to producer and consumer, and I wonder that it should have been so long overlooked. Once in operation, its whole cost would be saved, many times over, every year to the people. It would not only cheapen bread at the East, and give the producer at the West a better price, but it would open a market for an almost inexhaustible supply of coal and timber, which exists along its route, which could be furnished at much cheaper rates than from any other source. New England capital and skill would here find a most inviting field. Already several factories are at work, or in process of construction, for manufacturing furniture, &c., &c., from the fine material furnished by the forests of Western Virginia, or rather for preparing all the parts ready for transportation, to be put together at other points. The superiority of our soil, the excellence of our climate, and the cheapness of our materials for manufacturing, are already admitted, and the fact that we are comparatively near market, will soon become manifest. J. H. R.

*West Virginia, Oct. 25, 1869.*

#### COARSE AND FINE WOOLED SHEEP.

I have read with interest all the communications on this subject in your valuable paper for the last year. In breeding sheep, I have sought as much weight of sheep as amount of wool. My sheep are Merinos. They average about 100 pounds, and sheared a little over six pounds washed wool this spring. When wool brought \$1 a pound, my lambs

weighed seventy-seven pounds each, and brought \$7.70 per head. Last year my lambs were a little more fashionable and smaller. I sold them for \$2 50, for mutton, after selecting ten of the best. Then I went to Connecticut and bought of Burdett Loomis a yearling Cotswold buck and raised from sixty ewes, sixty-seven lambs, and I never had less trouble or better success. I saved nineteen bucks, only two of them weighing less than one hundred pounds, and some of them weighing one hundred and twenty-three, at seven months old. There is a pair of twin ewe lambs in town from my buck that weighed, at six months old, 105 and 110 each. I have sold seven of the bucks for \$98, the other twelve, if not sold for stock, are good for 140 or 150 pounds before spring, and will bring fancy prices for mutton. This added to the six pounds of wool will give more profit than a large amount of grease from a forty pound sheep or a small fleeced South Down.

M. DUSTIN.

West Claremont, N. H., Nov., 1869.

#### LAME CHICKENS.

My chickens as soon as grown lose the use of their limbs. They try to walk, and fall over, try to fly and cannot. They have no use of their legs,—sometimes one, at others both,—grow poor, and have to be killed. I have examined them and can find no cause. Some of my neighbors are troubled the same. If you know a remedy, please answer; if not, please ask if any one does. SUBSCRIBER.

Haverhill, Mass., Nov. 3, 1869.

#### DECOMPOSING BONES.

I have a quantity of old bones. Are they of any value? If so, what is the best way to decompose them?

A SUBSCRIBER.

Lovell, Me., Oct., 1869.

REMARKS.—In the article on the Garden in November, in another column of this paper, you will find an answer to your inquiry. Some care will be necessary to success, but bones can be softened in this way.

#### BUCKHORN.

In answer to the inquiry of your correspondent "Essecker," who writes from Danvers, I would suggest that the plant he calls *buckhorn* may be the *osmunda regalis*, a fern, quite common in swampy lands. I remember that this was called buckhorn in my native town (Weymouth) when I was a little boy. I do not know whether it is poisonous for horses or not; but I do know that cattle eat it with a good relish, in large quantity, without any apparent ill effect. My father used to say that it was as good as English hay for cows.

Concord, Mass., Oct. 24, 1869.

M. P.

CHEESE.—Gardner B. Weeks, Syracuse, N. Y., Secretary of the American Dairymen's Association, has issued a circular announcing that the Association offers a premium of one hundred dollars for the best original essay on "The Claims of Cheese as a Wholesome, Nutritious and Economical article of Food." The premium will be awarded and the money paid at the Annual Convention of the Association at Utica, N. Y., January 12 and 13, 1870. The essays must be forwarded to the Secretary, Syracuse, N. Y., as early as December 20, 1869. The premium will be awarded by a competent and disinterested committee of three gen-

tlemen. It is designed to make use of the premium essay in the next annual report of the Association.

#### VERMONT DAIRYMEN'S ASSOCIATION.

We learn by the *State Journal* that an association of the dairymen of Vermont was formed at a meeting of farmers at Montpelier, Vt., October 27. Hon. R. J. Saxe of Sheldon, was Chairman, and O. S. Bliss, of Georgia, Secretary. The following constitution, reported by a committee, consisting of O. S. Bliss, of Georgia, E. D. Mason, of Richmond, and G. C. Chandler, of Montpelier, was adopted:—

#### Constitution.

SECTION 1. This organization shall be called the "Vermont Dairymen's Association."

SEC. 2. Its object shall be to improve the Dairy interests of Vermont, and all subsidiary interests.

SEC. 3. This Association shall consist of such persons as shall signify their desire to become members and pay the sum of two dollars, and a like sum annually thereafter, and of honorary and corresponding members.

SEC. 4. The payment of five dollars shall constitute a Life Member.

SEC. 5. The officers of the Association shall be a President, three Vice Presidents, (one from each Congressional District), and a Secretary, who shall constitute the Executive Committee, and have the general oversight of all the affairs of the Association; also a Treasurer and fourteen Trustees, who shall be charged with the interests of the Association in their respective counties, and constitute a medium of communication between the Executive Committee and the resident members of the Association. They shall also act as a Board of Appeals on all questions of difference that may arise between the Executive Committee and any member.

SEC. 6. The Annual Meeting for the election of officers and the transaction of business shall be held on the second Wednesday after the second Thursday in October in each year, at such place as the Executive Committee shall appoint. There shall also be held during each winter, at such time and place as the Executive Committee may designate, a meeting for addresses and discussions, to continue at least three days, which meeting shall be open to all members of the Association.

SEC. 7. It shall be the duty of the Secretary to prepare an Annual report of the transactions of the Association for the current year, embracing such papers, original or selected, as may be approved by the Executive Committee, and cause the same to be published and distributed to the members of the Association.

SEC. 8. The Treasurer shall keep the funds of the Association and disburse them on the order of the President or a Vice President, countersigned by the Secretary, and make a report of the receipts and expenditures to the Annual Meeting in October.

SEC. 9. This Constitution may be amended at any Annual Meeting by a two-thirds vote of all the members present.

Mr. Mason, of Richmond, was called upon for a statement relative to the Dairymen's Association in New York, who gave a favorable report of its operations, showing that the

superior quantity and quality of the cheese produced, resulted in a great degree, from the operations of this organization. Mr. Mason believed that Vermonters, with equally good pasturage and a better climate, could place their cheese at the head of the list, with the same skill in manufacturing. He believed an organization or association among farmers would help to accomplish such a result in Vermont.

A committee consisting of Mr. Mason, of Richmond, Mr. Hall of Burke, and Mr. Bliss, of Georgia, was appointed to report at an adjourned meeting, officers for this organization, also to solicit members for the same.

At an adjourned meeting, Oct. 28th, this committee submitted the following report, which was accepted and adopted:—

*President*—E. D. Mason, Richmond.  
*Vice Presidents*—Middleton Goldsmith, Rutland;  
 N. B. Safford, Harford; R. J. Saxe, Sheldon.  
*Secretary*.—O. S. Bliss, Georgia.  
*Treasurer*.—G. C. Chandler, Montpelier.

#### County Trustees.

*Addison*—D. W. Nash, New Haven.  
*Bennington*—A. B. Armstrong, Dorset.  
*Caledonia*.—H. M. H. Hall, East Burke.  
*Chittenden*.—E. Barnum, Milton.  
*Essex*.—E. S. Freeman, Guildhall.  
*Franklin*.—A. A. Moore.  
*Grand Isle*.—Allen R. Manning, Alburgh.  
*Lamoille*.—E. P. Mudgett, Cambridge.  
*Orleans*.—Ezra F. Darling, Derby.  
*Orange*.—Aaron N. King, Tunbridge.  
*Rutland*.—A. D. Smith, Danby.  
*Washington*.—G. C. Chandler, Montpelier.  
*Windsor*.—C. Horace Hubbard, Springfield.  
*Windham*.—Peleg Winslow, Putney.

#### POISON CHEESE.

Mr. X. A. Willard gives in the *Rural New Yorker* the particulars of a case where several persons were poisoned by a lot of cheese made in St. Lawrence County, N. Y. No lives were lost from eating this cheese, but several persons were made sick, with pains and cramps and excessive vomiting. Dr. Jackson, who analyzed portions of this cheese, could find no metal or mineral poisons, nor any alkaloids or deleterious vegetable principles. But he did find "a small proportion of offensive putrifying animal matter," which does not belong to good cheese. He said he could not give this matter any correct name, but suggested that it might come from the rennet. Mr. Willard says:—

The facts elicited from this analysis of Dr. Jackson correspond in some respects with those discovered, a few years since, by Dr. Voelcker, and from which it would appear that cheese, as well as other kinds of animal food, under certain conditions of decay, generates a peculiar organic poison;

but what the composition of this virulent poison is, the chemists are as yet unable to determine. Dr. Voelcker stated to us in a conversation on the subject in 1866, that instances had come under his observation where this poison in cheese had become dissipated as the cheese passed into a further state of fermentation and decomposition, and that the cheese could then be safely eaten, producing no injurious or unpleasant effects.

Mr. Willard then gives a detailed statement of an analysis made by Dr. Voelcker of some cheese in England that was known to be poisonous. In the first place his object was to detect mineral poisons, but not a trace of them was to be found in the cheese he was analyzing, although on former occasions he had found sulphate of zinc, sulphate of copper, in cheese that had proved poisonous. The Professor then says:—

"The proportion of water in this cheese was rather large, considering that it must have been cut for some time, and have lost water by evaporation. On further examining it I found it remarkably sour, and had no difficulty in detecting an unusually large quantity of fatty acids, which, if not poisonous themselves, are the vehicle conveying the peculiar organic poison which appears to be generated sometimes in cheese undergoing a peculiar kind of fermentation. Probably the poison generated in this modified decay of cheese is identical with the so-called sausage poison, which is sometimes found in German sausages, especially those made of coagulated blood. A similar poison appears to be generated sometimes in pickled salmon, smoked sprats, pork, tainted veal, bacon, and hams. Bacon and hams, when not perfectly cured, and fat meat kept in a damp, badly ventilated cellar, are very apt to become more or less injurious to health; and even butter, after it has turned rancid, and similar organic acids are liberated in it which exist in this cheese in a free state, acts as a poison in most cases. Singularly enough, some people are not affected by these subtle organic poisons.

Dr. Voelcker regrets that we have no ready means of detecting this insidious poison which, in a great many cases, has produced fatal results. He also says, that it appears that *cheese kept in damp, badly ventilated places, or where too much whey is left, or, indeed, all the circumstances which tend to produce a too acid curd and to generate free fatty acids, are apt to produce this peculiar poison.* The cheese maker will see, therefore, how important it is to have a properly ventilated curing room for his cheeses, and also that the whey be thoroughly expelled from the cheese.

—President Abbott, of the Michigan Agricultural College, said in his remarks at the meeting of farmers at Bangor, Me., that at the State Agricultural College of Wisconsin—connected with a literary university—with about 400 students, the most diligent inquiry could not find one that had determined to return to industrial pursuits.

## UNRELIABLE SEED CORN.

In this climate, with our small-sized yellow corn, we seldom have any trouble with seed corn where ordinary care is used. But with sweet corn, especially of the large varieties, there is much complaint. One of our neighbors planted a peck last spring, and he thinks that not more than forty kernels germinated. Another estimates that not more than half that he planted came up. We never fail to have our sweet corn germinate as surely as the yellow corn; but a little care and pains are necessary to secure this result. We select the earliest and largest ears as soon as the husks begin to dry, and trace them up in small traces and hang them in the sun and leave them exposed to the weather at least two months, and then hang them in a *dry* chamber. Seed corn should not be exposed to moisture, which will cause the chit to swell. A little care in saving seed corn will often prevent much disappointment and vexation.

The editor of the *Prairie Farmer* has some sensible remarks upon this subject. He says that varieties that have a large cob are more liable to be injured than those that have small cobs; that the pith in such cobs retains its moisture so long that it is liable to mould or to freeze, by either of which the chit or germ is killed, even when the body of the kernel is sound. He recommends boring out the pith with a bit, when the cob is very large. This lets the air into the cob and allows it to become dry.

## CLEAN CULTURE.

Notwithstanding all that is said in agricultural papers and in Farmers' Clubs of the importance of clean culture, and of the unprofitableness of crops of weeds, we never saw many farms or even fields that were kept clean throughout the season. Like "perfection," in morals and religion, clean culture with most farmers is, at best, only comparative. We confess that in our own experience we seldom succeed in having a place for every plant and in keeping every plant in its place. The theory of clean culture is easy enough, but the practice is so very difficult, that we fear the weeds are increasing on most of our farms. In one of his recent Walks and Talks on the Farm, in the *American Agriculturist*, Mr. J. Harris says, he thinks his corn field is toler-

ably clean (the result of two corn crops in succession five years ago, and the thorough, almost the excessive, use of the cultivator at that time, together with its free use this season.) But with this exception, he does not know of a single field of clean corn, or clean potatoes, or clean beans. Even the Deacon's wheat stubble, though there is a fine growth of young clover, is far from clean. This is in Monroe County, "The center of the garden of the Empire State," where good farm land is supposed to be worth, and actually sells for, \$125 to \$200 per acre.

Mr. Jason Smith, of Seneca County, N. Y., the home of such farmers as John Johnston, says in a letter to Mr. Harris:—

In witnessing the operation of a new steam thrashing machine recently, it was disgusting to see how much bulk the feeder had to put through for the quantity of grain. As a general rule, about one-third of the bulk was weeds—and this on farms the owners of which make some pretensions to being model farmers. *Unless we adopt a better system of farming, the weeds and insects will drive us from our farms.* I highly approve of your advocacy of the practice of summer-fallowing, which, if done thoroughly, is a sure, if not the only economical, means of destroying troublesome weeds, such as the Canada thistle, cockle, May-weed, white and yellow daisies, pigeon weed, plautain, burdock, ragweed, mustard, quack grass, with a host of summer weeds too numerous to mention. Nearly all of these, except quack grass, can be killed by thorough summer-fallowing in a dry season.

In contrast with the foregoing, Mr. Harris gives the following pleasant picture:—

One of my neighbors, a thriving German farmer, has made the sides of the road smooth and level, and this year mowed quite a nice crop of hay from them. He is doing to well to have any thought of selling, but if he had I am sure his farm would sell for \$10 an acre more for having such a lawn-like road-side, and for the general air of neatness and thrift which it imparts to the establishment.

Too many of us make the road the receptacle for all the stones, sticks, and rubbish of the farm. The thistles come up between the stones. Mowing the grass is out of the question. The best we can do is to top off the thistles occasionally. I know of few things that would add so much to the beauty of the country as to have all the road-sides made smooth and level, and have the grass cut with a mowing machine twice a year.

SULPHUR IN LOUISIANA.—Prof. Hilgard, of the University of Miss., who has been on a visit to the sulphur deposit in Louisiana, states that the bed was found to be about 100 feet thick without perceptible change. It is pure, crystalline, semi-transparent sulphur. A shaft of 443 feet once sunk to this sulphur bed, the working of the mine would be easy and in the highest degree remunerative—capable, in view of the difficulty under which the production of Sicilian sulphur labors, of control-

ling the sulphur market of the world, and adding to the prosperity of the whole country by cheapening the production and improving the quantity of that great fundamental agent, "sulphuric acid," the preparation of which from impure pyrites is so often a source of annoyance and loss in all kinds of manufactures.

*For the New England Farmer.*

#### MEN WANTED.

A few weeks since I cut the following article, with the above heading, from a newspaper that fell into my hands:—

**MEN WANTED.**—The great want of this age is men. Men who are not for sale. Men who are honest, sound from centre to circumference, true to the heart's core. Men who will condemn wrong in friend or foe, in themselves as well as others. Men whose consciences are as steady as a needle to the pole. Men who will stand for the right if the heavens totter and the earth reels. Men who can tell the truth and look the world and the devil right in the eye. Men that neither brag nor run. Men that neither flag nor flinch. Men who can have courage without showing to it. Men in whom the courage of everlasting life runs still, deep and strong. Men who do not cry nor cause their voices to be heard on the streets, but who will not fail nor be discouraged till judgment be set in the earth. Men who know their message and tell it. Men who know their places and fill them. Men who know their business. Men who will not lie. Men who are not too lazy to work, nor too proud to be poor. Men who are willing to eat what they have earned, and wear what they have paid for.

Is it not lamentably true that there is a great lack of such men as are here alluded to? I think the feeling is quite general among business men that those placed in positions of great pecuniary responsibility are less reliable than at any former period of our nation's history. They are more liable to betray the trusts committed to their guardianship. The prevailing spirit of speculation proves too strong for their integrity. The temptation of great, and (as it looks to them) sure gains impels to the use of funds that belong to others. The salve that quiets their conscience and blinds their eyes to duty is the *expectation* of replacing what they had no right to take. Losses resulting from their first venture, lead to a repetition of the crime in hopes of making it all right in the end. Repeated losses, however, involve them irrecoverably. Many a man who was looked upon by those who knew him best as being grounded upon unswerving integrity has been ruined in this manner. The trouble was that he allowed the first thought in that direction to have a lodgment in his mind. The cases of defaulting bank officials and others of recent date are apt illustrations of this truth.

Another class of dishonest men are those who do business on credit, when they know it is impossible for them to pay for the goods they purchase. A house in this city that reported a surplus of \$60,000 last January,

failed in less than six months for \$120,000. They acknowledged to a creditor that the statements made to him and others in January was false. The excuse given for the falsehood was they hoped to work out in some way. This seeking a desired end by such means is never *safe*, and never *guiltless*. It is not worth while to specify the various phases of dishonesty and trickery that abound, as most are too familiar with them. It has come to such a pass among business men that they are driven to regard *every man* as a rogue, until he has proved the reverse. Heretofore, the farming community have been regarded as a class less subject to this sweeping condemnation. It is not well for us, however, to be too Pharaisaical because of this fact. Too many cases of deception and trickery are resorted to by farmers, for us to exclaim that we are more honest than others. How many give short weight, short measure, put the best and fairest on the surface and hide all defects from sight? Far too many, I fear, from what I have seen and heard.

In too many instances in buying and selling stock, the rule of honest, fair dealing is too often departed from. I recollect of a gentleman remarking to me that the worst swindle he ever was subject to was perpetrated by a farmer of whom he bought a horse. Being a *farmer* the gentleman confided in his story, without seeking for a confirmation of its truth. From that transaction he was taught the folly of relying upon a class or calling, supposing it to be composed entirely of honest men. His experience is too common for farmers to call it exceptional.

Money gained at the sacrifice of principle is an illusion. It is not gained permanently. That is, it will take to itself wings and fly away. Reputation also suffers. The whole result is a loss every way. A man may be rich without money. Millions, without a quiet conscience and a contented mind are but a burden to their possessor. A rich man on the brink of the grave would gladly part with all he had for a longer lease of life. Honest men are hard to find, and we should welcome them from whatever source they come.

There is an antidote for all this crying evil to be found in the application of the golden rule to our daily life. I apprehend it is to be found nowhere else. All other panaceas are illusory and disappointing. This cannot fail.

*Boston, July 30, 1869.*

K. O.

*For the New England Farmer.*

#### HELP AND STOCK FOR A FARM.

"I have bought the high-priced, fertile farm," said Mr. Bullion, as he met his friend, Mr. Jones, "and now as spring is drawing near, I must hire help to begin its cultivation. What kind of help shall I hire?"

"This is, indeed, a question of some im-

portance. Are your help to become members of your family?"

"Yes, at present; though I have considered the plan of building a cottage for permanent farm help. But this year we must be one family, with perhaps two tables."

"Then the most satisfactory help would be smart young Americans, that have always lived on a farm with their parents, and who intend to follow farming for life."

"Are there such persons?"

"Yes, plenty. Among the thousands of farmers' families there are many young men and women that leave their homes, to sell the service of their brain and muscle a few years, for money."

"Yes. But they rush to manufacturing towns or cities, and get larger wages than farmers can afford to pay."

"No. Farmers constantly refuse to recognize the full value of skilled labor on the farm. They let their sons go, and hire a greater weight of muscle for a few months each year, in some Irish, French or German, and accept with it habits of smoking, drinking or profanity. And the farmers' boys soon become skilled in the employment they choose, and however firmly they may resolve to work only a few years away, and return to farm life again,—their labor becomes of such value that they are retained in the cities, where their employment is permanent. But there prevails an idea that the farmer only needs help in summer. So the intelligent, painstaking, energetic young man, not only is obliged to work in competition with the transients foreigner in summer, and perhaps at less wages, if he weighs less pounds, but in winter he is a drug in the market; no farmer enlarges his plans and enterprises to give him employment and keep him in the country. So he must go to the city, or take some job at a disadvantage, or keep school in order to earn money. A farmer that has a good horse or ox team will plan to find profitable work for them. But to his son he says 'I can spare you through the winter,' and he is crowded out of the regular routine of farm life."

"Then you would recommend American help, hired by the year?"

"Yes. Such would understand the nature and wants of your cattle; the comparative value of the hay, straw and roots to be fed to them, the treatment of the soil for each crop you raise, and the best way to dispose of the surplus in market. You should hire by the year because it is duty. Winter is a dull time in other trades, yet proprietors retain their workmen as much as possible, so as to be sure of them in the busy season. The farmers' loss may be trifling, yet not as much as would be the workmen's loss if he bore it alone."

"Then \$30 per month for eight months, is just as much as \$20 for twelve months, and often men can be hired at about these rates. Your idea is a good one of building a cottage

and hiring a married man, and if you can make your service desirable, faithful men will be found. And then to enjoy farm life, you must have a happy family, and their happiness cannot be perfect, when all their time is taken to minister to the appetites of such ravenous boarders as farm help often are, when hired because of size and strength."

"Well, if I adopt your suggestions as to help, what stock shall I get," said Mr. Bullion, to his friend and adviser.

"Why! get that you love the most," said Jones.

"That is singular advice. I expect to keep stock for profit and not for love. Every body keeps stock to consume what is raised and make manure."

"Very true; and with that object it matters but little what you get. But you wish to enjoy your country home. Now if there is any thing you love more than another, keep that, whether it be horses, cattle, sheep, hogs, goats or fowls; then whether the market price runs high or low you are contented. But if you have no specialty, then keep what your farmer likes."

"You seem to lay great stress upon affection. I desire to raise what will be a credit to me among my neighbors, and will sell well in market. While I do not care for profit for its own sake, yet I desire it on account of its being the evidence of good management, and I can hardly decide what to buy."

"If one buys what others are dealing in," said Jones, "in hopes of a rise in price, or a continuance of popularity, there is great danger of being led astray. When Merino sheep brought a thousand dollars each, many bought them to get the stock to sell. But when prices came down, their carcasses were sold at a shilling each in market, and there was great haste in getting rid of them. A choice Durham is sold at \$5000, or an Alderney for \$2000; and Angora goats \$500. Now a fortune spent in purchasing does not insure success; if there continues a demand for these animals, it is only the good ones that bring a high price, and good care is necessary, which is the result of affection."

"It is the excellent animals that sell for the best profit on cost of raising. Devotion brings success. Whatever you love so deeply as to plainly show it in the care you give it, and in words of praise spoken in its favor, will attract attention. Those strong words, 'The good Shepherd gives His life for the sheep,' are true ones. Dark nights, stormy days and weary limbs, must not turn away the man who hopes for success, from caring at the proper time for his stock. Some make fortunes in horses, but they have good ones, and love horses."

"If you have no affection for my particular stock, and have faithful, intelligent help, I will recommend large mutton sheep and cows. You can buy good feeding ewes for three or

four dollars each; with good care, they will raise more than one lamb each on an average. These lambs should be four months old in July and bring five dollars each; the fleece two dollars each sheep. Then with a little crowding, these ewes can be fattened to sell in October at five dollars each, making a gain of nine dollars. If you raise full-blooded sheep of any English breed, the profit would be more, as the lambs would sell to other stock raisers."

"A cow will eat, it is estimated, as much as eight sheep. A good one has yielded an income, in butter, of over one hundred dollars in a year, and by selling milk a much higher income. Reference can be given to several persons whose flocks and herds have come up to about these figures. Raising colts, young cattle, or fattening oxen, some times gives a good result. But cows and sheep I recommend as likely to be profitable every year."

Z. E. JAMESON.

*Irasburg, Vt., 1869.*

*For the New England Farmer.*

#### HORSES OF NEW ENGLAND.

Ladies and Gentlemen of New England—I say ladies, because I believe they may justly be classed among the admirers of the horse—to enter into an argument at this period of the nineteenth century, to show that horse stock is an important item in the schedule of national wealth, strength and greatness, would be to admit myself a novice or to assume that I were addressing novices. In no country in the world, perhaps, is such an argument less needed than in our own; and in no part of our country, less than in New England. In few sections are horses either for service or pleasure better appreciated, or a desire and an ability to breed and to keep superior animals more general than in the Eastern States.

The interest of farmers and breeders in the production of valuable animals will depend largely on the profit to be derived from their sale. This profit is increasing and will continue to increase as horse keepers appreciate the fact that it is as cheap to keep a good horse as a poor one. The prime cost being the only difference to be considered; stable-room, feed, grooming, &c., being equal, while the chances for selling at a profit are very decidedly in favor of the good one.

Windham county, Conn., where I live, is not, properly speaking, a horse-raising county. Still there are colts enough raised each year to show the difference breeding between good and poor ones. Mr. Reynolds, of Brooklyn, has recently sold a pair of colts of his raising, right out of the pasture and "green," for \$1000,—four and five years old. Dr. John McClellan, of Woodstock, has recently sold two green colts, two and three years old for \$600. These are all from the Ethan Allen stock; old "Ethan" being their grandsire.

Wm. A. Atwood, of Killingly, has a colt one year old, sired by "Geo. M. Patchen, Jr.," for which he has been offered \$400. Mr. Atwood has a two-year-old colt from the same mare, sired by "Gen. U. S. Grant,"—now owned in New Jersey,—of the Pathfinder stock, which is a very valuable animal. I also have a two-year-old stallion, sired by the same horse, out of a Consternation mare, which, in the hands of some men, would be worth \$1000. At the same time there are plenty colts in the county, from one to five years old, which can be bought to-day for from \$50 to \$125.

I think these few illustrations should prove clearly to all horse-breeders the importance and profit of starting right in breeding this noble and most useful of all domestic animals.

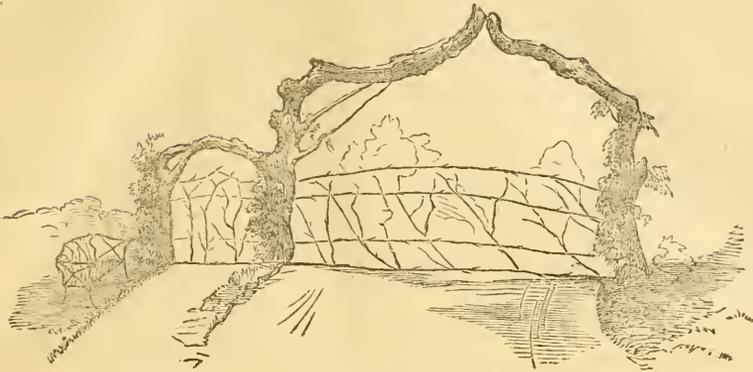
In writing this article, I am not blowing for any particular horse or any special breed of horses. I have no axe to grind; but must say that I do admire "Figaro," by imported Consternation, raised and owned by Orrin Trow, of Hardwick, Mass., "Geo. M. Patchen, Jr.," "Gen. U. S. Grant," by Pathfinder and their stock, the best of any three stallions with which I am acquainted to-day. I also think very favorably of old Ethan Allen and his stock. I do not set myself up as authority in these matters. I have simply given my views or hints in regard to breeding. I don't pretend to be acquainted with all the good stock horses in the country by any means, but have a strong desire to become better acquainted with it. And one object in writing the present article is to call out those who are capable of imparting information which would undoubtedly be as valuable to others as to myself. If there are other stock horses in this vicinity of equal or superior merit with those I have named, I will esteem it a favor if the owner, or others, will give me information concerning the same.

JOHN DIMON.

*Pomfret, Conn., Oct. 18, 1869.*

NOTHING on earth can smile but human beings. Gems may flash reflected light, but what is a diamond-flash compared with an eye-flash and mirth-flash? A face that cannot smile is like a bud that cannot blossom, and dries up on the stalk. Laughter is day and sobriety is night, and a smile is the twilight that hovers gently between both and is more bewitching than either.

STRIPED BUGS.—H. Capron, Paris, Province of Ontario, assures the *Rural New Yorker* that he succeeds in keeping his grounds clear of the striped bug, by pulling up and burning the vines as soon as done bearing, with the weeds which grow among them, burning them up all clean, believing that he thus destroys the eggs or germs of the incoming crop of bugs.



RUSTIC GATEWAY AND LOUNGE.

The good workman, it is said, never complains of his tools. A trained artist will draw a tolerable likeness of any object with pen and ink, a common lead pencil, a bit of charcoal, or a heated poker. Why, then, may not farmers and gardeners employ the materials within their reach to express their sense of the beautiful? Why should they resort to painted boards whenever they wish to build an ornamental gate, bridge, or seat? Even our house-builders and furniture makers have discovered that the natural veins or fibres of wood, even of our own bird's-eye maple, are fully equal to the more expensive imitations of the "grainers." Why may not, then, the gnarled trees, the crooked sticks and roots, so abundant on our premises, be made to express an idea of

These plans are not working models, but simply outlines, to be varied and filled up according to circumstances, the materials on hand and the taste of the builder. In many places such structures would look better, and more harmonious than elaborate carpenter work and gaudy paint, however expensive.

#### CHEESE FACTORY APPARATUS.

In reply to an inquiry for the cost of the implements, &c., to manufacture 300 or 400 gallons of milk per day into cheese, Mr. X. A. Willard says in the *Western Rural*:—

I. A vat holding 500 gallons with heater underneath will cost at the manufactory about \$200. The above price will include smoke pipe, elbow, whey strainer, syphon, etc. For curd knife, presses, and hoops, say \$50 to \$60 more.

II. It is not customary in New York State for manufacturers to purchase the milk used in cheese manufacture. The manufacturer usually has no pecuniary interest in the milk. He is employed at a salary, or at a fixed rate per pound of cured cheese. When the manufacturer works by the pound, he gets from sixty-three to seventy-five cents per hundred pounds (cured cheese), and furnishes all the labor for manufacturing, care of cheese, &c., furnishing also his own board and that of his assistants. When a cheese maker is employed at a salary, board, &c., are usually furnished by the proprietor, who also employs whatever other help is required.

The salaries of cheese makers vary according to their skill, and the amount of business to be done. In large factories the head



RUSTIC BRIDGE.

the mind as well as subserve a more practical purpose?

To illustrate this principle we copy this month from the *Rural New Yorker* a plan of a gateway designed to separate the garden from the lawn or front yard, in connection with a rustic side seat, and also of a bridge over a brook or ditch. The bridge is made by springing poles and fastening the ends on each bank.

cheese-maker often gets as high a figure as \$1,000 to \$1,200, and more, for the season (nine months). When a small amount of milk is to be made up, good dairymaids can be employed often at from \$8 to 12 per week and board. In cheese dairying it generally pays better to employ a skilful cheesemaker at a good round price, than an inferior one at a low price.

III. Persons commencing the business of dairying, often make great mistakes in employing inferior or second rate manufacturers, because they can be had cheap. A poor cheese-maker will entail heavy losses on the sales of cheeses besides damaging the reputation of the dairy, which last is of more importance than many are apt to imagine.

IV. Milk is sometimes purchased by a manufacturer, or by the proprietor of a factory. In this case the purchaser must fix upon some data to regulate his rates.

Ten pounds of milk is usually considered sufficient for one pound of cured cheese. About two cents per pound is taken as a fair rate for manufacturing, care of cheese, boxing, bandage, &c., and putting it into market. Now if cheese can be sold at 15 cents per pound, about 12 cents can be paid for every ten pounds of milk delivered. The margin, however, is commonly made larger than this, to cover losses on account of poor cheeses, risk of markets, shrinkage of cheese, and other matters connected with the business. We do not pretend to give any exact figures that could be taken as the proper price to pay for milk, but merely allude to the methods, or general data, by which a purchaser makes up his opinion as to the price he can afford to pay. Sometimes when milk has been engaged for the season at a low figure, and the price of cheese runs high, the purchaser clears a handsome profit, and we have known cases, where on the other hand he has made serious losses. The business, it will be seen, is of a speculative character, and has never been popular among the New York factories.

#### COTTON SEED MEAL.

As furnishing information concerning the use of cotton seed meal, in addition to the few remarks we made recently, in reply to the inquiries of a correspondent, we copy from a contemporary the following notes, by our correspondent, A. W. Cheever, Esq., Sheldonville, Mass., of a visit to some dairy farms in Cumberland, R. I.

Mr. Leander Mory had seven large cows, that I think are the largest and best seven that can be found in one yard for several miles around. They are like the cows of most milkmen, partly fresh and partly drying off. He sells milk the year round, and has his cows come in at different times through the year.

He showed me cows that would give as high as twenty-four quarts at their best, that are now giving from twelve to sixteen quarts and are coming in this summer and fall. He says it takes him one year or more after he buys a cow to bring her up to her full capacity. He raises no calves but prefers to buy cows, as he sells all his milk.

In summer he feeds, in addition to pasture feed, two quarts of cotton seed meal. In winter four quarts cotton seed and from two to four of Indian meal per day with English and swale hay.

Mr. Andrew Belcher keeps about the same number of cows and feeds much in the same manner. They both think very highly of cotton seed meal for feed. Mr. Belcher was formerly cautious in the use of it. Now he buys a cow and immediately puts her on a full feed of cotton seed and meal.

He bought a cow this spring for \$70, that was claimed by the owner to give twelve quarts. He now milks eighteen quarts from her daily.

Mr. Mory says if he is out of cotton seed one day his cows will shrink a quart each, and neither Indian meal or wheat shorts will keep them up to their quantity, but after feeding cotton seed again one day, they will come up again to their full rate.

Neither of the gentlemen have ever had a case of garget or swelled udder on their premises, which fact does not coincide with the experience of Dr. Loring and some others who think so little of the value of cotton seed meal for cows.

I know of two herds of milch cows in the town of Franklin, Mass., that are fed on cotton seed very freely, that are healthy and free from anything like garget.

In my own experience I have been quite cautious in the use of cotton seed. I have rarely fed more than two quarts per day to a cow. But with such examples as those of Mr. Mory and Mr. Belcher, I feel like using it a little more boldly as it is one of the cheapest grains I can buy, and according to the chemists one of the richest.

In an article on this subject, in the *Rural New Yorker*, Mr. X. A. Willard says:—

Cotton cake does not contain any large amount of mucilage nor anything that produces, on mixing with water, a volatile pungent and injurious essential oil.

Cattle often take at once to it, and even when fed upon linseed cake they soon get accustomed to the taste of cotton cake, and apparently eat it as readily as linseed cake. It contains a very high and much larger percentage of flesh-forming matters than linseed cake. This circumstance suggests that cotton cake may probably be given with great advantage to *young stock and to dairy cows*. As by far the largest proportion of nitrogen of food is not assimilated in the system, but

passes away with the excrement of animals. the dung produced by stock fed upon cotton cake will be found particularly valuable.

In comparison with linseed cake, there is much less mucilage and other respiratory matter in cotton cake. This deficiency is compensated, to a certain degree, by the larger amount of oil in cotton cake. The proportion of indigestible woody fibre in decorticated cotton cake is small, and not larger than in the best linseed cake. Lastly, it may be observed that the ash of cotton cake is rich in bone material, and amounts to about the same quantity as that contained in other oil cakes.

#### THE WOOL INTEREST.

A stock dealer, who is engaged in buying and shipping sheep to the Cleveland slaughter market, informs us that there is but little, if any, better satisfaction among wool growers in the pursuit of sheep husbandry now than there was a year ago; and that thousands of sheep are weekly slaughtered in Ohio for their pelts.

Flocks of common stock sheep are bought readily at prices ranging from fifty cents to one dollar and twenty-five cents per head; superior lots of fat wethers bring only about \$2.50 per head. Very many flocks have suffered much during the past season with foot rot, and such are now thrown upon the market with slow sale at fifty cents to one dollar each.

Ohio does not appear to be alone in the panic, for the wool growers in other States are losing heart, and also in other countries. The *Kansas Bulletin* asks: What is the matter with our wool interest? Is our climate so far modifying that we require fewer woollen fabrics to protect our bodies through the day and keep us warm o' nights? Or is mechanical invention going to supersede the necessity of raising fleeces? The ladies seem to have a rage for underclothing made of paper, and some inventive genius has applied this material to the manufacture of carpets.

Sheep farmers of Vermont and Michigan and other States are losing heart in their property, and contemplate a wholesale slaughter this fall, as only the best grades of wool pay the expense of raising. Indeed the case has grown so bad that a writer in the *North American Review* declares that the millions of sheep which figure in our agricultural returns as constituting so much wealth, ought to be erased from the tables, as they form an element of actual impoverishment.

A correspondent of the *New York Times* also, writing from Brazil, mentions that an inevitable crash awaits the heavy wool interest of that country. "Sheep are going down in price rapidly, and wool is also declining, and it is believed by some that the sheep in that country will go unshorn, as their wool will not pay the expense of shearing and marketing. All the sheep raisers are trying to get out of

the business, while thousands of carcasses are every month boiled down, the pelt scarcely paying the cost of the animal. Many sheep farmers who paid two dollars per head for their stock, now cannot sell for one-fourth of that sum, and, as a consequence, sheep are regarded as most undesirable property at all."

Foreign wool interests have been affected by the protective duties passed by Congress, and although the tariff was what this country needed, farmers got their expectations too high, and so multiplied the number of sheep as to over-do the business and bring on a panic.

The number of sheep in the Union more than doubled between the years 1860 and 1866, and increased about two millions between 1866 and the time the wholesale slaughter began.

The Western States were filled up while the excitement was high, and every available sheep used to increase numbers without particular regard to quality. Farmers in New England and the Middle States also lost sight, in a measure, of their future interests, and dropped the proper rules in the principles of breeding and looked only to the multiplying of their flocks; for anything bearing the name of sheep was quick sale, and at prices before unknown. The result of all this is now fully realized, but this reverse will have its end.

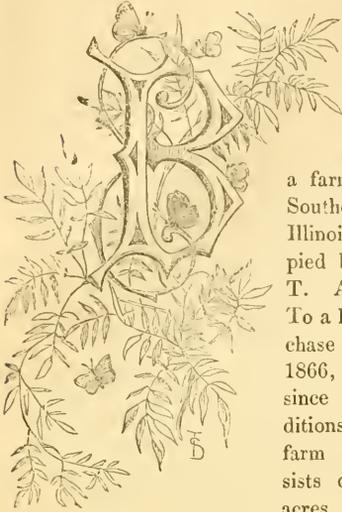
A level will be found in the wool market sooner or later; and we still admonish the farmers to be cautious how they sacrifice their flocks. Sell off the old scrubs at whatever they will bring, for there is no profit in winter feeding any inferior animal. But selling good sheep now for a song may prove as unprofitable as did the buying of inferior flocks a few years ago at big figures.—*Ohio Farmer*.

**SHEEP-SKIN MATS.**—Make strong soapsuds, using hot water, and let it stand till cold; then wash them in cold water till all the soap is out. Next dissolve half a pound each of salt and alum in a little hot water, and put into a tub of cold water sufficient to cover the skins, and let them soak twelve hours; then hang over a pole to drain. When well drained, stretch carefully on a board to dry. Stretch several times while drying. Before they get entirely dry, sprinkle on the flesh side one ounce each of pulverized alum and saltpetre, rubbing it in well; then lay the flesh sides together and hang in the shade for two or three days, turning them over every day till perfectly dry. Finish by scraping the flesh with a blunt knife to remove any remaining scraps of flesh, and then rub the flesh side with pumice or rotten stone and the hands.

Very beautiful mittens can be made of lamb skins tanned as above.—*Western Rural*.

—Mining has ceased to be the leading interest of California, and wheat is now King. The present year's crop is estimated at twenty million bushels.

## AN ILLINOIS FARMER.



**BROADLANDS** is the very appropriate name given to a farm in the Southern part of Illinois, occupied by Mr. J. T. Alexander. To a large purchase made in 1866, he has since made additions, and the farm now consists of 26,500 acres. Cattle-

feeding is the leading object in the management of the farm, and about 800 are weekly sent to the New York market, making more than 40,000 per year. By means of dams and embankments on two streams of water which pass through Broadlands, some twelve ponds have been made for watering stock, which cover some 200 acres in all,—one pond containing 50 acres, and is from four to eight feet deep. About 100 miles of Osage Orange hedge have been set out. A row of this hedge runs entirely around the farm. The farm is divided north and south by three road-ways, two miles apart. They are sixty feet wide, and a hedge is planted on each side of them. An avenue 150 feet wide divides it east and west, also set with hedge. Meantime eighty-five miles of post and board fence are set. The posts are driven by a post-driver. The posts are sharpened on two sides, like a wedge, and are found to drive easier and stand better than when sharpened in the usual way.

Breaking prairie has been done in the old way, with five yoke of oxen, in May, June and July. During the last June twenty of these teams were kept running, employing 100 yoke of oxen.

Mr. C. L. Eaton, the superintendent of Broadlands, has been experimenting with trench ploughing, having ploughed last year 2000 acres, which were put in corn, and gave a good crop. A large portion of the corn grown this year was ploughed in the same way.

This is done by ploughing a furrow as thin as can be well turned, then a furrow of the lower soil about four inches deep is brought up and thrown on to the sod. This furnishes a seed bed, and enables the crop to be thoroughly worked, producing crops the first year equal to old ground. This process is commenced in April and continued through May.

In sowing for pasture, one bushel of red clover and ten of Timothy are mixed, and one peck of the mixture sown per acre. White clover and blue grass come in of themselves.

Mr. Eaton is trying an experiment this year of seeding with corn. This is done by a fine preparation of the soil by ploughing and harrowing, then planting to corn, after which the whole surface is sowed with the pasture mixture. Of course the corn is not worked at all. By the time the grass is well up, the corn affords sufficient shade to protect the young grass, and it gets a good stand and fine growth. He has seeded 300 acres this spring in this way. It now looks finely. The corn will make a good crop—though less than if worked.

The present force on the farm is 160 able-bodied men, mostly Scandinavians, who receive \$20 per month and board. There are six stations on the farm, each with from eighteen to twenty-two men and a foreman and a man cook. The bread is baked daily at the centre station or headquarters, and distributed to the other stations, together with beans, rice, bacon, beef, mutton, fish, sugar, coffee, tea, flour, hominy, potatoes, molasses, vinegar, salt, pepper, dried apples, sour kroust and candles. The living is good and costs about thirty-five cents per day.

There are, at present, 4000 head of grazing cattle on the farm; 120 yoke of working oxen; 100 horses and mules, and about 500 hogs. The grazing cattle are brought from Texas. When the arrangements are completed, Mr. Eaton expects to manage from eight to ten thousand head, by the labor of one man to a thousand. There is no disease among the stock. On the north side of the farm there is a strip of land under cultivation six miles long and half a mile wide, and another patch, east of this, five miles long and one mile wide. There are 400 acres of wheat, 140 of oats, 150 of Hungarian grass, 120 of rye, and various patches of potatoes for the use of the farm, and fully five thousand acres of corn;

all of which, says the editor of the *Prairie Farmer*, who rode fourteen miles from end to end of this field, while it was growing, promised a yield of fifty bushels per acre. The wheat and rye were in the stack at the time of his visit and the oats nearly ripe. They were putting up 1500 tons of hay, and expected to save 1500 bushels of Timothy seed. The writer says it is hardly to be supposed that all the operations on this farm are carried on with the same neatness and order that can be attained where things are on a small scale. A little Yankee ingenuity might save time and labor, and less would be done by mere brute force. As a whole, he doubts if any experiment in farming on so large a scale has ever proved so successful as this promises to be.

*For the New England Farmer.*

#### THEORETICAL AND PRACTICAL KNOWLEDGE.

Nothing can be more erroneous than the idea that all book knowledge is theory, and that knowledge obtained outside of books is experience. The fact is, that books are largely the mere compilations of the experience of the best men connected with the department,—be what it may,—about which they were written. Consequently the man who reads the most has the most experience. But when we act on the experience of others, we must ascertain whether the circumstances under which we would apply it, are the same as those under which it was gained. It is just here where so many have failed in attempting to make the experience of others their guide, or, in other words, in applying what is called book knowledge.

One man for instance, puts his experience with regard to certain fertilizers, or with regard to the method in which they were applied, in a book. The soil on which he experimented was a stiff clay, on which certain fertilizers and certain methods of culture have been productive of the very best results. Another man having read the result in that case tries the same articles of manure and the same methods of culture, with the very worst success, because they were applied to a light sandy soil, which require a different culture and a different management, and at once book knowledge is condemned. The trouble was in disregarding the difference in the soil, and in other circumstances under which the experiments were made. The book or paper was at fault only so far as it fell short of stating the character of the soil and other conditions, which were essential to a proper understanding of the result. But the logic of the experimenter was at fault in attempting to apply

the experience of another to a different class of circumstances.

Then, again, there have been those who claimed for books and science that which they were unable to perform. It was claimed, not long ago, that by an analysis of the soil it could be ascertained precisely what particular element was lacking; and this fact once ascertained, the farmer could obtain the article in such a concentrated form that if he could not carry a sufficient quantity of it in his vest pocket to manure an acre, he certainly might in a common-sized pail! Now the exercise of a little common sense should have satisfied every one that the analysis of soils, sufficiently minute for this purpose, was simply impossible. If we notice the amount of ashes that is left after burning a cord of wood, we shall find that both bulk and weight are very small indeed, compared with the bulk and weight of the wood. What has become of the balance? It has been converted into gas and watery vapor, and returned to the atmosphere from whence they came. The small bulk of ashes is all that came from the earth. Then, again, examine the sap as it flows from an incision, and notice how clear and transparent it is,—clear and limpid as the bubbling spring,—yet it contains every element necessary for producing a crop of luscious fruit or a stately growing forest. How infinitely small must be the particles of those minerals which are destined to form a part of vegetation thus to float in, and form an undistinguishable part of, this clear fluid! How wonderful the chemistry of nature that prepares the food of the plants, and the paints of the flower! How far beyond the tests of our chemists are these minute atoms! And yet if he would detect the atoms necessary to plant life, he must reduce the elements of the soil that he tests in his crucible, to the condition in which they exist in the sap. In the soil of your field or in the rocks from which that soil originated, he may find what he deems the elements necessary to fertility. But we all know that plants will not grow in stones, although they may contain every requisite element. And why? Because those elements are not in a condition to be made available to the wants of the plant. And the cause for the barrenness of many of our unproductive soils, is not because they do not contain the requisite elements, but because these elements are not in a condition to be made available.

Those rocks must be disintegrated, and those finer particles must be made still finer by heat and frost, by rains and air, aided by the plough, the harrow, the cultivator, the hoe, the spade and the rake.

When you give your soils or your rocks to the chemist he pounds them in his mortar; he applies heat and acids to reduce them as nearly as possible to their primitive elements, before he can ascertain what they consist of; and farmers have to do much the same thing, but

on a larger scale, to make them available to the plant. They must be finely divided in the field as well as in the chemist's crucible. When a piece of land is what we call run out or exhausted, only those elements which were available to plant life are used up; and we must either wait the slow action of heat and cold, rain and air, to produce those available elements from the soil, or we must apply them in a condition already available, and generally known as manures or fertilizers. The chemist, therefore, may be able to decide whether the elements necessary to fertility are in the soil; but with all his science he cannot determine whether those elements are in a condition to be immediately available as plant food. This vegetation alone can decide. T. W.

*Boston, Mass., Nov., 1869.*

*For the New England Farmer.*

### SPARE THE BIRDS.

Thus will every man who has any interest in the soil, and who is worthy of the human form, exclaim with me, when he has had the same instruction that I have had on the subject. Idle boys! rambling about, shooting birds from mere wantonness, have you never been taught by your parents or guardians that it is morally wrong for you to commit such piracy upon the feathered "tenants of the air," without any other motive than that of indulging in the debasing sin of cruelty? If you have never been taught this, much less, perhaps, have you been taught that it is physically wrong, and against your own interest and that of your neighbors.

But it may be asked, why am I so interested in the birds, and of what consequence are they? I am interested in a pecuniary point of view; they save and protect my property, and yet they do no more for me in this way than for every other man who tills the soil, or who is fed by the proceeds; and yet, people, regardless of their own interests, will suffer them to be destroyed!

A week or two ago, I was walking in a corn-field, witnessing with no very good humor the devastation by the grub-worms; whole square rods being cut down by these underground destroyers, with not a blade left? There, said I, go my labor and expectation through the long and weary days of spring! Thus I moved on, and observed many hills with the blades left untroubled by the worms, but a small hole was bored down an inch or two deep, close to a corn blade in each hill. This, said I, is the work of the felon crows; what the grubs leave, they can destroy,—thinking that they made the hole to rob the blade of the kernel. But observing the great number of perforations and no corn pulled up, as is the usual manner of crows, I dug down, and to my surprise, found the kernel there. Then the truth flashed upon my understanding,—this is the work of the birds. In the morning when the grubs are near the surface, and close to the corn blades to begin their gluttonous work, the birds instinctively dig down with their beaks, seize and devour the grubs, or bear them away to their young ones; thus saving thousands of hills from the common destruction.

Again, have you never observed in sultry weather before rain, the swallows fly skimmingly through the air near the earth? They are catching insects that are forced by some change in the atmosphere above, to take possession of its lower strata. And so their invariable occupation is brought before our observation; namely, that of destroying the

myriads of insects that poison our atmosphere, and render it malarious and pestilential. I wish that State Legislatures would enact severe laws that would place such idle bird killers in the houses of correction of their respective States, where they can be effectually reformed in this respect.

Parents and guardians, I entreat you, use your best influence over your children and wards and stop such outrages; take the green-hide if necessary, but by all means prevent it. Again I say, "spare the birds."

The foregoing, written by myself, was published in the *Boston Cultivator* twelve years ago. Time has only confirmed the truth of the assertions then made. The present year I have cultivated a piece of corn on the south side of a contiguous wood, where many birds had their nests. The ground was apparently filled with grub worms, as the hoe frequently brought them up in sight. I noticed the diligence with which a pair of robins examined the corn rows; walking with head erect a moment, then running swiftly along till with a sudden dive and motion of the wings they would seize a grub and bear it to their nest in the wood, then immediately return and recommence the search, coming up fearlessly within fifteen feet of me, knowing, perhaps, that I was their friend. My corn was eaten but very little, while as I learned from a neighbor that his, which was not situated near the woods where the birds were so plenty, was badly dealt with, and he was obliged to go over the rows and dig the grubs himself.

I have heard some so-called farmers complain that the robin redbreast and the gold robin eat their cherries and green peas, as though those were all the crops they had to lose. What little they might lose in that respect was doubly repaid by protection of their field crops.

Naturalists seem to be divided in opinion as to the usefulness of the crow. One of your correspondents, not long since, declared from personal observation that the crow lives largely on the offspring and eggs of birds. I am at present inclined to credit the charge, for many a time is the vagrant crow seen flying over our fields with half a dozen small birds on his back, pulling at his feathers, and as many more in the chase being eager to assault him as a common enemy. They know, doubtless, who are the invaders of their domestic castles, better than we do. I, for one, have suffered much from the depredations of the crow in the corn-field patiently, believing that his virtues more than compensated for his faults, but if the charges of your correspondent are to be added to his other crimes, let him be exterminated!

*Epping, N. H., 1869. M. J. HARVEY.*

—A Champaign County, Ill., correspondent of the *Country Gentleman* says he doubts whether Central Illinois has raised more than half wheat enough to supply the bread eaten therein for the next year.

For the New England Farmer.

### SUCCESSFUL FARMING.

It is reasonable to suppose that the millions of farmers now laboring to produce food for themselves, and to feed the cities, desire success. Consider then, What is successful farming? It cannot be measured by the amount of money accumulated.

1. The fertility of the soil is stock in trade.
2. The health, strength, vigor and honesty of manhood, is stock in trade.
3. The happiness of a wife and family is stock in trade
4. The reputation of the business is stock in trade.

All these may be exchanged for money. And the barren exhausted soil, the premature old age, the scattered family that hate the farm, make farming in the greatest degree unsuccessful, notwithstanding the amount of money for which this stock is bartered may be large.

This is shown by the deserted farms and hearthstones in all the older parts of the United States. Fertility, strength and reputation have gone with the crops of grass, corn, tobacco and cotton.

We therefore conclude that the four items mentioned must all be in a good degree retained, and a fifth added.

5. Money accumulating.

These items should be regarded in the order mentioned. If the last is put first in the estimation, the money accumulated becomes money deposited, and the affections and anxieties are entwined around it so powerfully that it draws the first four away from the farm disastrously.

Consider, now, how successful farming is manifested or shown.

1. By the productiveness of the soil in judiciously chosen crops and the thrifty cattle, safe, tidy and convenient buildings and fences.
2. The enjoyment, satisfaction and pride experienced by the farmer and family in his pursuit.

A discontented man shows it in his management, and it brings a reproach upon his trade. It is desirable and right for one to feel a pride that he can so co-operate with Nature in bringing about glorious results.

3. By the esteem felt for, and respect shown to the successful farmer by others of the craft and by the public!

Successful generals have their triumphs or grand receptions. Lawyers sit on the judges' bench, and in the senatorial chair, and their words of wisdom are treasures to others of the profession. The eminent doctors and divines, each in their sphere, receive reverence and respect.

A few farmers in centuries past became noted. But in this age of enlightenment and mental activity, all successful farmers should

become well known and honored by those around them, and by the tillers of the soil throughout all lands. *Abundance, enjoyment and fame* are results. Consider now, the combinations that tend to make farming successful.

1. Theoretical knowledge; because there should be an idea how a thing is to be done before it is attempted.
2. Practical knowledge; this should in part be gained as an apprentice, so that the result of failures may be, where it belongs, a loss to instructors.
3. Executive ability; without which knowledge cannot be well applied.
4. Favorable circumstances; or, in other words, the blessing of God, shown in health, favorable seasons and providential care.

Agricultural colleges are one of the means to increase knowledge. Z. E. JAMESON.

### PRUNING IN AUGUST.

The *Germantown Telegraph*, in an article on pruning apple-trees, makes the following statement, which is published for the benefit of those who have orchards to take care of. Most of our orchards have been badly managed, as their appearance and condition show. Generally they have been pruned in spring, a time now considered injurious to the trees. "Here, at the North, we have no class of people more successful with orchards than the United Society, or Shakers. They consider their trees as organized productions, capable of being improved by proper care, and injured by neglect and mismanagement. Of course, they are careful to see them fed with proper diet, and in all respects dealt with as things of vegetable life, having constitutions to be protected and preserved as they should be. We were passing their village at Mount Lebanon, New York, last August, and found them engaged in pruning some beautiful apple-trees by the way-side. The novelty, to us, of seeing pruning performed at this busy season induced us to inquire why it was done. The reason given us was, that at that season the sap was thick, and of course would not run to waste, and that, if pruned then, a healing process would commence which would eventually cover the wounds, and protect the tree from all damage through cutting off branches. In a subsequent visit to the society, we were invited into some of the orchards, which had for years been subject to this system of pruning, and it was a luxury to see their healthy trees, free from the wounds of injurious pruning, and, in some instances, with scarcely a scar to show the operation had been performed."

CORN FODDER.—Lyman Call, East Durham, P. O., writes the *Canada Farmer* that he keeps a dairy of twenty-six cows, the milk of which is disposed of at a cheese factory;

that last June he sowed an acre of corn in drills, and commenced cutting and feeding to the cows the first of July. When the September rains came on, he omitted the corn feeding four days, and the result was a diminution of fifty-two pounds of milk per day. The corn feeding was again resumed, and in four days the cows gave their customary quantity of milk. The increased flow of milk doubly paid the cost of the food given.

#### SHEEP-SHEARING BY MACHINERY.

Machines for shearing sheep and milking cows have been invented, and they have been used sufficiently to demonstrate the possibility of performing both operations. City cows have been milked, and city sheep have been shorn by machinery. But in the country, farmers are still obliged to milk their cows and shear their sheep by hand—not the only difference between city and country farming! Some of the “farmers” of New York city have recently witnessed the operation of two different sheep-shearing machines. A committee was appointed by the New York Institute Farmers’ Club of that city, to see two sheep sheared by these machines, and here is the report that they made of the working of each of them:—

The machine of Mr. Anderson cuts the wool on the same principle as a mowing machine, being driven by compressed air, conducted to the shears through a rubber tube from the bellows, worked by a crank, and turned by a second person. The machine is very ingenious in its construction, and when sharp will cut the wool closely and rapidly; but it gets dull quickly, owing to the delicate construction of the knives. The power is not sufficient to clear the knives of the wool, the machine presenting the same difficulties in operating that a mowing machine does in thick, wet grass. Without increased power and an ability to keep sharp longer, and not to clog so easily, the committee could not commend this machine, but yet it has some decided merits, which are the closeness and evenness with which it shears.

The machine of Mr. Earl shears with a rotary knife with two cutting points, rotating on a bed plate with notches or guards which rest on the body of the sheep, and is attached to a universal joint, connected by a revolving rod to a wheel, turned by a belt driven by a crank and wheel turned by a second person. The machine is easily adjusted, and the universal joints will turn in any direction, allowing the shearer to work the knives without the least difficulty on any part of the sheep. The committee are of the opinion that in the hands of an experienced operator the machine will do good work.

EXHIBITION OF WOOL.—The American Institute, as will be remembered, made a very liberal offer of space at their late Fair in New York, for an exhibition of wool. It was hoped that the wool growers of the country would make such a show as would indicate their ability and their purpose to supply our own manufactories with the various grades of wool required for the woolen fabrics they produce. They have failed to do so. Col. Harris, of the *Ohio Farmer*, visited the Fair which was

held in the Skating Rink in the north part of the city, and says, “I hunted the Rink all over for the much-talked-about show of wool, and found about enough of fragments to make two fleeces!”

#### EXTRACTS AND REPLIES.

##### PREMIUMS AND STATEMENTS AT FAIRS.

At the last fair of the Middlebury society, held at Concord, I had a number of articles for exhibition, and among them twelve pounds of butter. Upon examination, the committee said it was the best on exhibition. But as I did not state the temperature of the cream when churned, they declined to award it the first or any premium. I gave what I thought to be a full and correct statement of how it was made, supposing the object in requiring a statement was to get information. The committee, however, awarded the premiums to those who made their statements according to the requirements of the trustees and not to the best article. The committee put the card for the first premium upon a lot of butter which they themselves admitted was not the best, and it stood there exposed to the gaze of thousands, indicating not the best butter but the best statement. Consequently the statements took the premium, not the butter. Now I contend that this is wrong. If the committee could not give the best article the premium, because of a little defect in the statement, then I say withhold it from any one until another year. To give premiums to anything that may be brought in, because the statement is up to the requirements, is to encourage skilful writing, not good butter-making. I enclose a copy of the statement I made, and am confident that any one who follows that method cannot fail to have the first quality of butter; but at present I do not wish the statement published. A BUTTER MAKER.  
*Middlesex County, Mass., Oct. 23, 1869.*

REMARKS.—One object of awarding premiums at agricultural fairs is undoubtedly to reward and honor skill; but another, and perhaps a higher object, is to collect and disseminate information. It is desirable and pleasant to look upon a nice article of production or manufacture, but with our Yankee inquisitiveness, we are very apt to ask, How was it done? or, How was it made?

We have known societies who made no provision for an answer to any such questions, but awarded their premiums on the apparent merits of the articles or animals submitted to their inspection, and left the public to find out the secret of superiority as best they could. This course has been so unsatisfactory that the managers of our fairs now generally require a more or less full statement from those to whom premiums are awarded. If they are justified in demanding any statement at all, must we not concede to them the right of specifying the character of that statement, and to indicate the points on which information is desired?

There has been considerable discussion by butter-makers of late, as to the proper temperature of cream for churning. The managers of the Middlesex society may have wished to settle this point, or at least to learn the practice of the butter-makers of the county on this one subject. If they offered their premiums on condition that this fact

should be stated, would it be right for them as law-makers to become law-breakers?

The best rules and the best laws may seem to operate unjustly in individual cases. It certainly seems unjust that, as in the case of our correspondent's butter, the poorer article should have worn the "blue ribbon," but under the "rules" imposed on the awarding committee, we do not see how they could have done otherwise. As farmers make little pretensions to skill in drawing up legal documents, might there not be a provision by which, as lawyers sometimes do, they could amend their statement so as to meet any requirement that might have been overlooked in writing it out.

With the exception of the omission which our correspondent admits, his statement is full and clear. Even the temperature of the milk room is given, and, as he says, we think the details which are stated would enable any one who followed them out to make premium butter. And we sympathize with him in his disappointment in finding that the omission of a statement of the temperature of the cream when put into the churn should have given to another the honor which otherwise was so justly due to him. And we venture to express the hope that next year he will exhibit not only the best butter but the most complete statement of any dairyman in the county.

#### TO HIM WHO BUILDETH A BARN.

I wish to make inquiry, 1st. Have you decided on a plan for its construction? If so, let me ask you to reflect much upon that plan and be sure that it is the best one possible for your location. You will build for the use of yourself and coming generations, and how important that it be so arranged that you and they may accomplish the greatest amount of work in the least possible time. At times you will have to "pitch off and mow away" a load of hay or grain when a quarter of an hour may save the wetting of a ton of hay or a load of grain, and a consequent loss. Is that plan of yours so arranged as to save the most time and labor in unloading? If so, you will have an *attic* floor or drive way in the roof. It is the cheapest help a man can have to "mow away" crops, and will save you a large interest on its cost. No man ever regretted making this labor-saving machine, who had used it two seasons. Such a floor way in the roof is also the cheapest and the best store-house for carts and wagons in winter.

You also will have to spend many hours during the cold winter days in "doing chores." Does your plan arrange your stables and feeding pens for all kinds of stock so as to be got at with the least waste of time, strength, fodder and comfort? If so, you will be able to review your whole regiment of animals almost at a single glance.

Of course you have a cellar for manure, &c. But is it an *attic* cellar,—a cold frozen space above ground,—or a warm cellar, mostly below surface, where manure will not freeze nor pigs nor poultry suffer?

Think well, my dear sir, on the plan of the barn you are to build, being careful not to copy the commonest size, or the exact arrangement of all the old barns in your neighborhood, if it is possible to do better. Do not be afraid to strike off on a new style of your own, if satisfied that it is an improvement. Never forget that it costs no

more to shingle a tall barn than a low one; that it is much less expensive to keep in repair one large barn than two or three small ones, and that it is much easier to pitch hay and grain "with gravitation than against gravitation."

If in debt, you cannot afford to build without an upper drive way, even on level land. C. F. N.  
Randolph, Vt., Nov., 1869.

#### THE THOUSAND-LEGGED WORMS.

Some two years ago Mr. George B. Hale, of Dover, Mass., sent us specimens of these worms, known as the American Myriapoda, Centipedes, Millepedes, &c., and stated that they were greatly injuring his crops, having in one case destroyed a field of turnips, in which they were so numerous that he had counted no less than five hundred on

a single turnip. The annexed cut of these worms is copied from Prof. Tenney's late work on Natural History. Though we had occasionally found them on potatoes and turnips, we had supposed, as taught by such scientific men as Professors Harris, Tenney, &c., that they were comparatively harmless, as they were said to feed on dead, decaying, or diseased vegetable matter, and not on that which was live and healthy. A similar reply was made by Prof. Asa Fitch to a communication in the *Country Gentleman*, by a man in Pennsylvania who complained that these worms had almost totally destroyed every thing of a vegetable kind in his garden for the last three years, including strawberries, cucumbers, radishes, beans, onions, &c.

Prof. Fitch has, however, since that time paid particular attention to the habits of the Millepedes, and he now says:—

"Within a few years past, I have had these worms under particular examination, and can now present most conclusive evidence, showing that they are not harmless and inoffensive, as writers have taught us to believe, but that they attack and devour with avidity tender succulent vegetation which is in a perfectly healthy and growing state, and that they are liable to become so multiplied in our gardens as to be one of the very worst pests with which we have to contend."

#### BURSAL SWELLING.

Sometime since I wrote you in relation to a swelling upon a cow's knee, which you termed a bursal swelling, and directed me to open it and bandage with a compress bandage. I did so, twice, but it filled again in twenty-four hours. If you know of any other remedy please inform through the FARMER. J. H. BOURNE.

Groton, Mass., Oct. 23, 1869.

REMARKS.—Such swellings will often fill up, as this has. Surgeons sometimes make a small opening, squeeze out the contents, and inject with a syringe, a solution of sulphate of zinc, half an ounce to a pint of water, retain it a few minutes and then empty it out and apply the bandage. Repeat this several times if it fills up. But we think it would be better to consult your family physician, if there is no intelligent veterinarian in



your neighborhood. It is a somewhat nice operation, and we presume that your doctor would be willing to assist you, and as it is somewhat out of his line of practice, would do so rather as a neighbor than as an expert.

#### SPECIAL FERTILIZERS.

I would like to ask you a few questions, which you will please to answer in the FARMER, it may benefit others as well as myself. It is said by Agricultural Chemistry that plant food may be divided into four necessary elements; these must exist in the soil. The absence of either deteriorates the strength of the plant and weakens its productive powers. The necessary elements are: potash, and lime. These four elements, it is said, make a complete manure. Now, what I want to know is this: What proportion of each of these elements does it require, and how mixed, and should muck should be added? Will it pay to buy air-slacked lime at \$1.25 per barrel for a fertilizer? Are hard coal ashes worth drawing two or three miles to apply to land? ASA WARE.

*Palmer, Mass., 1869.*

REMARKS.—The proportion of the several fertilizers is of little importance, provided there is enough of each; neither is it necessary that they should be mixed. In many cases it is more convenient to apply them separately.

We think the lime will pay if you have good material to compost it with. We have found coal ashes worth more applied to currants, peach trees, and other trees, to keep off the borers, than to apply to grass land.

The manner of drawing it must depend upon circumstances. It certainly would not pay to hire a team to do so; but opportunities may occur when you could do it with your own team, possibly at a remunerative cost. Its value, however, as a fertilizer is generally considered as very small.

#### PRESERVING NEW CIDER.

Will you inform me through the FARMER how to prepare new cider for bottling, so that glass bottles will hold it? H. C. NICHOLS.

*Pittsfield, Mass., 1869.*

REMARKS.—Some persons add a pint of mustard seed in a cotton bag, to a barrel of cider; others throw in three quarts of barley, and state that it will keep it sweet. A sure way is to filter it through clean sand. Let it run slowly from the barrel into a tub nearly full of sand, and from the tub pass it into another barrel. These are easy and cheap modes. There are undoubtedly others, with which we are not acquainted.

#### SICK CALVES.

I have some calves that are sick and seem to have a trouble like consumption. They cough and grow poor; act dozy; their eyes run, and look red. Some of my neighbors' calves have died of the same disease, and I expect to lose mine unless some remedy can be found. Can you or some one of your subscribers recommend something beneficial, and greatly oblige G. W. A.

*Milton, Vt., Nov., 1869.*

REMARKS.—We have shown this statement and inquiry to several of our neighbors, but are uncer-

tain as to the disease, and consequently as to the remedy. We have thought it possible that it might be caused by minute worms in their wind-pipes, which Mr. V. M. Hubbard of Rochester, Vt., lately said in a communication to the *Woodstock Standard*, often occasion great mortality. He recommended the following remedy:—Asafoetida, three ounces; aloes, three ounces; vinegar, one quart. Boil together till dissolved. Give each calf a tablespoonful in each nostril every third morning, taking care to hold the head well up to prevent waste.

#### A CRIPPLE AS SHOE-MAKER, GARDENER AND HOUSEKEEPER.

I wish to say a good word for a crippled occupant of one of the little brown cottages in this town, who in his youth lost one of his legs, and since the death of his parents has lived alone, and though in feeble health has nearly supported himself by work on shoes, and in his garden and house. He keeps a cow, takes care of the milk, and makes butter that no dairywoman would be ashamed of. He also keeps a pig, and his sausages, souse, &c., are equal to that made by any house-keeper in the neighborhood. His house is always clean, and everything in it is kept in order. His garden is cultivated very neatly, and produces all the vegetables grown in our climate, and his front yard is so tidy and well kept as to attract the notice of the passer-by. He is now over sixty years of age, and of late his solitude has been enlivened by a small child, which lives with him. He is ever ready to entertain those who call upon him, and whether their mood be gay or grave, all find in him a genial companion, and they leave with their sympathy excited for one who, though a cripple, has done what he could in a world of activity and usefulness. L. R.

*West Salisbury, Vt., Nov., 1869.*

#### GARGET IN COWS.

Many diseases or irregularities of the bag, the teats and the milk, are popularly called among farmers *garget*. For the most common of these, such as swelling, caking of the milk, small lumps in the teats, causing great pain in milking, inflammation of the bag and similar troubles, there is a simple and specific remedy, which has been successful in many cases. One ounce of Hydriodate of Potassium dissolved in one pint of soft water. Dose for a full grown cow—one large spoonful mixed with a little bran mash, twice or three times a day, according to the virulence of the disease. It should be used with caution, as it has a tendency to dry up the milk. L.

*Boston, Mass., Nov., 1869.*

—Gilbert Whipple, of Sheffield, Lorain County, O., while examining a head of wheat, a short time ago, shelled out the grain and tossed it into his mouth. One of the kernels was not divested of its shell and beard, and the beard soon reached the throat, where it lodged, and no effort could remove it. It soon became very troublesome and painful. Swelling followed, succeeded by suppuration, but still the beard was not carried off. A second swelling and breaking failed to bring relief. It is difficult for the sufferer to take necessary food, and his case is said to be both painful and alarming.

## SEEDS: THEIR ORIGIN AND VITALITY.

**F**ew employments in life afford to those engaged in them so many interesting phenomena as that of the farmer. Changes take place in his trees that he cannot account for; such as blossoming in September instead of May. Curious and unthought of qualities appear in the progeny of his stock, and unknown plants spring into life in the soil and on the rocks, which make his *thinking powers ache* in the attempt to find where they came from, and what they are.

A well was dug in the early part of winter, and the earth thrown out from a depth of thirty-five feet below the surface. Some portions of this, from the lowest point, were immediately hauled away and deposited in a heap. Quite early in the following spring, signs of vegetation were observed, and in July, a luxuriant growth of plants covered the ground! What were they? Where did they come from? How did the seed get thirty-five feet below the surface? No other plants in the neighborhood were like these!

In ditching, the farmer throws out banks of soil, some of it four feet below the surface, which are often covered the same season with plants that have not been seen before in that locality. Where did the seed come from? If the same kind of plants grew in that vicinity before, the winds, or the birds, or the squirrels, might have taken the seed to this spot.

How came the seed at the bottom of the ditch dug in the swamp? On this point there are different opinions. In the first chapter of Genesis, and the eleventh verse, it reads:—

“And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, *whose seed is in itself*, upon the earth: and it was so.”

The seed, then, must have been created before the tree grew. The seed was upon or in the earth; but when the plant had matured, it had seed perfected in it, and was thereafter capable of propagating itself.

A common opinion is, that all seeds were originally deposited in the earth at the creation, and that they have been mingled with the solid earth in every conceivable situation,—in some instances near the surface and in others at immense distances below it, where the tem-

perature is always so low as to prevent germination. This has been brought about by the convulsions of nature,—by travelling glaciers, earthquakes, land-slides and volcanic action, upheaving the earth in one place, and depressing it in another; so that if all seeds were once upon the surface of the earth, they have become mixed with it, and are now found in most places where excavations are going on.

But others entertain a different opinion; believing that the work of creation is still going on, and that when such cases occur as those alluded to, the seeds *have just been created*, and especially placed where the plants sprung from them. One of the most learned persons of our acquaintance, a “doctor of laws,” and a studious, Christian gentleman, has stated to us that such is his belief. What evidence he can adduce to justify such a conclusion we do not know; nor do we know of any, besides that alluded to in Genesis, to warrant the belief that they were all created as narrated in the Mosaic account.

If they were created “*In the beginning*,” their powers of *vitality* are as wonderful as the creation itself. Through how many inconceivable ages must a grain of mustard seed, for instance, have laid in the dark chambers of the earth, and apparently as lifeless as the stones around it! And yet, when brought into the genial sunlight, moisture and air, how quick it has burst into life and activity, and invited the birds into its branches to build their nests there.

Does not this afford us hints, or give us positive assurance, that any seeds may be preserved with all their vital powers unimpaired, if we but place them in favorable positions, as nature seems to have done! It would seem so; but we find seed laid away below the action of frost, throwing out a germ, perhaps, and then decaying. They are too deep to spring up to the light and air, and yet fail to preserve their vitality. Who can explain this?

Most of the seeds commonly used by farmers may be preserved with their full powers for several years in succession, by placing them where there is a dry, even temperature at about forty-five or fifty degrees. In such a position, and put up in brown paper bags, seeds will keep good for an indefinite time. But with ordinary care, beans of all kinds will keep good three or four years; beet seed, the

same; carrot, two to three; corn on the cob, three or four; cucumber, eight to ten; cauliflower, five to six; onion, two to three; parsnip, the same; pea, five to six; pumpkin, eight to ten; squash, the same; lettuce, two to four; melon, seven to ten; turnip, four to six; and radish, three to five years. We have no data as to the keeping of grass seeds, but have no doubt that if kept in a proper place, most of them would retain their vital powers for several years.

This is an interesting topic, and the more we know about it, the greater will be the probability that we shall make farming profitable as well as interesting.

#### VERMONT HORSE STOCK COMPANY.

The Legislature of Vermont meets in October and adjourns "before Thanksgiving." Though the celebration occurred earlier than usual this year, the business of the session was completed in time for the members to reach their respective homes, where alone this old New England festival can be fully enjoyed.

Among the Acts passed at the last session of particular interest to farmers, not only of Vermont but to those of adjoining States, is the charter of a horse stock company, for the outlines of which we are indebted to a correspondent, and a gentleman who has long been one of the most active of the intelligent farmers of that State in efforts not only to sustain the reputation of Vermont horses, but to secure improvement in their breeding and management.

The Company is chartered with a capital of \$100,000, and has liberty to increase it to \$250,000. It is proposed to buy, import, breed, grow and improve horses in Vermont.

The charter does not allow operations to be commenced until \$25,000 are paid into the treasury, and the debts are never to exceed two-thirds of the cash capital paid in. In case they do, the directors or persons so contracting them are to be personally liable therefor.

If the full plans of the movers can be realized, Vermont will have the finest stock of horses in a few years to be found in America.

The plan is to have a farm of some 300 acres, comprising some of the best pasturing in the State, with best of stables, sheds and paddocks; the farm to be thoroughly fenced

for horses, and worth, say from \$20,000 to \$25,000.

For stock, it is proposed to have half a dozen of number one thoroughbred mares, if they have to import them; at least one first class thoroughbred stallion; half a dozen mares from the "American Star" family, and one of the best Hambletonian stallions to be found in that celebrated family of trotters; also, some ten to twelve of the best Vermont breeding mares, and one or two of the very best Vermont stallions.

Such a stock on the best Green Mountain soil, under the care of a skilful breeder, with capital sufficient to perfect it, cannot fail to return a profit, and add millions to the wealth of the State.

To succeed in any enterprise, capital is very necessary. In all business movements that are to work great and good results, men have almost always found it absolutely needful to form associations and combine capital. Such companies, working with such powerful capital, begin, forward, and complete nearly all the great material improvements of our age.

The horse breeders of Vermont are generally men of means quite too limited to perfect even a small *family* of horses. They do well to manage so as to raise the stock to perfection from one brood mare. Generally they have to sell one or two years too young for profit, and must let those go that will bring the most. This "takes the gold and leaves the dross."

It is this *necessity to sell the best*, which calls so loudly for a combined capital, so as to secure and retain at least a small family of the very best horses, and to improve them.

When Vermont starts with the best horses and those of the best blood, and has capital enough to breed them in the best perfect way, and grow them to maturity, she will soon show to American horsemen that the best are to be found among her green hills. We hope soon to see this company organized, the stock taken, and the thing set a going.

**BUTTER MAKING.**—A lady distinguished for her excellence in housewifery, and interest in all that pertains to agricultural pursuits, informs us that last winter she lost three consecutive churnings because the "butter would not come." She put the cream into the churn

at a temperature of 62 degrees. After churning a few minutes, the cream became frothy; and although urged and coaxed to become butter for three hours, utterly refused to do so. At the fourth churning, she raised the temperature of the cream to 67 degrees, and the butter came in the usual time, and in excellent condition. This course has been uniformly pursued since, and always with the same result. It is so simple and easy that all may avail themselves of it in winter churning.

*For the New England Farmer.*

#### WHEAT CULTURE.

Your editorial in the FARMER of October 16, took my attention, and I would like to ask you a few questions respecting the mode you recommend of raising wheat. You stated that wheat should be planted not sown; but do not explain how it should be done, or what tools should be used.

Would you recommend the dibbling system? Would you do the work with the hoe? If you recommend dibbling, will you be kind enough to state what it costs per acre; if you recommend planting with the hoe, what will that process cost per acre? Is there any other mode that is convenient to farmers generally, especially those with small means?

Next spring I shall,—if all is well,—sow four acres with wheat. To plant the same, how many hands shall I need to employ to have the work done in season; leaving alone the time that will be required to get in my corn, oats, barley, potatoes, &c.? By *planting* wheat, shall we get as much straw as we do when we sow two bushels to the acre? If we get more wheat and less straw by planting, can we make as much manure from the straw from planted wheat, as we can from wheat sown as plentifully as is usually done? I am aware that we sow wheat for a crop; but should it be our object to get the largest yield of wheat and little straw; or an average yield of wheat with plenty of straw, to make manure for future crops?

You refer to Mr. Mechi, of London, and his large yield of wheat, forty-six bushels to the acre, weighing sixty-six pounds to the bushel. Would you advise farmers generally to adopt his mode of cultivating land, as the most profitable? If it is, why do not the farmers of England adopt it?

Speaking about the weight of wheat to the bushel, and about wheat deteriorating by sowing two bushels to the acre, I will say that is the quantity I sow, and that I have sown the same sort of wheat for the last six years. I have to-day wheat grown this year that weighs sixty-four and one-half pounds to the bushel. I had two acres and three quarters, of which one acre was badly eaten by worms, but yielded

sixty-five bushels, good marketable wheat. I had seven loads, averaging twenty-six stooks to a load, twelve bundles to the stook. Should I have had the same amount of straw if I had planted the wheat? I seeded the same with berdsgrass, and clover, and when I cut my wheat the grass and clover would average six inches high, and some of the clover was headed out.

Now, Mr. Editor, I ask these questions in good faith, hoping you will answer them and give the readers of the FARMER something to talk about besides Norway oats and Early Rose potatoes, of which I think we have had a good share.

I do not wish it to be understood that when I speak about any of the modes of farming in England, I claim that they are the best and most suitable for this country; but as you refer to England many times in your editorials and other items, I wish to lay before your readers some truths with which I am perfectly familiar. I am acquainted with dibbling, drilling and pressing land for wheat upon clover leys, and can speak from experience. This I propose to do at some future time. Pressing wheat after the drill, and other modes of culture, may answer in this country, especially as the white wheat is apt to heave out with frost.

You say when the time comes that we plant, hoe and cultivate wheat, a part of the extra expense will be paid by the saving of seed. I am aware that there would be a great saving of seed; but could we make it profitable with wheat at the present price? When the English farmers dibbled their wheat its market price was one guinea, or over five dollars, per bushel, and one bushel would pay a laborer's wages for a week! If the time ever comes in this country, that wheat shall be five dollars per bushel, and the laboring man be seen going home with one bushel of wheat upon his back as payment in full for one week's wages, I would like to know where rent, clothing and other necessaries are to come from, provided that laborer has a family.

At some future time, I will give you the whole mode of wheat culture practiced in Yorkshire, England, where I came from. It is a part of the country where all sorts of grain are grown; where, in fact, grain and stock are their staple products, to pay taxes, rents and wages with. E. HEBB.

*Jeffersonville, Vt., Nov., 1869.*

REMARKS.—It is easier to ask questions than to answer them, especially where they are of the direct and searching character of those of our intelligent correspondent.

Perhaps his four first questions will be satisfactorily answered by the remark that we did not intend to recommend that wheat should be planted either with an English dibble or a

Yankee hoe. We admit that either process would be too slow and too laborious. We remember of once meeting a bright English boy who had left his father's farm in Ohio, because, as he said, the old gentleman insisted on his performing the back-breaking operation of dibbling in each kernel of corn, while their Yankee neighbors over the fence practiced a much easier and more rapid process, and raised equally good crops.

But the next question, Is there any other mode of planting wheat that can be adopted by farmers of small means? cannot be disposed of in the same way. Except where the land is too rough, or too full of roots and stones, we believe there is another mode by which it may be accomplished, and that mode is by drilling. Machines are made and sold in this country, we understand, at prices ranging from sixty to three hundred dollars. Our idea of "planting wheat" is realized by the successful operation of these machines. With them the seed is placed in rows at such distances apart, and covered at such depth, as the operator desires. He can also regulate the distances between the plants in the rows. To some of these drills rollers may be attached, so that not only may the seed be planted and covered, but the land rolled at the same time. The plants when thus standing in straight rows may be cultivated by horse-power, with a suitable implement,—completing several rows at a time. The usual distance between the rows in drill-planting is from nine to twelve inches. But in all cases, we believe, an important saving of seed is gained by drilling over that of sowing by broadcast.

Our idea of the cultivation of crops has been that we should aim to get the largest amount of *grain*, not straw; but there may be something worth considering in our correspondent's suggestions on this point. He seems so thoroughly acquainted with the whole matter, that he may show us reasons why a certain amount of each, may be more profitable than a larger amount of one than of the other.

We shall be glad to hear from him again, not only on this point, but on the advantages and disadvantages of drill husbandry, which we understand is extensively practiced in his part of the old country.

—The Michigan Agricultural College graduated ten young men on the 10th of November.

*For the New England Farmer.*

#### MILK OR PUERPERAL FEVER.

Can you, or any of your readers, give me a name for a disease in cattle, which I will describe as well and briefly as possible. A friend of mine had a valuable cow that dropped her calf on the 14th of the present month, and, to use an expression common with farmers, "she did well," in every particular. She calved in the morning. At evening her calf was taken from the stable and tied on the barn floor, the cow being tied up in her usual place.

The morning following, she could not get up, even with help, and *never* got up again. Several so-called cattle doctors saw her, and they varied considerably in their opinions regarding the disease. One said milk fever, another internal hemorrhage, another stoppage, &c. The cow lingered till this morning, when, seeing no hope of recovery, she was killed and opened. Found the liver of unusual size, and the gall four times as large as it should be; the liver was darker colored than usual, and was brittle or rotten, that is, you could easily break or crack it between your thumb and finger. The manifold (I think they call it) was full and hard to the touch.

On cutting it open, found it full, and the contents perfectly *dry*, hard and on the outer edges a slight scale or crusting that was black. The lungs I did not see, but they said they did not look badly.

The cow's food for six months past has been one quart of corn meal per day, and grass from the pasture. She did not seem to be in any pain at the first, but in thirty-six hours, perhaps, was in a good deal of pain, groaning with every breath. She did not want to lie with her head straight or natural, but inclined it backward and would turn her head over so as to rest in on both horns, with her nose in the air. She swelled some, though not very much, and was entirely blind a great portion of the time. Her body did not feel as warm to the touch as when in health, and would perspire freely when covered with a blanket, or when any warm drinks were given. Should be glad to hear from some one posted in such matters. I will add that her flow of milk did not cease any more than it would have done in ordinary sickness. SENEX.

*Cumberland, R. I., Nov. 1, 1869.*

REMARKS.—We think the disease was what is called among farmers, *milk fever*,—more properly, puerperal fever, or inflammation of the womb, attended with fever. The secretions of the intestines ceased, and the contents of the manifold became dry in consequence; the liver became gorged with blood, and its texture softened. Such cases are usually

fatal. We should have been pleased if you had described the condition of the worm.

#### AN EXPERIENCE WITH WHITE-WEED.

In 1863 I ploughed four acres of land, which produced only a light crop of grass, and was too low to plant, intending to dress and seed down immediately. The fall was wet, and it was found impossible to get on the manure; succeeded in harrowing tolerably well; sowed a part of the seed that season, the remainder the spring following. The first year it was not worth mowing. The first day of June, 1865, noticing that the land looked very green, I went to it; you may judge my surprise and indignation to find the land occupied with white-weed. We had never had it upon the farm before; when it blossomed, it was no wonder that the attention of the passers-by was attracted to it. I have seen many fields of white-weed, but none equal to this; it stood three feet in height. When in bloom, the whole surface was covered with flowers. It would have been difficult to have found a square yard upon the whole piece that had not a bunch of roots a foot across; oftener two or three such would be found. I resolved to be rid of it, although many told me it could not be done.

We cut the crop in June, while in blossom, before the seeds were ripened sufficiently to germinate; we got a fair crop, the majority of which was white-weed. We ploughed the field as soon as we could after haying. The season favored us; the summer and fall were hot and dry, the succeeding winter cold—little snow, with sudden changes. In the spring we harrowed the surface thoroughly, which was continued at intervals of a few days until August, digging up all that showed itself. When we seeded down, we gave the land a good dressing of leached ashes. This was followed by a good catch and a heavy crop of grass.

The next season our enemy appeared in force. I purchased refuse salt, applying a handful to the roots wherever it made its appearance; broke off the flowers that there might be no mistake when we had been over the entire field. This was continued as long as any blossoms appeared. Three days after the application, nothing could be found excepting the place where it "recently was;" the stalks, roots and everything were burned over a space as large as a man's hand.

The second year but little could be seen, but which I treated in the same manner. This year a few heads appeared, which yielded to the salt. To all appearance we are rid of the pest, which has yielded only to determined and continued labor. Without the aid of salt, it would have been a more difficult task. (I would add that the Turk's Island salt was the best.)

Messrs. Editors, what is a suitable punishment for a scoundrel who will raise and put

upon the market such seed as this, for it was obtained in a sack of red-top? For the sake of putting about a couple of dollars in this man's pocket, I am put to more than a hundred dollars expense. The State prison is the only place for such fellows, where their labor would be applied to the benefit of the State.

Since then I have closely examined the seed before purchasing; fifty cents or one dollar a bushel has not been any object when clean seed could be had. In this way the experience has not been wholly valueless. An old gentleman in this vicinity used to keep white-weed and other foul seeds, liable to come in grass seed, in a box; before purchasing he would look at it, and was able to detect any of the more common kinds. The clean appearance of his fields at the time of his death, was conclusive evidence that the plan was a good one.—*W. Brown, Hampton Falls, N. H., in Country Gentleman.*

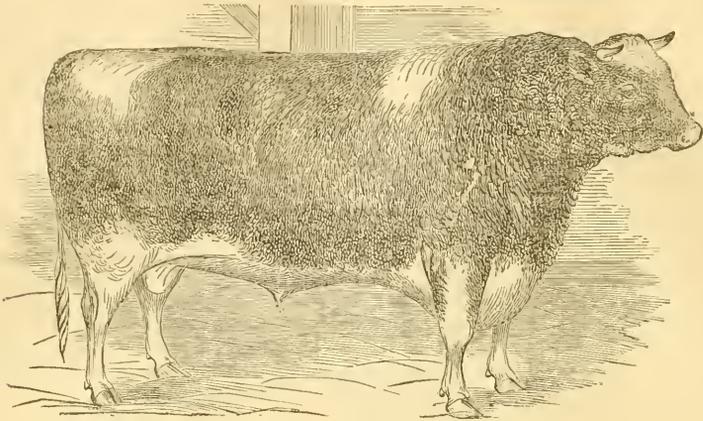
#### HOW TO CLEAN OLD AND MUSTY BARRELS.

—At this season of the year the farmer and beef and pork packers are often greatly troubled with musty, filthy smelling barrels, bottles, &c. How to cleanse them for use is an important question, which chemistry will answer satisfactorily.

Permanganate of potassa will entirely destroy all fungoid growths and fermenting matter, and render the barrel or bottle perfectly sweet and clean.

A pint of the permanganate is a sufficient quantity for a cider or beer barrel. It must be thoroughly rinsed so as to touch all parts of the barrel. Its deodorizing and disinfecting qualities are wonderful, as it contains five equivalents of oxygen, and will even deodorize carbolic acid and remove its pungent smell from the hands immediately.—*Hearth and Home.*

SODA ASH FOR WIRE WORMS.—A letter quoted in "Milburn's "Pests of the Farm" states: "I had sown a headland with soda ash, as a fertilizer; the following spring it was under turnips, and a man hoeing asked if 'anything had been done to the headland?' I asked 'why?' he said, "there was not a plant destroyed by the wire worm, and the rest of the field had fifteen to a nest." I then determined to try it upon another field which was full of wire worms. I have never seen one on it. In the following year I had twenty-five acres of oats attacked more generally. I happened to have a cask of soda ash with me, and ordered it to be sown. From that day the ravages ceased, and within a week the whole field changed its color to a vivid green. I have always a cask by me, ready, in case of any appearance of the wire worm. The remedy is equally efficacious in repelling the attacks of the green-fly."



DUTCH CATTLE--BULL VAN TROMP.

I wish to inquire of you or some one that has raised the Dutch cattle, how they will compare with other imported breeds for the dairy, or beef, and for working oxen. Are they a tough, hardy race of cattle for our hard winters, and rough farms? How large are they? Some time ago you gave a description of a herd of them, but the paper has got mislaid so I cannot refer to it. Do they command such high prices as some of the other imported breeds?

C. F. L.

*Woodstock, Vt., Nov. 10, 1869.*

REMARKS.—The monthly edition in book form of the FARMER is well calculated to obviate the difficulty of reference experienced in the use of a weekly newspaper. In the volume for 1868, several articles on this breed of cattle were published, which may readily be referred to by the index which accompanies the volume, and to some of these you probably refer.

The cattle of Holland have long been celebrated for their size and excellence. A French historian who wrote in 1350, said that Holland had been famous for its dairy products for five hundred years. In his history of the United Netherlands, Mr. Motley says, in speaking of Holland, "on that scrap of solid ground, rescued by human energy from the ocean, were the most fertile pastures in the world. An ox often weighed more than two thousand pounds." Mr. Chas. L. Flint, who visited the great international exhibition at Hamburg in 1863, speaks of the Dutch cattle as a prominent and marked feature of the show, and says they are renowned for their dairy qualities. Some writers believe that the

Dutch cattle were the foundation of the improved breeds of England.

The Dutch cattle, however, are comparatively new in this country, and time must decide the question of their adaptation to our climate and to our soil, which is certainly very different from that of the section spoken of by Mr. Motley.

The breeders and friends of this stock are quite enthusiastic and hopeful. They might probably answer your questions somewhat differently from what those would who have invested their money in other improved breeds.

Mr. Allen says, in his book on American Cattle, that Mr. Chenery's herd, mostly imported in 1861, is "the only herd of pure bred Holstein or Dutch cattle known in the country, except their descendants, which may be in some other hands."

As to the dairy qualities of the Dutch cattle, Mr. Allen says they have been long bred and cultivated with a view to develop their lacteal production to the utmost, and that they are quick feeders and physiologically constituted to turn their food readily to milk, must be evident. Messrs. W. E. & B. Simpson, of Cambridgeport, Mass., state that a grade Dutch cow owned by them, gave 6390 wine quarts in a year, her largest yield being thirty quarts in one day, and averaging thirty quarts for about three months.

As a beef animal, Mr. Allen says, they have been, as yet, but partially tried in the half

breeds, or grades from the Holstein bull, on the natives or other cows of different breeds. So far, however, they are claimed to be satisfactory.

As working oxen he believes they will rank with other heavy cattle,—better in their grades with the lighter and more active breeds than in the thoroughbreds, as with the short-horn crosses. Mr. T. S. Lang, of Maine, says that when in Belgium he questioned the herdsmen in two or three estates that he visited, and they assured him that they excelled in this particular; one of them pointing to the intelligent head and eye, and strong, straight, active limbs, saying, do you doubt it?

The animal represented by the above engraving was imported by Mr. Chenery in the womb of his famous cow Texelaar, which has produced 76 pounds 5 ounces of milk in one day—over 35 quarts—and an average of 63½ pounds per day for 63 successive days. At three years old Van Tromp weighed 2080 pounds; at four years old, 2310; at five years old, 2600; and at six years old 2720 pounds. He was calved March 20, 1862.

#### HUSK BEDS.

There is nothing equal to corn husks for under beds; yet few families have them even in the country, where the trouble and cost of them are so small. They are always light and easy, and last for a long time. Our family use no others. For twenty years they have done constant service, and are now as good as new; so that though costing at first about two or three times as much as straw, they are vastly cheaper in the end, besides being a thousand times better. Now is the time, and this is the way to get them:—

As soon as the husks are taken from the corn, before any mould or other harm comes to them, take the fairest and best of the leaves, free from all stalks, silk, &c., and spread them out to dry in some large, airy room, stirring them well every fair day for a month, or till they are perfectly dry. As they shrink 50 per cent. in drying it will take twice the bulk of straw to make a good bed. For people who raise them, they are easily got and prepared; for it is a nice little work for children. For people who haven't them, this is the way: Give some farmer lads—who want, and ought to have, some way to earn a little for themselves—give them a dollar and two bed sacks, to be crowded full in the green state of the pure husks, as just described; dry them as before named. This will make one bed. As there is some wear out to them, as to everything, once in half a dozen years a little new

will want to be added. Don't split the leaves; they do not become flat and solid, as many suppose, but curl up and make the mass light.

Husk beds have a great medical value. In many cases of injuries and of diseases a hard bed is vastly superior to feathers; and as comparatively few families have mattresses, a bed every way as good as these may be quickly made for the occasion by putting the feather bed at the bottom, the husk bed above, and a comforter and other thick quilt over this. As a great remedial agent, then, every family should have one husk bed, and one is sure to bring all the others.—*Belfast, Me., Journal.*

#### VIGOROUS PLANTS EXEMPT FROM INSECTS.

We have often thought if all the conditions were present to give vigorous growth and health to a plant, that such plant would either not be preyed upon at all by insects injurious to vegetation, or, if they were preyed upon, the plant would be able to resist the attacks made upon it; and that the depredations of insects are only nature's gentle reminders that something is lacking which the plant needs. In the animal kingdom do we not find lice, ticks, &c., preying upon the unthrifty, while those in a thriving and growing condition are exempt?

A Southern planter, writing to the agricultural department of the *Mobile Register*, and giving details of the almost total destruction of his cotton crop by the boll-worm and caterpillar, closes his article with the following suggestive postscript:—

A corner of the farm, about one-eighth of an acre, was so poor, though guano had been applied, that I replanted it as late as the 24th. of June, before I could get a stand, and it continued so stunted and sorry looking that, about the middle of August, I applied half a spadeful of fresh cow dung to each stalk, covering with a little earth. Having a good season from thence, the cotton grew off magically, commenced fruiting at once, is now weighed down with bolls, and, strange to tell, not a leaf has been touched by the caterpillar, though they devoured the other to the very rows so treated. Nor has the boll-worm disturbed it. I applied fresh stable manure to another poor spot, with like result as to worms, but not as to growth, for the plants *fired* from the caustic properties of the manure. They fruited extremely well, nevertheless.—*Cincinnati Gazette.*

DRY EARTH FOR POULTRY HOUSES.—The employment of dry, pulverized earth as the means of deodorizing poultry houses, appears to be worthy of more attention than it has hitherto received. The fact that from four hundred to five hundred fowls can, by this aid, be kept in one building for months to-

gether, with less smell than is to be found in any ordinary fowl house capable of accommodating a dozen chickens, is very conclusive as to its efficacy. In the building of the National Company, where this fact has been ascertained, seven or eight fowls are kept in each compartment, twelve feet by three, and yet there is no smell or trace of moisture. Mr. Greyelin informs us that if a much larger number are put into each run, the ground becomes moist, ceases to deodorize, and the birds at once become unhealthy. It should be stated that the droppings that fall from the perches during the night are removed from the runs each morning, and the dry earth only receives the manure that falls during the day; this has its moisture absorbed so speedily by the earth that it at once became pulverized, mixed with the soil, and ceases to smell. So powerful is the deodorizing effect of the earth that it does not require to be renewed in the runs for many weeks together.—*London Field.*

*For the New England Farmer.*

#### PREPARE FOR WINTER!

Winter is close upon us! The air is filled with snowflakes, the last flock of wild geese have left us for the great savannahs of the Mississippi; the small rivers and creeks have frozen over and thawed out the requisite number of times. Now the ice grows thicker every day, and soon the deep snow will blot out all the landmarks, and we can only trace the windings of the brook by its hedge of alders and hazels. Are we ready for it? That is the question each farmer should ask himself. If you are not, begin to-day to prepare for the winter winds. Nail on every loose board in barn, stable, and cow-stalls, remembering the old proverb that "a stitch in time saves nine."

Protect the young apple, pear, peach, and cherry trees against the ravages of mice. Scatter sulphur and copperas mixed in equal parts, all round the roots of the trees. This mixture is abhorrent to all vermin and they will keep their distance. Earth heaped up a foot around the trunks of young trees, and pressed firmly down will also prevent the attacks of the mice.

Lay down all the raspberry bushes, and grape vines, and cover with hemlock boughs; if these cannot be procured, straw can be scattered over them, or leaves, and secured with boards. The care you now take will be returned to you in full measure by the great increase of fruit in the ensuing summer. Prepare warm stables and sheds for horses, cattle and swine; it will take much less fodder if they are protected from the intense severity of our winters. A farmer who built a barn as tightly shingled and clap-boarded as his house, assured us that the outlay was soon restored to him in the well-being of his stock, and the decrease of the food consumed. It would seem as if all our farmers knew this fact, yet

the wretched huts called barns, which are scattered throughout New England, show that they have not yet learned the needed lesson. Sheep are better able to withstand the cold, but they need a dry fold well sheltered from the wintry storms; and then are forced to huddle close together to keep each other warm.

The hens must have their house attended to, or they will not permit your income to exceed your outlay. There is great economy in all these matters, yet how many of us are "penny wise and pound foolish."

There is yet time to draw in loads of dry muck to be used for litter, and to fill up the wet places in the barnyard. All this work will give you ample returns at the next harvest. Is your wood all under cover, and nicely chopped and sawed, ready for the housewife? If not, lose not a day, in storing, it if you desire your breakfast, dinner and supper *on time*. It is said that "wet wood makes the house too hot for men folks," and we endorse the saying.

As you gaze upon your well stocked barns, your fine cattle, hogs, &c., and your cellars, filled with the fruits of the harvest, remember the parable of the "rich man," who said to his soul, "Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry." But God said unto him, "Thou fool, this night thy soul shall be required of thee; then whose shall those things be which thou hast provided?"—and share of thy abundance with those who have not been so blest. Among your investments *be sure* to take a little stock in the "Kingdom of Heaven," whose notes are always above par.

*Bath, N H., Nov., 1869.*

s. o. j.

HOW TO BUILD A CISTERN.—I see that a subscriber wishes to know the best way to build a cistern. I have had the care of building quite a number, and would say to him, build two instead of one so large; dig the holes and put on two good coats of cement on the bank, and arch with good hard brick. One of my neighbors has one that I built for him sixteen years ago, in this way, and it has been in use ever since. I had one built for myself, six years ago; the mason put brick all round; the brick settled and it leaked. I had another built two years ago, which was eight feet across in the clear after finished, nine feet deep. This was plastered on the bank and arched with brick and has been full of water ever since, and has not leaked a drop that I know of. I could mention more made in this way but this is enough. I would not have brick or stone in the sides of a cistern if they were put in for nothing; they are simply thrown away.—*Mentor, in Country Gentleman.*

—It is predicted that Florida will become one of the largest sugar-producing localities on this continent. The character and soil are admirably adapted to its culture, and the crop is a sure one.

## IMPORTATION OF WOOL.

EDITOR OF NEW ENGLAND FARMER:—In the address delivered at the American Institute, New York, by Mr. Bigelow, President of the National Association of Wool Manufacturers, I notice that, as published in the newspapers, he assumed that “the great cause of the present depression is excessive home production,” and fithermore that he said, “our wool industry being depressed by over production, its restoration to the normal relations of demand and supply can alone bring relief.” With this view of the subject I am unable to account for the marked increase in the importation of foreign wool, in addition to our “excessive home production,” which is shown by the statistics of the foreign trade published by our government at Washington. By these it appears that, for the years ending with June, the

	No of Pounds.	Value.
Importations in 1868 were	24,124,803	\$3,792,065.
Importations in 1869 were	39,607,975	5,697,641.

An increase this year of 15,483,172 \$1,804,985.

This has a bad look to some of us wool-growers who have been waiting as patiently as we know how for the good time that you have encouraged us to hope was coming. J. B.

Benson, Vt., Nov. 9, 1869.

Having but little knowledge of the statistics of trade and commerce, we submitted the substance of our correspondent's inquiry to John L. Hayes, Esq., the able Secretary of the Wool Manufacturers' Association, who has kindly furnished the following reply, which we hope will be satisfactory to him and to others who may be alarmed by the published statements of the increase in the amount of wool imported by our manufacturers.

EDITOR OF NEW ENGLAND FARMER:—*Dear Sir*,—I reply with pleasure to the interrogatories proposed in your favor of the 15th instant.

The facts stated are, that the importations of wool into the United States, for the year 1868, amounted in value to \$3,792,065, and in pounds to 24,124,803, and in 1869, to \$5,697,641 in value, and 39,607,975 in pounds. These facts are understood to be stated by the opponents of the present wool and woollen tariff as proofs of the inefficiency of this tariff for the protection of the American wool grower. I do not propose to enter into an inquiry as to the correctness of the precise figures stated, for I admit the fact that the nominal importations of wool for the year 1869 considerably exceeded those for 1868.

I will take some figures for illustration, whose accuracy I can rely upon.

Mr. George Wm. Bond, in his published price current of wool at Boston, for November, 1869, gives the imports into Boston for the first three-quarters of the years 1868 and 1869. They are as follows:—

	1868.	1869.
England,	289,179 lbs.	271,076 lbs.
Buenos Ayres,	2,231,907 “	4,066,948 “
Cape of Good Hope,	8,8751 “	1,648,718 “
France,	49,375 “	666,833 “
Turkey,	979,941 “	2,324,539 “
Chili and Peru,	2,057,443 “	1,733,653 “
Sundries	514,339 “	653,992 “
	7,008,855 lbs.	14,627,743 lbs.

The explanation of this great apparent increase is very simple and familiar to all persons in the trade. The importations were principally made directly by manufacturers. The character of the navigation was such in the latter part of 1868, and the first part of 1869, that the imports, which in the ordinary course of trade, should have reached Boston in 1868 arrived in 1869. Almost the whole imports of the Pacific Mills and the Atlantic Delaine Company, among the largest consumers of wool of all our mills, which should have come in 1868, are included in 1869. To this, the principal cause of the increase of importations in 1869, should be added an increased importation of combing wools from England, notwithstanding the high duty, and the needed encouragement thus given to the production of similar wools here; this increased demand for combing wools, resulting from the progress of the worsted manufacture in this country. Nearly a million pounds of the card wool included in the imports of 1869 were re-exported to Canada.

It is apparent, then, that the alleged facts fail to prove anything as to the inefficiency of the present wool tariff as a protection to the wool grower.

On the other hand, there are striking facts which prove the efficiency of this tariff as protection to the great mass of American wool growers. The principal object of the wool tariff was to check the importation of clothing wools, such as were largely imported from Buenos Ayres and the Cape of Good Hope, and which came into competition with the fine clothing wools which are the principal product of the American sheep husbandry.

In 1866, before this tariff act was passed, the importations of wool into Boston, from

Buenos Ayres were 12,368,988 pounds, and from the Cape of Good Hope 2,868,753 pounds. The whole imports of wool into the United States from the two great competing countries in fine wool production in 1866 were 22,693 bales from Buenos Ayres and 14,067 bales from the Cape of Good Hope, as against the imports in 1868, after the wool tariff went into operation, of 4604 bales from Buenos Ayres, and 1986 bales from the Cape of Good Hope.\*

Such facts are conclusive that the wool tariff has effected precisely what it was intended to do. It has saved the fine wool husbandry of the United States not from depression, the result of over production in the Southern hemisphere, but from annihilation. To quote the capital illustration of Dr. Randall, "There is but a plank on the ocean between the United States and the South American wool grower, and that plank will bear but one, the other must perish. Without the tariff, the South American grower would have all the plank, because he could entirely undersell us in our own markets, and he raises more than enough fine wool to glut our market. The tariff gives us the plank. \* \* \* \* It is our market we are contending for,—our plank which they (the foreign wool growers) are trying to throw us off from."

Respectfully your obedient servant,

JOHN L. HAYES, Secretary.

Boston, Mass., Nov. 22, 1869.

#### YOUNG MEN AT FARMERS' MEETINGS.

A new feature in the attendance on the late meetings of the Board of Agriculture at Orono and Bangor is noticed with much satisfaction by the editor of the *Maine Farmer*. Alluding to the presence of the young men from the college, and the part they took in the exercises, he says:—

Such a sight has never before been witnessed at any session of the Board we have attended during the past ten or a dozen years. Surely, the world *does* move; light *is* breaking; the young men of our State begin to realize that knowledge is a power, and a power, which, applied to agricultural operations by a skilful hand will bring results as satisfactory as if applied in any other direction whatever.

If any one who has attended the meetings of the Board of Agriculture for the past ten years, will call to mind the sessions that have been held during that time, and the general "make-up"—so to

say—of those who have attended them, the fact will force itself upon him that there were no young men present. This, at any rate, is the light in which the matter strikes us at present. Those composing the assemblage on these occasions have been men somewhat advanced in years; to young men it would seem the meetings possessed no attractions. But the recent session of the Board of Agriculture at Bangor, stands out in striking contrast to all that have heretofore been held, in this particular, at least; and if in no other respect the Bangor meeting deserves to be reckoned one of the most successful the Board has ever held.

We doubt whether the Agricultural Boards of the other New England States have hitherto been more successful than that of Maine in securing the attendance and co-operation of young men and boys at their respective sessions; nor have we any doubt that all of them would be equally well pleased by a similar attendance. How then can it be secured? How was it secured at the late meeting of the State Board of Maine?

The young men who were thus interested in the sessions of that Board were present not as mere spectators, but as actors. A part was assigned them in the programme of the proceedings. They had something to do, something to say, and a set time to do it and to say it. They were expected by others to perform a part—to participate in the proceedings—they expected to do so themselves, and when their turn came, they did it. Can any one who understands human nature be surprised that these young men "manifested,"—as the *Maine Farmer* says they did,—"a close, earnest and intelligent interest in the proceedings?"

We do not say that this is the only cause of the change on which our Maine friends are congratulating themselves. But it is undoubtedly one reason, and it is the first that occurs to our mind. Our school-masters tell us that the very word *education*, implies a leading out, not a mere cramming, of the mind; and in view of the success of the Maine Board in leading out the minds of their young friends we are disposed to adopt the exclamation of brother Boardman, with a slight variation, and say,—Surely, the world *does* move; light *is* breaking; our Agricultural Boards begin to realize that if they would interest young men and boys in their work they must devise some means by which these young men and boys shall take some part in that work.

The practical farmer, mechanic or artist who should seat his apprentice in an arm-chair and expect proficiency from ever so much

\*Mr. James Lynch's Statistics, Bulletin of the National Association of Wool Manufacturers, Vol. I, page 84.

talk or lecturing would be an exception to the general practice. In each of these, and all other similar professions, it is customary to put the proper tools of the craft into the learner's hands, and to set him at work. He may be bungling and awkward at first,—he may even spoil the tools and the stock put into his hands,—but experience in these industries has demonstrated that such a course is the only practicable way to secure proficiency or to excite an interest in the business on the part of the learner.

Perhaps almost every one will say, "all this is well enough and proper enough in the field or in the shop, where two classes, men and boys or journeymen and apprentices, are recognized and provided for, but what has it to do with our State Boards of Agriculture, or with the formal meetings of farmers? The idea of inducing ordinary farmers' boys to take part in exercises conducted by men distinguished for learning and eloquence,—by Governors, Congress-men, Professors in colleges, &c.,—is simply impracticable."

Perhaps so. But is that the plan we are recommending? Is it the plan that was adopted by the Maine Board of Agriculture? Did these boys make a speech or read an essay? We believe they did nothing of the kind. They merely recited their ordinary school lessons. And yet this simple exercise elevated them to the dignity and the interest of actors, or participators, in the proceedings of the day, and gave the old heads more pleasure than any of their own performances.

It is evident, then, that the managers of these assemblages desire the attendance of the young men and boys. With their "old men for counsel," they need "the young men for war," and deeply regret their absence. On the other hand we believe the young men really desire to attend, and that they would be greatly benefited by an attendance under such circumstances as would make them feel that they were at home, and in their place. Why then may not the desire of both be gratified? Why may not these two classes be brought together? "Where there's a will," says the old adage, "there's a way." Who will point out this way?

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—An unmarried woman at Virden, Ill., owns seven hundred acres of excellent land which she paid for by teaching school.

#### CARDING THE WINTER STOCK.

Every person who has long been confined by sickness, or by a broken limb, can well appreciate how grateful any gentle motion is, that makes the surface all aglow and sends the blood dancing through the veins. They feel younger at once; a new elasticity of muscle and limb is imparted to them, and with that a buoyancy of mind which brings body and soul into pleasant harmony.

John Hunter, the most celebrated physician, probably, for many ages, when he told mothers of the three cardinal things to be done for infants, viz.: "plenty of milk, plenty of sleep, and plenty of flannel," did not fail to add, also, plenty of gentle friction. When his three things have been supplied, nothing is obviously more grateful to the child than to have the body gently exercised by friction.

Our neat stock, in their winter quarters, are helpless in this respect. They are tied by the neck to a spot three by four feet, where they are doomed to remain most of the time for months in succession. They are provided with a rasp on the tongue, which is intended to subserve two or three purposes, one of which is *scratching* themselves, when inclined to do so. But in their confined position, they are deprived of this luxury, during a large portion of the time. How grateful the privilege of licking is, is evident from the constant application of this *rasp* to their sides and limbs, during the time they are at liberty, daily, in the yard.

Use the card, then, at least once each day, on every animal in your care, while confined in its winter quarters. Use it gently, because a rough usage excoriates the skin and tortures the beast. Use it generously, not in a hasty and grudging manner, because it not only affords comfort to the cattle, but tends to *fill your own purse!*

Carding tends to make beef, because it keeps the skin soft, loose and lively, and no animal can fatten readily unless these conditions exist.

Carding increases the flow of milk, because when the skin is healthy and active, the processes of digestion are quicker and more perfect.

Carding saves feed, because the better the digestion is, the more nutrition is extracted from the food eaten, so that the time spent in carding is spent economically.

Carding improves the appearance of animals, so that in buying, a good judge will pay from five to ten per cent. more for animals whose skin is soft and loose, that gives more milk, and that look as though they got all the goodness out of the food they eat, than for those not possessing these qualities.

Carding, then, makes cattle fatten faster, increases the flow of milk, saves fodder, makes them handsome, and thus puts money into the pocket of the owner.

#### VERMONT DAIRYMEN'S ASSOCIATION

The Vermont *Watchman and State Journal* publishes a communication from O. S. Bliss, Secretary of the Association, in explanation of the objects and principles of the organization. He says:—

It is demonstrable that Vermont dairy products, though bearing a *good* general reputation, are not as a whole strictly first-class, and do not return to the citizens of the State so much money, by many thousand dollars per annum, as they ought; that the product per cow is not so large as it might and ought to be; that the number of cows kept, as compared with the number of acres of tillage lands, is much too small; that the prevailing system of marketing the product is radically faulty, in that there is not a proper discrimination between the several grades, and the better are made to compensate for the loss to the middle men on the poorer, which inevitably results from the system; that the supply of labor, specially of female labor, is inadequate to the wants of the State, imperiling the dairy interest of many towns, and that these and many other defects and evils of our system may be remedied by a proper diffusion of information among the people.

To investigate all these defects and evils, and propose practicable remedies, is the office of the Dairyman's Association. The manner in which it proposes to accomplish these purposes is to invite addresses from practical men who have investigated and experimented upon the several subjects until they have established certain facts and principles; to cause inquiries and investigations to be made and reported by committees appointed from among the members of the Association, and to compare experiences and elicit facts by discussions.

For these discussions and addresses the constitution provides for a three days' meeting each year, and for a printed report of the proceedings, which will be furnished to each member, so that the members who are unable to attend will be informed of all that is said and done at these annual meetings, which it is believed will be a full consideration for the two dollars invested in membership.

**SALE OF COTSWOLD SHEEP.**—Burdett Loomis of Windsor Locks, Conn., has sold to J. & S. S. Walker of Hartland, Vt., two Cotswold bucks and one ewe.

#### AGRICULTURAL ITEMS.

—In exporting living plants, the Japanese wrap the roots in a mixture of earth and carrots ground together.

—The Byfield, Mass., Cheese Factory has closed operations for the season. The company has made nine tons of cheese the past season, and declared a dividend of 8 per cent.

—During the first nine months of the present year there were exported from the port of New York 13,511,916 bushels of wheat; 1,572,706 bushels of corn, and 1,081,226 barrels of wheat flour.

—High prices for hops are quoted in Europe, and it is the opinion of many that there is a fair prospect of a further advance in the price in this country.

—The receipts of the three principal agricultural fairs in eastern Pennsylvania last fall were as follows: Doylestown, \$8,500; Allentown, \$6,930; Reading, \$6,295 55.

—A Vergennes, Vt., cheese dealer has purchased the entire lot of cheese manufactured on the farm of Ezra Meech, of Shelburne, since June 1st, for which he paid \$800—being 16 cents per pound.

—Owing to the extensive destruction of trees in Victoria, the climate is changing. Near Ballarat the rain-fall is sensibly diminished, and the Government is taking measures to prevent the waste of timber and to establish nurseries of forest trees.

—The *Maine Farmer* makes the following estimate of the crops of that State for the past season: hay, 800,000 tons, (equal in quality to 1,000,000 tons produced in 1868;) corn, 900,000 bushels; potatoes, 4,000,000 bushels; wheat, 200,000 bushels; barley, 800,000 bushels; oats, 2,000,000 bushels.

—In a forest tree lately cut down in Wisconsin was found an Indian arrow-head, completely embedded and grown over. It appears, from counting the layers of wood over it, that ninety years have elapsed since the arrow which it tipped was shot at the tree.

—In Joint Assembly of Vermont last November the following gentlemen were elected Trustees of the University of Vermont and State Agricultural College for six years: Hon. Justin S. Morrill of Strafford, Rev. Horace Herrick of Wolcott, Hon. Samuel H. Stevens of Enosburgh.

—There are indications that Hereford cattle are rising in favor in England. After the show of the Herefordshire Agricultural Society, a large number of these cattle were sold. Three prize bulls sold for 363 guineas, one of them going at 190 guineas. From a single herd 30 cows and heifers brought an average of over 26 guineas.

—A California correspondent of the *Boston Journal*, who has eaten wheat bread at supper, the material for which was standing in the field at sunrise, says that when the grain is ripe it is often cut, threshed and put in the sacks the same day.

Instead of the reaper, the "header" is now generally used. It cuts the straw midway, and its swath has a width nearly double that of the reaper. With two headers and five wagons a large threshing machine is kept running, and in this way forty acres and 1,500 bushels of wheat are harvested in a single day.

—The N. H. *Statesman* says that a farmer from a neighboring town brought a quantity of cider into Concord, a few days since, and sold it for \$7 a barrel. Twenty or thirty years ago the same man brought fifty barrels into town and sold it at 75 cents a barrel (total, \$37.50,) receiving most of his pay in goods.

—The forests are dying out in certain parts of Virginia. The chestnut trees have already submitted to some delictious agency, and their growth is nearly exhausted, and this year the oak, and in fact all the trees of the forest in certain sections, are dying. No explanation of this disastrous visitation has yet been given.

—A hand potato digger was exhibited at the New York State Fair. It is simply a wide fork with six or seven teeth, with a movable fulcrum behind. The fork is thrust into the soil on one side of the hill, and by bearing down on the handles the potatoes are lifted up, and the fork is shaken up and down on this fulcrum to separate them.

—Western papers and farmers' Clubs are discussing with much spirit the expediency of a law to prevent cattle from running at large. The expense of fencing against his neighbor's unruly cattle, and the loss of crops occasioned by them, are serious matters with the new settler; but, on the other hand, the advantages of free pasturage are also of considerable importance to him.

—A Kansas correspondent of the *Rural World* writes:—I will give you an infallible remedy for galls and sores of all kinds on horses, including what is generally called scratches: Two ounces extract of lead, two ounces spirits of wine, one ounce sal ammoniac, half ounce white vitriol, four ounces soft water; mix, dissolve, and wash three or four times a day.

—The trade in bones is becoming an item in the business of Jackson, Tennessee, giving employment to many poor people that would otherwise be without anything to do. All the bones that have accumulated for years in the neighborhood of the city are collected and shipped to Atlanta, Georgia, at which place there is a company engaged in making chemical manures.

—A correspondent of the *Maine Farmer*, at Welchville, says, last Spring I purchased a bushel each of the Early Sebec, Early Goodrich, Harrison, Gleason, Orono and Crown Eagle. They were all treated alike in planting; were planted on sandy loam, and the first four varieties named amounted to just nothing. The Orono produced fifteen bushels of merchantable potatoes; the

Crown Eagle twenty. I also planted one-third of an acre with the Garnet Chilli, and received ninety bushels of good sound potatoes. Unlike the above named varieties, these were planted on wet, clayey loam, but otherwise received the same treatment.

—Steam engines are used in New York, and in many of the Western States, for threshing grain. Five to six hundred bushels of wheat, and 800 to 1000 of oats are a common day's work. An engine costs about \$1000, and can be moved from place to place by a single pair of oxen.

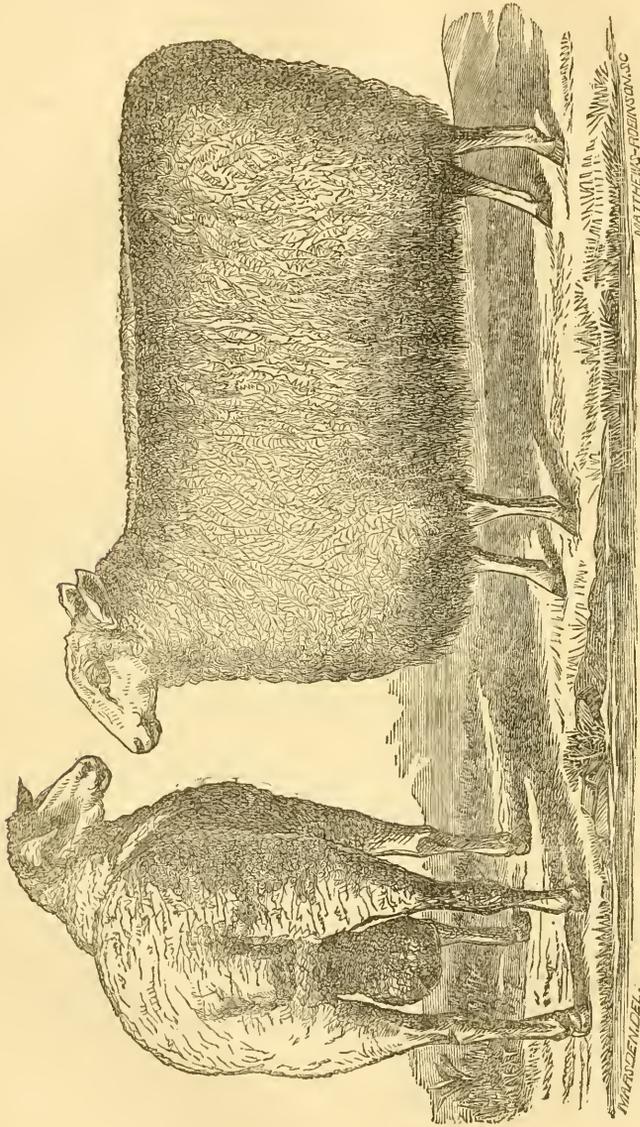
—An important improvement in the manufacture of horse collars has just been devised by a Philadelphia mechanic. The collar being stuffed with elastic cork, is light in weight, and adapts itself to the shape of the animal as readily as if it was moulded. It is highly elastic, does not chafe or gall the neck, and, the cork being a non-conductor, injury from the heat is prevented.

—The London Society for the Prevention of Cruelty to Animals is turning its attention to cases that are occurring in the country. Recently, a farmer holding five hundred acres of land was, on the complaint of the society, convicted of working "wounded horses," and sentenced to three month's imprisonment. The foreman was imprisoned for six weeks, and the ploughman was fined \$3 and costs.

—President Welch writes to the *Iowa Homestead* that the Iowa Agricultural College buildings will accommodate the faculty and 150 students; that during the year there have been over 200 applications for admission, and every available room, with one exception was filled. A defect in the warming apparatus prevents holding a winter session now, (1) but after this year there will be a regular course of lectures every winter on the various subjects of farm industry.

—An attempt has been made this year, with a fair show of success, to enlarge the production of barley in this county, and to terminate the scandal of its importation. The increase is estimated by the *Prairie Farmer* at 14 per cent. in Indiana, 11 in Ohio, 9 in Michigan, 10 in Wisconsin, 26 in Minnesota, 7 in Iowa, 20 in Nebraska, 23 in Kansas, 22 in Missouri, 37 in Kentucky, 7 in Pennsylvania, 20 in New York, and 14 in New England. The quality is generally good.

—A correspondent of the *Boston Journal* says there is one singular thing about the grasses of the Pacific coast. When apparently dry and useless for food the cattle eat them greedily, and get fat on straw and stubble. The reason is they are rich in nutritious seeds, which last till late in the season. Sheep will be turned into a field with no sign of a blade of green grass, and pushing their noses down among the stubble, will eat the seeds which lay thick upon the ground. The wild oats grow on most of the hills of Central and Southern California, and are one of the best feeds for all kinds of livestock.



THE LINCOLN OR LINCOLNSHIRE SHEEP.

For lustrous combing wool, the sheep of England are undoubtedly superior to those of any other country, and at the present time, under the depressed condition of the fine wool business, many farmers are turning their attention to the larger breeds of sheep. We give an illustration above of one of the old English breeds which is less known in this country than the Leicesters and Cotswolds.

Mr. Randall mentions only two importations in his book on Sheep Husbandry,—that of L. D. Cliff, of Carmel, Putnam County, N. Y., in 1835, and of Messrs. George H. Gossip & Brother, in 1836. He remarks that Mr. Cliff established a flock which was generally regarded as highly valuable. They were hardy, gross feeders, and very prolific. They yielded from six to ten pounds of wool per head. Mr.

Cliff sold a lot of half blood two-year old wethers in February 1839, which weighed 139 pounds to the carcass.

In the winter of 1867, Mr. Wintrop W. Chenery, Highland Stock Farm, Belmont, Mass., imported some of these sheep from Canwick, Lincolnshire County, England. In an article published in the MONTHLY FARMER for 1868, page 546, written by our correspondent "Mentor,"—a gentleman of great experience in the wool business,—the leading characteristics of the English lustre-wooled sheep are given. Speaking of the Lincoln or Lincolnshire sheep, he says they are larger framed animals, their fleeces are heavier and the staple longer than either the Leicester or the Cotswold. The wool measures from ten to eighteen inches in length, and the fleece weighs from eight to fourteen pounds. The sheep is hardy and prolific, but matures slowly, and as fourteen pounds of the best lustre wool cannot be grown on one sheep without good food and plenty of it, the Lincolns require a very rich pasture.

In the Agricultural Report of the Ohio Board of Agriculture for 1866, a long article on the various kinds of wool was published. It was a translation of a work by a Mr. Elsner, of Silesia. It is there stated that the best representation of nice combing wool is the Lincolnshire sheep, and it is one of the largest sheep in England. The next in rank for combing wool is the Leicester, and the third is the Cotswold.

In an address before the Royal Agricultural Society, at Cirencester, Mr. J. A. Clark said, "Lincoln wool is in great request from its peculiar properties of length, strength and lustre."

The above cuts represent the Lincoln ram "Lord Canwick," and the Lincoln ewe, "Lady Bassingbourne," imported by Mr. Wintrop W. Chenery. The ram's fleece, which was sheared in 1868, of about sixteen months' growth, weighed twenty-three pounds. This animal has been lately sold to a gentleman in California, and we understand that Mr. Chenery has none of this breed for sale at present.

—Many of the most valuable islands off the Carolina coast will next season be devoted to the growth of the finer kinds of cotton. The planters expect to make more money to the acre than by continuing the growth of the Sea Island cotton.

## EXTRACTS AND REPLIES.

### COTSWOLD SHEEP.

A notice of some Cotswold sheep that I purchased of T. L. Hart of West Cornwall, Conn., was published in the FARMER. Perhaps some of your readers who are engaged in sheep raising will like to know how I like them. I have no hesitation in saying that they have far exceeded my expectations in all respects, and please me better than any other breed I ever raised. I have just weighed a twin ewe lamb from a grade ewe, sired by the buck lamb I had of Mr. Hart, that weighed 113 pounds, and the mate, which I sold two months ago, I am told will weigh more. My yearling ewe sheared 14 pounds of wool, and will weigh 175 pounds now, and has had no extra keeping.

Having been engaged in butchering and selling meat, I have found the Cotswold to dress heavier in proportion to the live weight of carcass than any kind of sheep that I have dressed, and are much fatter on the same keeping. If more of them could be had, it would be money in the butcher's pocket and gain to the consumer, while the farmer would receive a third more for his sheep. Thousands of the sheep now kept by farmers and sent to market are worth little more than the skins on their backs. While farmers are grumbling bitterly at the low price of mutton, consumers are complaining of its unprofitableness, even at prices so low that dealers are losing money on them, the best they can do. How can this be otherwise? What amount of meat is there on a quarter of mutton weighing from five to ten pounds? And the common sheep of New Hampshire will average little more. Common sense will teach a man the difference in profit to all concerned between a carcass of mutton that will weigh eighty to a hundred, and one that will weigh thirty to forty-five pounds. The consumer says to the butchers, give us better mutton and we will pay your price, but we don't want mere bones any way; and the butcher says to the farmers, give us mutton; we can't sell mere frames; and unless you furnish a better article the people will buy beef and pork, and the use of mutton will decrease. I would advise farmers whose flocks are run down and need improving, to try the Cotswolds this year, and next fall give me the result of the experiment. A. L. SANBORN.

New Hampton, N. H., Nov. 19, 1869.

### TO PICKLE AND SMOKE BACON.

At this season of the year farmers are slaughtering their hogs, and are ready to make hams and bacon. All have not a smoke house, and are forced to depend upon their neighbors. It requires some skill and experience to smoke them just right. Our hams have been spoiled for our taste more than once—the smoky flavor being too intense. Now we have found a way which makes them *just right*; so of course we must impart it to others. First, we smoke the barrel or firkin, by placing it over a small fire of corn or the cobs which are put in an old tin pan. We have tried cobs, saw dust and maple chips, and think that burning corn and cob together gives the sweetest smoke. Four good sized ears of yellow corn will smoke a fifty pound firkin which will hold two large hams, two pieces of beef and two or three tongues. The meat is rubbed with two quarts of fine salt, one pint of molasses and three ounces of saltpetre, for three days before putting into the firkin; turning and rubbing it twice each day; but if this is too much trouble, a pickle can be made of six pounds of coarse salt, one quart of molasses, and three ounces of saltpetre, dissolved in two gallons of water, and after the meat is closely packed in the firkin this mixture is turned over it. In three or four

weeks the meat is ready for use; the beef can be hung to dry, and ham and tongues left under brine. When a ham is cut it can be returned to the pickle; thus it is kept from drying up and from insects. In March or April pour out the brine, re-smoke the tub, scald the brine; add one pint of salt to every two quarts of water which is needful to keep the meat covered; or else, pour away the old brine, (it is good for the asparagus bed or the plum trees) and make new. Keep the firkin in a cool, dry cellar, or in the ice house, and your meat will be as sweet as a nut till it is all consumed. This way of smoking and pickling will recommend itself to every woman of common sense. If she is willing to take the trouble of rubbing the hams, the meat will be sweeter. After they have been well rubbed they should be placed in the smoked firkin and pounded down very tightly with a heavy stick. A large stone must be laid on top of the meat, and the salt, molasses, &c., poured over it. In the early spring a fresh brine can be made for the meat, washing off the old brine and re-smoking the firkin. Beef and pork can be cured together without injury to either.

S. O. J.

Bath, N. H., Nov., 1869.

## CATERPILLARS AND WILD CHERRY TREES.

MR. BROWN,—Dear Sir:—I am very much surprised to see in your paper advice to “cut down and cast into the fire” every wild cherry tree, as they are a complete nursery for caterpillars. The reason you give for destroying them is the very reason I should give for planting them. Nobody can suppose that they create caterpillars. They only attract them from every other tree, and are thus the best guard of the orchard that can be found. Let a few stand in or near the orchard, and there will be no necessity for cleaning every apple tree of nests of caterpillars. They will be all found on the cherry trees, which need not to be planted in the pasture; and, if the cherry trees are low, the labor in getting rid of all the caterpillars will be very small.

I read your paper pretty constantly, and my only objection to it is that there is so much good in it, that it takes up too much time. G. B. E.

Winthrop, Mass., 1869.

REMARKS.—We have great deference for the opinions of our correspondent, but a twenty years' experience proves that his plan has not operated well in our case. A stone wall separates a large orchard from a neighbor's field, where he allowed wild cherry trees to grow abundantly. They were covered with caterpillars every year, and the adjacent apple trees were about as lively with them as were the cherry trees. Tired of destroying them, we obtained consent to cut down the cherry trees, and the result has been, that it has not required half the labor to take care of the apple trees since. The best way, we think, is to destroy the sources of the evil.

## OUR BOOTS AND SHOES.

The NEW ENGLAND FARMER comes to us weekly, laden with good things. It discourses of the past and the present, and with hope looks ahead toward the good time coming, when every farmer in the land shall get a living easy, and have plenty of time to wipe the sweat and dust from his face, and to sit down beneath his own vine and apple tree and enjoy the fruit of his labor, the society of his friends, and the beautiful things in creation around him. Moreover his happiness would be increased if the post-office department

would be a little more prompt in the discharge of its duties. For a man to wait until Saturday night or the next week, for a newspaper due on Friday, is like having to wait for an opportunity to eat a cold dinner, which would have been much better warm.

But this trifling annoyance is not to be compared with the trials and sufferings endured by farmers, in common with other classes, on account of the present style of boots and shoes. I have heard of boys being “big enough to go bare-foot,” but what is the exact size or age which entitles a boy to that peculiar honor I never yet have learned, but I have wished many a time that I could go barefoot *always*. I have lived on this earth upwards of forty years, and have had a new pair of shoes or boots every year, I think, but never since I can remember have I had a single pair that were comfortable and easy. I have not a club foot, nor a long heel, and there is nothing peculiar about my feet. The truth is, the present style is not adapted to the foot. Why not, is more than I can tell. Some infernal spirit must have had control of him who designed a pair of boots or shoes that compels the wearer to be constantly going down hill whenever he attempts to walk. Why should the heel be raised one or two inches higher than the front part of the foot? Why should the toes be squeezed at every step into an acute angle, with acute pain? I have questioned shoe manufacturers in regard to the matter, and they answer, “If we should make a shoe to fit the foot, no one would buy it.” Then nobody prefers a blessing to a curse, when curses are most in fashion. In heathen lands little children are thrown to the crocodiles because it is the fashion, and in New England they are obliged to wear high heeled, narrow toed shoes because it is—the fashion.

Hebronville, Mass., 1869.

L. L. READ.

## BARREN APPLE TREES.

What shall I do with my apple trees? I purchased a farm in this town fifteen years ago. On a field descending south were many small apple trees. When moving, we were careful to leave these trees, and there are now 300 of them on the field. They are from one to six inches through; mostly thrifty, and are considerably shading the land. I do not get ten bushels of apples a year from them. Shall I cut them down and put the land to a better use; or had I better graft them with scions from trees that bear? S. FISHER.

Ripton, Vt., 1869.

REMARKS.—The trees are now fifteen to eighteen years old, and if producing as they usually did thirty years ago, would yield, as an average, one barrel to each tree. It appears that the trees are in their *natural* state—are not grafted. They ought, therefore, to be hardy and productive. But they are not. If they will not bear in this condition, is it likely they would if grafted? We think not. The difficulty does not lie in the variety of the fruit, but in some wide spread influence that we know nothing about, except from what we see of its effects. It does not seem that the trees are deprived of any of their accustomed powers. Fruit buds set abundantly last year, and the trees blossomed, but bore no fruit. They have again set their buds for another year, and they appear fresh and strong. Their non-bearing is not on account of poverty of soil, for trees are all about us that have made a large growth the past season, but produces very little fruit. We know nothing

of the causes which have so cut off the apple crop in the New England States for several years past. The various families of the vegetable, like those of the animal kingdom, seem to be subject to occasional epidemic or general diseases, and we hope that, like the cholera, the present disease which afflicts fruit trees will be succeeded by a period of health and fruitfulness.

We will not advise to graft your trees, and we should reluctantly advise to remove them; if they are cumberers of the ground, and there is no hope of redeeming them, let them give place to things that will make a return.

#### NORWAY OATS, AND HOW HUMBUGS GROW.

I have read piece after piece about Norway oats, and am still an unbeliever in their boasted superiority. Passing by a field of the Norways this fall, I stopped and picked three or four of the largest heads I could find, and brought them home. On comparing them with the common oats, I found that they would not produce any more pounds to the acre, under like cultivation. The world is, always has been, and, for ought I know, always will be full of humbugs. In 1859 and 1860 the big English or Barley Oat was all the go. It soon disappeared. About 1861, the full blood Spanish Merino sheep fever appeared, and soon the country was so greasy that if the farmer on a hill wasn't calked up sharp he would find himself sliding to the bottom immediately. This raging fever prevailed until the manufacturers ascertained that with all their skill and chemicals they could not make cloth out of yolk or grease, and then the fever was broken or turned. The fact is, saving machines are so plenty that farmers must "keep their eyes peeled," or they will be taken in.

While digging my potatoes this fall, which were manured in the hill, I found one stalk of India Wheat, of unusual size, growing from a potato hill. It was almost such a tree as the fowls of the air might lodge in the branches thereof. Not only the stalk but the grain was of an uncommon growth. The kernels were one-third larger than usual. Now, were I to sow this grain in a rich place next year, give each kernel plenty of room, employ some skillful writer to invent a high-sounding name for my new variety and to extol its wonderful qualities, and get the printers to keep it before the people, should I not follow generally the foot-steps of my predecessors on the high-road to wealth and renown? And would my new Cochinpoota wheat be a more transparent humbug than many others with which farmers are befooled?

*Braintree, Vt., Nov. 1869.*

H. H. C.

#### RACCOONS AND HEDGEHOGS.—CROPS IN VERMONT.

Living on a hill farm, which is nearly surrounded by woods, these animals have a good chance to prey upon my crops, and I have suffered much from their depredations. Sometimes they have mangled and destroyed one-fourth of my corn. With me the Hedgehog is as bad as the Raccoon, and together they occasionally make about as bad work in a field as a drove of hogs could. This year I planted a piece of corn by the side of the woods. Expecting trouble, I went into the field before the corn was fairly in the milk, and found they had already commenced their harvest in earnest. Though they had evidently spoken for the lion's share of this piece, I thought I would make one effort to save the crop. I tore six or eight newspapers into pieces, some eight or ten inches square, and cutting off a tassel, adjusted one piece of paper in each hill, about as far down

as the first leaf, in the row next to the woods, and so far as I could see the corn was not meddled with by these animals afterwards. If it should prove equally efficacious in other cases, some of my brother farmers may thank me for writing out this little experiment.

As I have taken my pen in hand, I will just add that in this section, through the month of June and July, farmers did not expect to get a sound ear of corn. But now, as we have a fair crop, how thankful ought we to be to the Giver of all good for his blessing. Well may we say:—

"God moves in a mysterious way,  
His wonders to perform;  
He plants his footsteps in the sea,  
And rides upon the storm."

*Braintree, Vt., Nov. 10, 1869.*

H. H. C.

#### ABOUT WHITEWASHING.

I have been whitewashing quite extensively this fall, and have thought that my experience may be of some use to others. I think it a little strange that farmers do not use whitewash more than they do, as it costs but little, and most anybody can apply it. It makes buildings look better and last longer. I use nothing but lime and water. I have whitewashed most of my roofs. I have put it on in all kinds of weather. If applied when the roof was very dry, it did not stay on long after it rained; if just before a rain, and when the roof was a little wet, it did better; but if right after a rain, when the roof was quite wet it has withstood all of our late rains, and in good order. Of the roof of a long building which I whitewashed, a part was of very old, and a part was of nearly new shingles, and the whitewash has staid equally well on both. If I were ever to whitewash another roof I would put it on after a rain.

*Woodstock, Vt., Nov. 10, 1869.*

C. F. L.

#### LAME CHICKENS.

In reply to your Haverhill subscriber's inquiry about his lame chickens, I will say that we have about fifty chickens of various sizes, five of which were taken lame. Losing the use of their legs, they were readily caught. I took them to my husband to be killed. He asked me to keep them by themselves and feed them well. I replied that all my hens were well fed, and I could not feed five any better than I fed the fifty. But I thought I would try them. The result is they are now fit for a Thanksgiving dinner. If they had been left with the other hens they would not have got well. Chickens, like everything else on the farm, must be taken care of.

*Rockport, Mass., Nov. 17, 1869.*

Mrs. E. M.

#### SPENT LIME.

Will you inform me, at your convenience, through your columns, whether the spent lime from the tanner's pits, largely mixed with hair, would make a good top-dressing for grass lands?

*Milford, N. H., 1869.*

Wm. P. ENDicOTT.

REMARKS.—It is often used with excellent results.

#### A BIT OF POULTRY EXPERIENCE

The first of October, 1868, I commenced with four old hens and four pullets, a mixture of Brahma and Cochlin China. The first of last June I sold two of them. They have laid 1087 eggs, and raised thirty-six chickens up to October 1, 1869. But within a short time five roosters, that would have dressed about twenty pounds have "come up missing."

ORSON TOWNE.

*North Dana, Mass., Nov., 1869.*

## Ladies' Department.

From Once a Week.

### THE INITIALS.

Yet stands the tree! There seems no change  
Come o'er its mossy trunk or leaflets fair,  
Sturdy its branches spread. To me, how strange  
To see it there!

The years have passed, the happy hours have fled,  
The burning love has now forever gone,  
The bright hopes, like the fallen leaves, are dead—  
I am alone!

And yet, upon that tree her much-loved name,  
Unscathed by time, with mine is intertwined.  
Can it be years since to this spot we came,  
One heart, one mind?

Her arm was round me, her breath fanned my cheek.  
As I the letters carved with no small art,  
Together, ever! though we did not speak,  
Was in each heart!

Then, once again, I will her name repeat,  
And try forever to forget the words;  
And pray that time, with gentle hand, may beat  
O'er memory's chords.

I will just place my lips upon that tree,  
And seal the feelings of the past forever,  
And will depart. Where'er my path may be,  
My heart is there.

And now I call, and fast my pulses beat;  
A dainty sound the fallen leaves comes o'er—  
Is it the brushing of her fairy feet?  
Ah, nevermore!

Some other now with her elsewhere may trace.  
In letters fading, their names to intertwine,  
Which time may blot, but he dares not efface  
Such love as mine!

## DOMESTIC ECONOMY;

OR,

## HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1866, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

### CHAPTER XIX.

#### CARE AND COOKING OF VEGETABLES.

Vegetables do not indeed rank so high in the dietetic scale as fruits and meats; even though some philosophers have succeeded (according to their own statements) in extracting sunbeams from cucumbers, and have attained aldermanic corpulency upon turnips fried in water. Yet in their subordinate position they are desirable, not only because they furnish us with a large variety of cheap and healthy dishes, but for the stimulus they often give the appetite towards the proper enjoyment of animal food, while they sometimes render good service in palliating or correcting the injurious effects of a too carnivorous diet. They are generally considered the least important articles of our food, and consequently receive slight attention. The reverse should be the case. As

much thought and care must be bestowed upon the management of vegetables as upon that of the choicest fruits, or there will be great waste of their nutritive qualities, and their highest uses fail of development.

At the harvesting of vegetables pains should be taken to keep all half-ripened and sound productions free from contact with the unsound or diseased,—a decaying turnip or onion, a blighted potato, a "lousy" cabbage—may infect and ruin a whole winter's stock.

Most roots give signs of their maturity in the changed color or dryness of their foliage. They should then be dug or pulled from the soil, left in the sun till dry, and then kept from heat and moisture till they are cooked.

All roots should be taken within doors before the chilly nights of autumn; for if frost-bitten they are sure to decay quickly. But they must be kept as cold as possible short of freezing.

Potatoes and onions are less liable to rot when kept perfectly dry and cool. All other roots need the slight moisture of sand or gravel about and upon them to prevent them from shrivelling; turnips and beets, especially, require this.

Carrots should be covered with sand or ashes; parsnips the same. These last if not needed during the winter, may remain till spring in the soil where they grow, as the frost has less effect upon them than upon other roots. Cabbages also can remain where they will freeze if they are kept in that condition till they are used. Freezing melons and sweetens them; but they decay soon after thawing. They retain their freshness longest if transplanted from the field before the frost comes, to a trench, about a foot deep, in the cellar. Their roots should be watered occasionally. Cauliflowers need the same management. Set celery in deeper trenches in the darkest part of the cellar.

Sweet potatoes keep best packed in saw-dust in a cool, dark and dry closet. Pumpkins and squashes should be kept dry and moderately warm. If squashes get touched by the frost, to prevent their entire waste, pare them immediately and remove their seeds; then cut them into pieces of a convenient size. Slice these to half an inch thickness, and spread them on dishes or cloths in the sunshine, or string them and hang them in a sunny window or about the kitchen chimney to dry. Soak them in warm water till soft before stewing.

Green corn may be dried for winter use, retaining its excellence unimpaired if well cared for during the process of drying. None but the real sweet corn should be dried. Remove the husk and scald the corn just enough to set or coagulate its milk; then with a knife clear the kernels from the cob and spread them thinly on a cloth in the sunshine where there is plenty of air. Stir the kernels about, or shake them to another cloth every morning till they are dry; a week of good weather will dry them. Keep this dried corn in

tight paper bags till needed; and soak in warm water over night before using. Green beans and peas taken from their pods and spread and dried, and kept in the same manner are very nice. Many persons can them; but it is less trouble to preserve them in this way, and they are equally as good.

The most common of our vegetables, and that which is the most useful, is the potato—the Irish potato as it is called to distinguish it from the sweet or Carolina potato; but it is of American origin. It was carried from Virginia to England in 1556, by Sir Walter Raleigh, and from its resemblance to the Batatas, (afterward called sweet potato) which had been long known there as a dainty, it was given its name—slightly modified. For many years it was only used in the preparation of sweet meats and comfits; not until the latter part of the seventeenth century did it get into use as an article of ordinary food. The first potatoes that were raised in New England grew in Framingham, Mass. They were planted by Martha Buckminster Curtis, a famous “female merchant” of Boston.

The potato though not very nutritious, is easily digested when properly cooked, and hence has become almost as indispensable a portion of daily food as wheat bread. But the disease which has infested certain species of the potato during the past few years, has done much to check its consumption, perhaps to our advantage, for it has been plainly demonstrated that a diet of this vegetable is unfavorable to mental and moral development; those who subsist mainly upon it, or who partake of it freely,—as the Irish in their native country—are much below the average in intellect and correct conduct. Still, used in connection with other vegetables, and as an accompaniment to fish and meats, in moderate quantities it does no harm.

The best way to cook potatoes is unquestionably the old-fashioned method of roasting them, rolled in paper, under the ashes of a wood fire. Next to this comes baking in a quick oven. They are good boiled or fried, or—*disguised* in some of the one hundred and four ways in which a Yankee has recently outwitted a Frenchman, who boasted that he could cook an egg in greater variety than he his favorite tuber. But Jonathan gained the case and won a bet by a plurality of just one recipe.

To boil potatoes: Fill a kettle with water just sufficient to cover the potatoes,—and no more. Heat the water till it boils. Throw in an even teaspoonful of salt for a dozen common sized potatoes. Have your potatoes washed clean, then put them into the boiling water. Keep a brisk fire, that they shall boil without cessation. At the end of twenty minutes try them with a fork. If nearly cooked, (while there is yet a bone in them) turn off the water, leave off the kettle cover and set them over the fire for five or ten minutes; or else take them from the kettle and lay them in the stove oven for the same length of time. Cook-

ed thus they will be dry and mealy. The salt not only seasons them, but hardens their skin, so that they are less liable to break in removing from the kettle. If put into water that does not boil, or if allowed to cease boiling they will be watery.

Old potatoes (those that have been kept through the winter) should be freed from their sprouts, as these secrete a poisonous juice in boiling. They should also be pared and kept immersed in cold water for an hour previous to boiling. Then if boiled in salted water and dried as mentioned, on the kettle or the stove oven, they will lose that waxy appearance which generally characterizes them.

A nice way to prepare boiled potatoes for the table is to dip them into beaten egg, sift over them pounded cracker or dried bread crumbs, and then brown them in the stove or range oven.

Mashed potatoes are an excellent accompaniment to roast fowls or pork. For this dish boil the potatoes till soft—from half an hour to forty minutes, according to the time of the year—new potatoes cook much sooner than old. Mash them with a rolling-pin upon a moulding-board, or pound them in a mortar. For a dozen potatoes heat, while mashing them, a pint of milk or cream, in which melt a square inch of butter and a little salt. When the milk boils stir in the mashed potatoes. Mix the whole thoroughly, then put it into a crockery dish that it will fill to heaping; smooth the top with a knife—and, if you please, beat the yolks of two eggs and pour over it—but it is very good without. Set it into the stove or range oven till browned—five minutes will suffice with a good oven—and then take it to the table in the same dish.

Baked potatoes, to be good, should be cooked as quickly as possible without barning. They require an oven heated as for baking bread. Twenty minutes should bake them, and they should be eaten immediately—they become heavy as they cool.

Cold boiled potatoes sliced and fried in fresh pork or beef fat are very desirable at breakfast. Cut the slices evenly, a quarter of an inch thick, and brown them well on both sides. Use as little fat as will suffice—supply it as it lessens. The fat should be hot to begin with, and that to be supplied also. Sprinkle the slices on both sides with salt—a salt box with a perforated cover, like those commonly used for pepper, is very convenient for salting these as well as for flavoring meats while cooking.

Raw potatoes peeled and sliced very thin and fried in salt pork fat are a very appetizing and hearty dish. Heat the fat to boiling in a deep kettle, and then drop in a quantity of slices, as many as can be conveniently stirred about in the kettle. Stir and turn them till they are browned. Skim them into a colander to drain, and then take them in a deep dish immediately to the table.

Sweet potatoes are generally liked; they have

always been celebrated for promoting health and vigor of constitution, and are especially suitable for the diet of children, who naturally crave sweets. The soil and climate of New England seem unfavorable to the perfection of this vegetable, even the best varieties being deficient in saccharine matter when raised north of Virginia. But anything bearing their name is eaten with avidity. The best way to cook them is by baking; or, rather, by boiling till soft, peeling and then browning them in the oven—boiling removes the peculiar rank flavor that some have. If very large these potatoes should be cut lengthwise before cooking. They will cook in two-thirds the time of ordinary potatoes. Both sweet and common potatoes that are left from dinner are nice sliced thinly and toasted on a gridiron over hot coals for breakfast. Eat them with salt or butter.

The turnip, beside its use for flavoring broths and soups, is excellent boiled, mashed finely, and seasoned slightly with salt, pepper and batter, with any sort of meat. New turnips need only washing, all signs of worms cut away, and scraping with a sharp knife, before boiling—old ones require peeling. Boil them in fresh water, half an hour. If they are watery when done press them between two plates before mashing. The Germans and Dutch mash equal portions of potato and turnip, and season in the same manner. Either the white English turnip or the sweet yellow French turnip served in this way is desirable.

Beets are only admissible with salted meat and fish. New beets are boiled in half an hour, but winter beets require at least two hours boiling to make them tender. They should be washed carefully with a cloth, in order to remove all sand or soil without breaking the skin or removing their fine fibrous rootlets—which would cause great waste of juice and flavor. When soft enough to admit a fork easily they are done. Take them immediately into cold water—let them lie half a minute, and then with a slight pressure of the fingers slip off their skins. It is accomplished almost instantly, and much nicer than by scraping or peeling with a knife. Cut them in slices, lengthwise, butter them; or send them plain to the table. Baked beets are a favorite dish with the Spanish, but they have never suited the Yankee palate.

Carrots are seldom used except as flavoring for broths and soups, but they are very nutritious and palatable when well cooked. Boil them in their skins three quarters of an hour; then peel them and serve in the same manner as beets with boiled corned beef or salt fish. Or, after boiling them till very tender, mash them and season with a little cut parsley, pepper, butter and salt. Or, bake them an hour (having removed their skins by scraping—) in a pan,—with a little water and sugar strewn over them; and serve with butter while hot. Boiled carrots, rubbed through a hair sieve, and mixed with milk—one cupful to a quart of milk—and three eggs well beaten, spiced with cinnamon

and lemon, and sweetened with two tablespoonfuls of sugar, make excellent material for pies. Bake this in deep dishes with an under crust, like prepared pumpkin or squash.

Onions are a great addition to any sort of fresh meat, with salt-fish. Remove the dry outer coat, and boil them in fresh water three-quarters of an hour. Turn off the water three times while cooking them, and replace it with more, boiling hot. They should be well-covered with it. Boiled thus they will be of mild flavor. Serve them whole with butter and pepper; or chop them and stir them a few minutes with cream, and a little salt and pepper to make a stiff sauce. Or bake them half an hour in their skins. Then remove their skins and serve with butter. Cold boiled onions are nice fried in pork fat till they are well browned; and raw onions sliced thin and fried in salted lard or salt pork fat, just enough to prevent them from adhering to the pan, are a good accompaniment to veal or mutton chops.

Cabbages should have their loose leaves removed and be carefully searched for insects, as well as very thoroughly washed. Then divide them by slitting the stump end in quarters, to the centre of the head. They are best boiled in water slightly salted. The water must be boiling, and kept so. Enclose them in a thin cloth bag or net if other vegetables are boiled with them. Boil a large head an hour. Season with butter, eat with vinegar and pepper. Cut cold cabbage very fine, and fry it in nice beef fat or lard,—just enough to move it easily in the pan. Sprinkle salt upon it, stir it, and brown it nicely, and turn it upon toasted white bread for breakfast.

Cold slaw or cabbage salad is made of raw cabbage. Two hours before it is needed, wash a close head and leave in cold water till dinner is nearly ready; then cut it into quarters, and these as thin as possible, and then chop as small as beans. Mix with this a little salt, pepper, vinegar and oil, according to your taste. Cabbage stamps throw out sprouts in the spring which make excellent salad, dressed in the same way; or serve as greens with corned beef,—boil them half an hour in a net with the meat.

Caniflowers, being a delicate sort of cabbage, need about the same treatment. They are improved by soaking an hour in cold water that is slightly salted before they are boiled. Boil them in fresh water—milk added to this water improves their flavor. When they are half done pour off the water and fill in more that is boiling.

Asparagus should have its stalks bound in bundles—about three inches through—with a fine tape or strip of strong cloth. Cut off the white ends. Boil it in salted water: it must be boiling hot, and kept so constantly. Half an hour will cook it. Toast slices of bread, spread them with butter and lay them in a dish. Then pour over them the water in which the asparagus has been boiled, and place the bunches carefully upon this toast, and

then cut the strings and loosen the stalks without breaking them. Lay upon them small shavings of butter, and take the dish immediately to the table. What is left from dinner is very acceptable at breakfast cut very fine and mixed with two or three beaten eggs and a little butter—scalded in a saucepan till the eggs are cooked, the whole thoroughly stirred, and then poured upon toasted bread.

Parsnips are nice boiled till tender; they require an hour—in salted water. Remove their skin, cut them lengthwise and butter and pepper them. They are good with fresh as well as salted meats. Fry them as you would cold potatoes, the next day. Some persons brown them in the stove oven after boiling them, before sending them to the table.

Cook egg-plants like turnips; or parboil them, slice them, and fry them in butter,—dipping them first in pulverized cracker and sprinkling salt and pepper over them; or bake them after they are sliced and seasoned with salt and pepper, placing them in a deep dish with layers of bread crumbs or pounded cracker.

Summer squashes should be boiled in a net. Put them in boiling water; from a half to three-quarters of an hour will cook them. Wring them as dry as possible by pressing between two plates. Remove the rind; mash, and season with butter, salt and pepper.

Winter squashes cut into convenient pieces; and take out the inside, except the filaments that are attached to the pulp—they are the sweetest part. Steam these pieces, or boil them in as little water—*fresh*—as possible. An hour will steam them; three-quarters boil them. When soft enough to bruise easily the squash is done. Peel it, taking off only the transparent skin of a soft shelled variety, and scraping the pulp from the rind of the harder kind. Mash the pulp fine, and season with salt, butter and pepper; a little sugar improves the flavor of a squash that has no natural sweetness. Boil and serve pumpkins in the same way; using the pulp if it is watery, as for summer squash. Two cupfuls of plainly boiled squash or pumpkins, one quart of milk and four eggs (or two eggs and one pounded cracker,) flavored with nutmeg and cinnamon—salt and sugar to taste—make excellent material for pies. Bake it with an under crust only, in deep dishes; or without a crust, having buttered the dish and sprinkled it thickly with fine Indian meal. These pies, baked with this substitute for a crust are very good for invalids.

Spinach is to be washed thoroughly and boiled in a net in salted water. This, as well as other greens, must have a great deal of water; or the water turned off and replaced, or it will be too bitter. Season it with butter; or serve it with melted butter with hard boiled egg chopped small added. It should accompany fresh meats.

Cabbage sprouts, young cabbage plants, young beets—both tops and roots—turnip tops, mustard, lettuce, dandelions, cowslips, radish leaves, sugar-

weed, and young shoots of the currant bush, make good spring greens—to be eaten with salted meats. They need to be well searched for insects, and washed and boiled in salted water till they will sink to the bottom of the kettle.

Purslane is excellent either as a green for salted meats or dressed with butter for fresh meats. And celery, which is usually eaten raw as a salad, is sometimes boiled and dressed with cream and butter for the same.

Lettuce and peppergrass taken together make a good salad; or lettuce and nasturtian plants; or lettuce and tomatoes.

Celery is sometimes used with these, and radishes; but they are generally preferred by themselves. Wash them carefully and eat with salt, or salt and olive oil.

For making a salad the vegetables should be as crisp as possible, so it is best to pick them over and wash them and place them in cold water two or three hours before they are to be served. Cut the materials very small, and dress them with vinegar, salt, pepper, oil, powdered sugar, and mixed mustard. If you please add hard-boiled eggs—the whites cut in rings to ornament the top of the dish, the yolks mashed and mixed with oil and stirred among the cut vegetables.

Now a few words about corn, beans and peas, and we must leave the vegetables. Husk the corn and shell the beans and peas with clean hands. Do not wash them; only remove all kernels that are not perfectly healthy. Boil green corn in soft, fresh water; green beans and peas the same—as little as will cook them. Cook these as soon as possible after gathering. If they are not very young a little salcratus—a piece the size of a small bean to a gallon of water—will make them tender; for string beans this is frequently needful. Green corn on the cob will boil in half an hour. It is good baked fifteen minutes in a stove oven, or roasted five minutes on the coals.

An excellent dish, and one that suits children, is corn soup. To make this, cut the corn from the cob, and boil the cobs in fresh water half an hour. Skim out the cobs and put in the corn, and boil this the same length of time; then add one-third as much milk as you have of the water, a little salt and pepper; and a beaten egg if you please. Let it boil a few minutes, then stir in a little flour for thickening. Serve it hot.

Green peas will boil in half an hour. Put them to boil in cold water, without salt—salt hardens both beans and peas. Use only water enough to keep them from burning. Dress them with salt and butter. String beans cook in the same way—after having removed the string at each side of the pod, and cut or broken the pods into small pieces,—they are easily broken or “snapped,” if not too old. String beans and peas may be mixed for boiling, or shelled beans and peas, or peas and asparagus. A small piece of salt pork seasons peas and beans nicely. It should be boiled with them

about ten minutes before they are done. Shelled beans, green peas, and green corn, that have been dried, should be soaked over night and then boiled precisely as when first gathered.

A very good addition to a dinner of boiled beef is a dish of beans—the common dried white beans—boiled in a bag with the meat. They should be soaked over night, the water turned off. Butter them before taking them to the table.

Bean or pea soup needs generally three hours to cook it well. One hour before it is done boil in another kettle a piece of salt pork, and, if you like, the same of corned beef, and just before taking up the soup mix the contents of the two kettles. Some persons pass the soup through a hair sieve. With pea soup this is always necessary, unless the hulls have been carefully skimmed from the surface of the liquor when they are first separated from the peas.

To bake beans or peas, soak them over night in cold water; turn this off in the morning, and par-boil them in double their measure of fresh, soft water till their skin cracks. Then skim them into a deep earthen or iron pan, pour in a little molasses—a tablespoonful to a quart of beans—and enough boiling water to cover them. Then place among them, sinking it so that only the rind is visible, half a pound of salt pork, both fat and lean, the rind cut in strips. Bake them three hours at least, in a steady oven; they are better if baked six or even ten hours.

Succotash, or corn and bean soup, is made of dried corn and beans, in the same way as bean or pea soup. It is sometimes made of green corn and beans. In that case the cobs, after the corn has been cut from them, are boiled an hour to extract their juices, and in this liquor the corn and beans are stewed. Only the sweet corn should be used.

*For the New England Farmer.*

#### DOMESTIC RECEIPTS.

##### Receipt for Lincoln Pie, or Cake.

Take two-thirds cup of sour milk, two-thirds cup of cream, one-half cup of sugar, one teaspoonful each of salt and saleratus, flour enough to make a

stiff batter, bake in a hot oven. While it is baking stew one and one-half cups dried raspberries, sweeten well and have plenty of juice. When the cake is done cut with a thin knife into two or three layers according to the thickness of your cake; put one on a warm plate and put on a layer of sauce, another of cake, till all is prepared, send to the table and help yourself.

Blackberry or raspberry jam, or even dried apple sauce can be used instead of the dried raspberry. Mrs. J. E. D.

#### GOOD DOMESTIC RECEIPTS.

AN ECONOMICAL DISH.—Steam or boil some mealy potatoes; mash them with some butter or cream, season them, and place a layer at the bottom of a pie dish; upon this place a layer of finely chopped cold meat or fish of any kind, well seasoned; then add another layer of potatoes, and continue alternating these with those until the dish is filled. Smooth down the top, strew bread crumbs upon it, and bake until well-browned. A small quantity of meat serves in this manner to make a nice presentable little dish.

PHEASANT, PARTRIDGE, OR GROUSE PIE IN A DISH.—Pick and singe two pheasants, or four partridges or grouse; cut off the legs at the knee; season with pepper, salt, chopped parsley, thyme and mushrooms. Lay a veal steak and a slice of ham at the bottom of the dish; put the partridge in, and a pint of good broth. Put puff daste on the edge of the dish, and cover with the same; brush over with egg, and bake an hour; or place them in a raised crust.

CLAM FRITTERS.—Take twenty-five clams and chop them fine, leaving out the juice; four eggs beaten, one cup of sour cream (if you have no cream, use one cup of buttermilk, and a piece of butter the size of an egg, melted and well mixed); one cup of flour, one small spoonful of saleratus. Then fry in butter, and spread them well with good sweet butter when you take them out of the frying-pan.





# THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

## FEBRUARY.



HORT always, and sometimes very sharp, is this month of FEBRUARY. The "backbone of winter may be broken," but in efforts to recover its full strength again, it blows, and snows, and freezes, and does so much in this line, that January would stand back as a second-rate month, if it could come along and make little February a visit.

Sudden changes of temperature make unusual vigilance necessary on the part of the farmer. His stock feels them. The milk pail shows them. The young cattle stand with their feet nearer together, and their backs "hunched up" if they are exposed, or in their stalls, if the weather is very cold. All the animals need more food, because more heat is required to keep them warm. Food to them is like fuel to us, in a cold day. We know how to get up warmth without eating an unusual quantity of food; they do not, and therefore require more care.

**REMOVING MANURE.**—Where one is so fortunate as to have a barn cellar, that does not freeze, this month affords an excellent opportunity to take the manure to the fields, where it is to be used in the spring. The labor of loading and unloading it, if hauled out upon a sled, is not lost, as it is so much work done towards mingling and making it fine. This work accomplished, greatly facilitates the

preparations for planting and sowing in laying lands to grass, in the spring.

It also saves cutting up the fields, that are obliged to be crossed with carts, after the frost has left the ground. Cart-ruts not only make ugly blotches to look at, but are much in the way of the mowing machine and rakes, whether by horse or hand, and also cut short the crop.

If manure is thrown from lean-to windows into heaps, it is better to take it to the fields in February, even if at some trouble to break it up when frozen.

The work of preparation, and of sowing and planting in the spring, *cannot* be postponed without the loss of nearly a whole year's operations. Whatever, then, can be accomplished in the winter months to aid forward the spring work, ought always to be attended to.

Something may be done this month in getting together materials for fences. On most farms a portion of the fence is of wood. On some, entirely so. Posts may be split out and morticed, and rails sharpened. For "bars" that are frequently to be taken down they should be straight, light and smooth, and made of strong material.

A good rail fence, made of chestnut or red cedar, will last a great many years. We have seen fences made of young cedar and chestnut trees, split once only, that we were in-

formed had been in use *fifty* years, and were still quite good. But in order to withstand the "tooth of time" so long, the bark ought to be removed, and the sticks laid up so firmly that they will not fall, and remain on the ground half the time.

**ABOUT PRUNING.**—It has long been a practice among farmers to commence pruning apple trees in February, mainly, we suppose, because there is leisure time. There are some reasons why this should not be done. There will not be sufficient action in the tree to harden the surface, where a limb is taken off, before the sap ascends in the spring. When this action does take place, the sap flows out and spreads over the surrounding bark, and by some chemical action which takes place in it, is changed to a poisonous fluid, which greatly injures the tree. It is very unsafe to prune before the middle of June. Soon after the leaves fall in Autumn, and in mid-Summer, are the safe times to do this work.

**ROOTS FOR STOCK.**—Where roots are stored up for use, it will be well to begin feeding them out in February. A root-slicer is a most convenient article. It will slice a bushel in two minutes, when turned briskly by a man, and leaves the pieces in thin slices as long as one's fingers, each slice being cracked in many places. In this condition, all the domestic animals can eat them without danger of getting choked.

**TOOLS.**—No delay is safe now, in seeing that plows and all other farm implements are in order to be used.

**FUN.**—Short and boisterous as the month is, there is usually considerable fun in it. The 14th is *Valentine's Day*, when there is some latitude likely to be given both to tongue and pen. In London, 200,000 letters, beyond the usual daily average, pass through the Post Office on St. Valentine's Day. "Two hundred thousand two-pences," said a gentleman, and was going to cast it into shillings and pounds. "Why, papa," said his daughter, "that's just the number of young folks there must be in love with each other—that's the way to reckon!"

The privilege allowed to tongue and pen on this day ought to be used with much discretion. They sometimes awaken emotions, and excite hopes, that can never be realized. A

general excitement prevails among young people, all breathing the spirit of the poet,—

"Outstrip the winds my courier dove!  
On pinions fleet and free,  
And bear this letter to my love  
Who's far away from me."

The old English books are full of the customs practiced on St. Valentine's Day. Sonnets and larger poems have been written without number, and jovial games, stories and witticisms are plentifully recorded. It was a general holiday, and served to drive off grim care, and refresh both body and mind for future labor.

"I'll be yours, if you'll be mine,—  
I am your pleasing Valentine,"

was upon a thousand tongues, and in ten thousand billets-doux.

#### THE DAIRY IN MICHIGAN.

We think there is sound sense in the following suggestions, by X. A. Willard, in the *Rural New Yorker*, to farmers who are now changing from the sheep business to that of the dairy. During the war we frequently heard the remark that prices for sheep and wool could never again be as low as formerly. But they have been low for two or three years. What assurance have we that the products of the dairy are safe from a similar depreciation?

F. M. Holloway, Hillsdale, Michigan, writes to the *Germantown Telegraph* that the falling off of the wool clip of the State last year was about 300,000,000 pounds, and he thinks that next year will show a like result.

He says every pound of wool grown in Michigan costs fifty cents, as farmers have learned by bitter experience, and they will no longer hang their hopes upon a delusive tariff for relief—that four pounds of butter or six pounds of cheese can be made with less expense than a pound of wool can be grown, and that the dairy interest is therefore taking its place. The pork interest is also spoken of as unprofitable, as Michigan farmers cannot compete with the corn regions South and West.

We are rather surprised to hear this statement from Michigan, and we hope the dairy will not disappoint Michigan farmers; still, success in the latter business depends upon skilful management and experience; and it is not well for farmers to be constantly changing from one kind of farming to another, simply because prices happen to be low one year and some other business just at that time appears more profitable. It always takes time and a good deal of experience to learn a business thoroughly, and when one becomes proficient in a certain branch he should have good solid reasons for abandoning it for that with which he is not familiar.

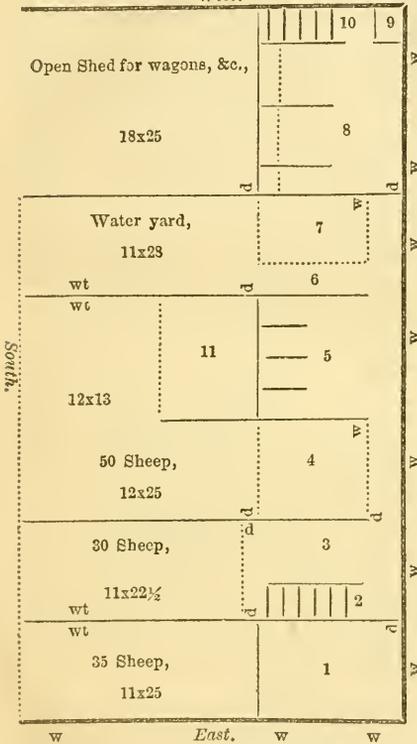
We do not wish to discourage any one from entering upon the dairy business, but rather to give caution that too high hopes should not be entertained, and that an inexperienced person will not be likely to realize a fortune from the dairy the first or the second year of his trial in it.

For the New England Farmer.

**A CONVENIENT FARMER'S BARN.**

In compliance with your request that some of us, practical farmers, who have barns that we think are about right, would furnish you plans of their arrangement and descriptions of their construction, we send you the following sketch of one that we have built during the past season, and which we are now using with the most perfect satisfaction. The barn is 75 feet long and 40 feet wide. The following is the plan of

THE BASEMENT.  
West.

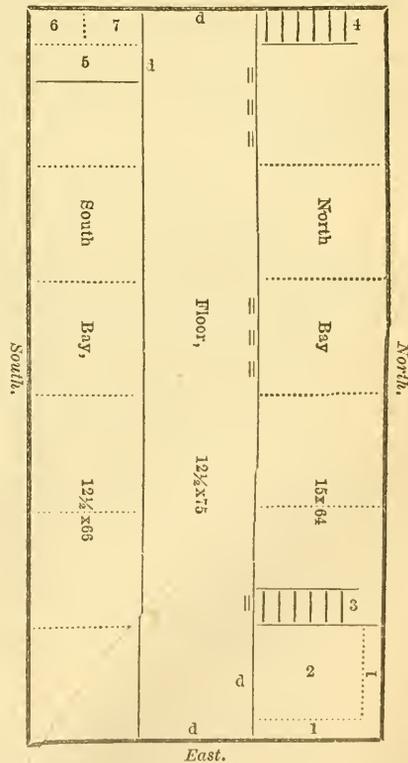


*Explanation of Plan of Basement.*—No. 1 is a room for poultry, 11x15 feet, fitted up with roosts, nests, &c.; No. 2, stair way 3 feet wide; No. 3, feeding place, 11x17½ feet, including stairs; No. 4, pen for calves and for manure thrown from the cow stable; No. 5 is the cow stable, 12x15 feet; No. 6 passage way, 3½ feet wide; No. 7, pen for hogs in front and for the manure from horse stable, 7½x11½; No. 8, horse stalls—the horse crib is 2 feet wide at bottom, 2½ at top, 2 deep and 1 foot from floor, made of maple plank; No. 9, harness room; No. 10, stairs, 3 feet wide; No. 11, hospital, or spare pen for colt, sheep or other animal, 12x12 feet. The place for doors is shown by d; wt indicates location of water troughs; w, windows.

Here all our stock are kept. It is all above ground and is eight feet high. The first two feet are stone wall, on which rests the frame, except under the big doors, where the wall extends to the floor. The posts of the barn are 20 feet in length, extending 6 feet into the basement, and 14 feet above the first floor.

Excepting the open space for wagons, &c., it is all enclosed, and so warm that water in the troughs does not freeze over in the coldest weather. Ample means are provided for ventilation. The partitions in the basement are made by nailing cleats on the inside of the posts, which are 10 inches square, and slipping boards between them. The south side, at dotted line, is boarded down to foot of the braces outside, and inside of braces doors with large glass windows are hung to the timbers above, so as to turn up and fasten over head. There are one of these at each end where the stock is kept, and one for the purpose of ventilation. Below these are smaller doors for the passage of sheep, which turn up at bottom. In summer time, the sheep doors are set one side, and the upper part or large doors are fastened up and the whole basement becomes an open shed. The manure is thrown from the horse stable through a window into the pig pen, and from the cow stable in the same way into the calf pen, and the treading of these animals keeps it from heating.

PLAN OF THE UPPER FLOOR.  
West.



*Explanation of Plan of First Floor.*—No. 1, the bin, 2 feet wide at bottom and 2½ at top, which are a part of the corn-room, No. 2, 11x15 feet, including the bins; No. 3, stairs, 3x3 feet; No. 4, stair-way; No. 5, oat-room, 9x12½ feet, including Nos. 6 and 7, which are bins. The parallels, =, show the feeding places to the sheep, cow, and horse departments below.

The first floor, as will be seen by the plan, consists of a drive way or floor  $12\frac{1}{2} \times 75$ , two bays, one  $12\frac{1}{2} \times 66$ , and the other  $15 \times 64$  feet, with corn and oat rooms, &c. The barn is situated on level land, but with an inclined bankment of 30 feet in length at each end we find no difficulty in surmounting the rise of six feet necessary to enter the floor. The large door at the east is hung on rollers on the outside of the barn, while that at the other end is hung inside, and slips in behind the stairs at the right. The dotted lines across the bays indicate the position of the beams 12 feet from the floor, and not partitions. There are only two bays. The barn is covered by a "two-thirds" roof, ribbed and shingled with sawed hemlock 26 inches long, the whole supported by purline plates. The hay for the sheep is thrown down the stairs into the "feeding place," and is distributed from that place to the feeding boxes in the different pens.

P. & O. L. FISHER.

*Westminster, Vt., Jan. 1, 1870.*

REMARKS.—We regret that we cannot give a perspective view of this barn, as we are assured by the wife of one of the owners, to whom we are indebted for a portion of the foregoing description, that it is not only a comfortable and convenient building, but that it "looks well."

*For the New England Farmer.*

#### FARM HELP.

In reading what others write and in listening to what they say, I am often reminded of the fact that we are all liable to "jump at conclusions." I think that Mr. Jameson did so in his remarks about foreign help, and I think "D. M. H." for what I regard as his just criticism of Mr. Jameson's article. But as Mr. J. gave us his name, I should have been better pleased if D. M. H. had done the same.

City gentlemen who retire to the country after having made a fortune in business conducted on principles of punctuality, order and system, experience much difficulty in securing such farm help as will conduct their farming in the same neat and orderly manner in which their city business was managed, and few men either foreign or native born, can be found to suit their ideas of good help, or efficient managers. And I agree with D. M. H.'s remarks upon this subject.

I cannot agree with Mr. Jameson though D. M. H. appears to do so, that none of those men who are competent to manage farms in England, profitably, that rent for ten to twenty dollars per acre, are seeking employment in this country. I have personal knowledge of men who paid similar rents for hired land in England, and made money there, who sold out and came to this country, believing they

could do better and live easier here. But I think most of them have been disappointed in these anticipations. They find a great difference in the climate, soil, customs and productions of the two countries. In England labor is cheaper than here; and many farmers there do little more than superintend their business, while hired servants do nearly all the work. In this country labor is so scarce that the proprietor or manager must take hold of the hardest work, and even then is not able to carry out his ideas of farming.

Hence, some of the farmers' sons in England, from being brought up without much work, and not unfrequently spending much of their time in riding about the country, like gentlemen, are not as well skilled as many of the servants, who know more of the practical operations of the farm. But those foreign boys who have worked upon and shared in all the labors of the farm, with, as Mr. Jameson well expresses it, "a determination to be a farmer," make valuable help and progressive, neat farmers.

I cannot agree with Mr. Jameson that bleak rocks and desert sands, even with intelligent labor, make rich farms or wealthy States, and I allude to the remark for the purpose of expressing the opinion that too much strength and too many lives have been expended on such soil.

Mr. Jameson advises D. M. H. to hire his own son, or, if he has none, to encourage and hire the son of some neighboring farmer. While this advice may have been prompted by a right spirit, I have known it to be acted on in such a way as to cause trouble. If he has a son that he wishes to keep at home would he thank a neighbor who should entice him into his employment? The minds of boys are sometimes unsettled by such means. Wages are offered and inducements held out that tempt them to leave home, or at least create uneasiness. These remarks are based on facts of my own observation.

In regard to boarding farm help I am disposed to dissent from the views of both Mr. Jameson and D. M. H., or at least to ask them if they have thoroughly considered the subject, and to advise all who propose to adopt the plan suggested to "look before they leap."

In leaving the old country I did hope that I had left that system in England, where it originated. In my mind it is associated with some of the worst features of the old world aristocracy. I am afraid that the introduction of this plan, as well as the introduction of English sparrows will prove misfortunes to American farmers. In England there are two tables in every farm-house, and in some large establishments the men are boarded in a house upon the farm; a laborer and his wife being chosen to take charge of the same. In some instances the gentleman pays so much a week per man, and said bailiff finds all. In other instances

the gentleman will pay the family so much a week for cooking, the master finding everything. This is done that the master and mistress may have more leisure, but while enjoying this leisure their property is going to waste and they themselves to ruin. Of this, gentlemen, I have been a personal witness. Would it not be much better for every farmer's wife to superintend her own domestic affairs, providing she does not work herself? Is it best to bring up our daughters so daintily that they will become so nervous that they swoon at the sight of the working-men in the kitchen?

Where a farmer employs but one man this plan may answer, but with from five to twenty I think he would find it more costly and inconvenient than to board them in his house. Those who have money in abundance may care little for economy, but with farmers like myself there is little to waste.

Farmers, like others, desire to see their wives happy, and I venture to say that thousands are more happy in the kitchen than in the parlor. Indoors as well as out, all needed help should be provided, so that the wife should have time to be sufficiently familiar with the affairs of the farm to manage them in the husband's absence. I am aware that study and inquiry are now necessary to keep up with the improvements of the day, but it would be good policy for us to keep in remembrance the old rhyme—

Man to the plough,  
Wife to the sew,  
Boy to the flail,  
Girl to the pail,  
And your rents will be netted;

But man tally-ho,  
Miss at piano,  
Boy Greek and Latin,  
Wife silk and satin,  
And you'll soon be gazetted.

I hope Mr. Jameson will read this with the same good feeling in which it is written, as I wish to be friendly with those whose opinions I may not fully endorse. E. HEBB.

Jeffersonville, Vt., Jan., 1870.

For the New England Farmer,

#### "STICK TO THE FARM."

These four words have made a *text* for a great amount of agricultural writing and speaking. It comes most often from men who are not themselves on farms. Men who *buy* all their farm products, men who make agricultural addresses at county fairs, and from men who make agricultural papers for farmers' reading.

Now, to a hard working farmer, or farmer's wife, who is, by the strictest economy, just making a living, this text is not very musical, coming as it often does from an editor who is getting a liberal salary, or from a lecturer who is making more money in one day than the farmers net income for a year. I

hardly ever see those words at the head of an article without feeling a little cross.

The writers seem to wish to *encourage* the farmer; to convince him that he *is* really better off on the farm than he could be any where else.

Now it seems to me, to be the most natural thing in the world for men who have their food to buy, to desire to see plenty of farmers to raise it. I, as a farmer, certainly like to see people stick to *other* business,—the more the better.

I find my best place to sell is where there are *no* farmers. Do the mechanic, the tradesman and the man of letters, find it the cheapest place to buy where the people are *all* farmers? Why should not they say, "stick to the farm," and try to convince the farmers' sons that it is the best place for them also.

And why should not I say to you who are not farmers, stick to your trade, or profession, or store. Do not raise anything to eat. You are doing better as you are. You can buy your produce a great deal cheaper than you can raise it. And your sons had better stick to the business you have taught them to do. They will succeed much better than if they try farming. Advice which is probably just as good for them as is yours for my son.

You advise us to stick to the farm, because you say we are so independent, or because it is so healthy, or that rural life is so pleasant; or because we are so free from care, and anxiety, and because all but three in a hundred of business men fail. You like to cite cases where farmers have begun in a small way, and have succeeded in gaining what you call, *for them*, a competence.

I know a man who is worth perhaps twenty or thirty thousand dollars, who boasts that he has made more money at farming than any man of his acquaintance. Now the fact is he is entitled to be called a farmer about as much as are thousands of business men who keep a horse to ride to their store, and raise hay enough on their house lot to keep him, with the addition of grain bought.

This *farmer* had a farm, a grist mill, and a saw mill *almost* fall to him, from his uncle. He paid something for them, but nothing near what they were worth, or what any one else would have had to pay. Then, in the same way he came in possession of more standing lumber than his mill could saw out as fast as it grew. He is now an old man. His wife has worked very hard a great many years. They have hired enough help every winter to cut and haul all the logs the mill would saw, and have boarded all the help; have kept teams enough to do the carting, and raised hay enough to keep the teams, and farm produce enough to board the help. He has bought oxen by the score in the fall, kept them on hay that grew on the meadow which the mill pond covered in the winter, and sold them in the spring to the neighboring farmers, at an advance,

after hauling logs all winter; then put his manure on his upland where he would raise potatoes enough for the family and corn enough with what he took as toll at the grist mill to fat his hogs, which were all consumed in the family. Most of his good hay he sold. And now his farm is not nearly as good as it was when he took it. He digs no stones, makes no wall and drains no land. But he passes for a successful farmer.

There can be no harm in advising *him* to stick to the farm.

I know another farmer, who three years ago left his place as foreman in a large factory, where he said he was getting all the wages he was willing to ask. He had saved enough in twenty years to buy a five thousand dollar farm. He put it all into a farm, and run in debt for the stock and tools. There was lumber enough on the place to build a new barn, which the place very much needed, but rather than be in debt he sold the lumber standing to pay for the stock and tools and then hired a man to run the farm while he went back to the shop to stay long enough to earn a new barn. He has tried several different men, but all of them had to draw on his wages to keep the farm running. And now he has let it out for a term of years, hoping some time to have earned enough in the shop so that he can afford to live on his farm! Would you advise him to stick to the farm?

I know another farmer of fifty years of age, who, till last spring, had been in a mechanic shop thirty years, was receiving good wages as engineer, house rent gratis, with a large family of girls all engaged in the shop at good pay. Last spring he and his son-in-law bought a large farm for seven thousand dollars, paid two thousand down and mortgaged for the balance. He runs a milk cart, gets up earlier in the morning than he ever did when confined to the shop.

He is disappointed in the capacity of the farm. Has to buy a great deal of feed for the cows. His fruit all blew off in the gale. His potatoes were spoiled by the drought, and the family have consumed all the garden produced. The taxes are high and the interest money is on the opposite page from what it was before this year. He is feeling decidedly *blue*. He and his family never worked so hard before or received so little for it. Shall he stick to the farm?

If I were buying my farm produce I might say "stick." But while I am raising food to sell, I do not expect to spend a great deal of breath in trying to convince people who do not like the business, or those who do not succeed in it, to stick to the farm.

A. W. CHEEVER.

*Sheldonville, Mass., Dec. 27, 1869.*

REMARKS.—We are so well pleased with the manner in which our esteemed correspon-

dent has presented his views, and our columns are so crowded just now, that we defer for the present any remarks of our own upon the subject of this communication.

*For the New England Farmer.*

#### THE GARDEN IN FEBRUARY.

"Who slacketh his tillage a carter to be,  
For great got abroad, at home lose shall three,  
And so by his doing, he brings out of heart  
Both land for the corn and horse for the cart."

Thus wrote the Poet-farmer Tusser. Can the reader see any point in it, as applied to the farmer's garden? I merely throw out the suggestion, and leave the inferences to be drawn and applied to suit each individual case.

In our climate little else can be done in the garden in February than to get ready for spring work; although I have known exceptional seasons when ploughing and planting of early crops was done in this part of Connecticut as early as the latter part of the month, and all prospered and perfected good crops.

In all our management and plans of the garden, our aim should be at the highest degree of excellence. To excel is one of the chief sources of pleasure with all enterprising, go-a-head individuals in any undertaking. There are many things in the care of a garden from which an inquiring mind may extract pleasure as well as profit. In watching the beautiful processes of nature, there are many interesting lessons. As a general thing we are too much of a matter-of-fact people; we mingle too little pleasure with our business. In all our gardening operations we should have our eyes open to the charms and attractions, of vegetable growth and perfection. Thus labor would become more profitable and successful,—for where there is a love and interest in any business success is sure to follow.

**COLD FRAMES.**—Look at directions given last month and follow them up—plenty of air mild days, and protection from changes, comprise the principal care.

**FENCES.**—A good garden fence, kept in repair at all times, will save a deal of trouble from the invasion of stray animals. Gates should have fastenings, and be capable of swinging without dragging on the ground. A nail in that loose board or picket will prevent trouble.

**GRAPE VINES.**—If these were not pruned in the fall, embrace the first mild spell when they are not frozen, and prune them. Rampant growers will do better not to cut them very close; they will produce more fruit and ripen it better than if pruned to one or two eyes. Vines should be pruned, according to their growth and habit.

**HOT BEDS.**—For general family purposes at the North, hot beds will not need to be started till next month or later. Frames and sash should be got in readiness, by doing all

painting, glazing and repairing that is needed. Let the manure and heating material be accumulating against time of need.

**HOUSE PLANTS.**—These will need attention in keeping the foliage free of dust, the bane, often, of plants kept in the living room. Wipe the leaves and stems of all smooth, firm leaved plants with a wet sponge or cloth. Give all plants a showering, from a watering pot with a fine rose sprinkler, as often as once a week, by placing them in a sink or large tub, and turn them on their side so as to wet the underside of the leaves as well as the upper. If the green fly, or aphid, trouble, give them tobacco smoke, confined under a tub, a funnel of paper, or box. Treat red spiders to frequent showering at evening, keep the atmosphere damp and they will soon leave.

**PRUNING OF CURRANTS AND GOOSEBERRIES,** if neglected in the fall, may be done any time when they are not frozen and the weather is mild. Cut with an eye to a well balanced bush, recollecting that fruit is borne, on the currant, on old wood. Of currants there are none preferable, for general culture, to the Red Dutch, White Dutch and La Versailles. Houghton's Seedling Gooseberry, and other American seedlings, are the most healthy. The larger imported varieties seldom escape mildew in our culture.

**SEED DRILL.**—No garden of any considerable size ought to be without some machine for sowing seeds. The machine drops the seed more evenly than it is done by hand, and saves the back from many an ache. These machines are now so commonly manufactured and the price so reasonable that there is not as good an excuse now as formerly for being without them. Some of them are made for sowing any seed, from that of the size of the turnip to peas, beans, &c.

**TOOLS.**—Have you all that are needed for the garden, and are they in good repair? If new ones are to be procured make a memorandum and look among the implement dealers as you visit the city, see what is new, and procure early. Make all needed repairs on old ones; give the wood work a coat of paint, or even boiled linseed oil clear is better than nothing.

Do not let another spring pass without setting out some flowering or ornamental shrub in that vacant place in the yard, to shut out that obnoxious view of premises over which you have no control. An ornamental tree set in the street in front will make your place look more attractive; as it now is, it looks barren and lonely without a tree or shrub to look out upon, or to meet the eye as we approach the place.

W. H. WHITE.

South Windsor, Conn., 1870.

#### AGRICULTURAL ITEMS.

—Samuel E. Bacon, Strafford, Vt., slaughtered a hog December 18, fourteen months and a few days old, which measured from nose to end of tail eight feet, and dressed 734 pounds, giving a daily increase of nearly 1½ pounds.

The New York Farmers' Club is informed that Frederick Selsor, of Ohio, has a thoroughbred bull calf one year old the 23d day of last April, which on the 23d day of November last weighed 1,710 pounds.

—At the Department of Agriculture of the University of Wisconsin, the course of instruction pertaining to agriculture is so arranged that the instruction in the class room can be completed in a single year by students already well acquainted with the physical sciences.

—A farmer in Putnam County, Ind., has kept a pair of black snakes in his barn for several years, and all kinds of vermin have since entirely disappeared. His cribs and bins are no more disturbed by rats and mice. The snakes are not the racers or the spotted variety, but a short, thick species, of a jet black color, and they are, he says, better protection than a dozen cats, and are entirely harmless toward chickens and domestic animals.

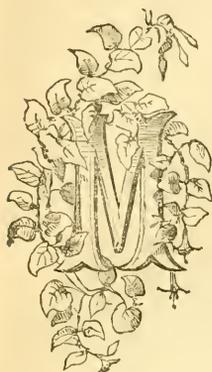
—At the East Orwell, Vt., Cheese Factory the milk from an average of 300 cows was daily received. Number of pounds of milk received, 857,674. Number of pounds of cheese produced, 90,607, showing an average of 943-100 pounds of milk for one pound of cheese. Cash receipts for sale of cheese \$14,905.33, an average of gross receipts per cow, \$49 68-100. There will be funds to pay a fair per cent. on the capital stock of the company.

—The Hampden Co., Mass., East Agricultural Society have chosen the following officers for the year to come: President, Dr. William Holbrook, of Palmer. Directors, Samuel Haines and David Knox, of Palmer; J. S. Blair, of Brimfield; A. J. Northrup, of Monson; Silas Billings, of Ludlow; and J. B. Foster, E. N. Fay, and O. M. Graves, of Monson. Secretary and Treasurer, O. P. Allen, of Palmer. Delegate to the State Board of Agriculture, Hiram Converse, of Palmer.

—A farmers' club has been formed in Newport, Me. The Secretary, Sewall Pratt, makes the following report in the *Maine Farmer* of wheat raised the past season by members of the club. John Parkman raised one hundred and ten bushels from four and one-half acres; Samuel Marsh forty-four bushels from one acre and two bushels of sowing; S. S. Wedgewood from two bushels of sowing and one acre of ground, thirty-four bushels. I raised twenty-four bushels from one and three-fourths bushels sowing, from one acre of ground. Mr. Henry Marsh, who is a flourishing farmer, harvested from two bushels and twenty quarts of sowing, eighty-three bushels of wheat from two acres of ground.

—The Melbourne (Australia) Meat Preserving Company are now slaughtering 8000 sheep a week for exportation to England.

## WINTER CARE OF POULTRY.



ANY persons complain that they get no eggs from *their fowls* in the winter, seem disappointed, and "wonder what the matter is." This is true in a large number of cases, even among farmers who look to profits of the poultry as an item of considerable account. Every year, soon after two or three weeks of cold weather have transpired, eggs are scarce, and sell readily at twice the price they brought in September and October. Precisely the same fowls that laid once liberally, have ceased entirely, or their product of eggs is exceedingly moderate. Why is this? the good housewife frequently asks, when the egg-basket in the store-room is empty, and none can be purchased or borrowed in the neighborhood. As a consolation to the anxious housekeeper, whose plans are thrown completely out of joint, the good man of the house informs her that "hens cannot always lay,—they must have time to rest, and by-and-by they will commence again." All this may be true, but he has not given the reason why the hens do not lay, even if it is cold weather.

When fowls have their liberty, they are not contented with remaining quietly in a limited space. They love to roam considerably; quite as far as they deem it safe so long as dogs, foxes and hawks are about. They are not idlers in their rambles, but assiduously search for the materials which not only nourish the body, but which go to build up the egg. In worms, grasshoppers, &c., they find the animal matter they need, which goes first to sustain the body, and in part, perhaps, to make the egg. Then they need gravel, old bones, lime in oyster shells, old mortar, or something else, and a little sulphur, all of which they find in their rambles. They are an inquisitive, prying people, often getting where they are not wanted, but rarely where they do not find something agreeable to themselves.

When at liberty, also, they suit themselves as to heat and cold. If the weather is clear and cool, they cluster together under the lee

side of the building, fence, or bushes, and bathe themselves in the sun's rays. Or, if the weather is hot, they seek the shade, where they droop their wings, so that their heated bodies are cooled as fresh breezes go by them.

All this is what we should do for them—or give them the opportunity to do for themselves in cold weather, while in a state of confinement.

In the first place, *warmth* is indispensable to success. Without this, all the care that can be used in feeding, and in supplying a *variety* of food will be in vain. They *must* have *warmth*. When this is supplied, they must have something of the *variety* of food which they find when at large. A third requisite is, plenty of room in their house, and the room, or rooms, roosts and laying boxes, kept clean.

It is found best to keep constantly before them, corn, barley, oats, a box of sand, pounded oyster or clam shells, old mortar, or something that they get of that nature when at large, which they require. A dozen hens will eat all the bones that come from the kitchen of a family of eight or ten persons during the year. Dry them in the stove oven; place a firm stone in the hen-house, and pound the bones into fine pieces upon it. They will be sought with more eagerness than corn.

Each morning, in cold weather, give them a mash of boiled potatoes and meal, mixed up with some fatty matter.

Part of a cake of pressed pork or beef scraps from the butcher, lying before them, will furnish what animal food they need, instead of the worms and grasshoppers which make a portion of their summer diet.

Then they need vegetable matter, such as turnips, beets or mangolds, to take the place of grass which they eat in summer. Fifteen to twenty hens would gladly eat two or three dozen cabbages during a winter if they could get them.

Another care must be observed, that they are free from vermin. No fowls will lay well, and continue healthy, if they are continually preyed upon by these parasites.

Preventive and remedy are both easy. Scrupulous cleanliness is the first. But, if these are not entirely effective, and vermin exist, take the fowl from the roost in the evening,

and rub a little melted lard, or sweet oil of any kind, about the top of the head, under the wings, and touch it upon the body in several places. Do this once a month. The oil will spread over the surface, get upon the vermin, their breathing holes will be stopped, and they will die.

An observance of these simple rules will keep fowls healthy, and enable them to produce about 160 eggs, for each hen, in the course of the year.

When we say that fowls must be kept *warm*, we do not expect that all persons will find it convenient to have a room where water would not freeze,—but that it should be so tight that wind will not enter, and so supplied with glass as to admit the sun's rays during a large portion of the day. A room lathed and plastered would soon pay the cost in an increased product of eggs.

**ARTIFICIAL MANURES.**—A gentleman residing some sixty miles from Paris, has offered to place 250 acres of his farm at the disposal of manufacturers of portable manures. The soil is above the average quality, and in good condition. He will only ask them to supply the stuff, he will sow and cultivate, pay for a faithful registration of the experiments, and will divide one-half the profits with the manufacturer. Up to the present time he pauses for a reply. This is a fair proposition. We should be glad to see it tried.

*For the New England Farmer.*

#### FOOT-ROT IN SHEEP.

**EDITORS NEW ENGLAND FARMER:**—*Gentlemen,*—In compliance with your request I herewith send you a few lines upon the subject named.

As every man who has seen this disease has his own opinion about its contagious character, and also understands well its mode of working, perhaps it will not be best here to say anything in regard to either of these two points—excepting to state that I think there is no evidence to lead us to infer that the disease is self-producing, or that it is communicated in any other way than by contact.

When once started, it works its mischief by the process of ulceration. The particles of living tissue within the hard shell of the foot are gradually broken down, until the attachment between the outer and inner portions is destroyed, and then the shell, in part, or as a whole, drops off.

“How shall I cure it?” is the question which every man asks, whose flock this calamity over-

takes. The anatomy of the sheep's foot, and the pathology of the disease, are matters which may be talked over when we have no more urgent business on hand. But, just now, help me rid myself of this troublesome pest.

Well, then, let every one be convinced of the fact, that this disease is only an ulcerating sore, and needs for its removal—or cure—just the same rational local treatment, that an intelligent physician would prescribe for a similar sore upon your finger, caused by the contact of poisonous matter in some post-mortem examination. A clean poultice, or lint moistened with warm water, would be about all that would be demanded for the finger. But as we cannot carry the same delicacy into the treatment of sheep's feet, let our treatment be regulated on the same principle—that is, *cleanliness*, as perfect and entire as can possibly be obtained, and as lasting as the case demands. Here lies the whole secret in “curing” this annoying disease, which so generally affects the flocks of New England. My conclusion is not drawn from theory alone; but from actual practice, no less.

From a number of the worst cases I have ever seen in my own flock, I selected seven for experiment—none could be found worse than these seven.

After every particle of the shell of the ailing feet, that could be flayed up easily from the ulcerating tissue beneath, had been cut away with a sharp knife, the feet were carefully and thoroughly washed in cold water, and the sheep put into a dry pen, well littered with clean straw. Now for the result. I examined those feet every day. Where manure adhered, so as to prevent needed observation, it was washed off. No knife was used. Not a drop of matter was ever seen upon one of them. The loose, ragged tissues contracted and became dry externally, new shell commenced to form, and as soon as time enough had passed, every foot was clad in as clean and sound a hoof as ever a sheep stood upon.

This experiment taught me how to “cure” foot-rot; and if a man has but a small flock, or a small number affected, and can give the requisite time to it, nothing more is needed. I have tried this plan in other instances, and always with the same result.

Still some aid may be obtained in treating large numbers, from vitriol. I think this all that ever need be applied, and the action of this agent is purely mechanical. It contracts or puckers up the tissues that have been eaten into shreds by ulceration, and so doubtless squeezes out the minute particles of poisonous virus from the deep cavities in the diseased part, and bringing the live fibres into closer contact, the healing process is assisted.

As a wet sponge if thoroughly squeezed, will dry more quickly than if laid in the sun while filled with water, and as if kept compressed it will not as readily absorb more moisture, so vitriol, by its astringent property,

compresses the spongy tissues of the diseased foot, and holds it in that condition till the parts can become glued together by the material supplied from the blood of the animal. This compression aids the healing process, and at the same time renders any fresh matter that may come in contact with the foot much less liable to be absorbed.

These are all the remedies that need ever be used.

"But," says many a man, "I have used vitriol many times, and it never cured my sheep." Very true. Many men have mended fences every year, all their lives, and never had one suitable to stop a calf six months old; still good fences are very useful appliances on a farm.

The truth is, the work is not properly done. Most men pare a diseased foot as they would their finger nails, cutting off only a rim of the outer border; whereas every particle that can be detached from the soft parts beneath should be cut away,—as if you would cut off all the nail from the finger, deep down into the live flesh, till it should bleed all round the border. Or, again, such work is done as if you were to cut off only the tips of the shuck of an ear of corn, when you need to strip off every husk down to the but, and lay every kernel bare.

This preparatory work is indispensable. If it is not done all subsequent labor is wholly lost. Don't be afraid of a little blood. It would be well to wash all severe cases before applying the vitriol as directed in the note below.\*

As soon as this disease makes its appearance in a flock every sheep should be handled, and each foot carefully examined. Every case that shows no more than a *suspicion*—indicated by a little heat or redness, or a slight abrasion of the skin between the claws,—should be separated from the general flock and kept in a different enclosure till made well. *Vitriol should be applied to every foot in the flock.*

The diseased sheep should be treated every third day, till no trace of the disease is seen. If the work is done faithfully, two weeks will be sufficient to make all lame sheep whole again.

To make sure of the work of the whole flock, the sound portion should be treated by having their feet carefully cleaned and the vitriol applied once in two weeks, for three or four times.

If the time is summer, put the affected part into a dry pasture, if possible; if it is winter, put such in a dry pen and guard against moisture. With such measures carried out, no man need be afflicted for many weeks with this annoying grievance.

This treatment must be followed up with

\*Heat a pint or more of strong vinegar to near the boiling point, and then, while hot, put in as much vitriol as will dissolve while the mass is stirred. Turn off into glass bottles to keep. It is best applied with a small brush, such as painters use to "draw" window sashes.

the most persistent energy. It is comparatively easy to cure ninety-nine sheep in a hundred; but we are quite apt to let the last one go till she has reseeded the whole flock. It is old Jackson's "Eternal Vigilance" which can alone secure for us freedom from foot-rot. The sooner flock masters throw out of their minds all ideas about a remedy that will "cure" this malady without the exercise of such vigilance as is pointed out above, the sooner will their flock be free from the mischievous ailment.

Vitriol does not "cure" the injured part; it only *aids* us in our work of removing and keeping away the causes of the disease, till the waste of the tissues, caused by ulceration, may be repaired by nature's own process—the new material furnished to the part from the blood of the animal. HENRY BOYNTON.

Woodstock, Vt., Dec., 1869.

For the New England Farmer.

#### HOG KILLING AT THE WEST.

The return of this season—which might as appropriately, if not as poetically, be called the "time of the squealing of hogs," as is the spring the "time of the singing of birds"—reminds me of the "times" we used to have in Illinois when that was out west.

There is something about prairie life, with its wealth of elbow-room, which enlarges the hearts and liberalizes the minds of the settlers and tends to break up the narrowness of idea which the Eastern emigrant brings with him from a land where farmers, as a class, are too much addicted to a little one-horse style of thought and feeling, and whose sympathies too seldom extend beyond the family, or the limits of the farm.

This generous, social characteristic of West-erners, is carried into every department of their business; the whole neighborhood follows the reaper and thresher. A man's whole crop of wheat goes to market in one day, with perhaps a procession of wagons as long as an "official" funeral; and then come the corn shucking and other "bees" in the fall, closing up with the "hog killing," which brings me back to my subject.

We'll suppose Farmer Brown has fifty hogs ready for market. At the proper time he goes to town and engages his "crop of pork." This done he proceeds to load his wagon with the various luxuries of the season and returns home. Word is circulated that Farmer B. is to have a "killing." Matrons and misses gather in to help Mrs. B. make the necessary culinary preparation. On the fatal morning all the able-bodied men in the vicinity, fully armed and equipped, tender their service to Mr. B.

Down by the creek, where wood and water is handy, a huge fire soon sets the water a bubbling in the row of great black kettles. Pop goes a rifle! The battle has commenced,

and a porker bites the dust up in the pen. The knife is applied, and a horse draws the bleeding victim to the scalding tubs. Many hands make quick work, and the boy in the fence corner with his rifle, the man with his knife and the boy with the horse, are kept pretty busy. How the bristles fly! What a ghastly array fifty porkers present suspended on the poles! Must I tell it? Just beyond the butchers, muffled in hoods and shawls, with their feet on the reeking paunches to keep them from freezing, with bared arms stand a bevy of fair damsels collecting the fat from the intestines.

The last hog being hung up for the wintry blast to cool, all hands clean up and "go in" to the Thanksgiving-like dinner, which Mrs. Brown and her aids have prepared. While the viands are being discussed, it is also settled whose teams shall have the honor of helping convey the pork to market next day. Isn't it jolly?

Western farmer's boys seem to love their fathers' business, and only leave the old homestead to set up for themselves, on that quarter section which the old gentleman has been "holding on to" for them; or they move a little further on towards the setting sun, where their Uncle Samuel offers them a free home. Wouldn't a little of this neighborly way of doing things render Eastern farming more pleasant?

G. H. A.

*Braintree, Wis., Nov., 1869.*

REMARKS.—In the days of the early settlement of New England these "bees" were much more common among farmers than they have been of late years. We suppose that one cause of their going out of fashion was the unsatisfactory manner in which the work was sometimes done. When the farmer and his family dig through all their work alone, their pork may be dressed, their corn husked, and their apples dried a little nicer and somewhat more economically than when done at a bee. But they deprive themselves of the social element which made these neighborhood gatherings so enjoyable, particularly to the young, and which turned work into play. Which plan involves the greater loss? Solitude and want of company and diversion is an objection often made to the work of the farm. How far this objection may be obviated by bees, by exchanging work, and other plans of co-operative farming, is a question that may well be considered by farmers who wish to make their children love their homes and their business. We shall be pleased to have our correspondent continue his sketches of Western life.

## EXTRACTS AND REPLIES.

### THE HORSES OF NEW ENGLAND.

I am sorry that your correspondent in Pomfret, Conn., in his communication upon the "Horses of New England," should have entirely overlooked the efforts that are now being made to improve the horse stock of his own State. Our farmers have bred from the little degenerated descendants of the Black Hawk and Morgan stock, so thickly scattered over our State, until it is alleged, and I fear justly, that Connecticut breeds the poorest horses of any State in the Union.

Latterly, however, several well bred horses have been introduced among us. Your correspondent mentions Geo. M. Patchen, Jr., as a fine stallion. Mr. Wm. B. Smith of Hartford, and Mr. Geo. C. Hitchcock of New Preston, each own fine stallions by Geo. M. Patchen, which are consequently half-brothers to Geo. M. Patchen, Jr., both of which might be profitably used by our farmers. Both are of fine color—bright bay—of good size, and are good steppers.

Mr. Smith's Thomas Jefferson, by Toronto Chief, is also a fine colt, well bred and fast.

Then there is Mr. Hitchcock's Ashland that has twice taken a first premium at the Fairs of the New England Agricultural Society. As a stock horse this animal is by no means to be overlooked, especially as it was only last year that he received the first premium of \$200 for the best stallion with progeny. For raising road horses, there are no better bred stallions in the country than Ashland. There are few that have a better reputation as stock getters,—none in New England.

Mr. Battell of Norfolk, had, and has now, if he has not disposed of him, a very fine young stallion by Hambletonian, that ought to produce a marked change in the stock in his vicinity.

The horses of our State need a great deal of improving, and I believe that the true way to do this is to encourage, in every way, those who are at the trouble and expense of bringing such horses as I have mentioned into the State.

A gentleman living in New Haven owns a fine stallion by Mambrino Chief, half brother to Lady Thora and to Ashland, &c., that he keeps in Vermont, because the farmers of that State are more willing to pay for the services of a good horse than those of Connecticut! This simple fact tells the whole story as regards the reason for the inferiority of horses raised generally by the farmers of Connecticut.

It is undoubtedly bad policy to raise poor stock, and the sooner our farmers make a thorough change in this matter the better it will be for them.

CRUSOE.

*New Haven Co., Conn., Nov. 24, 1869.*

### CURING BEEF.

For some years past our beef has been too salt by spring. If you or any of your correspondents will inform me what quantity of salt will answer for a barrel of beef, you will very much oblige  
*Auburn, Mass., Dec., 1869.* A SUBSCRIBER.

REMARKS.—For a brine or pickle for beef we have generally used that made by adding a pound and a half of salt to a gallon of water. This is the proportion that was given, many years ago, in what was called the *Knickerbocker Pickle*. The editor of the *Germantown Telegraph* publishes every year the following, as the best receipt known:—To each gallon of water needed to cover the meat, add  $1\frac{1}{2}$  lbs. salt;  $\frac{1}{2}$  lb. sugar;  $\frac{1}{2}$  oz. salt-petre;  $\frac{1}{2}$  oz. potash. Boil, skim and cool before

using. The meat must be kept covered with the brine, by a flat stone or wooden follower. Towards spring the brine must be turned off, boiled and skimmed, and a little more salt added. We should advise to leave out the saltpetre entirely, as we consider it a rather dangerous article to use with food, and we have never used the potash.

Meat should not be salted the day it is killed. How long it should lay before being salted down, will depend somewhat upon the state of the weather and other circumstances. The animal heat must be entirely dissipated, and a change in the fibre of the meat be allowed to take place which, in case of steak is often expressed by the word "ripe." This makes the meat tender and rich.

EXPERIMENT IN SHIFTING SEED POTATOES.

A friend gave me seventeen potatoes that were raised 200 miles from my farm. They weighed four pounds and twelve ounces. I planted them in thirty-four hills. I took the same number, of the same variety, that had been planted on my farm for twelve years, being careful to select those of the same weight; planted them in same number of hills, side by side, with the others. Both were treated in every way alike, as nearly as possible. On harvesting the product of each the potatoes produced by the old seed, and those produced by the new seed, were counted and weighed, with the following result:

	NEW SEED.		OLD SEED.	
	No.	Lbs.	No.	Lbs.
Large or marketable potatoes,	428	102	350	82
Small potatoes . . . . .	630	32	780	51
	1058	134	1130	133

From the result of this experiment it appears, that while there was only one pound difference in the whole weight, between the produce of the old and new seed, there were twenty pounds more large potatoes from the new seed than from the old; and that there were seventy-two more potatoes in number from the old than from the new seed. It would seem, therefore, that it will not pay to change seed for mere weight; but that it will pay to do so in the increased value of the potato for market.

JOHN M. WEARE.

Seabrook, N. H., Dec., 1869.

REMARKS.—We thank Mr. Weare for this statement of the result of his experiment. We believe that farmers in the vicinity of Boston generally buy new seed every year. What are the advantages of doing so? Have these advantages been demonstrated by careful experiments? We remember of hearing an intelligent man once say that he thought the necessity for changing seed originated in the want of care in selecting potatoes for seed. Perhaps the best would be sold or used, and at planting time those unsuitable for seed, either on account of their small size or immaturity, would be used, and consequently the crop degenerated, as corn or other grain would degenerate by the use of inferior seed. Facts, however, are more satisfactory than theory. And that stated by our correspondent is a valuable one. There are other points or questions that we should like to see illustrated by similar experiments. What is the effect on the time of maturity from seed potatoes

grown in different latitudes? For instance, will potatoes grown in Maine ripen earlier in Massachusetts or Connecticut, or any other section south of Maine, than those raised at home or in places still further south? Mr. Weare did not conduct his experiment to test this question. May we not hope to hear from others on the subject of shifting seed potatoes?

BEST HENS FOR EGGS AND CHICKENS.

As I am going into the poultry business somewhat extensively I write you in regard to the best kind of hens for laying; also for raising chickens. Please inform me. LOREN SHEPARDSON. Guilford Centre, N. H., Nov. 14, 1869.

REMARKS.—We do not know as we can do any better than to advise you to get the kind that *you love best*. This was the advice given in a recent communication in the FARMER to a man who asked what kind of farm stock he had better buy. It may not be entirely satisfactory, but there is probably more good sense in the advice than may at first sight appear. What suits one person will often displease another, in poultry, or in stock, farms, houses, carriages, associates, business, locality, politics, and even religion. One person can choose for another in few of these particulars. If we should recommend one of the modern fancy breeds of hens, you might object to the cost; if we named any other variety, some objection might be urged to that with equal force. There is undoubtedly a great difference between varieties of poultry, in some breeds one quality, in other breeds other qualities, are specially developed; but we believe there is a far greater difference after all in the care and keeping which are given them; and consequently that results depend more on the keeper than on the breed of hens kept.

HOW TO MAKE APPLE TREES BEAR.

In answer to the question of S. Fisher "What shall I do with my apple trees?" I will give my experience under similar circumstances. I have twenty Baldwin trees of about twenty years' growth. Three years ago they were thrifty, blossomed well as they had done for several years, but bore little fruit, and that of very poor quality. Manure would not bring fruit.

In June, 1866, I spread about fifty bushels of leached ashes broadcast over the land, (which was in grass,) then sowed on about one hundred pounds of gypsum. The next season I cut two fine crops of hay, getting, as I estimated, full pay for my outlay and labor in the increase of that crop. That year there were no apples in this region.

1868, I had two good crops of hay, and on one-half the trees a very good crop of apples.

Last May, the ground was ploughed, turning in a good coat of stable manure. The trees looked finely and blossomed fairly. The land was planted to potatoes, with a handful of ashes and plaster in a hill, and yielded, except just under the trees, at the rate of two hundred bushels per acre; but, best of all, those twenty trees bore one hundred and twenty bushels of the finest Baldwins I ever saw grown in New England, together with some thirty or forty bushels which fell off and were made into cider.

The potato patch extended beyond the ground

dressed with the ashes. The whole piece was manured and tended alike. Where the ashes were spread in 1866 the tops grew more rank, the drought had no effect, and the potatoes grew until they were dug to save them from freezing. Beyond the limit of the ashes the drought injured them, the tops died early and the yield was no more than one hundred and thirty-three bushels per acre, and very many of these were badly eaten by grubs, while those where the ashes were spread were as clean and handsome tubers as one could wish to see.

From my own success I am convinced that ashes will certainly do no injury to the apple trees or to the soil in which they grow.

W. R. S.

South Wilbraham, Mass., Nov. 27, 1869.

TO HIM WHO FEARS DISEASE AND DEATH FROM THE USE OF WATER RUNNING THROUGH LEAD PIPES.

Know you not, dear sir, that you must die if you do not have water? From an extensive observation of twenty years as "waterman" in all this region, I am fully persuaded that not one in a thousand suffers while living, or dies earlier, in consequence of using water conveyed in lead pipe.

There are occasional instances of lead poison, but this is no more a sufficient reason why all should be deprived of this best of all means for serving man and beast with the crystal stream, than is the fact that one in a thousand or in ten thousand who ride in the cars are injured thereby, a reason why railroads should not be used?

I say lead pipe is the best of all known conductors of water for family use—1st, because it is within the reach of all, and is the cheapest, in the long run; 2d, it is the most feasible conductor and the most readily adapted to all localities; 3d, it is the most easily and cheaply repaired when by any means it is out of order; and 4th, if the water used is of "hard" or lime water, the pipe will very soon be completely coated with a deposit of lime, similar to an egg shell, which renders it perfectly harmless.

In a few cases there may be a chemical peculiarity in the water which renders the use of lead pipe unsafe. In such cases cement or stone conductors should be used. Wrought iron or common gas pipe is, perhaps, next to cement, the safest in such springs. There are, however, serious objections to iron as well as lead.

A few years since lead pipe coated with tin inside was recommended very highly as a substitute for lead. But trial has proved this tin coating to be so thin as to be of little or no real value. More recently still a new pipe has been introduced and is advertised largely as "lead encased tin pipes," which is but another name for the former article, save that the proportion of tin is greater than in the tin lined lead pipe. If we will believe the advertisement, this is cheaper than pure lead. But when we compare the price of this kind of pipe, which is about double that of lead, with the price of pure tin pipe which is at least four and a half that of lead, we must conclude that the proportion of tin is very small, or that the tin is adulterated by other and cheaper metals. But more than this, it is clearly proved that in a great many instances water contains a chemical property that corrodes this tin or alloy much more rapidly than pure lead. In such cases one only has his choice between lead and tin as the base of his metallic poison.

In some sections, especially near cities, there seems to be an idea that galvanized iron is the only safe substitute for lead. Let us see. Iron is galvanized by immersion, at a given heat, after being plunged in an acid bath, in melted zinc. Pure zinc is the coating called galvanizing, which penetrates the body more or less, as it is thoroughly or superficially galvanized.

Now, then, take your choice, my spleeny friend. Will you prefer zinc, tin or an alloy of tin, or lead, as the metallic base of your poison, if poison at all? Experience has fully convinced me that zinc corrodes most rapidly, tin and its alloys next, and simple lead, which is not alloyed, because it is the cheapest of all its class of metals, will remain unchanged by water much the longest, and is therefore the most harmless of all known metallic conductors of water.

At all hazards, I will close by making the assertion that many more lives are lost by want of water than by lead or any metallic poison from conductors.

P. J.

Randolph, Vt., Nov., 1869.

SALTPETRE FOR SICK CATTLE AND TURKEYS.

Having recently used saltpetre with apparently beneficial effects, I will make the following statement for the benefit of others. Sometime last winter a two-year old heifer began to cough, grow poor and weak. She would put her nose near the ground and cough, or rather gag badly, for some time. Finally she got so weak as to stagger if she attempted to move quick. We dissolved about a common table spoon even full of saltpetre in warm water, which was put into a bottle and given to her. It appeared to help her at once. About a week afterwards another dose was given her. She continued to improve in health and strength, and was soon well, strong and fleshy. About a month afterwards another heifer was taken in the same way, was treated in the same manner, and with the same favorable result.

This last season we lost about thirty young turkeys; in fact, all we had except three or four. When about half grown they would droop and die. A neighbor suggested that the disease was probably worms. I took one that could hardly stand and gave it a piece of saltpetre, the size of a pea. Before night it began to walk about. The next day it was eating with the rest. I tried the same remedy with another one with a similar result.

Marlboro', Mass., Dec. 3, 1869. P. WELCH.

TO DRESS POULTRY FOR MARKET.

There is a right and a wrong way to prepare poultry for the market, and a nice appearance adds many pennies to the house-wife's store. A bright, cold day should be selected for the operation, and the fowls should not be fed in the morning, so that their crops may be emptied. The old process of wringing their necks is entirely done away with. The heads of turkeys, geese, chickens or ducks can be chopped off with a sharp hatchet, so that one quick blow will do the deed. Have an assistant to take each one from the block; tie its legs together, and hang it across a stout line stretched from post to post. Here, let them hang until thoroughly bled. If the feathers are desired, they must not be scalded, yet there is danger of tearing the skin if it is not wet. Pick them clean, but on no account remove the intestines. The meat keeps much longer if no air is admitted into the body. Our best poultry men plunge each fowl into a kettle of boiling water as soon as it is picked. This practice makes the flesh white and plump, and if they are in decently good condition when killed, gives them a fine appearance. A well-dressed fowl makes a good show if not very fat, while an ill-dressed one, no matter how fat, can never look well.

When the fowls are all picked and scalded, (a few moments is sufficient for that) tie the legs together, and hang up in a cool room; if this is not possible, lay them upon clean boards until the animal heat has passed away, but do not let them freeze directly.

Barrels do not make good packing boxes, the rolling of them injures the poultry. Clean, dry goods boxes, which every country store will furnish, are much better. Rye or oat straw placed between them so they cannot touch each other, answers the best purpose for packing.

If the fowls are well dressed and well packed they will keep sweet for a long time in cold weather, and can be sent by express or freight with the surety of their arriving in good order, and commanding the highest market price. A walk through our city markets about Christmas time, reveals to an observer that full half our poultry raisers do not understand the *right* way of preparing their poultry so as to look *attractive*. The scalding process is the secret.

S. O. J.

Bath, N. H., Dec., 1869.

FARMERS' CLUBS IN STETSON AND GARLAND, ME.

Being in Stetson Tuesday evening, Nov. 16, I attended an agricultural lecture, delivered by Hon. Samuel Wasson, chairman of the State Board of Agriculture, I think. It was interesting and instructive. After the lecture, a farmers' club was organized, and much enthusiasm was manifested. Also at Garland, Friday evening, Nov. 19, I listened to the same gentleman upon the same subject. After the lecture, a farmers' club was also formed here—farmers, mechanics, traders, ministers and doctors subscribing their names to the constitution. In no way can the farmers spend a part of their evenings more profitably or more pleasantly than at a live farmers' club. Success to the farmers' clubs of Stetson and Garland.

P.

Garland, Me., Nov. 22, 1869.

REMARKS.—From the frequent notices of farmers' clubs that appear in the Maine papers, we think that they are just now more popular in that State than in any other part of New England. This may be owing to a provision in the law of the State by which a portion of the money drawn from its treasury for agricultural purposes must be devoted to the formation and encouragement of such clubs. We presume that Mr. Wasson is employed under this provision of the law, and we have no doubt that he will be eminently successful. We believe that all that is wanting in many agricultural neighborhoods to secure the organization of a good club is some one to "break the ice."

SWELLED SHEATH IN HORSES.

I have a valuable horse that is badly troubled with a swelling of the sheath. After standing a short time it seems to inflame and become hard and swollen. I keep him thoroughly clean and have tried cold bathing and various simple remedies, but it still continues. Exercise makes it better while it continues, but after standing it swells again. Can you or any of the readers of your valuable paper give me any remedy for the trouble?

W. P. GRIFFIN.

Annisquam, Mass., Dec. 4, 1869.

REMARKS.—Beyond the simple remedies which you say you have tried, we do not feel competent, from want of knowledge as to the cause of the difficulty, to offer any advice. It is often said that the knowledge of a disease is half its cure. Dr. Dadd was once consulted in a somewhat similar case, where the poor horse had been bled and physicked almost to death without any benefit. On examin-

tion, he found the trouble to be a tumor or fungus of about one-half of the bulk of a man's fist. This removed, the difficulty ended. If there is no intelligent veterinary surgeon in your neighborhood, we must advise you to get your family physician to make a careful examination of the case. Perhaps some reader of the FARMER may be able to advise our correspondent what to do for his horse.

A GOOD COW ON GOOD FEED.

In March, 1868, I bought a cow for \$125. Wishing to try an experiment with liberal feeding, I fed her four quarts of Indian meal a day. She was milked eighteen months and twenty-one days, when being in good order for beef, she was slaughtered, dressing 805 lbs., and sold for \$116,—the rough tallow weighing 77 pounds. At the time she was killed she was giving seven quarts a day, and during the whole time averaged 10 quarts a day. Calling the time 568 days, the whole amount of milk was 5680 quarts. The account then stands as follows:—

Cow	Dr.	
To original cost . . . . .		\$125 00
To keeping 568 days at 40 cents a day . . . . .		227 00
		-----\$352.00
Cow	Cr.	
By 5680 quarts milk at 8c per quart . . . . .		\$454 40
By beef sold . . . . .		116.00
Net profit . . . . .		-----\$570.40
		\$218.40

Brighton, Mass., Dec., 1869. GEO. W. WILD.

MR. QUINN'S PEAR CULTURE FOR PROFIT.

It was refreshing to me to-day to read the—as far as it went—free and just criticism of that seventy-two page book, "Pear Culture for Profit," by Mr. Quinn. There is one other point I would have spoken of, and that is the opinion it gives of dwarfing trees. Lamentable is the ill success Mr. Quinn has had; and if he has had no better success in other departments, his book is anything but a safe or reliable guide. He says in chapter fifth, "With a single exception the culture of the dwarf in the orchard is a failure." \* \* \* \* "For a long time I had reason to suppose that the Angiers Quince was well suited as a stock for many of our best varieties of pears, but as far as my personal observation has gone, the number has dwindled down to one variety,—that is the Duchesse D'Angouleme. How long this kind will do well on the quince root, I am not prepared to say."

Admit, if we must, the facts in the case, and of how much value is the book as a guide for others? That the culture of pears on the quince has been a success, thousands attest. Hardly an author who has written has not approved it. I quote but one; that admirable work by Baker, "Practical and Scientific Fruit Culture." At page 296 he says, "The period of barrenness before maturity in the pear, on free stock, is cut short by the quince and the life extended nearly as long as the standard, if cropped judiciously. The life of pears on the quince independently has, I believe, been understated. \* \* \* \* An observation of those from thirty to forty years of age, in the gardens of my esteemed partner, Hon. Marshall P. Wilder, which are still bearing crops; and a large number of fifteen to twenty years of age, apparently in full health and productiveness, must lead one to extend the period." I only add that Mr. Baker is well supported by most of our best writers, who, while they recognize the fact that dwarfs are not as long-lived as standards, yet for *profit* they give the preference to the former.

I have a thought to offer on another point, and

that is in regard to the Old St. Michael, to which you refer in a late article. I am convinced, after a careful observation of some years, that it is not true that this old variety has "run out." There has been grown, and without any particular care, in the extensive pear grounds of the late John Gordon, Esq., at Brighton, one tree with as fine specimens as can be desired. The tree is very healthy, and bears annually good crops. I have come to the conclusion that some kinds of stock are peculiarly fitted for it. I believe that by double grafting—on the quince first—we can produce perfect fruit. Our work is not to denounce, or set down in despair, but, instead, experiment in grafting or budding on other sorts, until the most favorable one is discovered. I am in no mood now to argue the question of influence of stock on the graft, but assume the point, fully believing, from other experiments, that our success lies in this direction, and I fully believe our end is to be attained. It is *probable* it would crack on the Dix, but simply possible that it would in the Vickar.

Boston, Mass., Dec., 1869.

T. W. S.

#### BONE-MEAL FOR COWS.

Within the last year or two, farmers in this section have experienced considerable trouble and inconvenience from the sterility of their cows. It is believed that less cows are with calf at the present time, in proportion to the number kept, than ever before at this season of the year. Many are inquiring for a reason and for a remedy of the trouble. One farmer of experience and observation has given bone meal to cows of this habit, as he believes with beneficial results. A gill is given with other feed three times a day every other week. He thinks it has also proved beneficial with sick animals. A heifer lost her appetite and grew weak until she lost the use of her legs. Bone meal was administered, and in a few days the heifer was on her feet, and was soon apparently as well as ever. These facts are stated to draw out the opinions and knowledge of those better informed than ourselves, rather than as a statement of value of itself.

Springvale, Me., Nov. 25, 1869.

ZEN.

#### CHICKENS MADE LAME BY EATING PUMPKIN SEEDS.

Perhaps some may think there has been enough said upon the subject. But I think I will give a little of my experience that may be interesting to some who keep poultry. In the fall of the year when feeding pumpkins to my stock near the buildings, the fowls have eaten enough of the seeds to affect their legs; sometimes, if long continued, proving fatal.

St. Johnsbury Centre, Vt., Nov. 30, 1869.

E. A.

#### LARGE POTATOES.

While digging my potatoes this fall, I thought I would try some of the largest in a Shaker bushel measure. Thirty-two of the Orono variety filled the measure heaping full. After drying a month, the thirty-two potatoes weighed fifty-two pounds. The largest one weighed two pounds and eight ounces.

Monmouth, Me., Dec. 1869.

HENRY DAY.

#### SPECIAL CROPS.

If it were safe for farmers to place their chief reliance on any one crop under any circumstances, cotton at the South would seem to be that crop. But with all the facts and circumstances which have been urged in favor of cotton as a specialty, the experiment is generally admitted to have been disastrous to planters.

On this point we find a statement by a correspondent of the *Southern Cultivator* that we think worth the attention of those who advise northern farmers to devote their attention to some one crop, and of those who propose to follow such advice. The name of this correspondent is G. W. Stokes, Wooten, Lee Co., Geo. Southern agricultural writers generally back their statements with their own sign-manual. We admire this fashion. There is a frankness, manliness, honesty of purpose apparent in this style, which is lacking when one adopts any sort of fiction for a signature.

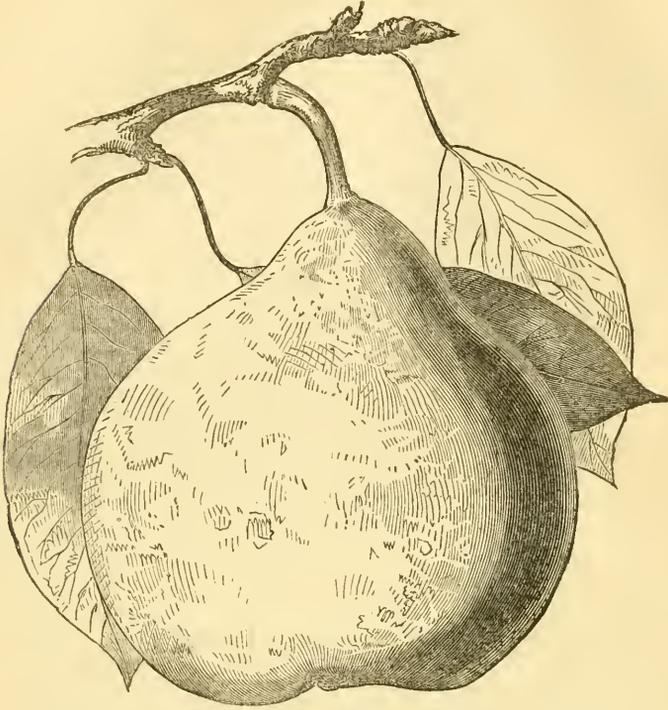
This Mr. G. W. Stokes is a planter, employing about sixty hands on his own land, and is also a merchant and furnishes supplies to from forty to sixty of his neighboring planters, taking the produce of their plantations or farms in payment in the fall. He says:—

I find that those who buy both corn and meat (all they use) never have any surplus money left; that those who buy all their meat, and only a portion of their corn, have money over, in proportion to quantity of corn purchased; and that those who raise all their corn, even when they buy all their meat, are doing very well. The few who raise both corn and meat, make money very fast. These I know to be facts, in the face of the argument, that the same acre that yields 15 to 20 bushels corn, worth \$20 to \$30, will yield 700 pounds to 1000 pounds seed cotton, worth from \$35 to \$75. It is difficult to explain why corn purchased costs so much, and that raised on the farm is so cheap; yet I know, and no doubt thousands of observant planters know, that he who buys all his provisions, never has any surplus cotton money.

I am inclined to think that the bought corn does not really cost so much, but that the principal explanation of these facts, is that a good planter can raise nearly a full crop of cotton, and at the same time raise an ample supply of corn, because with good management the heaviest of the work in the corn crop is past, before the heaviest of the cotton crop begins, so that he who plants cotton alone, loses enough time to raise his corn, for the simple reason that without any corn crop at all, he can raise very little more cotton than he could had he a sufficient corn crop planted.

Now if it is a fact, that a planter who raises no corn or meat, has never had any surplus money since the close of the war, with cotton ranging high all the time except 1867, how can we expect anything but ruin, the very first year our cotton crop is cut off, or the price is low? If our people had raised their corn and meat in 1866, '67, they would not have cared a straw for the low prices of cotton in the latter year named, even if the speculators could have controlled the price, and kept it down. I live in as good a cotton and corn region as I have seen anywhere, and we are highly favored this year, although our crops are not full, yet they are so much better than they are in most sections, that we certainly ought to feel thankful. I travelled over most of the West and North the past summer, and having seen the effects of the drought upon the corn crop, and I pity the cotton maker, who has not raised (at least) his corn this year.

—Mr. Wm. Whitfield, of Oakland County, Mich., has imported four Hampshire Down sheep from England. They cost at his place nearly \$200 each. One of the rams weighs 305 and another 294 lbs.; the ewes weigh over 200 pounds each.



THE LODGE PEAR.

This pear is very popular in Philadelphia, where it was supposed to have originated, but it has been disseminated from Hartford, Conn., as Smith's Bordenave, and said to have been imported with an invoice of trees from France. The fruit from which our illustration was drawn was raised in the garden of Col. Wilder of Dorchester.

The tree is hardy, but not very vigorous, except when grafted on the leading shoots of old trees, but further north it does not succeed as well as in the vicinity of Boston and Hartford. It produces abundant crops, which adhere strongly to the branches during the autumnal gales, and the fruit keeps well for one of its season.

The following description of this pear is copied from Cole's Fruit Book:—

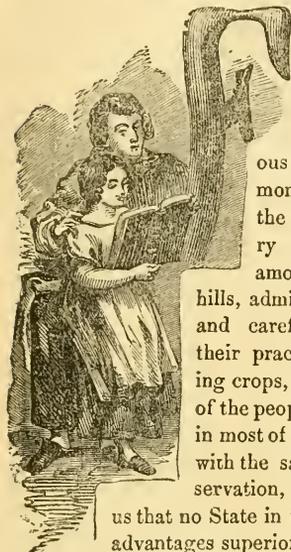
*Size*, rather above medium, three and a half inches long, including stem, by two and a half in diameter; *form*, acute, pyriform,

broad across the middle, some specimens inclining to obovate, outline and surface a little irregular; *calyx*, small, sunk in moderately deep basin; *stem*, one inch long, rather stout and curved, sometimes swollen at the base and set without depression; *color*, dull green, overcast with a thin coat of russet; *flesh*, greenish white, very melting and juicy; *flavor*, rich, vinous, with a distinct high Brown Beurre aroma; *maturity*, first of October; *quality*, very good.

MR. WALSH'S COLLECTION OF INSECTS.—The *Prairie Farmer* understands that efforts have been made to obtain this valuable entomological collection for some Eastern museum, but is anxious that it should be retained at the West, and expresses the hope that it will fall into the hands of Mr. Charles V. Riley, of St. Louis, who was associate editor with Mr. Walsh of the *American Entomologist*, and is also State entomologist of Missouri, and will probably now become chief editor of that publication.

### FARMING IN VERMONT.

The Climate—Soil—Water-power—Grazing lands—Stones—Stock—Horses—Cows—Steers and Oxen—Sheep—Poultry—Sugar—Quarries—Means of Transportation—Schools—Opportunities for Pecuniary Gain, and for Moral and Religious Attainments.



or several years past, we have annually spent two or three weeks in various portions of Vermont, mingling with the people of every class, rambling among its vallies and hills, admiring the scenery and carefully observing their practices in cultivating crops, and the habits of the people. Some travel in most of the older States, with the same careful observation, has convinced

us that no State in the Union offers advantages superior to those of the State of Vermont, in all that affects ones present or future prosperity.

The climate is well calculated to give shape to the character of its people. The face of the country is generally uneven, and a great part of it mountainous. All through the winter months, the ground is usually covered with snow, which remains dry, and affords easy and rapid communication from one point to another. The transition from winter to spring is less trying than nearer the seacoast, where freezing and thawing succeed each other for weeks in succession, and where the east winds blow all the moisture out of invalids exposed to it. Frost does not penetrate as it does where less snow falls, so that as the snow melts it passes into the ground, and the surface soon becomes dry and agreeable. Some exceptions to this are found on the roads where clay predominates. On account of the even and dry condition of the atmosphere, persons affected with pulmonary complaints find the climate more congenial than in warmer latitudes.

A large portion of the soil is fertile, and fitted for the various purposes of agriculture. It is generally deep, of a dark color, rich, moist, warm, loamy, and capable of resisting

the effects of moderate drought. The low lands yield corn and hay abundantly, and of the best quality; while the broad swells are excellent for small grains, and are among the best pastures in the country. A large portion of the land is free from stones; most of the hills, even, may be easily cultivated to their summits. Quarries of fine marble are found in various portions of the State, and porcelain earth, lead and copper ones. Water power is abundant to a far greater extent than it has yet been employed.

It may be that the prime necessities of life can be produced at a less cost of labor in some other States than in Vermont; but taking into account all the elements that make life a success, we look upon this State as pre-eminently inviting to those who wish to engage in agricultural pursuits.

By a reference to the census of 1860, we find the population stated at 350,000 souls, and that it has \$122,000,000 worth of real and personal property. They have about 3,000,000 acres of improved land; 75,000 horses; 175,000 milch cows; 50,000 working oxen; 160,000 other cattle; between 700,000 and 800,000 sheep; 52,000 swine; 3,000,000 pounds of wool; raised in 1860 more than 5,000,000 bushels of potatoes; made 16,000,000 pounds of butter, and between 8 and 9,000,000 pounds of cheese; cut 100,000,000 tons of hay; made 10,000,000 pounds of maple sugar, and harvested \$200,000 worth of beeswax and honey. The value of slaughtered animals in that year is set down at \$2,610,800!

The horses of Vermont have for many years stood deservedly high, and have reached their excellence by observing the true principles of breeding and tending, aided by the natural advantages of soil and climate. Less attention has been paid to improvements in the bovine race, but it is now being turned in that direction, and promises gratifying results. No climate seems better adapted for the rearing of horses or neat stock, especially to endow it with the qualities of docility, hardihood, and the largest powers of endurance. They grow up in a rigid region of pure air and water, and become so much accustomed to atmospheric changes as to be little affected by them in after life, when properly treated.

Now that there is a depression in the demand for fine-wooled sheep, the farmers of the

State are directing attention, more than ever, to horses, neat stock and the dairy. It seems to us that more flattering opportunities were never offered to those wishing to engage in agricultural pursuits. Opportunities, not only for making money, but for that distinction in the public mind which all desire, when it can be gained by being useful to the world.

Sheep culture is by no means abandoned in the State. Large numbers of Merinos are still kept, while the long-wools are introduced, and found profitable. The amount of poultry may be trebled, and a compensating demand found for it all. Where the cereal grains are so extensively cultivated, poultry can be cheaply raised. It is compact in form, easily dressed and marketed, and readily sells at paying prices. The forests nearly or quite supply the people with sugar, which is one of two or three of the leading articles of cost consumed in the family.

With this view of the matter we are inclined to think one of the writers of the State may be correct in saying,—“that when we take into consideration the number of acres of improved land, its appraised value, number of inhabitants employed in agriculture, and amount of production, we far surpass any other other State in the American Union.”

Another consideration of vital importance is, that all this vast production lies almost at the threshold of the doors of the purchaser. The means of transportation are so constant, rapid and cheap, that the articles produced are worth almost as much where they grow, as they are in the markets where they are consumed.

The opportunities, however, for pecuniary gain, in this favored spot, are not its principal allurements. Its crowning glories are in good laws, wisely administered; in the means of education afforded by schools, but chiefly in intelligent mothers; in the industry and liberal economy of the people, and in the ample opportunities for the moral and religious training of all classes, which is to preserve the institutions of our fathers, perpetuate our power as a nation, and make us an example worthy of imitation by all the peoples of the earth.

—One man in Walpole, N. H., has raised eight acres of the best tobacco that was grown on the Connecticut river last year. A good deal of land in that town will be devoted to the cultivation of the weed next season.

*For the New England Farmer.*

FARMING IN 1849 AND IN 1869.

A great many people are prone to look on only one side of a picture or of any object that may be presented to them, though almost every thing is said to have two sides, and we know that almost every body has two eyes. Let us try to use both eyes for a few moments, and to examine both sides of our present “hard times.”

During the late war, prices of farm produce ran up excessively high, and farmers gathered a richer harvest than ever before since our national existence. This state of things has raised the ideas of farmers. But now the war is over, and the high prices it produced, are no longer realized in full. Our taxes have been greatly increased and so has the cost of the labor we hire. Where, then, it may be asked, is the bright side of our condition? Let us see if we can find it.

We will compare 1849 with 1869. Twenty years ago I paid about \$20 tax; I paid for a hired man, six months, \$60; I estimated his board at \$39; my NEW ENGLAND FARMER then cost me \$2.50 a year—total for these three items in 1849, \$126.50.

In 1869 I paid \$50 taxes, for hired man \$150; cost of his board say \$78, and the FARMER \$2.50,—total in 1869, \$280.50.

Now I take the ruling prices at this market,—and, by the way, we have a good one,—and estimate the amount of each of the several articles of produce named, required in 1849 and in 1869 to pay my taxes, hired man and my newspaper:—

Article	Price		Amount required		Surplus.
	in 1849.	in 1869.	to pay,— in 1849.	in 1869.	
Potatoes, bush.	.17	.50	759	561	198
Corn, “	.62	1.69	2.3	187	17
Beans, “	1.50	3.50	8½	80	3½
Hay, ton	8.00	29.03	16	14	2
Butter, lb	.12	.40	1027	691	356
Eggs, doz	.10	.34	1205	675	399
A good cow,	12.00	40.00	10½	7	3½

Thus I have paid my taxes and my hired man in 1869, notwithstanding their much higher nominal cost, with a considerably smaller amount of produce, than I did in 1849.

If I had sold potatoes to raise the money, it would have taken 198 bushels less now than in 1849, a gain sufficient to supply a large family; if I had sold corn, 17 bushels less; if hay, two tons; if butter, 356 pounds; if cows, I should have saved the price of three and a half,—a pretty good beginning for a dairy; and so of the other articles named. Our farms, also are worth at least 25 per cent. more than in 1849. I might compare the present prices of horses now with those of twenty years ago, but the foregoing is sufficient.

What farmer who compares the above figures will wish for the return of the old times, with its low rate of taxation and of labor? If our taxes have increased our means for pay-

ing them have increased in larger proportion. What other class in the community are able to meet their increased expenses, and have as many dollars "to boot" as the farmer, or who can look into the dubious future with less fear than he?

If the prices of what he raises are reduced, so are the prices of those articles he is obliged to buy. One dollar will buy as much sugar and many other groceries as two dollars would during the war. Still many of us grumble and complain until we actually come to think that in no time in the past was our condition so deplorable as in the unfortunate present.

Others may look on the dark side of things till despair is daguerrotyped on their very countenances; but for one, I am determined to look upon the bright side as long as I can.

Springvale, Me., Dec., 1869. ZEN.

For the New England Farmer.

**EXPERIMENTS WITH SUPERPHOSPHATES AND OTHER MANURES.**

Does it pay to use superphosphate? is a question we frequently hear asked, but the answer is generally unsatisfactory. Some think it does, others think it does not. Some, high in authority, tell us it is all a cheat and a humbug, and that the farmers of the country would be better off if the whole lot were dumped into the dock, and advise us to spend our money in digging muck and making compost.

Others, whose testimony is equally as good, tell us it does not pay to dig and cart bog water and sand, for the small amount of vegetable matter it may contain, but tell us to buy pure flour of bone, and make our own superphosphate.

The manufacturers tell us we can't do it, that it implies so nice a combination of the several parts as to require the skill of a practical chemist to do it. Each one tells us that his is the best in the market, and produces thousands of certificates to prove it.

Now, under these circumstances, what are we poor farmers to do? Do as that good old farmer Levi Bartlett, of this town, advised me and thousands of others to do. He said, "be your own judges, by making a fair, impartial and comparative trial of the different fertilizers, both home-made and commercial. Use the steelyards, note the result and keep a true account. Then if any fertilizer fails to give satisfaction, you may come to the conclusion that that manure is a humbug and a cheat, or that your land is already rich enough in that particular kind of fertilizer."

I have been making these experiments for the last three years for my own satisfaction, and they have always proved satisfactory. Last spring I procured several brands of superphosphate, also a barrel of Pure Flour of Bone, from the Boston Milling Company, which I saw advertised in the NEW ENGLAND

FARMER. I made two barrels of Phosphate by using equal parts of bone and ashes, after the recommendation of Dr. J. R. Nichols. I also made a small quantity with acid, using sixteen pounds bone, six pounds sulphuric acid. I dried off the paste fit for handling with ten pounds plaster; this I call my phosphate. I also used equal parts of hen manure and rich loam, that had received the wash of the barn-yard.

The following table will show the result:—

	No. of bills.	No. lbs. Phos. &c.	No. lbs. of corn	No bu to the acre.	Pr. ct. of in- crease.
Nothing . . . .	100		20	10	
Glasgow . . . .	200	2)	116	23	190
Bone and Ashes . . . .	200	55	83	23½	145
Lobster Clum . . . .	200	40	73	18½	92
Bradley's . . . .	200	20	121	30	260
Wilson's . . . .	200	20	100	25	150
My Phosphate . . . .	200	20	125	31	212
Hen Manure Com . . . .	200	3 bu.	131	22½	227
Crosdale . . . .	200	20	135	33½	237½
E. F. Coe's . . . .	200	20	136	34	240

In making up this table, I allow eighty pounds to the bushel. I plant my corn one pece each way; this gives 4000 hills to the acre, which require 400 pounds Phosphate.

The ground on which this trial was made is a ridge of dry land, broken up last year. It had been mown four year and produced about one ton of hay to the acre last year. The soil was uniform in character throughout, and I conducted the experiment in a fair and impartial manner, doing the work myself.

Bradley's and E. F. Coe's Superphosphate I bought at the stores in this town; Wilson's I had of G. Walker, Concord, N. H.; Crosdale's I obtained of S. H. Robbins, Portland, Me.; Glasgow of Duncan & McKellar, N. Y., and I have no doubt that they were fair samples of what is put into the market.

I have used considerable muck, but never received any beneficial results from it, except as an absorbent in the bovel and hog pen.

It seems to me, that a series of experiments conducted in the manner I have these, must show conclusively, whether it pays to use commercial fertilizers or not. My experiments certainly show that they are not all "humbugs and cheats." In all of these experiments, some of the superphosphates have given better results than either of the home-made kinds. Take, for instance, hen manure, which is generally considered to be the best concentrated fertilizer we have on the farm, and E. F. Coe's Superphosphate, and compare the results. I was offered \$1.12½ for the one and one-half bushels of hen manure used. This made ninety-one pounds of corn, worth \$1.42, which gives me twenty-six per cent. on the investment. The sixty cents worth of phosphate made ninety-six pounds corn, worth \$1.50; this pays 130 per cent. In none of the three experiments has it paid me less than this. A little more figuring will show that the hen manure, compared with the phosphate is relatively worth 37½ cents per bushel, allowing nothing for labor of composting. It is a

very easy matter to advise us farmers to keep a large pile of this excellent fertilizer on hand; but they do not tell us where to get the hen manure.

I have raised over one hundred bushels of good sound corn with these special fertilizers applied in the hill the past season, and from accounts kept, charging the whole cost of the manure, labor, interest, &c., I find it has cost a fraction less than seventy cents a bushel.

We make fine wool a speciality. Our greatest desideratum is hay; the next is wheat, with which to bread the family, and I know of no better way to obtain these than to raise corn as I have named. After it is harvested, plough the ground, and spread on from eight to ten cords per acre of good manure from the sheep hovels or barn cellar. In the spring, as soon as the ground will admit, give it a good harrowing or cultivating, and sow to wheat and grass seed.

Mr. John Johnson,—not the famous one near Geneva, N. Y., but of this town—has brought an old worn-out farm to a high state of cultivation by a similar practice. He raises on an average twenty-two bushels of wheat to the acre, and keeps a large and thrifty stock of cattle. Mr. W. H. Palmer, another neighbor of mine, five years ago, bought an old, worn-out farm that did not average half a ton of hay to the acre. It will now average two tons. His practice is similar to mine and Mr. Johnson's. Other farmers are adopting the same practice with good success.

I should have said that my own phosphate cost two cents and eight mills a pound, besides the labor of making, and a narrow escape from getting badly burned with the acid. I don't think I shall use "Uncle John's" "superphosphate of brains" in making my superphosphate hereafter, but buy it *ready made*, and I think I have brains enough to know which to buy.

S. C. PATTEE.

Warner, N. H., Dec., 1869.

*For the New England Farmer.*

#### COUNTRY HOMES FOR CITY PEOPLE.

Much has been said and written about country homes for the clerks, mechanics and laborers whose business is in the city. The question has engaged the attention of noble minds and able pens. In occupying your attention and that of the public, I do it, let it be understood, not because I claim to rank with the best and wisest men of the day, but simply to detail a little of my own experience in this matter of a country home. My intention always is to regulate my desires by reason and the circumstances in which I am placed, and to attempt only that which I feel a degree of certainty I can attain. By so doing I may attempt less than others, and may attain less; but I shall have one or two advantages—my failures will be fewer, my mortifications less.

A couple of years ago my business brought

me into Boston. Having a family of five boys the question was,—What shall I do with my family? If I hire a tenement in the city—such an one as I shall like to have, and in such a neighborhood as I shall want to bring up a family in—the rent will be equal to, if not above my whole salary. To hire a tenement in such a place in the city as my circumstances would allow, I was satisfied would be no place for me to bring up a family in. I wanted to be with my family as much as possible; and the only alternative was such a place as last described, or a place in the country.

It did not take me long to make up my mind that my home must be in the country; but at such a distance that I could reach it every night at a small cost. After looking at a number of places within the eleven miles circle of Boston, I finally fixed upon a place in Needham. I must admit I was a little frightened about locating in this town by the reputation it had won. Every body with whom I conversed said, Why! you are not going to live there in Poor Needham! You may raise white beans and pennyroyal, but not much else.

Being somewhat wilful in my nature, and a little independent in my judgment, I made up my mind, notwithstanding all that was said, to locate in poor Needham. I found a place there of about twelve acres of land on which stands—not a palatial palace, not even a French-roofed modern residence,—but a good substantial farm-house, containing eleven rooms besides attics. The sitting-room and parlor are fifteen by sixteen feet, and two of the bed-rooms are of the same size. There was also a small barn and carriage house, with sheds attached which belong generally to farm houses. On the land there are about seventy apple trees and about the same number of young pear trees, many not in bearing yet.

For this place I paid forty-five hundred dollars. I bought a cow and a heifer fifteen months old, for which I paid one hundred dollars. I also purchased another parcel of land of about eleven acres, for five hundred dollars. This lot was part pasture and part wood. On the first mentioned purchase there is about five acres in sprouts. For fencing the pasture I paid two hundred dollars. My outlay for tools and other things would amount to another hundred dollars. Making my whole investment fifty-four hundred dollars; the interest on which at seven per cent., would be three hundred and seventy-eight dollars; to which add eighty dollars, the price of my season ticket for a year, would make the whole four hundred fifty-eight dollars a year.

I suppose some will ask the question, why buy so much land? I had five boys, four with me at home, who, besides going to school, could do a great deal about the place. They could milk the cows, plant and weed, as well as a man, and would thereby acquire the habit of doing something and taking care of

something, which would be a training for whatever station they may fill in after life. All this is worth something,—how much, those who have the training of boys can estimate as well as myself.

Well, then, altogether my rent was four hundred and fifty-eight dollars a year. What kind of a place could I get for this money in Boston? Then my family had the benefit of country air and good schools; if not quite as good as Boston at present, we believe they are fast improving.

On the first of June, 1868, I entered upon this place, with which I opened an account, which was balanced on the first of June, 1869. By which balance I found the place debtor to the amount of three dollars and sixty-one cents. That is, I had sold fruit, butter, milk and eggs for as much as I had paid out for labor, and for meal, corn, and other things I had to purchase for the farm, less three dollars and sixty-one cents.

Now, then, what did I have for my four hundred and sixty-one dollars and sixty-one cents? In the first place, I had a good large house, pleasantly located, to live in. Those acquainted with city rents can judge of the situation and style of house this money would have paid for in Boston. Besides the use of the buildings, I have had all the apples, pears, strawberries and other small fruits for my family's use; I had all the vegetables I wanted for the whole year, with potatoes enough for my next planting, which are worth more than the debit balance; I had all the eggs and poultry I wanted for the year; I had between two and three hundred pounds of pork; I had all the butter and milk I wanted for my family for the year; I had all the fire wood needed for my kitchen stove; and on the first of June, 1869, the expiration of the first year, I had one cow, and instead of a heifer fifteen months old, I had a two-year-old heifer, giving me eight quarts of milk per day; also one calf ten months old, and another, one month old.

So much for a country home in poor Needham. How I did it, and further details of my experience in farming, I will leave for another time.

TIOS. WHITAKER.

*Needham, Mass., Dec. 1, 1869.*

*For the New England Farmer.*

#### FOREIGN AND NATIVE FARM HELP.

IN THE NEW ENGLAND FARMER of November 13, I observed an article by Mr. Jameson, of Irasburg, Vt., entitled "Help and Stock for the Farm."

If I understand Mr. Jameson right, he believes that American farmers' sons make superior farm help;—that they understand the nature and wants of cattle, the comparative value of hay, straw, and roots to be fed to them, the treatment of the soil, &c; that they are not given to smoking, drinking, and profanity, and that they are small eaters. The foreign-

ers are represented as being unskilled laborers, given to smoking, drinking and profanity, and the idea is expressed that the happiness of the family cannot be perfect while all their time is taken up to minister to the wants of such ravenous boarders.

Now, sir, it seems to me that Mr. J. makes a gross misrepresentation of the two classes of help of which he writes. Let us look at them for a moment.

I admit that the American farmer's son, raised upon his father's farm, will make a skilful workman; at least, he has a chance to be so. Still I do deny that foreigners, generally speaking, are unskilled workmen. Why, sir, what makes the American farmer's son a skilled workman, but the fact that he has been accustomed to work on his father's farm? And why should not the foreigner be considered a skilled workman who has been raised under a superior system of farming? It is a fact beyond dispute, that the system of farming in Europe is considerable ahead of the system of farming in New England. Farmers in Europe can pay from ten to twenty dollars a year in rent for every acre of land they occupy, and make money at that. Could they do so unless they managed their business systematically, and had a good knowledge of every detail of farming? And why should not men trained up under such a system be considered skilful workmen, as well as those who have grown up on farms in New England? Let Mr. Jameson cross the line into Canada, and he will find a system of farming at least equal, if not superior, to that of New England. In Canada they raise good stock and good crops. Who are they that own these farms and raise these crops, these cattle and sheep in Canada? Why, sir, they are mostly foreigners; and not a few of them are the Irish and French of which Mr. J. complains.

Four years ago last spring, I commenced farming. I had never owned a farm before; having spent the greater part of my life in the city. Well, the farm was badly run down when I got it, and that, too, by the sons of American farmers. The first year I did not cut hay enough on the place to winter two cows. Last winter I had hay enough on the place to winter nine head. I think that is not very bad, do you, Mr. Jameson, for a foreigner, and a Scotchman, *at that!*

Why sir, what has made this nation—in which we live and of which we are proud—a first-class power amongst the nations of the earth? I claim that foreign skill and foreign labor have had very much to do with it.

Another objection of Mr. J. to foreigners is smoking. I admit that a great many foreigners use tobacco, but do not many American farmers' sons do the same, and some of their wives and daughters? If smoking, chewing and snuffing tobacco is condemned in the foreigner, why not in the native?

Another objection of Mr. J. to foreigners is

their profanity. This is a valid objection to any man. Profane language is a wicked and contemptible habit, unworthy of every one who claims the name of man; and I am sorry to admit that a great many foreigners use profane language. But are sons of American farmers guiltless of this debasing sin? From my observation in Europe and America I am compelled to affirm that young Americans are more addicted to gross profanity than any people with whom I have ever conversed. Not four hours since, I was in a blacksmith's shop where a few farmers' sons were talking together. I do not think that either of them spoke a sentence without using some grossly profane word.

Another objection of Mr. J. to foreigners is drinking or intemperance. Well, here again I admit that the German has a liking for his lager beer, and the Irishman for his whiskey, but are Americans the people to cast the first stone at those caught in the very act of "drinking?"

The last objection to foreigners, urged by Mr. Jameson, is the destruction of the happiness of the family in consequence of their gluttony—"ravenous boarders" as he calls them. If this objection was made considerably, I must pass it with silent contempt. If it was a thoughtless remark, it deserves no notice.

Let me say, in conclusion, to Mr. Bullion, that his best course will be to hire the best men he can find without much regard to the fact whether the Almighty fixed their birth-place on the east or the west side of the Atlantic Ocean.

D. M. H.

*East Canaan, N. H., 1869.*

#### ENGLISH FARM HORSES.

As Americans are aware, the English farm horse is called the "cart-horse," being totally different from the trotting affinities used on this continent. These cart horses are treated in about the same comparative way in respect to the nags as the laborer lives in comparison to the more independent class. The cart horse is made to eat up all the chaff blown from the grain when winnowed, and as every farm in England grows more than three times the quantity of grain ever produced on American farms, this chaff is the main support, for it is sifted through sieves for the purpose, the coarse portion given instead of hay, and the short, fine portion fed with very small quantities of grain (oats and split beans) in baits given by the "carter," whose duties consist of making his teams look fat and sleek on the greatest quantity of rough food mixed with the least grain possible. The horses, from eating so much chaff, drop in their carcass and are always very deep and round, the geldings having the appearance of mares in foal when viewed from a little distance, and the great objection by the carter to going out of a walk

with English farm teams is that it destroys this round barrel look, while the farmer dislikes to see them trot, especially on the road, because their great weight shakes their feet and legs and brings on side bones, puffs, &c. Four horses go to a wagon in a general way, about three tons besides the wagon being a load on fair roads, a small boy accompanying the carter. No reins are used excepting when ploughing "G. O.," for the carter walks by the side of the horses, and in meeting on the roads the teams turn out for each other on the opposite side to the one customary here, that the carters should not be between the horses or vehicles.

The cost of keeping cart horses in England is not much more than half what it is to keep the nags; "but will they do as much work?" says the American farmer. They (the English) plough somewhat deeper than the Americans, and though the teams are not out so many hours, they keep pulling away all the time they are out, very seldom sweating, as their immense bodies draw along whatever is behind them with little effort; in fact it is not much for one of these animals to walk away with what would make two of the undersized ones here scratch a good deal to start with.—*Country Gentleman.*

#### PHYSIOLOGY OF EGGS.

Every fowl has two small organs near the extremity of the body, called the ovaria. It is filled with elastic tissue, and feels under the finger like sponge. The eggs are started here, and those which will mature a year or two or three years hence are in embryo. One is forced up, is seized by the stroma, which is seventeen inches long, and passed rapidly through. When the egg leaves the ovary it consists of yolk only, but in its passage through that short canal, the yolk is surrounded by enough albumen to perfect the chick. The white of the egg has in it all that nature requires for making bones, muscles, blood-vessels, connecting tissue, skin, and feathers. Just before the egg leaves the body, this canal has the power of secreting lime for the shell. This shows how valuable the egg is as nutriment, and it also shows what demands are made for rich food by a hen that lays an egg daily. Besides what she requires for her sustenance, she is called upon to secrete the material for the body of an entire chick, and also retains for the little creature sufficient to last many hours after it leaves the shell. It shows also that a hen cannot make albumen so rapidly, except out of albuminous food, such as wheat, meat, and small animals. It is not true that there is a certain number of eggs, and that, this number exhausted, no more can be expected; but it is true that the secretions lessen as old age comes on, and latterly the hen fails to have sufficient force to carry forward the process. The practical bearing of this is

that we must see that the fowl is always well kept. The way to have good laying pullets is to quicken the circulation and strengthen the system by liberal nutriment. In conclusion, the speaker referred to the fact that the yolk is food for the young for the first three or four days—that careful housewives make a mistake by attempting to feed them before the expiration of this time. Let the mother bird have charge, and success will be certain, for she knows better than any man can what the chick requires.—*Dr. J. V. C. Smith.*

#### TREATMENT OF A COW DISEASE.

We have had a "cow disease" in this neighborhood. The legs and teats were all covered with sores and blotches. As soon as we discovered it, I got up the cows, started a fire in the steamer to give us plenty of hot water, and four of us went to work washing and fomenting the affected parts with as warm water as the cows would bear. We also used some Castile soap and a little borax. The latter is a capital thing for cleaning and softening the skin, but I do not know that I should have used it only that I knew the men would doubt the efficacy of such a simple remedy as warm soft water and soap. I extolled the virtues of this white powder, gave strict injunctions to be careful of it and not waste it, and especially not to put any on the sores until they had been softened by the hot water. Then apply a little of the borax and rub it in gently with warm water and soap to form a lather. Then wash again with warm water and soap, and finally give another thorough washing with warm water alone. In this way I succeeded in getting the legs and teats washed thoroughly clean. This was the real point. We then rubbed the legs, bag, and teats, with crude petroleum, and repeated it two or three times, and the cows got well. The disease has been very general and in some cases quite serious. We do not know what it is. Some thought it was the cow pox, but that I suppose is usually confined to the teats and udder, while on my cows the inside of the forelegs were worse affected than any other parts. I attributed it to mosquitoes or some other insect.—*J. Harris, in Am. Agriculturist.*

**COWS SUCKING THEMSELVES**—I have a fine cow, which at three years old acquired the habit of taking her own milk. Unwilling to sacrifice so promising a heifer, I resorted to various devices to break up the habit or to prevent its successful practice—the most successful of which was a light wooden frame of light pins or rods, similar to the lower part of an old-fashioned splint bottom chair, fastened on her neck so that she could not get her head around to her side. This accomplished the object, but it worried and chafed her, and did not allow of her whipping flies or licking her-

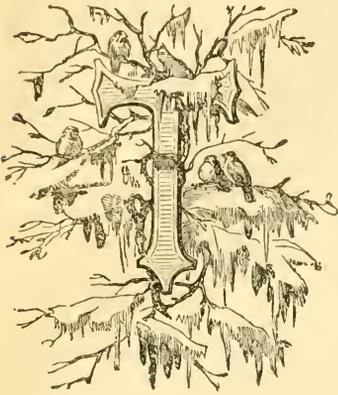
self. It looked uncomfortable, and I didn't like it. Last spring I secured a plain snaffle bit in her mouth, by means of a narrow strap passed over her head between the horns and ears. On two or three occasions the hair on the udder was found slightly smeared with saliva, but no milk was ever taken. The bit does not interfere in the least with eating or chewing the cud. It was removed in November. The cow was milked during the winter, and is now giving ten or twelve quarts of milk per day, and no indications of returning to her old habit.—*H. M. Hart, West Cornwall, Ct., in Country Gentleman.*

**WHY DO WE OIL OUR WHETSTONES?**—We oil our whetstones for several reasons. The first is that almost all stones, unless oiled, become glazed or burnished on the surface, so that they no longer abrade the metal. The second reason is that most stones, after being oiled, give a finer edge than they do in a dry or merely wet state. The pores of the stone become in a measure filled up, and, while the action is rendered continuous, its character is altered. A dry stone is very apt to give a wire edge to a tool, and although this sometimes happens when oil is used, yet it does not occur nearly so often. It has been said that a little carbolic acid dissolved in the water which is used to moisten a whetstone or a grindstone will greatly increase the friction, and thus promote the action of the stone upon the steel instrument. If this be true, and there be no unforeseen drawback, carbolic acid will prove invaluable to all who have to sharpen tools or grind metallic surfaces.—*Mining and Scientific Press.*

**A CHEAP BOILER OR STEAMER.**—*J. S. Seely* of Kendall County, Ill., gives the following description, in the *Prairie Farmer*, of a boiler or steamer used in his neighborhood and which he says is the best he has ever seen. Procure a sheet of common sheet iron, the heaviest that can be got; make the sides and the two ends of a box the size of the sheet, and nail the iron on for the bottom. Make two walls of brick or stone so near together that the edges of the box will be far enough from the fire so that the sides will not burn. The back will want protecting by iron or stone. The farmer will want a chimney at one end, and, if to burn coal, will want a grate. If used to steam, the box will not need to be more than six or eight inches high, with a box the same size to fit tight, with slat bottom, to set on top as high as desired.

I have one neighbor who cooks fifty bushels at a time, and another one hundred bushels of potatoes with a very small amount of fuel. The latter has two sheets riveted together, with pan and box 4x8 feet; the box made of good flooring, matched.

## USES OF THE SNOW.



HE revolutions of the seasons are not only necessary in producing and perfecting the crops upon which all animated beings subsist,

but they are peculiarly grateful to restless man, who would die of monotony if beautiful June should continue for six months. But pleasant as are the changes of the seasons, one can hardly see the earth wrapt in its white mantle, with all its late delightful colors, varied scenery, fragrant flowers and singing birds, swept away by the fierce breath of winter, without some feelings of sadness. He cannot regret the change, because He who holds the earth in His hands, has ordered all this in Infinite wisdom, and we know it is all for the best. Nevertheless, a sadness will steal over us, and this should lead us to look for the compensations which the change brings with it. There is a bright side to the picture. "While our gardens and fields are buried in snow, and our roads are blocked up with drifts, are there no benefits in this winter covering which partially make up for its admitted evils and discomforts?" Undoubtedly there are, and especially so to the farmer. He would look to it more with an eye to profit than with a poetic fancy or scientific research; will recall the old proverb, that "snow is the poor man's manure," and look for luxuriant crops of rye and grass to spring up where it has been so amply protected. He has been told that snow abounds in ammonia, more, even, than is contained in rain water, as in falling, the flakes sift the air through which they pass, and return all the impurities which they gather, as fertilizers to the soil. Snow has a very considerable absorbent power. A writer illustrates it as follows:—Take a lump of snow of three or four inches in length, and hold it in the flame of a

lamp; not a drop of water will fall from the snow, but the water as fast as formed will penetrate or be drawn up into the snow by capillary attraction. It is by virtue of this power that it purifies the atmosphere by absorbing and retaining its noxious and noisome gases and odors."

Deep snows prevent the ground from freezing, operating like a blanket to keep off cold winds and preventing radiation. Under these circumstances snow melts next to the ground, and the water supplies the springs and streams. Were it not for this—in the absence of rains—great inconvenience would be felt in the want of water for stock and other domestic uses, as well as to drive the wheels of factories.

Snow absorbs exhalations from the earth, and when it melts returns them to the soil as fertilizing properties.

Another important use of snow is the protection it affords to vegetable, and even animal life. In very cold weather, the partridge will plunge deep into the dry snow, entirely out of the wind, and there sleep as comfortably as in a nest of down. "Even in northern latitudes, there are plants which require more or less protection in winter. Nature provides for them most wisely. She hangs over them the branches of neighboring trees and bushes, gathers about their roots a many-folded blanket of dry leaves, and last of all, spreads over them a fleecy mantle of snow. Sweep off the snow from our wheat fields and meadows, and at least a portion of the crop would be winter-killed. The buds of peach trees are often killed in severe winters; but if a few branches get under the snow, they produce a splendid show of fruit."

Dr. Kane, in his "Arctic Expedition," mentions finding various plants in perfect condition under the snow, which could not have lived uncovered. He says:—"Few of us at home can realize the protecting value of this warm coverlet of snow. No eider-down in the cradle of an infant is tucked in more kindly than the sleeping dress of winter about this feeble flower life."

To the farmer, there is another compensation. The snow enables him to enter upon woodlands and haul off fuel and timber, where he could accomplish but little with wheels; and to work in swamps, to drain them, or to

take away their rich deposits of muck to fertilize higher lands.

These and many other considerations are so many compensations for the loss of beautiful landscapes and freshly-growing crops in the summer months.

Nature is never at fault. Man often is. If he does not like some of her changes, it is wise in him to turn the sadness which they cause, into sunshine, by more careful research into the wonderful life about him.

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#### THE EYE OF A HORSE.

Having occasion to drive a few nights since when it was so dark that one "could not see his hand before him," we were led to observe the conduct of an old and faithful horse, with a great deal of interest, and to inquire, Can a horse see in the dark better than a man? In this case, on one or two instances, he seemed to have left the road, and if continuing so for fifty rods, would be likely to plunge down an embankment into a pool not pleasant to bathe in, in a cold and dark night. He was pulled to the right, but insisted on going directly forward, or, as it seemed, to the left. Upon placing the head near the dasher of the carriage, and turning the ear forward, it was evident that the animal was not walking upon the grass; but, the road being a little sandy, it could not be decided whether he was in it, or not. So he was allowed to take his own course, and brought us safely through the perils of that night.

The question, "*Can a horse see better than a man in the dark?*" was then clearly in favor of the horse.

The circumstance related led us to read some accounts of the structure of the eye of the horse, and to examine drawings illustrating it. If all who drive a horse—whether it be light or dark—would do the same, they would not only feel more safe, but could not fail to be impressed with the wonderful wisdom which framed an optical instrument of such exquisite workmanship and mechanism; one so admirably fitted to collect the luminous rays which come to the eyes of a horse from the numberless objects he passes when in use. A special provision is displayed in it, fitting him to endure the strongest glare of a tropical sun, such as is reflected from the desert wastes he is called to pass over.

Unlike the pupil of a man's eye, that of the horse is oblong, instead of round, and when exposed to the direct rays of the sun, the opening rapidly contracts, so that the pupil looks like a mere line. The edges of the *iris*—that colored ring which surrounds the pupil—then nearly touch each other. The luminous rays are thus excluded. As darkness comes on, the iris moves back, so that the animal sees just about as well as when it was light. But when it gets to that "darkness which may be felt," it is hardly probable that a horse would feel as safe as in the daylight.

Another singular fact is, that the horse has *no eyebrows*. The *eyelashes* are peculiarly arranged so as to guard against the ingress of too much light, or of insects. There is another beautiful arrangement, too, about the horse's eye, to clear it of dust or of other matter that is annoying. "Concealed within the inner corner of the eye, is a triangular-shaped cartilage, called the *haw*. It is concave within, exactly to suit the globe of the eye; it is convex without, accurately to adapt itself to the membrane lining the lid; and the base of it is reduced to a thin or almost sharp edge. At the will of the animal this is suddenly protruded, passes rapidly over the eye, and shovels up every nuisance, mixed with tears, and then, being speedily drawn back, the dust or insect is wiped away as the cartilage again passes under the corner of the eye." It is not man alone that is fearfully and wonderfully made.

These brief explanations may give the night traveller confidence in his beast, and be the means, perhaps, of returning him safely home, although bewildered by the "blackness of darkness" which had ensounded him.

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#### BUTTER-MAKING IN WINTER.

The chemical man of the New York Farmers' Club stated recently in reply to an inquiry that when perfectly sweet cream is churned, the butter globules are broken by mechanical action alone, and the product is apt to be mashed or greasy, the grain being destroyed. When the cream is slightly soured the lactic acid helps chemically to weaken the casein coverings of the globules. The butter comes more quickly, and, all other things being equal, it is better to have the cream somewhat sour. Many practical butter makers

find that by heating the milk by putting the pan after the milk is strained over a kettle of hot water, that there is little trouble in making butter from sweet cream in the winter season.

On this subject we find the following remarks by Mr. X. A. Willard in the *Western Rural*.

The food on which a cow is kept, has considerable influence not only on the quality and quantity of butter she will yield, but on the time required in churning. If bran, oats, and corn meal be given to the cow in connection with the potatoes, the cream will be of better quality, and will be more easily churned than that made from potatoes and hay alone. It may be remarked here that when neither grain nor meal is fed to cows in fall and winter, in addition to hay, and the extra feed is composed of materials of which starch and sugar and water are the chief ingredients, the cream requires to be churned at a *higher temperature* than that produced from food containing a good proportion of nitrogen.

There is another trouble in fall and winter that often retards the churning—the milk and cream are not kept at an even temperature. If the milk is allowed to freeze and thaw or to fall to a low temperature while being set for cream, there is more difficulty in getting the butter speedily. The milk or cream should not be allowed to fall below fifty degrees. Where no conveniences are had for keeping the milk at the proper temperature while the cream is rising in fall and winter, good results may be obtained in scalding the milk by placing it in a pan over hot water on the stove. As soon as a little “crinkle” is observed on the outer edges of the thin coat of cream which rises, remove the pan to a room of moderate temperature or where the temperature does not fall below fifty degrees, and the cream will not only rise rapidly, but can be churned, generally, with facility. The proper scalding of the milk will be easily learned by experiment. If scalded too much, the amount of cream will be diminished.

*For the New England Farmer.*

#### COUNTRY HOMES FOR CITY PEOPLE.

Desirable as a country home may be to many of the people whose business is in the city, I would not advise all to make the experiment. There are many in the city who are to all intents and purposes *city people*. If they go into the country at all for a home, it will be either because sheer necessity compels it, or because it is fashionable. A few wealthy men can afford both a city and a country residence,—one for summer and the other for the winter. Such men can afford to do as they please.

But as a general rule, those whose feelings and preferences are entirely with the city do not enjoy themselves in the country, particularly in the more remote suburban towns. Their are towns so near the city as to be almost city itself; in these towns many might enjoy themselves who would be lonely indeed a few miles further out. Even city people may enjoy themselves in such a location. But without a real love of the country, the comparative cheapness of homes in these retired localities should not be allowed to induce one

to make the experiment. However much they may enjoy the summer, when winter comes and they find themselves away from the theatre, lectures and other entertainments and city society, they will forget the enjoyment of the summer and become disgusted with what they term the solitude and loneliness of the country, and desire to get back again to the city as soon as possible. But to the lover of the country there is no loneliness in such a situation. He finds ample means of enjoyment and amusement. If one loves his books and his family, he need never be lonesome; but then there are neighborhood gatherings and sociables which make the country enjoyable to one who likes the country and country people.

But every one from the city will not buy from twenty to thirty acres of land. Many could not if they would, and would not if they could. They may not all have four or five boys; they might not all have a taste for the farm, though they loved the garden. Many would love to pick the peas, to dig the new potatoes half an hour before they were boiled—so very different from the shrivelled, wilted ones they are compelled to take in the city,—or to enjoy the luxury of nice choice ripe fruit of their own raising. For these purposes a quarter or half an acre of land would be sufficient. Others might choose to keep a cow in order to have fresh milk and fresh butter. In this case they would want from two to three acres,—the quantity depending on culture and quality. Plenty of these homes can be obtained at reasonable rates, and I would advise all who buy in the country to buy at least one quarter of an acre of land. In some suburban towns the houses are so near together that there is little choice between them and the city.

My own tendencies are to the country, although born and brought up in a manufacturing town in England, and the greatest part of my life having been spent in manufacturing. Yet my love of country life and the farm have a rather curious and not perhaps an uninteresting origin. My father was brought up on a farm, and even in England was considered a good farmer. But like thousands in this country he was attracted by the apparently readier and easier way to competence and wealth, to business in the town. His fate was like that of thousands of others that leave the farm and whom we never hear from—financial ruin. We always hear of those who succeed, but those who fail are forgotten. He always considered it as a mistake that he left his farm; to his family it certainly was a misfortune.

When a boy I attended two courses of lectures; one on Galvanism, Electricity and Pneumatics, and the other on Chemistry. These lectures created in me a taste for natural philosophy, and gave direction to my subsequent studies. After having studied inorganic chemistry for a time, I turned my attention to organic chemistry. I was aston-

ished and delighted when the idea burst upon me that farming was the science of chemistry reduced to practice. To my mind the farmer became a new man, and farming a new business. The doctor I had always regarded as a man of science, as were professors, &c.; but that the awkward, clumsy, ignorant farmer was also a man of science—a chemist—was new and wonderful indeed to me. This was before I had read Liebig.

I give these particulars to show how I acquired a taste for farming, and how natural it was for me to look to the country for a home, and to buy land as I stated in a previous article, I had done.

My desire from the time of my discovery of the connection of chemistry with farming has been to be a farmer; but destiny—and I believe there is a destiny that shapes our ends, rough hew them as we will,—has thus far prevented me from gratifying my desires.

With this knowledge of chemistry and this love of the country, when but a boy, I often visited farmers with my father, and was able to give scientific reasons for many of the things which were done by them, and for others which they said should not be done, but for which they were able to give no other reason than that they had been taught so to do, or so not to do, by those who had preceded them on the same land. As I became older I made these excursions alone, as opportunity offered, and I generally spent my holidays with the farmers, studying chemistry, while others were spending their time in foolery or drunkenness. I also studied anatomy and physiology, with reference to farm stock,—making the study of sheep a specialty. I have continued to read whatever I could find on agriculture; and I remember a few years ago of being laughed at by my friends, and scolded by my wife, because I accepted a present from a friend of a wheelbarrow full of the *NEW ENGLAND FARMER and Country Gentleman*. These I read and studied, believing that the many empty shelves in my brain had better be filled by this knowledge than by none.

Having said thus much of myself and of caution to others, against rushing thoughtlessly into the country, I must reserve further details of my farming operations, promised last week, for another occasion. THOS. WHITAKER.

*Needham, Mass., 1869.*

*For the New England Farmer.*

#### ARE GREEN CORN STALKS MEAN FODDER?

GENTLEMEN:—In the *Springfield Republican's* report of the meeting of the State Board of Agriculture, Dec. 8, at Pittsfield, Dr. Loring is reported as saying that "*green corn stalks are the poorest and meanest fodder ever given to a cow.*"

This statement is certainly from very high

authority; and, so far as the report shows, was accepted by the Board. It may be correct, but is at variance with most of the statements which I have seen in the agricultural papers. On the contrary, both green and dry corn stalks have been considered among the best fodder for cows in milk.

It is the practice of others, and I have been in the habit of sowing a part of an acre with corn by the side of the pasture, so that in August and September, when the pasture grass was getting dry, I could have something green for the cows. I have *invariably* found an increase of milk, while the quality was in no degree impaired. So in late autumn and early winter my cows are fed in part with dry corn fodder, and as I have believed to advantage.

Let us have the experience and opinion of practical farmers in this matter. If we have been wasting our time in raising and feeding out the "*poorest and meanest fodder ever given to a cow,*" let us know it.

Then again, Dr. Loring says, "*oleaginous matters are bad for milkers.*" "*Corn, cotton seed and oil meal are of this nature, and are the ruin of thousands of cows. He had spoiled 25 to 30 in a herd of 50 on his own farm, in three years by this means.*" He recommends "*early cut hay, rowen and roots;*" so do I; but I do not agree with him in what he condemns.

When cotton seed meal first came into use, and the price was low, I used it freely, and for several winters with no apparent injury. Linseed meal, too, when I had occasion to buy feed, I have found good for cows in milk, both increasing the quantity.

But I have fed more corn meal than of both. In the early part of the season I grind corn on the cob, and when hard, the corn alone, and have never doubted the benefit of corn meal to the cows.

Now as to the injury to the udder: "*first one teat then another, twenty to thirty cows spoiled in three years, and then to the butcher.*" Was it all owing to the *oleaginous matter?*

In an experience of some fifteen years with Ayrshire and other cows and heifers, I have never had trouble with but one cow in this way, and she, coming in two or three times in mid summer, with only grass feed, and giving fifty pounds of milk per day, and being of a nervous temperament, I have found some difficulty in allaying inflammation;—yet at twelve years old, she is a good cow, with four sound teats. Another, at fifteen (also Ayrshire) is sound and hale, fed as above.

A few winters ago a practical farmer, a neighbor of mine, being out of butter, went to the store with a bag of corn to buy some at the then high price of twenty-five cents. Upon thinking the matter over, he decided to give his cows some corn meal instead of swapping the corn for pale winter butter, when he

found his cows to yield the golden article, and if they were ruined he kept it to himself.

I approve of a mixed feed, say wheat or rye shorts, with other meals; and I had supposed this to accord with the practice and the best authorities of England and Scotland.

*Amherst, Mass., Dec. 10, 1869.* L. S.

*For the New England Farmer.*

#### FARM HELP.

The success of "D. M. H.," as mentioned in *FARMER* of Dec. 11, in increasing the fertility of his farm is truly commendable, and I trust he will give us some idea of the method by which he increased his products from barely enough to winter two cows in 1865, to a sufficiency for nine head in 1868.

It is doubtless true that in most European countries, and in China, there are instances of remarkable productiveness resulting from good management. I experience great satisfaction in reading of the processes of agriculture in foreign lands and am inclined to adopt them as far as practicable. But I know that most of the foreign population employed among us are not qualified to take charge of a farm and to advise and direct in the outlay of large amounts of money that are expended by merchants, manufacturers and professional men who have accumulated fortunes and wish to retire to farms; a class represented by "Mr. Bullion," in the article criticised by "D. M. H." He is probably aware that the men who in England manage farms so well as to pay a rent of \$10 or \$20 per acre and still make money, are not seeking work in this country at from \$20 to \$30 per month. He also knows that a farmer's son who has shared in all the labors of the farm, is likely to understand the business, and that if he has that other qualification, "a determination to be a farmer," because he likes it, he would be desirable help.

There is no loss so great to a country as that of its young men. The most fertile soil, immense forest of choice timber, rich mines of gold do not make a wealthy country; but bleak rocks and desert sands, with the intelligent productive labor of young men, may become a powerful and wealthy State.

In New England the farmers send cattle, horses, and other productions to the cities and demand and receive a price in return; but the young men they raise up to maturity, the richest treasures they possess, the most costly and valuable of all their productions, are sent as a free gift to the cities, while they are dependent on transient help to carry on the farms. The owners of these farms soon become old, feeble and discouraged; their buildings decay and finally old cellars scattered through the land become sad moments of once flourishing neighborhoods.

Now, Mr. "D. M. H.," if you want to hire, notwithstanding your defence of foreigners, I

venture to advise you to hire your own son. Do not refuse him the wages you so freely give to others, but pay him honestly and generously. If you have not a son, it is your duty to encourage some other farmer's son in your vicinity, who is free from bad habits, and desires to give his honest productive labor to some one near home. You have not the interest of your town at heart if you try to crowd out any such young man for the sake of hiring for a few months some Scotch, Irish, or Chinese laborer, who, when he departs takes his wages with him, instead of spending it in your own town, as your son would do, for a farm or stock.

Then in regard to boarding farm help, I have seen something of the practice of having a farm house for the laborer and his family, while the proprietor lives in the enjoyment of all the privacy desirable in the family circle. I have in my mind a case of this kind, where the wealthy proprietor of the farm brings no burden upon his family, and his home in geniality, sociability and harmony is a model. His farmer enjoys like blessings in a comfortable cottage near by; his work is well done, the farm is productive, the stock thriving. If both these families were together, it would detract from the happiness of each. I do not know how it is among the Scotch, but Americans have some consideration for their wives, and if a man has gained wealth and desires a happy home on a farm he would naturally desire to see his wife happy and enjoy her company; but if he filled his house with strong, able-bodied men, hired from the streets at random, and boarded them at his table, over which his wife presided and for which she provided, it would not add to the happiness of the family.

In villages and cities, the married man works by the day or month or year and boards at home. What extensive merchant or manufacturer boards all his help in his family, yet does he not get faithful service? This idea is advanced considerably and is in accordance with practice in England and Scotland. Do the owners of vast estates there board all their help in their own houses, or do the tenants have wives and the laborers have wives, who cook, wash and mend for them. I expect the "silent contempt" of "D. M. H." will explode at this idea of allowing a laborer a home and a wife, as it did at the idea of hiring a farmer's son to work on a farm.

Z. E. JAMESON.

*Irassburg, Vt., Dec., 1869.*

—American dairying now represents a capital of \$700,000,000. The cheese product of 1867 sold for \$25,000,000, and the butter produce of New York alone, was nearly 85,000,000 pounds, and the quantity of cheese made 72,000,000 pounds. The value of these products, at a very moderate estimate, was \$50,000,000.

## EXTRACTS AND REPLIES.

## PLAN FOR A BARN.

I wish to build a barn next spring, and being a young beginner at building, I wish to get a good plan. Having read something about building in the *NEW ENGLAND FARMER*, I thought perhaps you could furnish me with some plan or a book that has barn plans. I wish to build one with a cellar under it for cattle, &c., to cost about \$1200.  
*Westport, Conn., 1869.* WM. H. TAYLOR.

REMARKS.—We have published several plans for barns in the *FARMER*, and we have one now in the hands of the engravers, which will be ready in a few weeks. The design, however, does not embrace a cellar. This might be supplied by the builder. If some of the readers of the *FARMER* who have barns that they think will suit our correspondent will send us plans we will have some of them engraved. With care in giving the size and proportions of the different parts of the barn an artistic drawing is not necessary. The general plan and arrangement are the essential parts. Let us have plans and specifications of a few *real* farmer's barns, such as are yearly filled with hay and grain, which are found to be convenient and comfortable, and which can be built by farmers of ordinary means, and not the mere castles on paper of the architects, which will cost more than the farm would sell for after it was built.

## FATAL CATTLE DISEASE.

I have recently lost six head of cattle. The first three dropped dead. I did not know that anything ailed them. The first one was a calf, six or seven months old, the next was a cow four years old, the next a two-year-old heifer. Soon afterwards a valuable bull died. Chunks of matter run out of his mouth that looked like his litter. The next that died was a yearling heifer. Her manure was black and blood came through her. She was in great distress. I noticed that she was sick at night, and she died the next morning. The last one was a cow. She grew poor for two or three weeks, but I could not discover that anything ailed her till a day or two before she died. Clots of blood came through her as large as one's fist. She eat well up to a few minutes before she died. I gave her sulphur, saltpetre, soap and milk, lard, rum, lime, &c., for about two weeks. Some of my neighbors have lost cattle in the same way.  
 HEMAN MORSE.

*Waterbury, Vt., Nov. 23, 1869.*

REMARKS.—We should fear that these animals had access to some poisonous matter which produced inflammation of the membrane of the gullet and intestines.

## MILK OR PUERPERAL FEVER.

I wrote you a short time ago, asking a name for a disease in cattle, which I imperfectly described. In reply you say you think it is puerperal or milk fever. Since making the inquiry referred to, there have been two more fatal cases where the symptoms were almost exactly like the case I mentioned. One of the last cases was a very large and valuable cow, owned by Mr. Leander S. Mowry, that calved about noon the 5th inst., and did well so far as anything connected with calving was concerned. By noon the next day she could not get up, nor could Mr. Mowry with any means

he had at hand get her up. She died that night by 10 o'clock. With the exception of swelling very much more, she appeared to be sick just the same as the other. I saw her opened, and with others examined closely every part. There was no inflammation of the womb, nor was there in the first case, and with the exception of one lung being almost black, I could see nothing amiss. The stomach was perfectly *natural*, and no one of quite a number present could tell what caused her death. The other cow I did not see, but was told her symptoms and appearance on examination after death were nearly or quite the same as the one I spoke of first. Some persons said over-feeding was the cause; but as one had been fed one quart corn meal per day the past season; one with two quarts, and the other probably never had any meal, I think feed did not do it. As the flow of milk did not cease in either case, I thought it could not be milk fever, as I had always been told the opposite was the case in that disease, still if men of your experience say such is the case I must of course yield that point. As there is considerable anxiety felt in this vicinity in regard to this sickness, hope you will reply once more and oblige  
 SENEX.

*Cumberland, R. I., Nov. 27, 1869.*

REMARKS.—These cases of disease demand the careful study of some skilful veterinary surgeon on the spot. If you have no such competent man, call on some intelligent physician. Puerperal fever is believed to be eminently contagious. The fact that there have been several cases, would rather confirm the idea that that is the disease. The black appearance of the lung complicates the affair, and indicates pneumonia.

## WHITE LEGHORN AND BRAHMA.

Seeing Friend Shepardson's inquiry about the best variety of hens for laying and chickens, I will give my experience. I prefer the White Leghorn as they are great layers and non-sitters, if you can give them a good warm place, as the best for eggs alone, and the Pea-combed Light Brahma as the best for raising chickens; but would prefer a cross between these two as the best fowl for all purposes that I have ever kept. The chicks from this cross will mature earlier, and the hens will not want to sit as often as the pure Brahmata, and will lay much better during the winter months than any other breed that I have had any experience with, and I have had and tried most all of the many kinds that now abound. In crossing the above mentioned fowls I have been the most successful by using a Brahma cock and Leghorn hens.  
 D. G. S.

*Brownsville, West Windsor, Vt., Dec., 1869.*

## SINGULAR EXCRESCENCE ON A COW.

Not long since I chanced to see a very peculiar mark or malformation on the back of a very nice thoroughbred Durham cow. The excrescence consisted of a horny substance growing on both sides of the back bone, just in the rear of the shoulders, and covering a space of a foot square. It is attached to the skin and lays down with its ends somewhat turned up. The scales or flakes of which it is composed are from half an inch to an inch and a half, or more, in width, and from one-sixteenth to one-eighth of an inch thick, and are very stiff, yielding only to great pressure, when the point breaks off. These flakes are sometimes torn off, rupturing the flesh badly, causing it to bleed. One flake as large as my hand lays close to the skin or flesh and has the appearance of a scab fastened by the oozing out of matter which

has dried on and become hard. The cause of this strange phenomenon is unknown to any person who has ever seen it. Can you, Messrs. Editors, or any of your readers, account for it or prescribe a remedy? ZEN.

*Livermore Falls, Me., Nov., 1869.*

REMARKS.—Malformations are not uncommon in either animals or vegetables. Darwin remarks that "all who have studied monstrosities believe that they are far more common with domesticated than with wild animals or plants." Their causes are little understood. Why some people have six fingers or an extra toe or other peculiarity or "mark" is not easy, even for the learned, to say; nor is easier for them to say when the cause that produced these anomalies occurred. We don't know even the cause of warts, and we cannot tell the cause of the malformation described by our correspondent. Can any reader of his article give the desired information?

#### DESTROYING ALDERS.

I would like to know how to kill alders.

THOMAS WILSON.

*North Becket, Mass., Dec. 13, 1869.*

REMARKS.—Another correspondent, "Farmer," makes a similar inquiry. The old rule, when people had more faith in the moon than they have now, was, we believe, to cut alders in the old of the moon in August, if you wished to have them die dead. But, whether you have faith in the moon or faith in nothing, we will recommend the last of August as the proper time to cut alders. Cut them close to the ground, or, better, into the mud, so that the scythe may pass over the stubs. Burn them when dry. The next summer mow the grass, weeds and alder sprouts that may spring up, and the alders will be to blame if they trouble you much afterwards. If you can flow the land on which the alders grow, and keep it flowed all summer, you may kill them in that way.

#### SODA ASH.

What is soda ash? Where manufactured, and what is its commercial value? P. C. T.

*Pittsfield, N. H., Dec., 1869.*

REMARKS.—Soda Ash is crude or impure carbonate of soda. We cannot say where it is manufactured. Its commercial value is given weekly in the FARMER, in the "Wholesale Prices," under the heading of "Drugs and Dyes." The quotations last week were  $3\frac{1}{2}$  and  $3\frac{1}{4}$  cents per pound. We have experimented with composting it with muck on a small scale, when the cost was considerably higher than now, and our impression was that it was too costly for extended use as a manure.

#### INDIAN CORN.

I propose to give an account of a crop of corn raised by me this year, which is not exactly a failure, nor yet a great success, but one that may perhaps be improved upon by some of your readers. Failures in farming when fairly reported are sometimes as profitable to others as successes. The best crops that I have ever raised, or seen raised

in my neighborhood,—and our soil is naturally very good for corn—is about 50 bushels of shelled corn to the acre. Reports have been circulated of late years of between one and two hundred bushels to the acre, while with us 40 bushels are accounted a fair crop. Consequently the framers of these reports are very much ahead of us in the art of exaggeration, or we are much behind them in the science of agriculture.

I planted 27 quarts of corn on about three acres of land where potatoes grew last year; all but about one fourth of an acre being sward, broken up last spring. The manure was all ploughed in. The corn on the sward land was much inferior to the rest, not starting as early nor making as rapid growth. On the old ground, the manure was drawn on in December, and laid in heaps of a suitable size for spreading all winter. On that the corn was earlier and much better than that where the manure was drawn on in the spring. Not having kept an account of the cost of raising corn before, I had supposed that the cost was less and the profits greater; but thus the account stands:—

Drawing 85 loads of manure, 4 cattle and man	
5½ days,	\$16 50
Spreading 3½ days	8 25
Ploughing, 4 cattle, 1 man and boy, 3½ days	5 25
Harrowing, 4 cattle and man, 2 days,	9 00
Planting, 2 men 2½ days	7 50
Cultivating, man, horse and boy, twice lengthwise	
and once er sward, 2½ days	9 37
Hoing once, 1 man, 5 days	7 50
Ploughing, both ways with shovel plough, horse,	
man and boy, 3½ days	14 12
Manure, 30 cords \$5.00 per cord, estimating one-	
fourth taken up by the corn crop	37 50
Interest on land	13 00
Taxes	3 10
Total expense	\$135 99

The crop amounted to 120 bushels shelled corn measured in the bin by taking the cubic feet, allowance being made for shrinkage, at \$1.45 per bushel \$183 50

Leaving a balance of profit on 3 acres \$ 52 51

I charge nothing for harvesting, husking, &c., nor give any credit for three tons corn fodder and about 30 bushels ears refuse corn.

*Epping, N. H., Dec., 1869.*

M. J. HARVEY.

#### FARMING BY A CRIPPLED SOLDIER.

In answer to your correspondent, "A Scrubber of Bush and Brier," in Weekly FARMER, Nov. 6, Monthly, page 574, I will give the experience, not of myself, but of one of my neighbors, with whose circumstance, I am nearly as well acquainted as if it was my own experience.

At the first battle of Bull Run, a man whom I will call Sanford was wounded and honorably discharged. He had nine hundred dollars, and with six hundred he bought twelve acres of land, similar to that of your correspondent. He had one cow, and with the remainder of his money he bought another cow, a horse, and a second hand wagon and harness, and moved on his place in the spring. The land was formerly a good strong soil, very stony, and had been run pretty hard. There was the manure from three head of cattle and one horse on the place, which he spread on a small piece after ploughing, and planted to corn, raising a pretty fair crop. About one-half acre around the buildings he planted to carrots and other roots, and also one-half acre to carrots on a new land on shares. These roots were a great help towards wintering his stock. He also raised one acre of potatoes on his own land, which he also used in wintering his stock.

Being partially crippled he could not command full wages, but whenever he had a chance he worked out, taking whatever he could earn, and at

some kinds of work he could do as much as any one. I myself paid him two dollars per day to work throughout haying time, it being dry at the time and he could do as much at that as any one. When not at work for others or on his own crops, he was clearing his land of stone, brush, &c., and otherwise improving it. Early in the fall I persuaded him to draw a quantity of muck from my swamp and put into his barnyard, which more than doubled the quantity of manure, a part of which he applied to his meadow and the rest to his planting ground, of which he cultivated no more than he had manure for. He also set out a large strawberry bed in his garden, from which he sold, the second year, nineteen dollars worth of berries. He has used considerable plaster on his meadow and pasture, which has had a good effect.

To make a long story short, he has gone on improving his land until he now keeps four cows and one horse on his little farm of twelve acres, and he actually sells more from his place than one of my neighbors does from fifty-three acres, and his place will now bring him him sixteen hundred dollars. He has perhaps laid out two or three hundred dollars in repairs to the buildings, including his own labor,—he having done all the work himself. It is true that farm produce was higher then than now; but you will observe that the most he had to sell was his butter and his own labor when not employed at home, and these are two products that have not as yet been affected by the decline of prices, and they will probably be about the last things affected thereby. I think that "Scrabber" may take courage from this man's experience, and remember that energy and perseverance will accomplish very many seemingly impossible things.

If a crippled soldier can accomplish such things on twelve acres of poor land, what ought we, who have our health, to do on our hundred-acre farms? Truly more than any of us do. I confess that I have learned many things of this man, and his methods of farming; and the reason I write this is that others may profit by his experience, if they will.

*Oak Hill, N. Y., Dec., 1869.*

#### STOOKING CORN SO AS TO CURE THE FODDER.

In the FARMER of Dec. 18, Messrs. "E. O. and H. M. D." ask how to cure corn fodder. I find it a very easy matter to cure it perfectly. Take a stout smooth pole, about twelve feet long and three inches in diameter at the largest end, put two legs in the large end with an inch auger, three feet eight inches long, and three feet apart on the ground; bore an inch hole three feet from the legs horizontally through the pole; fit a pin two feet long, so that it will go through half its length, and you have a stooking horse. Go into the field between the second and third rows, cut and set up before and behind the pin, on both sides of the horse, about twenty hills, which make a stook large enough. When enough is set up, take in one hand a good strong double band of rye or oat straw, put both arms around the stook and fetch it together tight as possible, turn over the tops and bind down close to the ears tight as you can. In tying down the tops, be careful not to move the butts from the ground. If corn is cut up before too ripe, before it falls down and becomes crooked every way, and is set up firmly, pointing a little to the centre and placed equally on all sides, and each stalk standing on the ground, it will save and cure perfectly, so that any quantity can be packed in a mow without heating. The whole operation depends on the workman; if a man undertakes it that don't care for the difference between a hill of corn lying down and one standing up, he won't make it

stand. If some lies half way down and some stands up, or if as much again is set upon one side of the frame as on the other, and all twisted round, it certainly will not stand; and if it don't stand, it won't cure. If the operation is well done success will be sure. But there are many that pretend to stook in this way, that can't make a stook stand any how. As I before said, it all depends on the workmanship of the one who puts up the stooks.

W. S. GROW.  
*Westboro', Mass., Dec. 20, 1869.*

#### SWELLED SHEATH IN HORSES.

My father once had a valuable horse that was troubled in the same way as Mr. Griffin's, of Annisquam, Mass., mentioned in FARMER of December 18, and cured him by washing and digging out the sheath with the fingers, using castile soap and water blood warm. After that give the horse gentle exercise. If the first operation fails to effect a cure, wash it out again in a week or ten days.

*Kensington, N. H., Dec. 20, 1869.*

J. H.

#### POTATOES.

I raised seven kinds of potatoes this year, viz.: Jackson Whites, Orinos, Stevens', Davis' Seedling, Goodrich Seedling, Prince Albert or Irish Pippins, and a few Early Rose. The Jackson White and Orino were hardly worth digging, being very small and rough. The Irish Pippins were poor and watery. The other kinds were extraordinarily good. The Stevens' are better for fall and early winter eating. Goodrich and Davis' seedlings are good keeping varieties; good table potatoes for spring and summer. A neighbor, whose farm adjoins mine, says his Jackson Whites were very good—the best variety he raised. Another neighbor claims the Irish Pippins are the best he raised. I planted half an Early Rose, but did not get an extraordinary yield. C. Martin planted fifteen Early Rose which produced eight bushel, but they rotted so badly that he removed them from his cellar. Two-thirds decayed soon after digging. J. House planted less than one bushel of the Chili or Cailian Pink, which produced seventeen bushels of grand eating potatoes.

#### POTATO WASHER.

While speaking of potatoes, I would recommend the potato washer. I have used one six months. It washes potatoes well in less than five minutes, which would take twenty minutes at least to wash by hand. It is a great help to a farmer's wife, and is also convenient for washing potatoes for hogs.

#### THE BEAN BRAOS.

I have made no count of beans raised this year, but last year I raised a stalk from one bean which bore 230 pods, which from actual count and estimate contained 1400 beans. This shows what the Thousand and One bean can do.

#### A GOOD PORK BARREL.

For a small family that uses but little pork, a large stone jar—they can be had that will hold the salting pieces of a 200 pound pig—makes a capital pork barrel. Pack tightly with plenty of salt, and always keep a little salt above the brine.

#### CHICKENS.

Last spring we had six hens of the Brahma breed; sold \$6.50 worth of eggs, and raised thirty-six chickens, of which twenty-six were sold for \$25.00, at twenty cents per pound. I have a good hen house, and think it cost no more to keep them shut up than it does to let them run after they get big enough to damage the garden and grain crops near the house. Give them plenty of water. Forty hens will drink a pailful in a day when cat-

ing dry feed. Have fed with ground corn, and sometimes corn and oats ground together wet up with boiling water, fed when cold. Have also fed mixed corn and oats, boiled potatoes, &c. Hope no one will think I am trying to tell a big chicken story. I can't do it this year, but with a little more experience and a few hints from the FARMER perhaps I'll try another year. C. F. D.  
*Berlin, Vt., Dec. 20, 1869.*

#### CRANBERRIES ON UPLAND.

Can you give me any information in regard to raising cranberries on hill plough land? What manure should be used, and how much, and how far apart should they be set, and when?

A SUBSCRIBER.

*North Prescott, Mass., Dec. 13, 1869.*

REMARKS.—We think that cranberries on hill or dry land should be treated very much as you would treat apple trees or corn on a wet meadow; and that is not to put them there at all. We should expect about as good success in raising fish in a sheep-pasture, as cranberries on dry land. The cranberry is a water plant, and we believe that all attempts to grow it contrary to its natural instincts have proved failures.

#### RELIEVING CHOKED CATTLE.

In the FARMER of December 11, there is a description of an apparatus for relieving choked animals. The gag is all correct, but there are strong objections to putting a stiff broom handle down the throat. Instead thereof use a slim rod, the size of a whip handle, put a wooden ball in the shape of a Minnie bullet, on the small end, as large as will go through the hole in the gag—concave end down—and fasten it on so that it will not be pulled off; oil or grease the ball before using. This can be used with perfect safety from injury to the gullet.

Another remedy is to apply a small quantity of saltpetre to the roots of the animal's tongue. It makes them cough so violently that it is pretty sure to remove the obstruction and give immediate relief. C. R. F.

*Waterbury, Vt., Dec. 19, 1869.*

#### BLOODY MILK.

We have a valuable three year heifer, which has given bloody milk from one teat, for more than two months. Bean meal, tincture aconite and garget have all failed to effect a cure. She is a very nice heifer, or I should not feel so particular. What can be done for her? G. D. BARTON.

*Chester, Vt., Nov. 14, 1869.*

REMARKS.—Try salt-petre, half an ounce twice a day, dissolved in her drink or feed, and bathing half an hour at a time with warm soap-suds, daily.

#### GRADE DURHAM YEARLING STEERS.

A notice of my steer calves was published last January—Monthly FARMER, page 145—which at ten months old weighed 1400 pounds. They now measure six feet in girth. They have not been weighed recently, but are estimated at 2150 pounds. They had nothing but grass during the summer.

WILLIAM F. LOOMIS.

*Langdon, N. H., Nov., 1869.*

—It is reported that nearly one-half of the potatoes raised in the northern part of Maine will be lost by the dry rot.

#### AGRICULTURAL ITEMS.

—The Iowa *Homestead* estimates the average cost of producing a bushel of wheat in Iowa at not less than eighty cents.

—The students of the Iowa Agricultural College have, during the past term, earned one-half their board.

—In Wisconsin \$80,000 have been added to the funds of the Agricultural College of the State University by the sale of agricultural college lands during the past year. These sales will add an income of about \$6000 annually to its fund.

—Those keeping horses should twice a week throw into the manger a handful of salt and ashes. Mix them by putting in three parts of salt to one of ashes. Horses relish this, and it will tend to keep them in good flesh and their hair short and fine.

—A farmer in Bakersfield, Vt., during the past dairy season has made from fifteen cows 3000 lbs. of butter. He sold it for 45 cents a pound, realizing \$1350. He also raised ten calves, now worth \$100, and 1000 pounds of pork, which he sold for \$130—making, as the proper income of the dairy, \$1580, besides supplying his family.

—Secretary Boutwell has sent a circular to the Collectors of Customs directing them not to allow the landing of any animals from Europe without a certificate from a Consul that they are free from any contagious disease. This has been done in consequence of the prevalence of a hoof and mouth disease in Europe.

—A correspondent of the *Southern Cultivator* had a young horse whose nose was covered with warts, many of which were tender, bleeding, and very troublesome. He dissolved half a pound of alum in a quart of water, and with a brush or cloth wet the warts twice each day for ten days and they all disappeared.

—The *Prairie Farmer* says that the law passed three years ago by the legislature of Illinois, prohibiting the importation of Texan and Cherokee cattle, has been pronounced unconstitutional by Judge Gillespie; but does not give the ground on which the decision is based. Hundreds of suits through the States have been brought, and some of them tried, with varying results, under that law.

—Iowa is larger than New York or Pennsylvania—larger than New England, without Maine—and more productive than all of them put together. She has thirty-five million acres of rich, black mould, and to-day a clean furrow can be turned over thirty million of these acres. Although less than five millions are under cultivation, they produced last year eighty-five million bushels of grain.

—Where an old cow or an old horse is kept singly it is generally found in good condition, but when either are put with others it declines in flesh and animation. On account of poor teeth they cannot masticate their food as rapidly as others, and as mangers are usually constructed, the more

vigorous animals rob the weaker ones. So says the *Ohio Farmer* to enforce the admonition to take good care of the old animals.

—A worthy farmer in Egremont, Mass., sitting at his fireside the other evening, was disturbed by a heavy, suspicious movement outside, and came to the conclusion it was a bear. Peering through the darkness he saw a large black object, and he sets his dogs on it, but the supposed bear beat them off. Getting his gun he levelled the animal, and found on handling the carcass that he had slaughtered his old and valuable black hog.

—A correspondent of the *Western Rural*, who cured a cow of garget by giving her at first, as directed, four pieces of poke-weed root, about the size of a butternut, but finding she ate it greedily gave her in half an hour nearly two quarts, or all she would eat, says, "I find when a cow's milk organs are all right they will not eat the poke-weed root; but when the milk gets disordered they eat of it greedily till they have enough, when they stop, and you needn't try to make them believe it's good any longer."

#### BEEF SUGAR.

After having been engaged in experiments for the manufacture of sugar from beets for several years, a Prussian chemist succeeded in 1799 in producing several loaves which were presented to the king. During the blockade of 1812 its manufacture was commenced in France. In 1866 reports from 1426 factories in France and seven other adjoining European nations showed a production of 630,000 tons. This success in Europe has encouraged us to hope that the manufacture of beet sugar might be successful in this country, especially at the West. The attempts which have been made at different times and in different sections have not been as encouraging as was hoped. A few weeks since we published a rather unfavorable account of the enterprise at Chatsworth, Ill., where a large capital was invested and as was supposed the most skilful workmen were employed. But it is said that the season has been very unfavorable in that section to most crops the past year, and particularly so to the growth of beets.

It is with much pleasure, therefore, that we copy from the *Prairie Farmer* the following particulars of a more successful attempt at beet sugar making in Wisconsin:—

Mr. A. Otto, a practical German sugar-maker, left his native country with a small "kit" of tools and machinery, some beet seed, &c., intending to visit California and experiment with the beet for sugar there. On his way to this country, falling in with an intelligent countryman, his attention was

called to the vicinity of Fond du Lac as very similar, in quality of land, to the best sugar districts of Germany. Arriving here, he visited that place, and was so well pleased that he at once decided to try the experiment there, and last year located about four miles from that town, on leased land, planted four acres of beets, and fitted up cheap and simple apparatus for manufacturing. The crop turned out well, and proved rich in saccharine matter, yielding a good quality of sugar.

His operations attracted the attention of Mr. A. D. Bonsteel, a citizen, and ex-mayor of the city, who carefully watched the progress of the workings of Mr. Otto, and became so well convinced of the profitableness of the enterprise that he entered into a business arrangement with him for the present year. Eighty acres of land were purchased and planted to beets, and, notwithstanding the unfavorable season, the peculiar fitness of the soil gave them a good crop of beets. More machinery was obtained, and the manufacture is now being prosecuted most successfully; about 1000 lbs. of a good quality of coffee sugar being turned out every twenty-four hours, with improving results as the work progresses. The crop is sufficient to occupy the works for at least four and one-half months, which will give an aggregate of 125,000 to 135,000 pounds of sugar.

The method of manufacture is not unlike that pursued at Chatsworth, the beets being grated fine, the juice extracted by centrifugal machinery, when it is defecated by milk of lime, purified by gas and charcoal filters and then reduced to the sugar point in vacuum pans. It is then poured into coolers, where it granulates. It is then prepared for market by separating the syrup by centrifugal machines.

The locality of Fond du Lac seems to embrace all the requisites to make the manufacture of sugar a prominent feature there; a soil of black sandy loam, underlaid with friable red clay, resting on gravel; abundance of pure soft water, obtained from Artesian wells, bored to the depth of 100 feet, giving a strong flow of water for three or four feet above the surface; cheap fuel obtained at a low price from the numerous saw mills in the neighborhood; cheap and abundant labor, which is always obtainable in the town at a few hours' notice, and both railroad and water communication with the outer world.

The beets are planted fifteen inches apart, each way, and have been cultivated the past year, almost entirely by hand labor; another season, with increased acres, suitable machinery will be introduced into the field culture.

With the light we now have on the subject, it seems as though there was no industrial enterprise in the West, deserving of more attention or more sure of giving good returns for the capital invested, and the day seems not distant when the great West will be supplied with sugar from home factories, and then turn the tide towards the sea-board, eventually driving foreign sugar from our markets.

HEREFORD STEERS.—In a business letter to this office, a correspondent speaks of a pair of matched Hereford steers, which he had recently seen, one year and five months old, weighing 2000 pounds, owned by Benj. Clark of Russell, Mass. They took the first premium in their class at the Hampden Union Fair at Blandford.

SALES OF STOCK.—Mr. J. A. Harwood, Littleton, Mass., has lately sold to George Hoover of Canal-Fulton, Ohio, the Short-horn bull calf *Mabel*, got by Roan Prince 6370, out of *Mattie Newell*.

*For the New England Farmer.*

### COUNTRY HOMES FOR CITY PEOPLE.

In my last I omitted one consideration that my wife reminds me should never be overlooked by any city family that contemplates a country home, and that is the preferences of the wife. Indeed, she thinks the question should be decided by the wife rather than by the husband. After being in the stir, excitement and perplexity of business all day, the man might find in the quiet of his home an agreeable relief and contrast; but the woman who has spent the whole day there, and, if in the winter, without scarcely seeing a neighbor, might find the seclusion monotonous and irksome in the extreme. Such a residence should be attempted by few city ladies, and never without careful consideration. If one is satisfied that she can make the sacrifice—and a sacrifice at first it would be to most city ladies—from her love for her children and for home cares and duties, the trial may be made.

I found on an examination of the soil of Needham that though somewhat gravelly and sandy, it was not what might be termed poor. It is warm and quick. There is in the town a large amount of peat meadow. These are two desirable combinations of soil. The soil of my first purchase is a combination of clay and sand; sand enough to make it light and loose, and clay enough to keep it from blowing away. The gentleman of whom I purchased it had owned it four years. He had applied lime, phosphate of lime, and considerable manure bought in Boston. The old farmers made a good deal of fun of him; called him the Boston farmer, &c. When he bought the place it sustained a cow and a horse. The first winter I was on it I kept two cows, a two-year-old heifer, and one calf. This winter I keep three cows, one heifer, and two calves. I entered upon the place the first day of June,—not a good time to make improvements. One thing I had learned from observation in England—that whenever I found stock well kept, I found land well cultivated, and a wealthy farmer, though he only hired his land; but where I found poor stock, I found poor land and a poor farmer, though he might own the land. Finding that manure was eleven dollars a cord, I said I cannot afford to pay that price, nor can I afford to buy special fertilizers, yet I must manure highly.

Mr. Brown, the editor of the FARMER, paid me a visit in the fall of 1868. He said "you will soon keep five head of full grown cattle on this place." I feel sure I can do more than that, and make the place pay from year to year. I have no peat meadow, but I can buy as much meadow muck delivered at the barn as two horses can comfortably draw, for a dollar and a half. The first thing I did on commencing operations, was to buy three pigs. The boys picked up the ap-

ples as they dropped from the trees, which, with the small potatoes were fed to the pigs, which were kept in a part of the cellar under the small barn, which had a cemented floor. Peat muck and sods from the way side, potato tops, weeds, and leaves from the woods are thrown into the pig pen, but the cow manure is not. The manure from the pig pen is put where it will receive the urine from the cows. In this manner I manufacture a large amount of first class manure, and being under cover none is lost. Here my pigs have a cool place in the summer and a warm one in the winter. The entrance being on the north side, I can give them plenty of sun, or close the doors on very cold days. In addition to apples and potatoes, I feed skim milk and meal. I also buy scraps for them. This food makes excellent pork, and rich manure. I make the production of manure as much an object as any other produce of the farm. Manure is the farmer's raw material; and he has this advantage over other manufacturers, he makes it at his own factory, and the better he makes it the better will be his crops; and the better his crops the better will be his manure. Beef and pork scraps are sometimes used as manure direct, but I prefer putting them through the machine, because it finely divides the particles, and after appropriating enough for its own repairs gives us an article ready for plant food. A judicious use of meadow muck will prevent all odor not only from the hog pen, but from the privy. Mine is made of brick, cemented. In summer, muck is freely used; in winter, coal ashes, and all disagreeable smell is entirely prevented.

My cows are stabled nights during the summer, by which I have in the fall a large amount of manure to haul out on the grass. Last November I drew out twenty-six two-horse loads and spread upon the grass. While doing so, an old farmer came along and said you will lose all the best of your manure; it will run off into the road. Well, I said, let it run. Now he keeps his cows in his barn yard summer nights, where the manure and urine are nearly all dried up before fall, and he throws his manure under his barn eaves, where the rains wash through it fall, winter and spring. In all this he could see no loss, but in spreading manure upon the grass, he thought he could see great loss. But I anticipate very little.

As my pasture is not good, I feed my cows more or less both spring and fall. The sudden change from hay to grass is liable to cause the cows to scour badly and to shrink in flesh and milk. I therefore give them in the spring a feed of hay, nights and mornings, which they eat greedily. The consequence is there is scarcely any change in their droppings, while there is a marked increase in the quantity of milk. In the fall I give them corn stalks, with an evident increase of milk. Hence my experience is in direct op-

position to that of Dr. Loring, who pronounces "green corn stalks the poorest and meanest fodder ever given to a cow." Corn is a rich food; and do not the stalks contain, in a green state, all the materials which constitute the corn? Sweet corn stalks make excellent fodder, after the ear is picked. I pulled mine up by the roots and the cows eat them close to the root. A year ago I had my corn stalks cut close to the ground. I had always disliked the appearance of corn butts on the farm, and knew it took a long time to convert them into plant food. I had them cut up very fine, put into a tub at night and boiling water poured on to them, and let them stand till morning. The taste of the liquid told that there was sugar there, which is good for milk and butter. A little meal was added, and the cows ate it up clean. But I had other fall feed. About the first of June I planted about one-eighth of an acre with mangold wurtzels, carrots and ruta bagas, and raised one hundred bushels in all. I had a furrow opened with the plough, into this the manure was put, and where the mangolds were planted, salt was sprinkled on the manure, which was covered up with the hoe. Then a small drill was made with a stick, for the seed; and I had a splendid crop. After the leaves of the mangolds are pretty well grown, the lower ones will fall off and rot, but I had the boys anticipate this and pick them off; also the lower leaves of the ruta bagas. These were fed to the cows, with good results. We estimated that we got almost as large a bulk of fodder as from an equal quantity of land planted to corn; but we did not think they were equal as fodder, but they are a steady supply, for as soon as you have been once over you can begin again, and so continue till frost comes. About the middle of October I began to dig my roots, feeding the tops to the cows, and only dug each day as many as it would be safe to give them. Thus when the roots were all dug, the tops were eaten up clean.

There is danger of "running things into the ground." A persons hears that a certain article is good for a given purpose; at once he uses it exclusively or inconsiderately. Cotton seed meal is great on exciting milk, and some farmers know no limits to its use, and feed cotton seed meal and poor hay to their cows till they have poor animals or none, as the result; others feed roots in the same manner, but perhaps with less injurious results. But feeders ought to use judgment; they should have a purpose in feeding, and adapt means to the desired end. Dr. Loring sells milk, and is great on roots; but he eschews oleaginous substances. These, however, are essential to butter and manure; but for mere quantity of milk they may be less so.

Having talked over the matter here—my wife and myself—concluded to make butter instead of selling the milk. Butter would require good feed; but good feed would make good

manure; and good manure would make good grass, which would complete the circuit for good butter again. Then we should have skim milk for pigs and heifer calves, and butter would take little from the land,—its elements coming mainly from the atmosphere. Cows left to themselves will have a mixed diet. We must take nature for our guide.

In winter I go to the barn at half-past five o'clock in the morning, rather sooner perhaps, than a good many would like to go. I give each cow a small handful of hay, and then go to grooming them just the same as I should a horse—first the curry comb, then the corn broom brush, and then the hair brush—keeping them supplied with hay, a small quantity at a time, for about an hour. Then the boy milks. At night we fill a pork barrel with cut hay with which we mix about a half a peck of cotton seed meal, half a peck of corn meal, and half a peck of shorts. Upon this mixture we pour hot water, and cover with an air tight lid. In the morning we pour on more hot water, and after milking this is given to the cows; at eight o'clock they are turned out to water; at noon, when the boys come from school, they are fed with hay, and at four o'clock a little more hay; they are then turned out to water. After which they are fed each a pailful of mangolds, ruta bagas and carrots cut fine; then cleaned and milked, then they have each about two quarts of cotton seed meal, corn meal and shorts—equal quantities of each; upon this boiling water is poured, to which cold water is added enough to fill a pail, with a little salt; after this a little more hay, and they are left for the night.

And now for the result. We sell one hundred and thirty-six quarts of new milk a month; in November we sold fifty-seven pounds of butter; in December we shall sell about the same quantity, besides what we have for family use. This is from two cows and a heifer that was two years old last April, and calved the first of May. One of the cows dropped her calf in May, the other last September. We made butter all last winter, and shall make it all this winter. It pays better to make butter in winter than summer. Churning has never exceeded half an hour, and generally inside of that time. The milk is not scalded, but the cream before churning is brought to a temperature of about sixty degrees. I would say here that my wife was brought up on a New England farm, and that she loves to make butter; but she is satisfied that unless the cows are properly fed she cannot make good butter, and the fact that her butter comes so quick she ascribes to the feeding of the cows, and she thinks it would take more than half an hour to bring butter from Dr. Loring's milk, where the cows are not allowed oleaginous food. A neighbor of mine some little time ago, told me my cows were too fat, and would dry up. A short time after he asked me how my wife got her butter, he

said his wife had churned all day, and after he got home he took hold and churned till ten o'clock, and the butter did not come then. I told him to keep his cows as fat as mine and butter would come in half an hour.

We had green peas by the middle of last June, and new potatoes the last of June. The latter part of July we dug at the rate of a bushel from twelve hills of the early Goodrich. These were manured in the hill with hog manure and a little phosphate of lime. After the peas and potatoes were off we sowed English purple top turnips, from which we raised twenty bushels. We had on the same piece about thirty bushels of potatoes besides peas; and let me say here, that light as this soil is, I have never seen corn roll in the driest of times, when I have seen it suffer on moist, clayey soils. The fact is, the roots can get down deeper into the ground, and the soil absorbs moisture rapidly from the dews, when from the clayey soils it is repelled.

I shall have to put an addition on to my barn this spring. I was just about crowded out last fall. The present barn has supplied the wants of the owners a number of years.

I wish to make another statement, that unless the skin of a cow is kept in a healthy condition she cannot give healthy milk, nor good butter. A healthy skin is indispensable. Through the pores of the skin a large amount of effete matter is thrown off. If these pores are not kept open, this matter is thrown back into the system, and goes off by other secretory vessels, which are as likely to be the milk glands as any others. The skin becomes dry, scaly and itchy, and the cows are continually rubbing and licking themselves. The grooming of the cow remedies this to a great extent; dry feed increases it; oleaginous food tends to increase it; and this might have been the cause of disease in the bags of Dr. Loring's cows. Roots have an excellent effect on the skin of all animals, to which man is no exception.

THOS. WHITAKER.

*Needham, Mass., Dec., 1869.*

#### FARM STOCK IN WINTER--WASTE OF ANIMAL HEAT.

There is no farmer's wife in New England so ignorant of the simple laws of nature as to attempt to bake a loaf of bread with the oven doors open. No thoughtful woman would waste fuel in that way. And yet, are not some of the practices of farmers quite as wasteful? Take for example, the loss of animal heat resulting from insufficient protection of stock in winter. It is well known that in all warm blooded animals, heat is generated by some mysterious process of combustion which is sustained by the food consumed, and in its absence, by the adipose or fatty tissue of the body. When the temperature of the atmosphere is lower than that of the body, heat radiates or passes off constantly. If the

air is very cold, the radiation of heat is very rapid, and unless the supply of heat is kept up, the temperature of the body would soon correspond with that of the air. It is very clear, then—the quantity of heat-producing food necessary to maintain an uniform temperature of the body being in exact proportion to the loss of heat by its passing off in the air,—that a much larger quantity of such food is necessary when the animal is exposed to extreme cold than if it is well protected. It is the fuel which, burning night and day, keeps the creature warm. We do not say this as anything new. On the contrary it is well known to every farmer. The only thing peculiar or strange in the matter is that the practice of so many farmers should exhibit a striking indifference on the subject. Many neglect to furnish warm quarters for their stock, and others who have comfortable barns and stables, keep stock all or a part of the time "out in the cold."

We once knew a farmer in comfortable circumstances, of such general good intelligence that he was chosen to represent the town in the "General Assembly" for several years in succession, who gave his sheep no protection whatever, not even an open shed, in winter, because they were "supplied by nature with a fleece to keep them warm." On another farm, one of the best in Windsor county, we have seen milk cows lying on ice and snow in a barnyard much exposed to wind, without even a little straw to lie upon on winter nights, when the mercury ranged from ten to twenty degrees below zero, when a warm stable stood vacant.

We desire especially to have it understood that we do not advocate the system of constant housing in close quarters, deprived of exercise in the open air, which, with high feed, is destroying the constitution of so many herds and flocks of breeding animals. Nothing can be more odious to the friend of improvement in stock than this pernicious system. There is a proper medium course between the two extremes. The loss resulting from undue exposure to cold is three fold. Extra keeping is necessary to maintain the condition—here is a loss of forage. With warm quarters there would be a gain of flesh instead of loss, without extra feed—here is a loss of condition. Constant suffering from cold exhausts and enfeebles the nervous system, upon which depend the healthful performance of all the functions of the body—here is a loss of health.

If there is some special drain upon the system, such as the labor of horses or the production of milk by cows, which requires extra food, the necessity for protection from cold is much greater, for the animal heat must be sustained first. If that requires nearly all the food, the remainder will be insufficient for work on milk, which must be made up out of the stores in the body.

Without alluding in specific terms to every detail to be attended to, we desire to urge farmers not to try to bake their bread with the oven door open.—*Vt. Record and Farmer.*

#### HOOVE IN CATTLE.

I lost two cows in one day by eating green clover, and one at another time. I then knew no remedy or cure. My cows having been turned into the pasture one morning earlier than usual, while the dew was yet on the clover, I was notified that one of them was sick. I went immediately to her—found her much swollen—her breathing was quite difficult, and it was with much exertion I could keep her on her feet; she was disposed to lay down. At a short distance, on the adjoining farm, was a German, tying up grapes, having under his arm a bundle of long rye-straw, which he used for that purpose. Seeing me trying to drive the cow, and suspecting what was the matter, he came running over, saying: "your cow eat too much clover—me cure her for you." He then took a wisp of straw, saturated the middle of the straw in fresh cow manure, put it in the cow's mouth, tying the ends together over her head, back of her horns; he then bid me take a position so that we might punch her in the flanks on both sides at the same time. The cow made an effort to get the straw out of her mouth, by opening it very wide, and running out her tongue, as though it was not very palatable. Her mouth being open and tongue in motion, whilst we punched, the gas escaped at every punch, and in less than thirty minutes she was entirely relieved. I afterwards had occasion to resort to this remedy, and always found it infallible.—*Southern Cultivator.*

#### MILK UNDER THE MICROSCOPE.

M. V. Essling, in a foreign medical journal, reports some very curious facts which he has ascertained as the result of microscopic experiments with milk. He states that if the surface of fresh cream be examined under the lens, there will be found, amid myriads of milky and fatty globules, a large number of either round or oblong corpuscles, sometimes accompanied with finely clotted matter, being just what is seen in most substances in a state of decay. He finds that these disagreeable looking corpuscles make their appearance in summer within fifteen or twenty hours after milking, and in winter after the lapse of two or three days. Continuing the observation until coagulation took place, the corpuscles were found to increase in number, bud, form ramified chains, and at length to transform themselves into regular mushrooms or filaments composed of cells placed end to end in simple series, and supported at their ends with a spherical knot filled with granulous matter. M. Essling is of the opinion that these for-

mations may be classified among the ascophora, and to this state of the milk may often be attributed the gastric difficulties which affect children. The *Journal* adds: "All this must be very unpleasant for people in the country whose misfortune it is to get pure milk and cream, but to city folks, whose milk is a more artificial composition, it does not so much matter."—*Utica Herald.*

A CHEAP ICE HOUSE.—"A year or two ago I had my attention called to an ice house built by a farmer near me, which was simply a bin, made with rough boards, sixteen feet square and roofed over, leaving a large opening at the front and sides. He said his ice kept perfectly until the next winter. He put on a layer of sawdust, about a foot thick, on the ground, and then stacked the ice snugly in the center, eighteen or twenty inches from the walls, and then filled in with sawdust, and up over the top a foot or more thick.

"Last winter, before filling my ice house, I determined to try his method. I accordingly tore out all the inside wall, and shoveled out the sawdust; then filled by stacking it snugly in the center, fifteen to twenty inches from the wall. This space I filled in with pine sawdust, and covered the whole over the top a foot thick or more. I left out the window and took down my door and left it all open, so that the sun can shine in there every day. Now for results. At the present time I have an abundance of ice, and the cakes seem to come out as square and perfect as when they went in, seemingly nothing lacking except what is used out. I am satisfied 'how to build an ice house.'"—*Cor. N. Y. Farmers' Club.*

THE USE OF SALT.—The use of salt as a fertilizer is not nearly as much considered as we think its value demands. It might be applied every third or fourth year. It is the usual practice to scatter the salt broadcast, at the rate of four or five bushels to the acre, after the grain has been put in. Many farmers who have used it in this manner, have given their testimony that their crop of wheat has been greatly increased, and the crop of weeds, bugs and worms correspondingly diminished. If this is so, it is evident that salt performs two important offices, while ordinary manure performs but one. Many of our readers, doubtless, have a small pasture in which they keep a cow and occasionally turn a horse. Many of these pastures have coarse grasses growing in them, while in other places the grass dries up quickly on approach of warm and dry weather. All such pastures will be greatly improved, and often the coarse grasses will entirely disappear if a harrow is passed freely over back and forth during this month, and salt at the rate of eight or ten bushels to the acre be spread over the ground.—*Germantown Telegraph.*

### CONVENIENT DAIRY BARN.

The following is the article we alluded to in connection with the illustrations of a dairy barn on page 100:—

The modern barn in Herkimer and Oneida counties, N. Y., are roomy and arranged, if possible, so that one structure will meet all the wants of the farm. This is easily done when a side hill and running water are convenient to the farm-house. In such cases the stables for milking in summer are those in which the cows are kept in winter. This arrangement saves the cost of a special building, or "milk-barn," as it is termed.

There is great difference of opinion in regard to whether manure cellars under the stable, are injurious or otherwise. Many barns in Herkimer, Oneida and the central counties of New York are constructed with these cellars under the stables, and in no instance where they have been properly ventilated and absorbents used for taking up the liquid manure, have we heard of any bad effect on account of the manures, &c. The stock are quite as healthy, and appear as thrifty, at all seasons, as in barns without manure cellars. We have examined manure cellars, under stables, at different seasons of the year. Some of them were badly ventilated and were fowl with gases emanating from the decomposing excrement which had been dumped without absorbents. Such a condition of things must be a source of disease and cannot be recommended. In others, where ventilation had been secured, and absorbents, such as muck, dry earth, or sawdust, freely used, the atmosphere was comparatively pure and free from any disagreeable odor. Generally, those who have manure cellars under the stable are pleased with them. They save a great deal of labor in the course of a year, and with the precautions we have named, as regards ventilation, &c., they have not been found to be objectionable by the majority of dairymen who have them in use. Leaving this question, for the present, to be decided by those contemplating building, it will suffice, perhaps, to give the general outlines of a class of barns now being erected in the dairy districts of Central New York, which are found to be convenient and give satisfaction.

Our description is that of a barn in Trenton, Oneida county, belonging to W. W. Wheeler. It has capacity for fifty cows, and has a manure cellar under the stables. The basement for manures may be converted into stables for the cows if desired. The barn stands on a side-hill, and is one hundred feet long by forty feet wide, and has a stone basement nine feet high. The bottom of this basement, which is used for manures, is paved with cobble stones, pounded down in the earth, and then cemented with water, lime and sand, in proportion of one tenth lime to nine-tenths sand. This forms a perfectly tight bottom,

and is the receptacle for all liquid and solid excrement from stock in the stables above.

The basement is well lighted and ventilated, and teams can be driven through the central alley for removing manures. Muck and dry earth are hauled into the central alley and used from time to time as an absorbent, and when mingled with the liquid and solid excrement a large quantity of fertilizing material is made. The stables are eleven feet wide, and the cows are fed from the central alley, which is fourteen feet wide. The cows stand four feet apart, and are fastened with double chains two feet long, attached to a ring sliding on a post. Between each cow there is a plank partition extending into the central alley the width of the feed box and back into the stable some two feet. This plan gives the cows more liberty and ease of position than stanchions, and many prefer these fastenings to stanchions on this account. Back of the cows and along the outside of the stables, the floor is raised some five inches higher than the drop, back of where the cows stand, and there is an open space between the two floors, where the manures are pushed into the cellar below. The stables are well lighted and ventilated.

Above the cows are the drive-floor and bays, where the teams deposit the hay and fodder. The loads come in at one end and go out at the side at the other end, so that several teams can be in the barn, and the work of unloading go on at the same time, and not interfere with each other. The posts above the cows are sixteen feet in height. On one side of the barn are the horse stables and carriage-house, communicating with the upper floor, and all arranged in the most perfect manner as to granary and the means of dropping hay for feeding horses and the cattle below. In the upper loft over the drive-way a flooring is arranged with open spaces, where a considerable quantity of corn in the stalk may be taken up and preserved until such time as there shall be leisure for husking.

The leading feature of barns now being built in the dairy region, is to have the drive-floor and bays above the stables. Where the site is suitable, some prefer to have the drive-way near the peak, or top of the barn. The hay may then be rolled from the load on either side into the bays. In feeding—the stables being below—the fodder is thrown downward, either through openings arranged in the bays or in the central alley, according to the manner in which the cows are placed in the stable.

—X. A. Willard, in *Rural New Yorker*.

WEN REMEDY.—O. W. More writes to the *Rural New Yorker* that the following prescription will cure a wen in most cases, if applied early and faithfully. Take a bottle with a large neck, fill with balm of Gilead buds, (say one pint.) put in enough of the best of alcohol to cover the buds; let it stand

in a warm place two or three days, shaking it often. When the gum is thoroughly mixed with the alcohol, apply two or three times per day with a swab. Continue until the bunch softens; then it may be opened; then apply for a few days, and the wen will be thoroughly and permanently cured. I know it, for I have proved it. The buds gathered in the early spring are best.

*For the New England Farmer.*

#### VETERINARY MEDICINE AND SURGERY.—No. 1.

I have been a practitioner of medicine and surgery during a period of nearly forty years; and although it has been my daily business to prescribe for diseases and injuries as they have afflicted *human bipeds*, I have not been indifferent to the manner in which those things are usually managed when they occur in connection with *brute quadrupeds*. The result of my observations in this direction are a strong interest in the subject of Veterinary Medicine and Surgery, and an earnest wish that the Society for the Prevention of Cruelty to Animals may, at an early day, give due attention to the numberless and senseless barbarities practiced upon the inferior animals, by the multitude of *ignoramuses*, called "horse doctors," "cattle doctors," &c.

There are within the boundaries of the United States, thirty or more medical schools in which Human Anatomy, and Physiology, Surgery, Pathology, Materia Medica, Theory and Practice of Medicine, Obstetrics, Chemistry, Botany, &c., are taught by competent instructors. To enter these schools, a good moral character, and a proper preparatory education are required; and to graduate from them a tolerably thorough knowledge of the subjects taught is demanded. Most of these schools are filled from year to year with young men eager to push their way into a profession already crowded with numbers, and in which but few succeed in doing more than to "get a living." Yet, here is a department of the healing art—a branch of medical and surgical science—an honorable and lucrative profession—which has been, and is now, almost entirely neglected!

To remedy this evil, and induce young men of education and character to enter this hitherto neglected profession, a few well conducted schools should be established at convenient and well selected points, in which should be taught all the branches of science that are taught in our best medical schools—substituting *Comparative Anatomy and Physiology for Human*. In connection with these school or colleges, commodious and properly arranged hospitals should be erected for the treatment of diseased and wounded animals; and in them clinical lecture should be given, daily, before the students, as is the case in

the Boston, New York, and Philadelphia hospitals.

I am glad to know that a beginning has already been made in this direction—that one or two veterinary schools, worthy of the name, have been established, within a few years, and that in some of our larger cities, a few men may be found who know something about the structure of that noble animal, the horse; and of the nature, causes, and proper treatment of the diseases to which he is liable. But alas, how few are thus qualified! I positively aver that during the thirty-eight years of my professional life I have not seen one! Plenty of "horse doctors," "cattle doctors," &c., may be found, it is true,—one, two or more in nearly every town; but, so far as my knowledge of them extends, they are about as ignorant of those things which a doctor should know, as a horse or an ox is supposed to be of *algebra*!

MEDICUS.

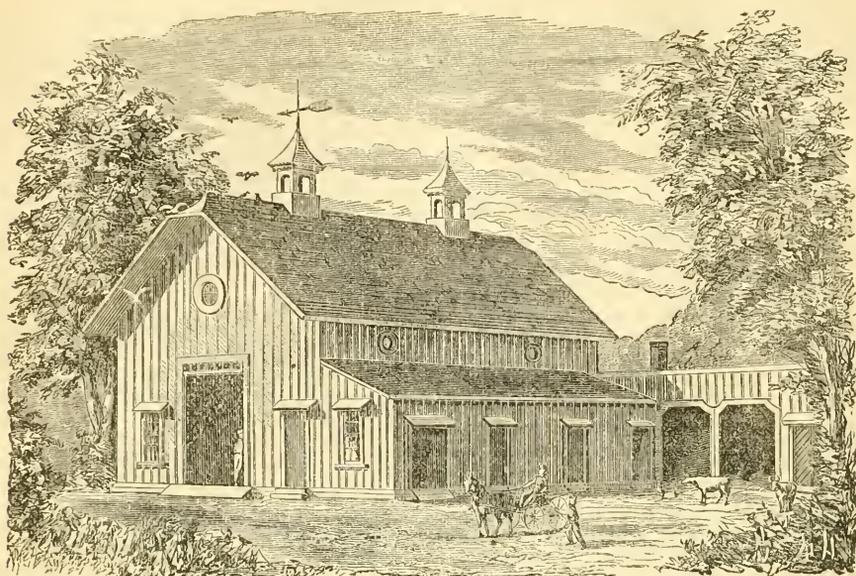
Brattleboro', Vt., 1869.

ENGLISH SHEEP.—The advantages of English sheep are their prolificacy in breeding, their good quality as nurses, their early maturity, their profitableness for mutton, and, at present, their profitableness for wool. Their disadvantages are their incapacity to resist hardships, their poor herding qualities, their want of longevity, and their tendency to disease under mismanagement. By longevity we do not mean merely length of *life*. Their wool degenerates in quality and quantity, and they begin to "go down hill," by the time the Merino has reached its meridian; and the latter keeps up to that meridian for several years. In respect to disease, they but exhibit the tendency of all highly artificial and highly forced domestic animals. All such must be peculiarly subject to maladies, especially inflammatory maladies, when every proper physical condition is not maintained.—*Dr. Randall in Rural New Yorker.*

BARNSTABLE CO., MASS., AGRICULTURAL SOCIETY.—At the annual meeting of this Society, holden in Barnstable, December 14, the following officers were elected:—

President—Charles C. Bearse; Vice Presidents—Levi L. Goodspeed, Matthias Hinckley; Secretary—C. F. Swift; Treasurer—Walter Chipman; Executive Committee—Luther Hinckley, Amos Otis, Isaac Whelden, Thomas Arey, M. W. Nickerson, E. T. Cobb, S. B. Phinney, H. Goodspeed, Jos. R. Hall, J. C. Mayo, J. S. Parker, Wilson Ryder, Zenas Day. Delegate to the Board of Agriculture in duty of Hon. G. O. A. King, when his term expires—S. B. Phinney; Committee on Hall and Grounds—Ansel D. Lothrop, James Otis, Gorham Hallett; Auditing Committee—F. G. Kelley, Elijah Lewis 2d, Chauncey Coant; Committee of Arrangements—Walter Chipman, F. B. Goss, Jos. M. Day, E. N. Winslow, Nathaniel Hinckley.

—Twenty-five pairs of large oxen have been sold in the vicinity of Charleston, Vt., recently to go to the lumbering swamps in other States.



BARN FOR A DAIRY FARM.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

The manufacture of cheese to a very large, and of butter to a smaller extent, in factories has greatly revolutionized the dairy business within a few years past. This general change in the business necessitates changes in most of its details,—in the breed of cows, in the manner of feeding and managing them, and in the construction of barns for their accommodation. In response to the frequent inquiries which have been made of late for suggestions in respect to the most convenient arrangement of a barn for a dairy farm, we engaged Mr. GEORGE E. HARNEY, formerly of Lynn, Mass., now of Cold Spring, N. Y., to furnish a design which should embrace all the modern improvements which have been suggested by the dairy farmers in New York and elsewhere. Having had his drawings engraved by one of the best artists in the city, we take much pleasure in presenting his plan this month to the readers of the FARMER, with the following brief explanations.

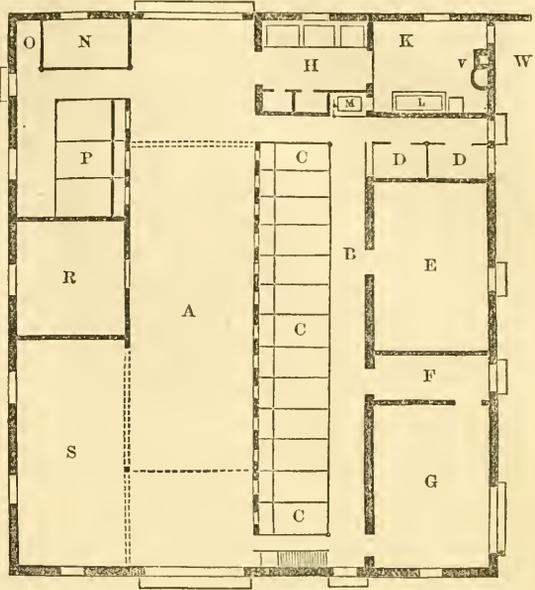
The size of the barn is 40x60 feet, and the shed or lean-to 14x60 feet. The barn floor, or open space, 13 feet wide, with a large door at each end, is indicated on the plan by the letter A. The letter B represents a pas-

sage way, 5 feet wide, for the cows to their stanchions or stalls; CCC are the stanchions or stalls, allowing a space of 3 feet 3 inches by 7 feet for each animal; DD, are pens for calves, 4 by 6 and 4 by 7 feet; E, room for storing bedding, 13 feet 6 inches by 18 feet; F, room for small tools, 5 feet 6 inches by 13 feet 6 inches; G, room for farm machinery, 13 feet 6 inches by 18 feet; H, grain room, 8 by 12 feet, with large rat-proof chests and two large closets; K, boiling room, over pig-pens in basement or cellar, 10 by 13 feet; V, chimney and boiler; L, trough for mixing warm fodder, with a dumb waiter leading to the pig-trough below; M, pump and water trough, with an opening between M and L for access to the water from the boiling room; N, bull-pen, with a place for fodder at O; P, horse stalls; R, room for roots, or for hay in connection with S, bay for hay. The position in the plan of the open shed shown in the perspective is indicated by W. The dotted lines are intended to show the extent of the end scaffolds. The arrangements of the other parts of the barn, including the cellar, are left to the taste of each builder.

Here, then, you have a plan and a view of

a dairy barn. How do you like it? We do not claim that is perfect, nor that it will suit every dairy farmer. If it were possible, we should almost be sorry to give a plan that nobody could criticise; one in which no one could suggest an improvement, or point out a fault.

With the present price of lumber and of labor, the building of a barn is a more serious matter than it was when most of our present structures were "raised." Consequently it is desirable to plan with reference to the greatest economy of space, of comfort to the animals, and of convenience in storing and feeding the hay and provender on which they subsist. Let the matter be talked over these winter evenings at home and in the club, and if the above plan is not the best, let us have a better one.



In this connection we publish on page 98 some remarks on the construction of barns in the great dairy districts of New York, by Hon. X. A. Willard, a gentleman who has probably visited more dairy establishments, and more factories, both in this country and Europe, than any other man now living.

#### NICE BUTTER.

If the productions of the sculptor and of the worker in wax belong to the fine arts, where shall we class the butter now on our table from the dairy of our correspondent Thos. Whitaker of "poor" Needham? Who made it? Who gave it this pleasant odor, this rich color? It will be remembered that in one of his late articles he said that he and his wife had discussed the question whether the character of butter was decided by the man in the barn or by the woman in the dairy. Though not employed as umpire, we hope that the expression of a well settled conviction that no such gilt-edged butter as this can be made unless both barn and dairy are well managed, will tend to keep peace in the family, and suggest to farmers that if they wish their butter to come quick, with a good flavor and fine appearance, such as will find a ready sale, they have something to do besides scold their wives. Many a dairy woman is required to perform a harder task than were the Egyptian slaves who were ordered to "make brick without straw." Whitaker and wife will therefore accept our thanks for their kind remembrance.

In this connection we are requested by Mr. W. to say that there was a mistake in his statement

last week of the morning mess for his three cows. It should read half a peck of cotton-seed meal, two quarts of corn meal—instead of half a peck, as printed—and half a peck of shorts. In his description of the mess for the evening the word "each" was intended to apply not to the cows but to the quantities of meal and shorts; that is, he prepares near night a mixture consisting of two quarts of corn meal and two quarts of shorts, for the three cows, and not for "each" cow, as some might understand him to say.

#### VERMONT STATE AG'L SOCIETY.

In addition to the account given last week of the annual meeting of this Society, we publish the resolutions adopted by the meeting, and the names of the Board of Directors. The committee on resolutions consisted of Hon. John Gregory, Hon. Joseph W. Colburn and Hon. Edwin Hammond. Mr. Hammond was also chosen to represent the Vermont State Agricultural Society and Wool Growers' Association in the Executive Committee of the National Wool Growers' Association.

#### Resolutions.

Whereas, The renewal of the Reciprocity Treaty, so called, with the British Provinces, admitting free of duty their products, is expected to come before the present Congress; therefore,  
Resolved, That the Vermont State Agricultural Society and Wool Growers' Association trust Congress will refuse to re-enact said treaty, as it would cripple our industry, and bring us in close competition with those exempt from the burden of taxa-

tion which we cheerfully sustain as an incident to the great rebellion.

*Resolved*, That the admission of said products, while those of other countries are excluded by tariff regulations, would be an unjust discrimination in favor of Provincial productions.

*Resolved*, That any change by which free trade in wools and woolens should be permitted, or approached, would be injurious to both these important interests.

*Resolved*, The tariff on wool and woolens was agreed upon in joint convention of wool growers and woolen manufacturers, and its repeal would be likely to result in injury to the agricultural interests of the country.

*Resolved*, That we acknowledge our profound obligations to President Grant for the wise recommendations in his annual message on the subject of reciprocity with the British provinces.

*Resolved*, That the Secretary be directed to furnish our Senators and Representatives in Congress with copies of these resolutions, with a request to present them to the President and both Houses of Congress.

On motion of Henry Clark,

*Resolved*, That this Society have learned with pleasure of the organization of the Vermont Dairyman's Association, believing that it will be an important element in the progress of agricultural improvement in our State, and the Vermont State Agricultural Society and Wool Grower's Associations most cordially welcome the Association, and commend it to the support of the friends of agriculture in Vermont.

On motion of C. Horace Hubbard,

*Resolved*, That the granting of a charter to the Vermont Horse Stock Company for the improvement of the horses of Vermont, is a move in the right direction, and we would commend the same to the farmers of the State.

*Board of Directors*.—Edwin Hammond, Middlebury; John Gregory, Northfield; Elijah Cleaveland, Coventry; Geo. Campbell, Westminster; Henry Hayward, Rutland; Noah B. Safford, White River Junction; Henry B. Kent, Dorset; Lawrence Brainard, Jr., St. Albans; David Goodell, Brattleboro'; Edwin S. Stowell, Cornwall; James A. Shedd, Burlington; Henry Chase, Lyndon; Geo. A. Merrill, Rutland; C. Horace Hubbard, Springfield; S. G. Holyoke, St. Albans; Lemuel S. Drew, Burlington.

*For the New England Farmer.*

#### FARM HELP.

Whether Mr. Jameson, in his reply in the FARMER of Dec. 25, has fairly answered my objections to what I regarded as his gross misrepresentations of foreign and native help, your readers can judge better, perhaps, than myself. He reiterates not simply his belief, but his positive knowledge, that "most of the foreign population employed among us are not qualified to take charge of a farm," &c. Admitting this to be true, does it prove his former assumption that all such are "unskilled laborers." In every branch of business we find men of great skill and proficiency as workmen—men of good steady habits, valuable citizens and neighbors, who do not possess that tact and taste which qualify them for taking full charge of any business. To urge this as an objection to foreigners, when probably Mr. J. would admit that many home bred far-

mers' sons are equally deficient, is to treat the matter unfairly.

Mr. J. says that I am probably aware that the men in England who manage farms so well as to pay from \$10 to \$20 an acre rent are not seeking work in this country. I admit they do not, and alluded to the fact that there were such farmers in the old country, to show that foreign laborers who are brought up under a superior system of farming have a good chance of becoming skilled workmen.

Mr. J. objects to hiring Scotch and Irish help, because they do not spend their money in the town in which it is earned. This strikes me as illiberal in the extreme. Does Mr. J. suppose that we are living under some despotic power? Does he not know that it is the right of every son of toil to spend his hard gained earnings where he pleases? How is it with Mr. Jameson himself? Does he spend all his earnings in the town of Irasburg? Does he not, like other men, spend his money where he can make the most of it?

The charge made by Mr. J. in his first letter, and alluded to in his second, that farmers send their sons into the city and hire help a part of the time, I regard as a misrepresentation of the case. I know that there are thousands of fathers and mothers who would gladly have their sons around the domestic hearth, and would do by them what is right and just. But they leave, not because that good mother and worthy father have turned them away. No, sir; their hearts yearn for the presence and company of their children. The fact is that the children of our day have lost that respect for their parents which they ought to have and which children did have forty years ago. Our young men when about sixteen years of age become restless under parental control, imagine they know more than old people, and insist on having their own way. So, after making more or less trouble in the family they leave the old people and go to the city and the factory. From personal observation for many years of the career of such young men, I know that hundreds of them fall into temptation and are ruined. I think it unjust to charge farmers with driving their sons to the city.

As to Mr. Jameson's insinuation that Scotchmen have no regard for the comfort of their wives, I have patience only to ask him to compare the frequency of divorce in Scotland and in Vermont. I wish he could give expression to his views without such ungentlemanly flings and misrepresentations of any class of his fellow citizens.

It gives me much pleasure to close this article with an expression of perfect agreement with Mr. Jameson on one subject,—that of having a farm house for the laborer and his family. Such is the practice in Europe, but I almost wonder that he should approve of it.

D. M. H.

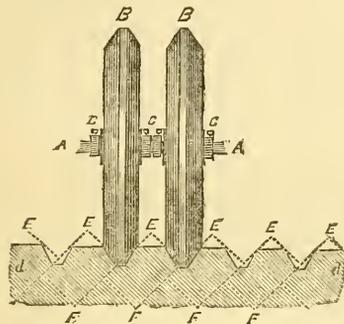
*East Canaan, N. H., Dec. 26, 1869.*

For the New England Farmer.

### WHEAT CULTURE IN ENGLAND.

Dibbling—Drilling—Pressing—Rolling—Treading—  
Depth of Ploughing—Amount of Seed per Acre—Ro-  
tation of Crops—Seeding down Clay Land—Value of  
Straw, Roots, &c.—Winter Management of Stock  
and Manure.

In a previous article on the cultivation of wheat, I spoke of "pressing after the drill." I did not mean simply pressing with an ordinary roller, but by the use of an implement known in England as the Presser-roller. As this may be something new to most of the readers of the NEW ENGLAND FARMER, I send you a drawing of a part of the machine which will perhaps sufficiently illustrate the operation.



The cut presents a view of two pressing wheels detached from the carriage and shafts, in which *AA* is the axle, *BB* are the two pressing wheels as they appear edgewise, their diameter being about two feet six inches, weighing some 200 pounds each. The sole of the wheel is about two inches wide. The pressing wheels are held at the required distance by the square collars *CCC*; *dd* represents a transverse section of the ground undergoing the pressing process; the shaded part of the section exhibits the furrows of a soft loose soil, and the dotted lines *EF, EF*, that of the newly ploughed land undergoing the operation of consolidation. The ruts left by the presser for the seed, is shown at the right, and are three inches deep by two wide at bottom. The presser follows two ploughs and the wheels run in the seams of the furrows. The land at the left, at *d*, is unploughed, and on this runs a light wheel which supports the frame or carriage of the machine. The shafts by which it is drawn are also placed on the left side of the frame, so that the horse walks on the unploughed land. Sometimes, however, four or six press wheels are used, or as many as there are drills in the machine which deposits the grain. In which case the side wheel that runs on the unploughed land is dispensed with.

This mode of cultivation is applicable only to the drill system, and is adopted only in cases where the soil is too loose and friable for the healthy and continued growth of the

wheat plant, as in case of a heavy clover lea, &c. I once worked for a farmer on the Yorkshire wolds where the soil is very shallow; the solid chalk rock lying only sixteen to twenty inches below the surface. On this land, with ordinary cultivation, the wheat suffered greatly by being forced out of the ground by the frosts of winter. To remedy this my employer set to work and got eight cast iron wheels made, and gauged them to correspond exactly with the distance of the coulters of his drills. Including the frame, this presser-roller weighed nearly a ton, but to make it still heavier, he put two four-bushel bags of wheat on to it. The presser was drawn by two horses and followed in the track of the seed drill, and pressed in the wheat very firmly. The result was, at the following harvest, some of the best wheat crops that were grown in that neighborhood, for a circle of many miles.

Before the introduction of machines for drilling in the wheat, dibbling was extensively practiced. By the use of this implement a firm seed-bed for the wheat was secured, similar to that obtained by the Presser-roller. The dibble is an instrument three feet long, all iron, excepting the handle, and weighs six pounds. The dibbler walks backwards with a dibble in each hand, giving a slight twist with the wrist at the moment of plunging the iron into the ground, which makes a hole that does not again fill up by the crumbling in of the earth. The holes were made four inches apart, and the rows about four and a half inches. The seed is dropped into the holes by children who place one, two, or three seeds into each hole. The holes are filled by a rake or a harrow with a few bushes woven into it. A good dibbler with three active attendants will plant about half an acre a day. This tedious process has been mostly superseded by the modern drill, with which the desired solidity of the soil is secured by the use of the ordinary land roller.

As another illustration of the benefits of consolidating the soil of wheat fields, I will mention an incident that I remember. A field had been seeded to wheat and finished off in the nicest English style. A party of sportsmen with a pack of fifty-two hounds rode over this field back and forth, to head off the foxes which the dogs were chasing in an adjacent thicket of broom and winns, pressing the ground quite solid in places. Without guessing what effect such treatment of his wheat field would have on a Yankee farmer, I may say that it provoked the English owner to rougher words than I care to repeat. At harvest, however, the yield on the most closely trodden part of the field proved to be the best and the heaviest.

I greatly prefer drilling to broadcast sowing. But where the land is in such a condition that we cannot use the drill-machine, we must resort to broadcast sowing. Among the disadvantages of broadcast sowing are the differ-

ent depths at which the seed is buried in the ground. This varies all the way from nothing at all to four inches. Consequently the plants come up at different times, and the straw grows to different heights. This cannot probably be obviated entirely under any system of cultivation, but I think the seed is put into the ground at more equal depths by drilling than by any other mode.

But for the purpose of giving an idea of the present mode of cultivation, I will copy a part of a letter I received last spring from a friend in England. He says:—

“I plough my land five or six inches deep for wheat, then roll it with an iron roller to make it solid, harrow well, and drill with a seven-coulter drill, which I prefer to a presser-roller. We cultivate about here under the fourth and fifth course system. First, I summer fallow, and in June sow with turnips, Swedes generally; feed some off with sheep, and pull others to feed at home. This crop gets well manured. Second, the following spring, drill with barley, and seed down with clover. Third, summer-feed this with sheep and cattle. Fourth, plough and drill with wheat in October. After wheat sow with oats, which are generally sown broadcast. I drill  $1\frac{1}{2}$  bushels of wheat,  $2\frac{1}{2}$  of barley, and 4 or  $4\frac{1}{2}$  of oats to the acre.”

You will see by the above that farmers in England seed heavy. The soil is good, inclined to gravel. They get on an average from thirty-six to forty bushels of wheat per acre. You will see by the mode of management they keep the land in good condition, and get wheat as well as straw. I think that this mode of farming might be adopted in this country to advantage where drills can be used.

On clay or moist land a somewhat similar course of rotation is adopted. On their summer fallows and clover leas, from two and a half to three cauldrons of lime per acre are applied. On such land they seed down with wheat, which is hand-hoed in the spring; the grass seed being sown and the land rolled when the wheat is two or three inches high.

From your editorial remarks on the amount of straw raised, I infer that you place a lower estimate on it than I do. The straw from an acre seeded with a peck or less of seed must be small,—very much smaller than where six or eight pecks were used. I must believe that if the farmers of this country would adopt a judicious course of rotation, raise more roots, more grain and more straw and feed them to their stock, it would be better for them and for their land. I think, too, that barley might be substituted in a measure for corn to advantage and profit. Barley is grown with less labor, and the land put in grass a year sooner.

Although I have made a long article I do not like to close without an allusion to the

#### English Mode of Making Manure.

Their barns and sheds are generally arranged so as to form a hollow square, which they call a fold-yard. In these yards their young stock and other cattle are fed on straw during the winter, from racks built for that purpose. What straw is not eaten by the cattle goes under foot and receives the dung and urine until it becomes two or three feet thick; the manure that is made in the stables by horses, cows and fat stock, is likewise thrown into this yard. During the winter and spring this manure is drawn upon the turnip fields. The dry and fresh straw on the top of the manure in the yard is raked or forked off, as the manure is loaded, and then is thrown back upon the bottom of the yard, to start another bed of manure. After it is deposited in the field it is turned over, taking care to work the outside into the middle. Such manure is more valuable in my estimation than that from stables here. In such yards cattle pass the English winters very comfortably; but the weather there is more uniform and less severe than here.

I have thus given you some of my recollections of farming in the old country. Sometimes I think farmers in this country would do well to adopt some of the practices which have been found to work well there, but our circumstances are different in many respects, and I am perfectly willing that others should do as they like.

E. HEBB.

Jeffersonville, Vt., Dec., 1869.

*For the New England Farmer.*

#### VALUE OF GREEN CORN-STALKS.

Green Corn-stalks, the Poorest and Meanest Fodder ever given to a Cow.—*Report of Dr. Loring's Pittsfield Speech.*

Such a sweeping condemnation of an article so generally used, coming from one so deservedly popular as a teacher upon agricultural topics, will naturally arrest attention and incite investigation. If corn stalks are worthless for fodder, the thousands who annually raise them ought to know it, but if they really have an intrinsic value it may be well for those who advocate their use to show their reasons.

For one, I believe, the main objections urged against this fodder arise entirely from the manner of cultivating and using it. In order to derive the greatest benefit from this crop, it is necessary to understand the office and nature of the stalk and its value at different stages of its growth. In its early growth the stalk is composed mostly of soft, cellular tissue, and the juice is watery and insipid. As the stalk approaches maturity, the juice thickens and is richer in saccharine matter, and when stalk and leaves are fully developed and the ear is forming, the juice is the richest, and the stalk has its greatest value. The development of the ear withdraws the juices from the stalk and leaves, and when it is fully ripened they pos-

sess little nutritive value, become tough and hard and are more suitable for beds and bedding and making paper than for even the fourfold stomach of the ox or sheep. Thus the office of both stalk and leaf is to support and perfect the ear or grain, and their value varies with the growth of the plant.

Where the practice of planting corn for fodder is to sow thickly in drills which have been well filled with the strongest kind of manure, a rapid, rank growth of partially developed stalks is produced, as the pale green, sickly yellow, or blanched appearance of a large part of the fodder is ample evidence. There is no room for full development. Cut this when half or two-thirds grown and you have an imperfect stalk at its most valueless period. A large bulk may be produced, but the juices are watery and insipid—not nutritious. It is better calculated to allay thirst than to satisfy hunger. It is no wonder the butter-maker is disappointed, and the milkman fears his customers will grumble.

The large, coarse and late varieties of corn make the poorest fodder; for they must be planted more closely and cut earlier than smaller kinds to have it eaten at all—consequently the stalks are furthest from maturity. It is probably from using fodder grown in this way that disappointment arises and the cry of condemnation is heard. Would there were more milk-producers who take pride in having a good article and giving their customers an equivalent for their money.

Now, it must be conceded that bulk in growing fodder is no consideration unless there is a corresponding amount of nutrition; quality, rather than quantity, is the main thing to be attained. An innutritious, bulky fodder unduly distends the stomach, and the labor of the digestive organs is greatly increased; their power is weakened thereby, and the food will be imperfectly digested. If the smaller varieties are planted thinly in the drill, giving each stock room and time to attain its natural size, or nearly so, and to produce an ear, and is cut while the ear is forming, the stalk will be in its greatest perfection and the fodder worth raising—its deep, rich, luxuriant green will betoken a healthy growth, and both stalk and leaf be full of the sweet juices which go to form the grain; one stalk is worth three of the large Western or Southern varieties but half matured. This fodder will produce cream as well as milk. It is good for oxen and sheep, and horses eat it readily and thrive upon it. For several years I have used sweet corn and find it far superior to the common yellow; it is excellent for fattening animals, and I have fed it to working horses with satisfactory results.

Corn fodder is just what we make it. If we plant so thickly that the stalk cannot be well matured and cut before it has attained its maximum goodness,—getting only a poor, watery article,—it is surely no fault of the corn. If well planted and allowed to remain

until the ear or grain and the weather have extracted all the goodness, we have only a hard, tough and indigestible stover. While if managed rightly, all the virtue of the grain may be retained in the stalk and leaves, and the whole form a palatable and nutritious food. Precisely the rules that are followed in raising other grains for fodder are applicable to corn. Any farmer of experience in sowing rye, oats or barley for that purpose would sow thinly and cut while in the milk, for he knows full well if seeded so thickly the stalks could not head out, and the result, though bulky, would be a poor, trashy stuff.

Complete success, however, cannot be attained without attention to something more than the proper quantity of seed and right time of cutting. It requires a good soil, in fine tilth, with a liberal supply of manure, part of which has been ploughed or harrowed in. In short, the cultivation should be so thorough that a good crop can be secured in an unfavorable season, for it is needed most when hay and pasture are failing.

Taking all things into consideration, green corn is the best thing yet offered for soiling or supplying a deficiency in pasturage. Its easy cultivation, almost certainty of a large yield, small expense, and the fact that it imparts no objectionable flavor to the milk or flesh of animals, all commend it. Moreover, what is not wanted in a green state can be cured and fed dry with profit in the winter. We must, therefore, advocate its use, although, occasionally, we hear denunciations against it.

*Lawrence, Mass., Dec. 27, 1869. N. S. T.*

#### MANAGEMENT OF FARMERS' CLUBS.

I will tell you how I think a Farmers' Club should be managed, or rather how its exercises should be conducted. My method may not be the best—perhaps I am wide of the mark; still I speak from conclusions drawn from a connection with one for several years.

The rules and regulations by which the members are governed should be few and simple. In general it will be found that an assemblage of farmers, unused as they are to public speaking, will talk more freely and more willingly, if left unhampered by parliamentary rules. The more at ease the members feel, the less they have to try to do the thing right, the more active they will become in their membership, the more interested they will be in the meeting, for they will feel that they can do it right as well as anybody. When they feel thus at ease they can talk and act unembarrassed, and the Club will get at their best thoughts and ideas.

If the number of members is not too large the best place for the meetings is at the houses of the members. Under this arrangement, in addition to the information derived from each other, and the interest in farm life awakened, there will be fraternal feelings

cultivated—neighborly good will encouraged. It will be a sort of farmers' lodge, where all meet on the same level—no one feeling himself better than his neighbor.

Familiar farm topics should be selected for discussion and not for debate. One or two members should be appointed to open the discussion. If the person appointed is accustomed to putting his thoughts in writing, an elaborate essay can be prepared and read. If this would not be agreeable he can arrange in his mind what he wishes to say and present it by word of mouth. A train of ideas will thus be started which will be taken up by others, who will give their opinions, relate their experiences and the conclusions derived therefrom, always confining themselves as closely as possible to the subject under discussion. The aim should be, in addition to the interest created, to draw out facts, opinions, conclusions, practices, and results. Clubs make a great mistake when they conduct their exercises after the manner of a debating society. If there are those among your number who wish to display their forensic powers, an opportunity may occasionally be given and a subject relating to the farm be selected and arguments presented pro and con, ever bearing in mind, however, that it is not the proper way to conduct the exercises of a Farmers' Club.

The Secretary should be directed to keep a journal of the doings of each meeting to be read at the opening of the next meeting.—*Cor. Maine Farmer.*

## EXTRACTS AND REPLIES.

### A COLD CELLAR.

I have a dry, cold, sandy cellar that freezes. Will it do any good to run a half inch stream of water into a tub in the cellar? The water is 38° Fahrenheit, in a shed. A SUBSCRIBER.

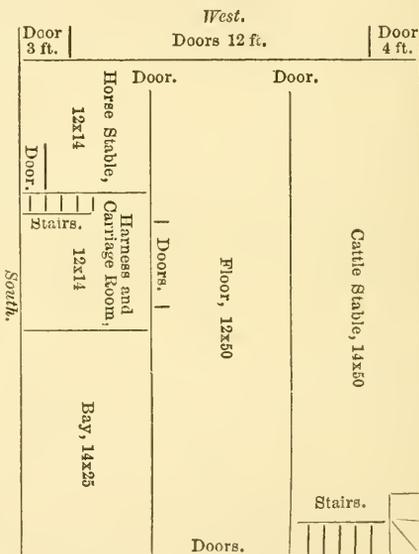
*Acuteville, Vt., Dec. 13, 1869.*

REMARKS.—We have known water to be carried into a cellar by the painful to keep out the frost on a severely cold night, and your stream of water, 6° above freezing, we should suppose would help a good deal. But if the under-pinning or the cellar wall is very thin or open, or if the rooms over the cellar are not warmed, such a stream of water may prove insufficient. Is your house banked up? Have you ever tried evergreen boughs for a banking? They are neat, and are said to be effectual. Collars, cuffs, bosoms, and other articles of male and female wear, are now made of paper; and here is what the *Scientific American* says about protecting cellars from frost: A man who had a cellar that persisted in freezing his vegetables, though thoroughly "banked up," went to work and pasted four or five thicknesses of old newspapers—hope he didn't use the *NEW ENGLAND FARMER* in that way—over the walls and ceiling of his cellar; a curtain of the same material being also pasted over the small low windows at the top

of the cellar. The papers were pasted to the bare joists over head, leaving an air space between them and the floor. He reports that the papers carried his roots through last winter, though the cellar was left unbanked, and he is confident they have made the cellar frost-proof. Before putting on the paper, it will be necessary to sweep down the walls thoroughly, and to use a very strong size to hold the paper to the stones. It is not necessary to press the paper down into all the depressions of the wall; every air space beneath it is an additional defence against the cold.

### PLAN OF A BARN.

In reply to your Westport, Conn., correspondent's inquiry I send you the plan of a barn I intend to build next spring. If any one has a better plan for a barn 50x40, I should like to see it before I build.



Size 40x50 feet; posts 18 feet long; rise of roof 15 feet, covered with shingles; body of barn covered with inch boards, clapboarded and painted. The stable for cattle 14 feet wide; floor 12 feet; bay 14 feet; height of cattle stable 7 feet 6 inches; horse stable 8 feet 6 inches; barn floor covered with pine, 1½ inch thick, lined with hemlock one inch thick. Size of timber on lower floor 8x8 inches; all above 7x7 inches. Cellar under the whole 8 ft deep with nine posts in cellar. The barn ends to the west; cellar open to the south. Stairs in one corner of cellar leads to the stable for cattle. I. B. HARTWELL.

*Rochdale, Mass., Dec. 25, 1869.*

### TURNIP TASTE IN MILK AND BUTTER.

What will prevent milk and butter from tasting of turnips when cows are fed with them? *Waterbury, Vt., Dec., 1869.* C. R. P.

REMARKS.—We generally feed turnips in the morning soon after the cows are milked, and, of course, after they have had a foddering of hay. They should not be taken on an empty stomach,

but as long before milking as convenient. While eating turnips the cows should be well supplied with salt. Cooking is said to prevent all taste. By adding to, say, half a bushel of boiled turnips, while hot, four or five quarts of shorts, which will be well swelled by the time they are cooled, you will have a very acceptable mess. In a prize essay, written by Mr. William Anderson, of Rockford, Ill., on the cultivation and use of turnips, and published in the *Country Gentleman*, it is said that the turnip taste may be completely neutralized by adding to the milk before it is strained "a very small quantity of nitre (saltpetre) dissolved in hot water." He gives no explanation of the amount of nitre to be used, further than the words "very small," and the remark that "the quantity of nitre must necessarily be regulated according to the number of cows kept." Mr. Anderson says he has fed cows all winter on turnips and had no complaint of turnip taste in the butter, from those who used it. We are perhaps prejudiced against saltpetre, but as we don't want much of it in our food, we should use the least possible quantity that would answer the purpose in deodorizing milk. Better taste a little of turnip than too much of nitre, we should say.

POULTRY ACCOUNT.

I commenced the year 1869 with twenty-five hens. I prefer the Brahmas for chickens, and the Leghorns for eggs. I think a cross better than pure breeds of either blood. In reply to the question often put to me, "Is there any profit in poultry?" I offer the following account current which I have kept with my little flock during the year past:—

1869.	HENS,	Dr.	
Jan. 1.	To value of 25 hens . . . . .	\$25 00	
	To food for hens and chickens	80 90	
			\$105.90
1869.	HENS,	Cr	
Dec. 26.	By 25 large hens . . . . .	\$ 25 00	
	" 15 small hens or pullets . . .	15 00	
	" 155 dozen eggs, at 36c . . .	55 89	
	" Dressed poultry sold . . . . .	111.50	
			\$207.30
	Profit . . . . .		\$161.40

Franklin, Mass., Dec. 20, 1869. S. S. Cook.

EGGS OUT OF PLACE—PACKING POULTRY.

Keeping about thirty hens this winter, I always read with interest every article in your valuable journal relating to their treatment, &c. I now wish to ask if you can inform me why I find eggs on the ground when I have nests—both on the ground and raised up three or four feet, with a walk to enable the hens to reach them easily. One side of my hen house, which is quite large, has a floor of loam, and in this part the hens generally roost. The other side, which was once used for keeping pigs, is covered about a foot deep with straw and hay, which was swept from the lofts above. In this latter part the hens stay nearly all the time in cold weather, and eggs are often picked up on the straw, with no appearance of a nest having been made.

I also wish to dissent from the opinion of "S. O. J." concerning the packing of poultry for the market. Having been in the transportation business for many years, I have always observed that poultry meat or eggs, packed in barrels or casks, arrive at

market in much better order than that packed in boxes, as advised by her. Any careful observer will always notice that the employes of railroads or express companies generally roll barrels on the "chime," and in so doing, keep the weight evenly distributed through the whole package, and with but very little shock to the contents, while boxes are "cut" from corner to corner, or wheeled on trucks and tipped off in a manner that throws the whole weight into different places, much to the detriment of the looks of the contents when opened. Again, barrels very seldom get broken open if they are strong when started; while boxes, unless very securely strapped, often split or lose off pieces, thus exposing the contents to the dirt and dust of railroad travel, to say nothing of the temptation to pilfer on the part of those who have to handle them. RAILROAD.

Boston, Dec. 25, 1869.

REMARKS.—It is not uncommon for hens to drop eggs when not on their nests, perhaps sometimes nearly unconsciously. It is one of those irregularities, or exceptions to general rules, for which it is not easy to assign a satisfactory cause.

AMOUNT OF CLOVER SEED FOR PLOUGHING IN.

I have not seen the answer to the questions, how much clover seed should be sowed to the acre for ploughing in the crop green, and what is the best time or season to sow it? C. K. P.

Wardsboro', Vt., Dec., 1869.

REMARKS.—We hope some practical farmer will answer these questions fully. We believe that the frosts of spring destroy a large number of plants sown, as often directed, upon the late snows. Mr. Allen says, in the *New American Farm Book*, that clover may be sown in August or September, but much better and surer early in the spring, with most of the grains or the cultivated grasses. The quantity of seed required per acre depends on the kind of soil. On well prepared loams, ten or twelve pounds of good seed will give a full covering to the land, while on clay from twelve to sixteen pounds are necessary to an acre. When sown with the grasses, four to six pounds on the first and eight to twelve pounds on the last will suffice. When intended for turning under, the clover is often mowed and hayed the first year and ploughed in the second year when in full blossom.

CATARRH IN SHEEP.

I have some sheep that are troubled with a disease of the head. They run at the nose, which sometimes is so stopped up as nearly to prevent their breathing. I lost two last spring before I turned them out to grass. It seems to be contagious. Do you know the disease and a remedy for it? H. L. SOWLES.

Alburgh, Vt., Dec. 24, 1869.

REMARKS.—We have placed the word catarrh at the head of your inquiries, thinking from your description that that is the disease with which your sheep are troubled. Generally the sheep recover, as people do with colds, without much doctoring; but sometimes this disease assumes a malignant type and proves very fatal. Nutritious and varied food, warm, well-ventilated shelter, and good care, are the only remedies we can prescribe. Will ex-

perienced flock-masters who see Mr. Sowles' statement give their opinion of the disease and of its proper treatment?

#### POULTRY WANTED.

One correspondent in Hanover and another in Monroe, N. H., wish to purchase Embden or Bremen geese, of which we gave an illustration some weeks since. Another correspondent in Shelburne Falls, Mass., inquires for the East India or Shake-bag fowls. Breeders who have fowls for sale will do well to advertise their stock.

#### BLOODY MILK.

Perhaps Mr. Barton will be encouraged to try saltpetre, as you recommend, by my success. Last summer I had a cow troubled in this way, which was cured by giving her one tablespoonful of saltpetre with one quart of meal twice a day for one week.

JOHN OWENS.

*Wilmington, Mass., Dec. 22, 1869.*

#### COST OF KEEPING HENS.

Can you tell me how much corn a hen of the Game or Dorking breeds will eat per day, and the cost of keep for a year, if they are allowed to run at large, on a large farm?

L. JONES, Jr.

*Lawrence, Mass., Dec. 12, 1869.*

REMARKS.—We have generally considered a bushel of corn, or its equivalent, as the approximate rule for the food of a hen a year, and consequently its market value the measure of the cost of keeping one. If they have the run of a large farm they may save you the trouble of weighing or measuring or even harvesting much of their food.

#### EFFECT OF ASHES ON CATTLE.

If your correspondent "Zen" (in No. 52, Vol. 48) were to trace back the history of the cow he speaks of, I think he would ascertain that at some time wood ashes had been put on her back to kill vermin, and allowed to get wet. I have seen quite a number of cattle with places on different parts of their backs similar to the one he speaks of, and usually could trace them to this cause. On inquiring the cause in the case of a very fine young heifer, I saw in Waldo county, about two years ago, the owner gave the same answer that others have,

"ashes applied to kill vermin, when a calf and allowed to get wet." For this reason I don't consider it safe to put ashes on any cattle, as they may get wet when we are not expecting it. I know of no remedy that will cause the skin to become smooth and the hair to grow over these bare places, but if any one does, I should like to hear from him.

H. C. BURLEIGH.  
*Fairfield, Me., Dec. 28, 1869.*

#### AGRICULTURAL ITEMS.

—The farmers of Caledonia, County, Vt., have formed a club and will hold weekly meetings during the winter for discussion.

—Officers of the Hampshire Co., Mass., Agricultural Society have been elected as follows:—President, Levi P. Warner, of Sunderland; Secretary and Treasurer, R. W. Stratton, of Amherst.

—S. P. Miller, of Fayetteville, Vt., has a grade Durham cow, from which he has made in seven months, after selling 142 quarts of milk (large measure,) and after using what milk and cream was wanted in his own family of five persons, 311 pounds of butter.

—The *Germanatown Telegraph* says that the common blue pill of the apothecaries cures the chicken cholera in Pennsylvania. Give each chicken when seized with the disease a two-grain blue pill, and if not out of danger by the following morning, another—two pills almost universally effecting a cure!

—To remove foreign substances from the eye, such as specks of dirt, eye-winkers, in fact any thing, from a mote to a beam, you have only to lift the lid, and introduce a flax-seed beneath it. The seed will make the circuit of the eye, and fetch out the offending substance.

—A New York sea captain having discovered, a short time ago, several small islands in the Caribbean sea upon which deposits of guano were found, the Secretary of State has caused certificates of title and government protection to be issued to his attorney. The islands are believed to be very valuable by reason of the extensive guano deposits.



# THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES.

Boston, March, 1870.

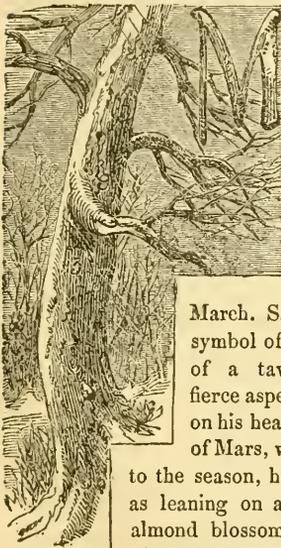
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MONTHLY.

SIMON BROWN, { EDITORS.  
S. FLETCHER, }

## MARCH.



ARCH was reckoned by the ancient Romans as the first of the year. It was so called in honor of Martius, the God of War. Their year commenced on the 26th of our

March. Says Brady: "The symbol of March is a man of a tawny color, and fierce aspect, with a helmet on his head; so far typical of Mars, while appropriate

to the season, he is represented as leaning on a spade, holding almond blossoms and scions in his left hand, with a basket of

seeds on his arm, sitting on a ram, the sign Aries, which the sun enters on the 20th of March, thereby denoting the augmented power of the sun's rays, which in ancient hieroglyphics were expressed by the horns of animals."

"Sturdy March, with brows full sternly bent,  
And armed strongly, rode upon a ram,  
The same which over Hellespontus swam,  
Yet in his hand a spade he also bent,  
And in a bag all sorts of needs, ye same  
Which on the earth he strewed as he went,  
And filled her womb with fruitful hope of nourishment."  
—Spenser.

March was the first month of the year among

the Hebrews, the Greeks and the Romans, and even throughout Europe until long after the commencement of the Christian era. In England, the legal year commenced on the 26th of March, down to 1752, when the first of January became the beginning of the legal, as it had long been of the popular year.

About the 20th of March the sun will have reached the equator and the days and nights will become of equal length throughout the earth. About the 20th of December the sun reached the Tropic of Capricorn, and his broad orb was visible for many days through the entire twenty-four hours, in the region of the Southern pole, giving light and life to the vegetable and animal creation. Having completed his Southern tour, he then turned towards the north, and has now half completed his journey. His resplendent orb will continue to roll on with increasing brightness until it reaches the Tropic of Cancer, when it will be visible for entire days in the polar regions of the North. The rapid growth of vegetation in the short summers of the polar circles, is owing to the flood of light and warmth poured around it during the entire twenty-four hours. The soil imbibes the life-giving rays of the sun during the entire period, and plants grow more in a few days than in as many weeks in the temperate zone, where the sun's rays are withdrawn and the plants sleep during the night. Thus, as the days are longer, fewer of them are needed to perfect

the growth of plants suited to the zones in which they grow. Where the days are shorter and the nights longer, a more extended season is needed.

The alterations in the movements of the heavenly bodies bring the needed compensation and adjust them to the wants of nature. The sun is the engine that awakens the activities of all organized beings. The plants that spring into life under the stimulus of lengthened days require a long winter for rest; while those that have a diurnal season of sleep require a shorter period of winter for their rest. Thus they are all adapted to the position in which nature has placed them.

The old English proverbs with relation to the weather are seldom applicable in our climate, else looking back to the mild and spring-like days of January we might quote the following:—

“March in Janiveer,  
January in March, I fear.”

“If January calends be summerly gay,  
’Twill be winterly weather till the calends of May.”

#### NEW ENGLAND AG’L SOCIETY.

**ANNUAL MEETING.**—The annual meeting of this Society was held at Meionian Hall, in this city, on Tuesday, Feb. 1. There was a very fair attendance, considering the state of the weather. Massachusetts and New Hampshire sent the largest delegations, with a very fair number from Vermont, a few from Rhode Island and Connecticut, and one or two from Maine.

The meeting was opened with a few remarks from Hon. Geo. B. Loring, the President.

The election of officers was first in order, and Dr. Loring was re-elected President by a unanimous vote. Daniel Needham, of Groton, was re-elected Secretary. There was some debate on the question of Treasurer, the re-election of Mr. Gage being advocated by Mr. Currier, of Exeter, and opposed by John B. Clarke, of Manchester. The vote resulted in the choice of Geo. W. Riddle, of Manchester, N. H., by a vote of 70 to 32 for Isaac K. Gage.

A vote of thanks was passed to Mr. I. K. Gage, for his efficient services as Treasurer for the past five years.

A recess of short duration was then had, to enable the delegations from the several States

to nominate their candidates for Vice Presidents and Trustees. On re-assembling the following board of officers was reported and unanimously adopted:—

**MASSACHUSETTS**—*Vice President*, William S. Clark of Amherst College. *Trustees*, S. H. Howe, Boston; J. A. Harwood, Littleton; Thomas Saunders, Salem; Richard Goodman, Lenox; Peter Butler, Quincy; Levi Stockbridge, Amherst; James F. Thompson, Nantucket; John Johnson, Jr., Framingham; William Birnie, Springfield.

**NEW HAMPSHIRE**—*Vice President*, Fredk Smyth, Manchester. *Trustees*, D. H. Goodell, Antrim; Warren F. Danell, Franklin; Warren Brown, Hampton Falls; Charles Williams, Manchester; John H. Bailey, Portsmouth; George A. Pillsbury, Concord; Robert Ellwell, Langdon; Charles M. Murphy, Dover; Greenleaf Clarke, Atkinson.

**RHODE ISLAND**—*Vice President*, Amosa Sprague, Cranston. *Trustees*, Obadiah Brown, North Providence; Lyman B. Frieze and W. E. Barrett, Providence; Thomas B. Buffum, Middleton; E. D. Pearce, East Providence; Cyrus Harris, River Point; Henry G. Russell, Warwick; Henry J. Brown, Cumberland; James D. W. Perry, Bristol.

**MAINE**—*Vice President*, Thos. S. Lang, North Vassalboro’. *Trustees*, S. L. Goodale, Saco; Columbus Stewart, North Anson; Seth Scammon, Scarborough; Waldo T. Pierce, Bangor; Geo. W. Ricker, Bath; J. F. Anderson, North Windham; Calvin Chamberlain, Foxcroft; George F. Shepley, Portland; P. B. Gilman, Orono.

**VERMONT**—*Vice President*, E. S. Stowell, Cornwall. *Trustees*, G. Campbell, Westminster; Henry Clark, Rutland; O. S. Bliss, Georgia; P. Winslow, Putney; G. C. Chandler, Montpelier; L. T. Tucker, Royalton; H. M. Hull, East Burke; L. S. Drew, Burlington; H. B. Kent, Dorset.

**CONNECTICUT**—*Vice President*, E. H. Hyde, Stafford. *Trustees*, S. M. Wills, Wethersfield; B. Sumner, Woodstock; Burdett Loomis, Windsor Locks; H. S. Collins, Collinsville; G. C. Hitchcock, New Preston; Samuel C. Colt, Hartford; H. L. Stewart, Middle Haddam; T. S. Gold, West Cornwall; Jonathan Camp, Norwalk.

It was voted to substitute the word “Trustees” instead of “Managers,” wherever the latter word occurs in the Constitution.

The Treasurer’s report was then read. It was very brief—only a few lines. He reported cash on hand, Jan. 1, 1869, \$192.48; received from all sources, \$1250.21—total, \$1442.69. Expenditures, \$224; balance on hand \$1118.69. There are some unsettled premiums, among them one of \$200 on horse trotting, to be paid, and a few smaller sums. The report was accepted.

It was voted that applications for locating the next Fair of the New England Agricultural Society should be made to officers of the Society previous to March 1.

**BUTTER FROM MILK OF DIFFERENT COWS.**—The question whether the cream from the milk of one cow changes to butter more easily than that from the milk of others, was recently asked by a correspondent of the New York Farmers’ Club. In reply it was said that it was undoubted so, and that the milk of some cows was unsuited to produce butter, or even to fatten a calf, and required much churning to obtain what little butter

it contained. Mr. S. J. Sharpless, of Philadelphia, who makes the splendid butter for which the Continental Hotel is famed, has made many experiments, and finds that no two cows are alike in the time in which their cream turns to butter. He has churned the cream of two good cows in the same mess. One would turn to butter first. He took that out and continued to churn, and a second batch of butter was the result. He is satisfied that butter is often thrown away in buttermilk when the milk of different cows is churned together, and says the best way is to churn each cow's milk by itself till the characteristics of her milk are well understood. When he would make a prize article and get the best returns from his dairy he uses the old-fashioned up-and-down churn, and takes the cream from one cow only at a time.

#### FARMERS' CLUBS IN MAINE.

The farmers of Maine appear to be organizing clubs the present winter more generally than those of any other State, in consequence probably of the proviso attached by the legislature to the law granting aid to county agricultural societies, which requires them to expend a certain proportion of the money in establishing these town clubs. We notice in the last *Maine Farmer* a statement by Mr. W. R. Wright, of Lewiston, that the Agricultural Society of Androscoggin county had employed Hon. J. B. Ham to visit every town in the county, and that a club had been established or an organization had been commenced in each town. We have had the pleasure of witnessing the spirit with which the farmers in several towns have taken hold of the work. In the last two numbers of the *Maine Farmer* we find notices of the following clubs:—

Towns.	Presidents.	Secretaries.
Bowdoin,	J. L. Patten,	J. L. Purrington.
Bucksport,	—	J. A. Lawrence.
China,	A. H. Abbott,	H. B. Williams.
East Winthrop,	W. H. Parlin,	F. A. Fuller.
Exeter and Garland,	—	—
Farmington,	—	—
Fryeburg,	A. Buzzell,	D. L. Lamson.
Gardiner,	—	F. D. Harmon.
Kenduskeag,	E. B. Stackpole,	W. E. Wood.
Levant,	—	—
Madison Bridge,	A. Washburn,	S. W. Walker.
Mt. Vernon & Vienna,	E. Kempton,	P. J. Cogswell.
Norridgewock,	—	—
North Anson,	D. Moore,	A. Moore.
North Auburn,	H. Dillingham,	A. Briggs.
North Fairfield,	B. D. Howard,	C. H. Mayo.
North Vassalboro',	H. G. Abbott,	T. Rowell.
North Ellsworth,	W. Maddocks,	D. F. Maddocks.
Parkman,	S. Works,	J. W. Warren.
Prospect & Stockton,	J. M. Grant,	I. T. Smith.
South China,	—	H. B. Williams.
South Montville,	J. C. Knowlton,	W. S. Pottle.
Stetson,	—	—
Sumner & Hartford,	J. Thompson,	H. C. Field.
Webster,	W. T. Kirby,	J. W. Maxwell.
West Winterport,	—	John York.
Wilton,	L. P. Walker,	Enoch Wood.
Winthrop,	—	—

For the *New England Farmer*.

#### THE GARDEN FOR MARCH.

If we would have a good garden, we must give it reasonable attention. And what is reasonable attention? you may ask. I answer, it is doing now,—to-day,—just the work that needs to be done. If the ground is covered with snow or frozen it would not be reasonable to plough or plant; but there are other things to do that are reasonable and which will make ploughing, planting, &c., much more easily done at the proper season. It is not the province of these articles to point out just the particular work applicable to each month in all localities and circumstances, but rather to make such remarks as will suggest to each one such duties as may call to mind things not definitely particularized, but aiming to be as practical as possible.

Occasionally a spring occurs when the ground settles and spring work may be commenced in March, but generally April is as soon as we, in New England, can plough and plant any kind of seed. But while waiting for the planting season, we can do the "cleaning up." Clear up the yard about the house and buildings. How much pleasanter a home looks where the approaches and all the surroundings are clean and neat. It is not necessary that things should look stiff, formal or expensive; a plain ordinary house, with everything arranged with neatness, will give to the eye a more pleasing effect than a more costly dwelling, without this neatness, and order. Straighten up and repair the fences; remove everything from the yard that does not belong there. In putting the walks in order, do not leave them sunken below the level of the ground, to be flooded with every rain, but raise them a little, and make them oval so that they may be passable at all times. A few flowers planted in the borders of the walk in front will add greatly to the attractiveness of the place. Flowering shrubs set here and there, with a tree or two, will add much more to the salable value of a place than the cost of planting and tending.

ASHES.—Good wood ashes will be found very useful throughout the season for every garden product. A supply should be saved, or procured, and kept under cover in suitable vessels. If unleached are not to be had, get leached, they will be found almost as good for many purposes.

COLD FRAMES.—These will need suitable protection on cold nights, and airing freely, or removing the sash entirely, on mild, warm days. Water the plants as they may seem to need it, giving tepid water from a watering pot with a fine rose sprinkler. Use every pains to harden off the plants as rapidly as is consistent with health.

CAULIFLOWER AND CABBAGE.—Where desired early, sow seeds of each in hot-bed. Attention will be needed on the appearance

of the plants above ground, that insects do not attack them. Any appearance of insects should be followed at once with a sprinkling of ashes and plaster. Gregory recommends Dwarf Erfurt Cauliflower as the best for forcing, and for general purposes as an early variety. He says the Early Blue Savoy Cabbage is very sweet and tender, and earlier than the Early York, and a much better cabbage.

**COMPOST AND MANURE.**—Compost heaps should be turned over as soon as possible after thawing out. Have all the lumps broken, rubbish thrown out and made as uniform as possible. If not sufficiently decomposed add a slight sprinkling of fish guano, stable manure, or even liquid manure, from soaking human excrement in water, to start and encourage fermentation. Manure may be carted to where it is to be used, packed neatly and be covered with soil. Hen and pigeon manure makes excellent guano, and should be saved under cover.

**HORSE RADISH.**—This is an excellent condiment in spring. Dig for use and for market. The old practice for starting new beds was to plant the crowns after using the root; but later practice is to use short pieces of the smaller roots, planting ten to twelve inches deep and a foot apart, in two foot rows, in a rich, moist soil.

**HOT BEDS** for early plants, &c., may be started during the month, but for the general farm garden April is soon enough. Manure and heating material should be accumulating, and be gotten in readiness against the time of need.

**SEEDS.**—If you are lacking in any, lose no time in supplying yourself with all needed. Remember that last spring your onion, carrot, parsnips or salsify seed did not grow, and you were obliged to get new seed and plant late, and thereby you failed to get a good crop. Your seed was more than one year old and failed. Some seeds retain their vitality only a single year, while others will germinate when ten or more years of age. Much also depends upon the manner of saving and caring for seed, in preserving their vitality. Test all seeds before risking a crop from any seed of doubtful vitality, and then it would be cheaper to purchase those of undoubted soundness, even at two or three prices.

**TOOLS.**—Are they all in good repair? and have you all that you need for economical use in the garden? Good, bright, clean steel tools, for digging, hoeing, raking, &c., are the cheapest and best; and will prove the rankest of poison to weeds, as well as great inducers to rapid growth of plants, often equalling the best of fertilizers. Try them one season—but be careful that they do not get rusty.

W. H. WHITE.

South Windsor, Conn., 1870.

For the New England Farmer.

### BUTTER MAKING.

Thermometers and their Use—Temperature of Cream for Churning—Composition of Butter—Preparation of Cream for Churning—Winter and Summer Butter.

In the FARMER of January 22d, Mr. "A." of Bradford, N. H., makes inquiry in regard to the best thermometer for dairy use, and the proper temperature of cream at churning.

In buying a thermometer for use in the dairy, see that the scale is graded as high as 212°, and also that it will slide from the case easily. Mine cost seventy-five cents. I slip the scale containing the tube up from the tin case, plunge the bulb into the cream while it is warming over a stove,—stirring constantly to prevent scorching at the bottom,—and when the desired temperature is obtained I plunge the thermometer into boiling water, which instantly cleans off all the cream; then wipe the scale dry and replace in the case. I have never broken one by changing it from cold to hot water if it would allow the mercury to rise to 212° without filling the tube. I should as soon think of keeping house without a clock, as without a thermometer. I have used one every churning day for eight years, and never trust anything else when preparing water for scalding hogs.

I have found by experience that it is usually safe to churn cream in winter at a considerable higher temperature than would be well in summer.

As an experiment, I churned to-day twenty-five pounds with the cream at 68°, which is one or two degrees higher than I ever tried before. It came a little quicker and the butter was a little softer than usual, but not any too soft to work well.

Butter is composed of fat or oil, caseine or curd, and water. Good butter should contain at least 82 per cent. of fat or oil. The oil or fat of butter, like lard and other fat, is composed of solid or margarine fat, and liquid or oleine fat. Winter butter contains, according to Prof. Thompson, of solid fat, 65 parts in 100, while summer butter contains only 40 parts. [See Flint's *Milch Cows and Dairy Farming*, page 240].

This fact explains the reason why cream should be churned at different temperatures in different seasons of the year.

It should always be churned at such a temperature, that when it does come it will gather well. Not so cold that the butter will be in crumbs that will not stick together, nor so warm as to be greasy.

Fresh, sweet cream will not churn as quick as that which is sour. In winter I prepare my cream for churning the day previous. The cream is kept in large tin pails. The day before churning it is all mixed together as evenly as possible, so that no fresh cream will be in a pail by itself, and warmed over a stove (stirring constantly) to a temperature

of from 65° to 70°, and then placed in a room where it will be warm enough to have the whole get slightly sour. The next day it is warmed up again in the same way to the desired temperature for churning.

Cream should never "stand around" in a wooden churn all day, nor *three weeks*, as I have known cases; nor should tin vessels be used after they get old and worn rusty. They will impart a bad taste, and bad color to the butter.

If the cream when at the right temperature, is too thick and stiff, it will come *too soon*, and all the cream will not be churned, but will be washed into the buttermilk. Such cream should be thinned with milk, to diminish the friction and retard the process, so that all the cream may have time to be churned alike.

I have never yet found that a little freezing would injure cream if it was managed as I have directed previous to being churned.

I find it very much less trouble to make butter in winter than in July or August. I can make more from the same quantity of milk. And I obtain the same price for both summer and winter make. Since last May I have sold every pound at a uniform price of 55 cents in a country market.

A. W. CHEEVER.

Sheldonville, Mass., Jan. 27, 1870.

*For the New England Farmer.*

#### VALUE AND USE OF MUCK.

A very insignificant subject, many will say no doubt, especially those who have never used it as a fertilizer; and not one farmer in ten that has it on his own land has ever used it as a manure. When I look around me and see the untold wealth that lies in the thousands of swamps and ponds of New York and New England, and then look at the cultivated lands that produce less than half a crop of grain, when by the aid of the muck in these swamps judiciously applied they could be made to produce three or four times as much, I feel just like going out among the farmers on a lecturing tour—subject, *Muck*. But I have neither the gift of gab nor the time for this. However, I have talked muck to my neighbors until I have got quite a number to using it with results satisfactory to themselves, while others have the idea that I have got muck on the brain, some having told me so. Well, I admit it, and I also admit that it has been expensive business; for, like Uncle John's brains in farming, it has caused my barns to expand to an alarming extent in these days of high priced lumber.

I commenced using muck sixteen years ago, and have been increasing its use ever since. My first experiment was a failure. I have one meadow lying next to the swamp where I get the muck, which is rather a cold soil and originally wet, but underdraining has made it dry enough to plough most seasons.

The first muck I ever used I threw out in the fall, and in the spring drew and spread on this meadow at the rate of thirty loads to the acre, and it took that land five years to get over it, and then I had to plough it up and seed it over. Not very encouraging, was it? But I took Luther Tucker's Albany *Cultivator* which kept harping on muck, until I concluded to try again.

When I came to haying, the next summer after applying the muck, I saw that I had made a mistake, and that such cold land needed warming manures. And here let me say that I have since applied muck, composted in various forms, to this same piece, but never could see that it was benefited by it in the least, and I now use my horse manure on this piece, giving it a dressing of lime occasionally. The rest of my farm is either slaty or gravelly; and the second year I tried some clear muck on five acres of corn, or rather drew the muck on the same fall after spreading the other in the spring. I drew on about the same quantity to the acre, and let it lie until spring, when it was spread and ploughed under. One acre was manured with barnyard manure at about the same rate per acre, and about one-half acre was not manured at all. There was very little difference in the yield of the muck portion and that not manured at all, while the barn manure gave double any other acre of the piece.

One-half of the farmers would have stopped here, and said that muck was good for nothing; and I confess that I felt the least bit discouraged, as the meadow was worse this year than the first. But the *Cultivator* said there was value in muck, and I was getting ditches opened in my swamp by taking it out, so there was something gained. I sowed the corn hills to oats the next spring, and to rye in the fall, and seeded. That year the muck began to tell, as the oats were nearly as good as on the manure, and far better than the half acre not manured, and the rye was fully as good on the muck. When harvesting the oats I became convinced that there was virtue in it; but how to get it out a little more expeditiously was the question now.

I resolved to try one more experiment; so in the fall I drew fifty loads into the barnyard, covering it all over to the depth of four or five inches; and as it was very dry when put there, it absorbed a vast amount of the liquid manure; and in the spring it was thoroughly mixed with the manure, except that from the stables which was thrown under a shed. This was spread on corn land, side by side with the clear manure; and the crop from the compost was fully equal to the other. I think the manure produced a little larger growth of stalk, and the compost a little the most grain. I have never tried composting muck with lime or ashes, having always applied it clear or composted it with yard manure.

I now have a basement under the whole of

my barn, affording sufficient room to stable twenty-five head of cattle. Through the centre is an alley four feet in width and four inches below the rest of the floor,—the floor of the whole being water tight. On each side of this alley are the stalls just deep enough for the cattle to stand upon and let the droppings fall in the alley. In front of these stalls are alleys for passage and feeding. In one end of this basement is a room ten feet wide and as long as the width of the barn, viz, 36 feet, so arranged as to be filled from the above. This is the store room for the muck. In the opposite end is a cellar for the manure about three feet lower than the stable floor. The cows are put in at night and fed there then, and the next morning, after which they are let into the yard, when pleasant. Before putting up the cows I take a handcart and cover the alley between the two rows of cows about two inches deep with the dry muck from the cellar, and in the morning this and the droppings are all taken up together and drawn to the manure cellar and dumped in. I also cover the yard from three to five inches deep every fall; also put it in the hog pen, hen house, and keep a large pile of at the back of the house to receive the slops, wash water, &c.

Before I commenced using muck I made from seventy-five to one hundred loads of manure. Now with the same stock I make from four to five hundred loads yearly, and raise about five times as much grain and hay from the same land.

Do you wonder that I have muck on the brain? In the course of my experience I have come to the conclusion that on any land that is dry enough not to need underdraining muck applied in any shape is equally as good as barnyard manure, although when applied clear its effect is not as quick as that of manure, but is more lasting. When composted after my plan, I think it is better than clear manure, as it is not quite so stimulating, but more lasting in its effect, producing rather less straw but more and heavier grain. I have made some experiments the past season with muck prepared in different ways, the results of which were quite interesting to me, but as your readers may not have the malady ascribed to myself, it might not interest them, so I will omit it this time. B.

*Oak Hill, N. Y., Jan., 1870.*

*For the New England Farmer.*

#### ARE FARMERS' CLUBS PROFITABLE?

The subject for discussion at a late meeting of the Springfield, Vt., Farmers' Club was a resolution "that it is not profitable to continue the Farmers' Club." C. Horace Hubbard, Esq., was appointed to open the discussion in the affirmative. Though one of the most active members of the Club, he urged several ingenious objections to its meetings which were well calculated to open the case. He spoke of

the distance members had to travel, of late hours, danger of eating too many apples, &c.

Mr. J. R. Walker regarded it as desirable for farmers to understand their business as it is for men in other pursuits. And where can we better learn the best methods of cultivating and marketing our crops than at the "Farmers' Club?" Here we spend a little time stately in social, informal conversation, where any question may be asked and answered without restraint. In addition to the information thus gained, our social natures are improved, which, alone, is worth all that the Club costs us.

At the time this Club was formed, Oct. 20, 1862, there was no organization of the kind in the State. It was an experiment, an innovation; and but little interest was shown in it, except by the few who organized it. They pledged themselves to sustain its meetings and respond to the appointments of the President. Meetings have been held once in two weeks during the winter months, where the most important questions of agriculture and horticulture have been thoroughly discussed. Essays of much merit have been read. Some of these have been fine specimens of literature, and have received much public commendation. We have had lectures by Rev. J. W. Chickering, Rev. Asa Mann, H. H. Merriam, Esq., Hon. John Gregory, L. T. Tucker and Dr. Boynton. And yet the question is raised, "Does the Club pay?"

I have attended its meetings pretty constantly since its formation, and never, without returning to my home feeling that I was a wiser and a better man.

Mr. H. M. Arms spoke at length, in favor of continuing the Club, citing several instances where great improvements in stock; and farm management had been made, which were clearly traceable to the influence of the Club. He thought farmers, as a class, were more respected now than formerly. Improving their minds and posting themselves in their profession gave them self-respect, and they were respected by others. The mental culture derived from a continued application of the mind to any question was elevating and profitable. He said he was but a boy when the Club was formed, had attended most of its meetings, and felt amply repaid for so doing.

Mr. J. B. Whipple believed the Club had been the means of doing a vast amount of good; that through its discussions the farmers had been stimulated to improve their stock, whereby thousands of dollars had been put in the pockets of stock raisers. It was no longer a question whether herdsgrass or timothy should be cut in its early blossom, or when the seed is ripe.

Mr. John Hall spoke briefly of the improved appearance of our stock as compared with it ten years ago, and believed it profitable to continue the meetings of the Club. News.

*Springfield, Vt., Jan. 11, 1870.*

### AGRICULTURAL ITEMS.

—There passed the Mattawamkeag, Me., hotel 22,733 sheep, on their way to market, between July 16th, and January 10th, 1869.

—A little girl who was sent out to hunt eggs thought it strange she did not find any, as there were several hens "standing around doing nothing."

—Mr. S. O. Hill of Manchester, has this winter raised full-sized green peas on vines grown in his sitting-room, fed with water and air entirely, having no soil in which to root.

—Professor George Perkins, Ph. D., recently elected to the chair of zoology, botany and geology in the University of Vermont and State Agricultural College, has entered upon his duties.

—A farmer in Concord, N. H., who is ninety-two years of age, says that the present is the only time in his remembrance when a load of wood would pay for a good barrel of flour.

—Paris has a new invention. It is a portable fresh butter churn, to be used at table each meal. It is made of crystal, and mounted on silver feet. A silver rod revolves quickly in the cream and presents a pat of butter every three minutes.

—Twenty years ago only two acres of tobacco were raised in the town of Hatfield. Now the average number of acres planted is between seven and eight hundred, yielding an aggregate product of 1,100,000 pounds. This at twenty-five cents per pound would yield an annual income of \$275,000.

—John E. Gile of Enfield, N. H., recently slaughtered a Chester-white hog, weighing 631 pounds, which he sold for fourteen cents a pound. He paid \$12 for her when three months old, and in eighteen months has sold thirty-two pigs from her, at an average rate of over \$4 each.

—An analysis by Prof. Johnson, of Yale College, of sixteen different kinds of fertilizers, some of which are sold as high as \$65 a ton, shows that a very large proportion of them are worthless. One specimen, selling at \$23 a ton, was shown to be really worth, as a fertilizer, \$2.33.

—The Ellsworth, Me., *American* says Mr. Peltiah White has a pair of five-year-old steers, grade Devon and Durham, seven feet four inches, 3700 pounds, and Mr. E. R. Ames of Sebec Village, has a pair of yearling steers, six feet three inches, 2450 pounds.

—The Ellsworth, Me., *American* says that Mrs. J. C. Tibbetts, of Brooklin, made two hundred and forty pounds of butter from the milk of one cow the past year, besides selling milk to the amount of \$15. A nice calf was also raised by the cow. In a former year Mrs. Tibbetts made nine pounds of butter per week for twenty-six weeks in succession from the milk of the same cow.

—A correspondent of the *Western Rural* thinks that the ground is the best bed for hogs, as it is warm enough, and a valuable disinfectant. To

prevent the hogs making distinct beds, he advises laying down flat stones, or making a pavement of small stones, and then covering them with four or five inches of earth. He presupposes a good house, built with brick or stone sides.

—At a late meeting of the Waltham, Mass., Farmers' Club, Mr. Dickinson said that he had successfully protected his plants from the depredations of the striped bug by taking a barrel hoop, cut it in halves, cross the halves at right angles, and set in the ground over a hill of vines, and covered this with newspaper. It worked well.

### NEW PUBLICATIONS.

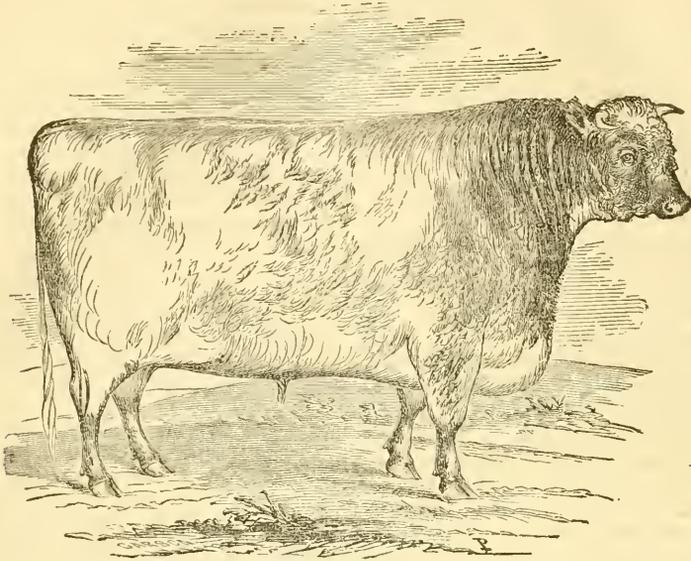
REMARKS upon the Portion of the Report of the Special Commissioner of the Revenue for the year 1869, relating to Wool and Woollens; addressed to the Committee of Ways and Means of the House of Representatives of the United States, by the Executive Committee of the National Association of Wool Manufacturers. January, 1870.

The Executive Committee of the Wool Growers' Association, of which Hon. E. P. Bigelow is Chairman, and John L. Hayes, Secretary, characterize that portion of the report of the Special Revenue Commissioner, which relates to "wool and manufactures of wool as abounding in grave errors and inconsistencies; as hostile in its whole tone and spirit to one of the most important industries of the country, or, at least, to the great mass of its representatives; as presenting arguments based upon facts which are either isolated or irrelevant; as abounding in that insidious form of the promulgation of error,—the suppression of facts which would have neutralized its statements; and as containing conclusions opposed to the judgment and experience of the great communities of the wool-growers and wool manufacturers of the country, who might be supposed to be most conversant with their own affairs."

These are certainly grave charges to make against the statements of an officer of the government who assumes to speak with authority; and we hope that all interested in the wool industry of the country will read this little pamphlet of only sixteen pages and decide for themselves whether these charges are sustained by the facts and arguments adduced in their support.

RULES, REGULATIONS and Schedule of Premiums for the Fourth Grand State Fair of the Mechanics' and Agricultural Fair Association of Louisiana, to commence on Saturday, April 23, 1870, at New Orleans. Luther Holmes, Secretary and Treasurer.

In addition to the liberal premiums offered in this list, which includes \$1700 for cotton, \$5000 are set apart for objects of special interest not enumerated in the programme. A grand exhibition is anticipated, and the managers remark that "it is evident that the true key-note of Southern development has been sounded. The practical men of the country, who are uniting in organizations similar to ours, are doing more to promote the prosperity of this section of our country than has ever before been accomplished."



SHORT-HORN BULL OF DAIRY STOCK.

According to the statistics of our Brighton cattle market reporter, of the 129,353 cattle which were sold in 1869, 86,365 were Western; in 1865 of 117,866 sold, 38,233 were Western. Showing an increase in receipts of Western cattle from less than one-third, four years ago, to over two-thirds of all the stock offered the past year. To supply this rapidly increasing demand, the farmers of the West make a specialty of raising "steers," as those of New York and New England do of the dairy.

For these two purposes, different races of cattle are required, or at least different families of the same breed,—those that have been reared with special reference to the development of particular qualities. Thus, some families of the Short-horns have been bred to a comparatively high degree of excellence for the dairy, while others have been bred with special reference to the perfection of those points which please the butcher.

At the West, where farmers care less for milk, much attention is paid to the beef producing qualities. For this purpose there is no breed equal to the Short-horns. Mr. Allen, in his American cattle, from which our cut is copied, says, that the early importations

of Short-horns into the United States, say fifty years ago, were those chiefly of which the cows excelled as milkers; but when the Ohio Company sent to England, in the year 1834, for a herd of Short-horns with which to improve the Western herds, *flesh* was their chief object, and they sought such cattle as showed that tendency more than the other, although some of the cows which they brought out, and many of their descendants, as we have known from personal observation and experience, proved remarkable milkers, both in quantity and quality. From the Ohio importation of 1834, the successive importations have been mostly of that description—full fleshed, of rapid growth, great development, and early maturity—so much so that the modern style of Short-horns appear widely different from the *old style*.

The above cut, which shows wonderful fullness in every part of the carcass, with flesh in places where the common cattle fail to give it, thus making the animal valuable all over, with no more offal than in an animal of a third less size of an inferior breed, is a good illustration of the modern style of beef producing Short-horns.

## FROST.



FROZEN dew is often called hoar frost. As the air grows cooler at evening, the vapor contained in it is condensed into minute drops, and deposited upon the surface of the earth, leaves, &c. The air continuing to grow cooler, until it reaches the freezing point, the minute drops are changed into ice.

In the act of freezing, water expands, so that ice occupies more space than it did in the form of water. This is a fact of great importance. To it are due most of the effects of frost, as they present themselves to us, and as they relate to agriculture. It is this expansion that causes ice to float on the surface of water. This floating ice protects the water covered by it, from the action of the air, and thus retains the water in a liquid state. Were it not for this benevolent provision, the whole body of the water in the ponds and lakes would become solid, and all animal and vegetable life in the water would be destroyed. As it is, a great amount of latent heat is retained in the water, and the life of fishes, insects and water-plants is preserved. That the ice preserves the heat in the water is proved by the fact that the atmosphere may be 10° or 20° below zero above the ice, while below it, the water is 32° or more above zero.

When water penetrates the soil it does not form a chemical union with it, but merely a mechanical mixture. Such particles contained in the soil as are soluble are dissolved by the water. This merely causes a finer division of such particles. The insoluble particles retain a large amount of water, entangled as it were, among them, and held by a sort of capillary attraction. When the surface of the ground freezes, or rather when the water in the superficial stratum of the ground freezes, the parti-

cles of water expand and separate the particles of earth from each other. Then when the ice melts and the water evaporates or settles into the ground, the earth is left porous and mellow, so that it can admit the air and be penetrated by the roots of plants, and the radicles of germinating seeds.

Most soils above the line to which the frost penetrates, never become comparatively hard and compact, owing to the expansion of the water contained in them, in the act of freezing. When soils in grass or grain contain a great deal of water near the surface, the freezing of the water raises or throws up the surface, and as this surface is bound together by a net-work of roots, it is raised irregularly, and broken into lumps and fragments, as we often see in the spring, indicating the use of the roller to reduce it again to a level condition.

In peat meadows the stratum through which the frost penetrates is always loose and spongy and must be entirely removed before the peat is cut for fuel. In this case there is so much water frozen that the particles of soil are removed so far apart that they do not attract each other, and unite again into a solid mass.

When soils are ploughed late in the fall, the water more readily penetrates them, and having been broken and loosened by the plough, their particles are more readily separated, and the spring finds them in a more mellowed condition, and ready for earlier handling.

The fluids contained in the vessels of plants consist chiefly of water. In the vessels of grasses, weeds and green crops generally, a comparatively slight degree of cold freezes these fluids and ruptures the containing vessels and stops the circulation. Hence such plants die and soon become dried up, as we see in the autumn.

The sap in trees is mostly contained in the vessels of the liber, or inner bark, and the alburnum or sap-wood. These vessels are somewhat better protected and will endure a lower degree of temperature.

In the unripened wood of vines and late growing trees, as peach trees, for example, which contain a large amount of sap, the vessels are ruptured by a moderate degree of cold, their bark shrivels and the wood dies. This is Nature's method of shortening in such

plants and trees. The sap vessels, lying deeper and better protected, will endure still more cold. In the larger limbs and trunks covered by thicker bark, the circulating vessels are seldom ruptured, though, occasionally, in rapid-growing, soft woods, we see the trunks split for many inches, or even feet, by long continued, severe cold. In such cases the sap in all the vessels is frozen solid, and the whole mass of wood is so expanded that the pressure from within becomes so great that the bark and alburnum burst, like the hoops on a cask when the water contained within it is frozen. In slow growing, hard wood trees this is seldom or never seen in our latitude. In forests, the trees mutually protect each other. The difference in temperature between the recesses of a forest and the open field where the currents of air are unobstructed is very great. The power of life to resist frost is truly surprising, and it is wonderful how slight a protection will enable it to endure almost any amount of cold. The bark of a tree, the outer coating of a seed, a thin layer of leaves or straw, a little earth, a covering of snow, the feathers of a bird, the hair of an animal, the cocoon of a chrysalis, will protect the living organism that would otherwise perish.

Frost, like snow, has its uses. It fines and mellows the soils, and manures and prepares them to yield their nutriment to vegetable life. Frost, like fire, is a bad master. But so far as we can guard against it and compel it to work for us, it will, like the other forces of nature, contribute to our comfort and happiness.

#### EXTRACTS AND REPLIES.

##### POISONED OR DISEASED PIGS.

I lost two fine pigs about the first of October, and as no one here can tell what ailed them, I will make a brief statement of the symptoms of the disease, and ask you or some brother farmer the nature of it.

The first pig had the scours about a week; but not severely. I gave it simple remedies and changed its diet, which had been boiled pumpkins principally, and it began to improve, as I thought; but all at once it refused to eat, breathed quick and hard, and was inclined to stand with its head pressed into the corner of the pen. I then applied warm soap suds, washing it thoroughly and scrubbing with an ox-card, which it appeared to enjoy very much. Its suppressed breathing wore off gradually in about thirty-six hours, and then it began to turn purple—first its ears and tail, then along the spine, then about the head and along the belly,—living about four days after it turned purple.

On the very morning that I found the first one

dead the second refused to come to his breakfast. I drove him out of his nest and noticed he breathed like the other. He came out and ate a little. I washed him as the other and gave him two spoonfuls of sulphur, but as it had no effect, gave three more at night, and saw no signs of an operation. The next morning he breathed naturally, but had begun to turn purple all over. Before noon he died, apparently in keen distress.

They were in adjoining but separate pens. I turned the first one out doors as soon as he began to turn purple. Both had been well all summer. I had given them all the pig weed they would eat nearly every day. Their pens were kept well supplied with rotted chips to absorb the liquids, cleaning out occasionally, and were well ventilated, being in an old barn. While the first was sick I searched the "Farmer's Book" for a remedy. Found a plenty of diseases and plenty of remedies, but as it gave none of the *symptoms* it was worthless to me. I enclose a short piece that I clipped from some newspaper, which states that swill at a certain state of fermentation is poisonous. Is that a fact? J. L. MORSE.

Jay, Me., Dec. 23, 1869.

POISONOUS SWILL.—A correspondent of the *Prairie Farmer*, having complained of a disease among his hogs, is told by another correspondent that the symptoms are similar to those of hogs of his own, which he is satisfied died from eating swill that had become poisoned by standing too long. He says:—"Chemists say that after swill stands a certain length of time after it has soured, it becomes poisonous. I don't know that this is so, but I do know that I shall not feed any more old swill."

REMARKS.—Yes, Brother Morse, swill and every thing else which is suffered to undergo the putrefactive or destructive fermentation, generates poisonous gases and poisonous plants; and these gases and plants if taken into the system in large quantities, will kill a pig or a boy—a hog or a man.

The mould so often seen on old swill and other decaying substances is a poisonous vegetable, belonging to that grand division of the vegetable kingdom called *Cryptogamia*, or flowerless plants; and not a few of the vegetable poisons will produce the symptoms described in your interesting letter.

Whether the pigs in question were killed by eating bad swill, or by eating or inhaling some other poison, we cannot tell; but we do not doubt they were poisoned. It is not necessary that pigs and hogs should have the same kinds of food that the children and the old folks eat, but it should be nearly as clean; at least, if they are expected to eat some dirt, it should be *clean* dirt, and not the poisonous dirt which comes from *decaying matter*, whether vegetable or animal.

##### OPERATION ON THE THROAT OF A CHOKED COW.

On the 19th of November, a cow seven years old, belonging to Mr. Baldwin of this town, attempting to swallow a large fragment of a round turnip, about 3 inches by 2½, became choked. The piece of turnip stuck a little more than a third of the way down the gullet. Three different men passed their arms into the gullet and tried to grasp the turnip, but were unable to get their fingers around it. A fork handle was then passed down upon it, but failed to remove it. After the turnip had been in the gullet about five hours, William Rey-

nolds, a butcher, under the direction of Dr. Barrett, cut down upon the turnip, and slipped it out, and the doctor sewed up the gullet and then the skin over it. The wound has healed kindly, and now, December 23, is apparently well. The cow eats and drinks as well as the others in the herd, and is giving about the same quantity of milk as before the accident. She was kept for a time upon hay tea and bran.

The operation is very simple and easily done by any man with a steady hand. The wound in the gullet should be carefully sewed up, to prevent the discharge of any food that may be passing it, as this might give rise to ulceration or an abscess.

I heard of another case in which the same operation was followed by a troublesome abscess, I presume from not properly closing the wound in the gullet, and perhaps from feeding too soon with hay or grass. J. REYNOLDS.

Concord, Mass., Dec. 23, 1869.

#### A MOUTH AND THROAT DISEASE.

Mr. George A. Carpenter, of Cheshire, Mass., has two cows that were taken with swelling of the tongue, throat and neck. The mouth is red and the tongue so badly swollen that the jaws cannot be closed within two inches. Nothing can be got down the throat, and they drool constantly. Some cows affected in the same way have died in this town. Many think the cows have been poisoned by something like poke root in their fodder. Your opinion of the disease, and suggestions for treatment, are desired. R. S.

Cheshire, Mass., Dec. 20, 1869.

REMARKS.—We are not quite sure that the cows referred to by friend Smith have been poisoned. Malignant diseases involving the mouth, tongue and throat, sometimes occur from causes which are not well understood. This is true of man and beast. A very fatal disease known as the foot and mouth disease is exciting a good deal of alarm in England, France, and other countries on the continent of Europe, at the present time. Sheep and pigs and even poultry are attacked as well as cattle. Yet, in the present instance the disease may be due to poison; but be this as it may, the treatment should consist in washing the tongue, and swabbing the mouth and throat, with a saturated solution of *chlorate of potash*. This is prepared by putting into hot water as much of the chlorate as the water will dissolve. The remedy should be applied at intervals of two, three or four hours; and if the animal can be made to swallow half a gill or a gill of the same medicine several times a day, all the better.

If the above fails to effect a cure, try a solution of *carbolic acid* in the manner described for the application of the chlorate. Procure Nichols' or Squibb's saturated solution of carbolic acid, and dilute from one-half to one-third with pure soft water. Both remedies may be warm, cool or cold when used, as may seem best to suit the case.

#### RAISING POTATOES.

I broke up one-third of an acre of land the 22d of last May, gave it a good harrowing and applied half a shovelful of manure in a hill; hills two feet and rows three feet apart. I put two small potatoes in a hill, six inches apart, and hoed as soon as up, and again in eight or ten days. That

gives them time for a good start. The result was that I had 157 bushels of very good Orono potatoes. I change seed every year. Now, Mr. Editor, the great essentials in raising potatoes are summed up in a few words, viz.; plough well, and harrow well, and plant well, and hoe well twice in a season and when the ground is in order. Those farmers who advocate hoeing only once cannot beat me; but I can beat them every time. One great trouble with some farmers is that they had rather be in the store, or in the mill, smoking or telling stories, than to be hoeing their potatoes the second time. O. F. CAIN.

Mill Village, Goshen, N. H., Jan. 3, 1870.

#### A CITY-BRED FARMER.—MILLET AND CORN STALKS.

Ten years ago next spring I left the shop for the farm. It was new business to me, as I was city-bred. Now if these ten years have not brought me riches, they have brought me much practical knowledge and experience, which I could not have gained in any other business. There is nothing that will bring out a man's wits like trying to bring up one of the old worn out farms with which New England abounds, without plenty of capital. Still I am not discouraged, and shall not return to the city this year. But what we new beginners have to contend with is such statements as Dr. Loring made at Pittsfield and at the milk producers' meeting at Nashua, in regard to millet, and similar statements, not based on experience, made by others, which induce experiments that use up the money that we need for books and papers and for other purposes. Last spring I tried millet, but it was a failure. My experience with corn fodder agrees with the ideas advanced by "L. S." in his communication in the FARMER, of Dec. 25. I hope that others who do their own feeding, or at least superintend it, will give us their experience, and thus oblige one reader of the FARMER who never before had a word of his own printed, and probably many others. G. R. M.

Wilton, N. H., Jan. 3, 1870.

#### VETERINARY MEDICINE AND SURGERY.—NO. II.

In a preceding article, I have urged the importance of establishing, at convenient points, well conducted veterinary colleges and hospitals;—institutions in which shall be taught every branch of science that is deemed essential to a thorough medical education.

The question may now be asked, Are such institutions an absolute necessity? Cannot a person become competent to treat the diseases and injuries to which our domestic animals are subject, by using diligently such means as are more readily at his command? Important as I hold such schools and hospitals to be, they may, doubtless, be dispensed with, provided a thorough medical education be obtained in some other way,—by pursuing a course of study under the instruction of a competent physician and surgeon, for example; by repeated dissection of the horse, cow, sheep, &c., at the same time; and by carefully studying and comparing the writings of the best veterinary surgeons of this country and of Europe. In this way any young man of respectable talents and education may qualify himself for the practice of this useful and honorable profession.

Young men, will not some of you enter this inviting field of labor? Will not some who have, until now, directed their thoughts and aspirations towards other channels of labor and emolument, turn their attention in the direction of this almost uncultivated field—this much neglected occupation? Why crowd your way into professions and avocations which are already filled to repletion,

when by becoming a scientific and skilful veterinary physician and surgeon, you will find yourselves in a field of ample dimensions, almost without competition, and where your labor will be appreciated and rewarded? **MEDICUS.**

*West Brattleboro', Vt., Jan., 1870.*

#### GREEN AND DRY CORN FODDER.

Though old age has so far dimmed my eye-sight that I am unable to read, I was very glad to learn that Dr. Loring had publicly expressed his opinion about green corn fodder for milch cows. I was also glad to hear the opinions of others on the same subject. I consider Mr. Whitaker's statements valuable to the public, but I must doubt whether he has had the experience with green corn fodder for milch cows that Dr. Loring or myself have had. I have known cows reduced in flesh, strength and milk, by feeding them green corn stalks, and from my own experience I am firm in the belief that, if any farmer were to tie up thirty cows in the barn on the 10th of August, and feed them all the green fodder corn they would eat, and no other kind of food, for thirty days, not one-half of them would be able to rise in their stalls at the end of that time. I would beg, however, that no farmer will try this experiment on good cows; but if any one doubts it, let him try it on one or two that are of little value.

Still I believe that sweet corn is the best thing that can be raised for fodder for milch cows, when our pastures fail in August or September. The next best crop that I know of is oats. But neither of them should be fed to cows green. The corn should have two days of good sunshine, after it is cut up, before it is fed to the cows, and the oats at least one day's drying in good weather, and two if convenient. If the weather is unfavorable, take them into the barn and chop them up with an equal quantity of meadow hay. The water in both corn and oats will be sufficient to moisten the hay, and it is well to mix with the mess a little Indian meal or shorts. **ASA G. SHELDON.**

*Wilmington, Mass., Jan. 8, 1870.*

**REMARKS.**—As dried-up as our pastures generally are in the latter part of summer, it is absolutely necessary to furnish milch cows with some kind of additional feed. And the question, What shall be raised? is one of much importance. Hence it is desirable that the views and experiences of different farmers on this point should be known, and that the conclusions of each individual should be treated with the deference which is due from one man to the honest opinions of another.

Since the present discussion commenced in our columns, we have seen the following suggestions upon the subject of cow fodder in some extracts from the address by Dr. James R. Nichols, at the Fair of the Franklin county, Mass., Agricultural Society, last fall, which we copy, remembering that in the multitude of counsellors there is wisdom. The Doctor says:—

It is a common practice in Eastern Massachusetts, and perhaps in this section, to grow the corn plant in drills, or in a mass from broadcast sowing, to feed to milch cows late in summer when the pasture grasses fail. This is a kind of food for animals not profitable to raise. It is not so because the maize plant is not rich and succulent, but because the conditions under which it is grown are unfavorable to its perfect and healthy development. The natural juices of the plant are

richly saccharine at maturity, when grown in hills in open space, with plenty of air and light; but grown in mass, in close contiguity, this principle is almost wholly wanting.

To test its comparative value with the green stalks taken from the cornfield, I fed to my herd of cows in August a weighed quantity of the "corn fodder," so-called, night and morning for one week; they were then changed to the field cornstalks, and the gain in the milk product at the end of the week was a little more than eight per cent., and there was also a manifest improvement in quality.

As a rule, all vegetable productions, grown under conditions where the chlorophyl,—the green coloring principle of plants,—cannot be produced in all its richness of tint, are abnormal, immature, worthless. The absence of this principle in the whole of the lower portion of the corn plant grown in drills, or from broadcast sowing, indicates its watery, half developed character.

As fodder for milch cows in summer, the sweet millet, green oats, and clover are much to be preferred to corn, and one or more of them should take its place upon all dairy farms.

#### BUTTER MAKING IN WINTER.

Having had considerable difficulty in making the butter come, I wish to ask what is the proper temperature of cream for churning, and also what kind of thermometer is best for the dairy? **A.**

*Bradford, N. H., Dec., 1869.*

**REMARKS.**—Sixty degrees is generally considered about the right temperature. Our correspondent, A. W. Cheever, of Sheldonville, Mass., one of the most careful dairymen in the State, said in a statement made of the mode of manufacturing a lot of butter that took first premiums at the Norfolk County Fair, in 1868, that "churning is always done with the cream at a known temperature, varying from 60° to 64°, according to the outside temperature." But temperature of the cream is only one of the conditions of good butter. The trouble may be in the hay rather than in the cream. The ordinary cheap thermometers, costing from 25 to 75 cents, answer a very good purpose. We believe there is a patented article designed for the dairy, which it is claimed is more easily cleaned, but we have never found any great difficulty with ordinary ones in this or any other respect.

#### CLAY AS A FERTILIZER.

At the meeting of the Farmers' and Gardeners' Association of Irasburg, Dec. 20, Mr. M. C. said he had noticed that where clear blue clay from a well fifteen feet deep got washed away from the pile about the mouth of the well, it caused a very rank growth of grass. In a piece of grass land that had been mown eight years the meadow star-moles worked last year to such an extent that he thought it was ruined by the piles of dirt all over it, but this year it cut the stoutest grass he ever had,—three tons per acre.

Mr. L. had seen a case where seventy-five loads of blue clay from a bank had been put on an acre of sand, which was then sowed to grain and grass, and it did well during the three years he lived where he could notice it. When he lived near La-moile river he had half an acre from which high water had washed the soil all off, leaving a loose white sand. On this he put a light coat of manure and sowed it to grass, but it would not turf over,

and it yielded no crop. Then he put on twenty loads of clay and harrowed it down, trying to pulverize the chunks. He then sowed grass seed and got at the rate of two tons of hay per acre; the turf was good and firm so the water did not wash it off. It continued good as long as he lived upon the farm. He spoke of a piece of eight acres of blowing sand, that when first cleared was good grain land, but by being long cropped was exhausted. The treatment he would advise would be a dressing of clay.

I. N. C. considered the hard pan thrown up from ditches, excellent dressing.

E. P. C. had believed for years that clay was a very valuable fertilizer for grass. It possessed just the qualities necessary to make grass grow. He had seen an instance where the clay from a well was thrown upon the grass ground near by and caused a rank growth. Z. E. J.

*Irasburg, Vt., Dec. 22, 1869.*

#### FOOT ROT IN SHEEP.

In a recent communication of Doctor Boynton to the FARMER on foot rot in sheep, I notice he recommends treating each foot in a flock of sheep as carefully and with as much precision as you would a sore finger. Now with a flock of a dozen sheep that is all well enough, especially if they are fancy ones. But how is it in flocks of one to five hundred? The "eternal vigilance" would have to be accompanied with a great amount of very disagreeable labor.

Now I propose to give my experience briefly in this matter of foot rot. In the first place, I went through "the mill" when I was a boy, and "lived out;" and learned something of the process of doctoring with vitriol in the old fashioned way. In 1846, after commencing for myself in Vermont, I had a flock of about 130 sheep, and they got the foot rot, and got it badly. Well, I went to work and worked two whole days,—I was alone in those days,—on that flock, paring and plastering, and I remember well what a miserable, dirty, back-aching job it was. Well, the sheep got better—a good deal better,—but after awhile they began to grow lame again; either a relapse of old cases or the coming on of new; probably both. I thought to myself, this will never do. I can't go that job over again, I must devise some wholesale mode of doctoring. So I went to work and built a small yard in a part of the pasture nearest the house, in which I put my salt troughs, and when the sheep had got a little salt hungry, called them into the yard, gave them their salt, shut them in and kept them long enough to be sure they all found the salt. As soon as the sheep had got used to coming into the yard after their salt, I placed a trough six or eight feet long on the ground in the narrow gate way, and fenced it so that the sheep in going into the yard would be obliged to walk the whole length of the trough. The bottom of the trough should be nearly level and wide enough for a sheep to walk in. I put into the trough one or two pails of salt brine, or enough to cover the hoofs, and also a solution of vitriol, and a pound or two of tobacco, steeped. I think I depended as much upon the brine as the vitriol, and I had some faith in the curative qualities of tobacco. At any rate it served to prevent the sheep from licking up the brine. Now the sheep must have their salt, and there was no way to get it but to walk straight through that mixture in the trough. It was fun to see them walk mincingly through it without knowing what it was for. In a short time my sheep were cured, and remained cured while I owned the flock, nearly two years.

Any flock of sheep I believe may be cured of foot rot in that same way. I never knew a flock of over a hundred that was ever perfectly cured in

any other way. My neighbors at the time advised me to take out a patent for my discovery; but I never did. So every sheep raiser has the right to adopt my plan, or the old one of paring and plastering by hand.

A. G. NOYES.

*Lancaster, N. H., Dec., 1869.*

#### EXPERIMENT WITH FERTILIZERS.

In October, 1866, I ploughed a pasture ten inches deep. In 1867, planted potatoes on the land with no other fertilizer than 200 pounds of plaster. The soil of this field is a brown loam and uniform as to quality. In the spring of 1868 I staked it off into three equal parts, containing 146 square rods each.

On lot No. 1, I used 1769 pounds of Bradley's Superphosphate of Lime. Two bushels of Club Wheat were sown on this lot, prepared by wetting it with brine and drying it with a portion of the superphosphate. The remainder was sown on the land after the wheat had been sown and harrowed once. The plot was again well harrowed and rolled for an even surface for the grass.

Lot No. 2 was sown and treated the same as No. 1, except that it was fertilized with 1441 pounds of Paddock and Dean's Raw Bone.

Lot No. 3 was treated the same as to drying and sowing as No. 1. But as a fertilizer 1770 pounds of Bradley's Raw Bone was used.

On harvesting, the result was as follows:—

Lot 1	produced	23	bushels,	weighing	61	lbs	per	bushel.
Lot 2	"	24	"	"	60	"	"	"
Lot 3	"	29½	"	"	60	"	"	"

By which it appears that the excess of wheat on Nos. 1 and 3 over that on No. 2 was enough to pay for the fertilizers used.

D. C.

*Peacham, Vt., Dec. 20, 1869.*

#### SURPRISE OATS.

I forward you a sample of surprise oats raised this season from seed that I received from Mr. Van Olinda, of Illinois, in the spring of 1868, but too late to sow that season. The seed sown weighed 45 pounds to the bushel, and that raised this season weighs the same, and was ten days earlier and nine pounds heavier than the Norway. I obtained my Norway seed from Mr. Pease of Hartford, Vt., the same year and sowed it that season, raising enough for seed the last year.

What is meant by the term "best oats," as used at the Farmers' Meeting at Manchester, N. H.? My father entered the Surprise Oats, but the New Brunswick Oats, weighing 41 pounds to the bushel, received the premium.

M.

*Jan. 10, 1870.*

REMARKS.—The specimen received is certainly very handsome. The kernels are uniformly plump, bright and heavy. We do not know any thing of the principles on which the awards were made by the committee on oats at the Manchester Meeting.

#### GROWING BARLEY.

The high price which this grain has borne for the last two or three years, and its excellent qualities as a milk producing food for dairy stock, seems to demand for it more general attention than it has yet received at the hands of the farmers of New England. It requires good soil, and a clean cultivation, not because it is a gross feeder, for it is a much less exhaustive crop than oats, but it seems less able to appropriate the required nourishment from the soil than some other grains. Cut before fully ripe, the straw is worth twice as much as oat straw for feeding purposes, as it seems

to be as readily eaten as hay, and stock will work it up without waste. The grain when ground and fed to animals producing milk is considered by farmers here more valuable than corn. It is as good a grain as wheat to seed with for the succeeding crop of grass. The number of bushels per acre in the valley of the Connecticut varies from thirty to sixty, according to circumstances, though from forty to forty-five may be considered a good crop. The best preparation for a good crop of barley appears to be a well manured and well cultivated crop of corn, though any other hoed crop with the land in good condition answers very well, but all attempts to raise it upon green sward, or land in poor condition, and foul with weeds, will result in failure. There seems, however, in this locality to be but little demand for it as a market crop, and it therefore rests its merits with us upon the excellent feeding properties of both straw and grain, and the universally superior "catch" of grass seed when sown in connection with it.

*Cornish, N. H., Dec. 24, 1869.*

E. R. S.

#### EFFECTS OF CHERRY LEAVES ON CATTLE.

I find that my attachment to the NEW ENGLAND FARMER increases with my years. I think it and kindred prints, are of more present benefit to farmers than all the agricultural colleges in the country. But I believe the time is at hand when agriculture will be considered one of the most important of all the learned professions.

There has been considerable discussion in the FARMER of late about the poison of wild cherry; but I do not recollect of any one having opened an animal to see its effects. I do not think it is poison. Many years ago one of my neighbors cut some cherry trees in the month of June, and threw them into his pasture. The next day his cows ate heartily of them. Before night one of them was dead. I helped him skin her. On opening her to ascertain what the difficulty was, we found that the wilted leaves had stopped, undigested, in a solid mass in her stomach. Had she eaten them in a green condition, they could not have stopped undigested. I do not think there is any danger from them only in a wilted condition.

THOMAS HASKELL.

*West Gloucester, Mass., Dec., 1869.*

#### EXPERIMENT WITH SUPERPHOSPHATE ON CORN.

I put about a tablespoonful of superphosphate into each hill of two rows of corn, and left two adjoining rows without the superphosphate. For three or four weeks there was little difference in the appearance of the corn. But after that time the phosphated rows went ahead, and when twelve inches high the other was seven or eight, an advantage which it maintained through the season, and which could be seen at some distance. The land was low intervals, part moist, part dryer. At harvesting, the corn on the two phosphated rows weighed 71, and that on unphosphated 52 pounds. The heaviest corn was the best, most forward, and most sound.

H. M. E.

*Fisherville, N. H., Dec., 1869.*

#### DECREASE OF SHEEP IN BENSON, VT.

"A happy new Year to you," Mr. FARMER, and here are the stamps. We cannot do without your weekly visits, though you made a miscalculation on the rise of wool. But you are not alone in that matter. For one I never was so disappointed in my expectations of the market value of any property before in my life. Other kinds of property and produce are high enough for the good of the country. I hope we have seen the worst of the depression in the wool trade, and that the low end

of the see-saw will soon begin to move the other way. If not the sheep in this section will soon disappear. The grand list of this town has shown over 20,000 sheep for taxation in former years, but next spring the "listers" will not be able to count 8000. And in adjoining towns the decrease has been in about the same ratio.

JOHN BALIS.

*Benson, Vt., Jan. 1, 1870.*

#### COUPLE-CROWNED TURKEY.

I have a male turkey with a tuft of feathers on his head. It is the only case of the kind I ever saw. Have you or have any of your readers seen the heads of turkeys thus ornamented?

H. T. GATES.

*New Worcester, Mass., Dec. 25, 1869.*

REMARKS.—In the "American Poulterer's Companion" by the late C. N. Bement, Mr. Main is quoted as saying that, although the subjugation of wild turkey is not of an ancient date—it is said that turkeys were unknown in Europe till after the discovery of America—their domestication has produced marked changes in their plumage, &c. Among these changes or varieties he mentions that of the "tufted turkey" as the most remarkable, and says it is yet very rare. The tuft is sometimes black and sometimes white.

#### SURPRISE OATS.

Enclosed find sample of surprise oats, raised by me last season. Every one who sees them prefers them to the Norways. They ripen a few days earlier than the common oat, and weigh one-quarter heavier by the bushel than any other.

*Rozbury, Vt., Dec., 1869.*

W. I. SIMONDS.

REMARKS.—Plump, bright oats. "One-quarter heavier by the bushel than any other oat," we should suppose would entitle them to the name of Surprise.

#### CURE FOR CHILBLAINS.

I can recommend with much confidence as a cure for chilblains, rubbing the parts affected with butter and heating it in by the fire.

E. M. S.

*Rochester, Vt., Jan. 2, 1870.*

#### MILTON FALLS, VT., CHEESE FACTORY.

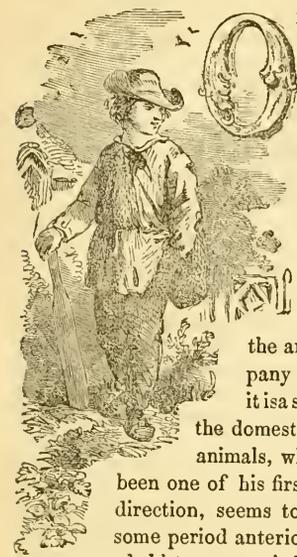
Received the milk the season of 1869 from an average of 373 cows for four months and eighteen days. Pounds of milk received, 932,231; from which they made 98,130 pounds of cheese, equal to one pound of cheese for nine and one-half pounds milk. The patrons have received an average price of \$14.37 per hundred pounds net, for their cheese the past season.

A. B. ASHLEY, Director.

*Milton Depot, Vt., Jan. 11, 1870.*

—At a late meeting of the Herkimer County, N. Y., Farmers' Club, Mr. Whitman said that as the cold weather came on last fall he found it important to hurry up his turnip harvest. To save time, the roots were dumped in the cellar without topping, intending to do that job immediately after the roots were safe from danger of frost. But before the tops were removed the mass heated and rotted so that the turnips were all spoiled and were removed to the manure heap.

## THE DOMESTICATION OF ANIMALS.



F all the arts by which man has acquired dominion over nature, the domestication of animals is the most interesting and important. Man has advanced in civilization and in the arts that accompany civilization, but it is a singular fact that the domestication of wild animals, which must have been one of his first steps in that direction, seems to have been at some period anterior to all recorded history carried to a certain point, at which it has ever since remained almost entirely stationary. Scarcely a single species of wild animal has been reduced to a domestic state within the period of human records.

Most of the domestic animals now known seem to have been reduced to tameness in the primitive seats of the human race in Asia, and to have accompanied man in his migrations over the rest of the inhabited world. It is probable that the different beasts of burden,—the horse, the ass, the various species of the ox, the camel and the elephant,—have been tamed at different periods of times, yet they were all tamed at periods anterior to the records of history. The same remark may be made respecting animals that are valued only for their flesh, their skins, and their fleece—and the universal favorite of man, the dog. St. Hilaire, the celebrated French naturalist, remarks "that there are one hundred and forty thousand animal species at present known, but man has reduced only forty-three to a domesticated condition, and ten of the forty-three are wanting in France, and eight in all Europe."

The animals that have accompanied man have adapted themselves to the various climates and condition to which they have been exposed as readily as man, their master; and there can be no doubt that many which are

now in a wild state might be reduced to a domestic state, and rendered useful to man. There are six species of the horse, only two of which have been domesticated, and so far as we know, the other four are as susceptible of being tamed as the two which have been. The eight or ten domestic animals which are found in South America and Asia, and which are not found in Europe, are probably as capable of being acclimated there, as those which have already been so acclimated. The Llama, the Alpaca, the Vicuna and the Tapir might add to the meat-producing and fleece-bearing animals of Europe. The Eland of Africa, a fine large animal weighing from eight to fifteen hundred pounds, is a gentle, quiet animal, apparently predisposed to domestication. All travellers, and among the rest Dr. Livingstone, speak of it as preferable to beef for food, and disposed to fatten very readily. The Yak, or horse-tailed ox of Tartary, is valuable for travelling, for carrying burdens, for its milk and its fleece. It is by no means to be supposed that all the animals capable of being useful to man have been subjected to his dominion.

In 1849 a Report was made by St. Hilaire to the Minister of Agriculture in France upon the domestication and acclimation of useful animals, which was published, and led in 1854 to the Society of Zoological Acclimation. They have introduced quite a number of new animals into France and placed them in such parts of the country as were supposed best adapted by climate to their habits and constitutions. They have also introduced several kinds of birds which are not only beautiful for their plumage, but valuable as food, especially the Hocro, more resembling the turkey than any other bird. This Society is extending its attention to fish at the present time, and also to useful plants.

This Society has a wide field open before it, and it is to be hoped that its labors will lead to results of great value as well as interest to the world. The facts which they will discover and make known in zoology will be of great interest, and will aid man in completing his conquest over the animal world, which, as yet, is very far from being accomplished.

Our own country, from its great variety of climate and soil, possesses some special advantages for the introduction and acclimation of

new varieties, and even species, of animals that may be useful to man. All our domestic animals were brought from Europe, and so far from deteriorating, they have in almost every instance improved, showing the favorable character of our climate and the products of our soil to all animal life.

#### A FINE TRESS OF CORN.

While some of the correspondents of the FARMER are just now discussing the value of corn in the stalk, our attention has been called to the beauty of "the full corn in the ear." Farmers may differ in their opinion of the value of green corn stalks, or *straw*,—for we believe naturalists class Indian corn with the grasses, and have christened it with a Greek word, *Zea*, meaning "to live," thus recognizing its great life sustaining power,—but they all agree that the grain itself is a nutritious food for both man and beast. But all who have used corn either in the house or in the barn know that its value depends in a great measure on its degree of ripeness when harvested.

Up to about the first of September last, the prospect of a good corn crop was not at all favorable, and in many sections a failure was predicted; but the fine weather which succeeded produced a fair crop on fields that were favorably situated, and which had been well manured and well cultivated. Commissioner Capron estimates that the yield of corn in New England this year is less than that of last year by about eighteen per cent., or nearly one-fifth.

We were, therefore, much pleased to look upon so beautiful a specimen of eight-rowed corn, of this year's growth, as that which we recently received from the farm of Dr. James R. Nichols of Haverhill, Mass. The ears, or rather the rows of corn on the ears, measure from nine and a half to twelve inches in length, the kernels are large, very compact, of an unusually rich color, and the cob well filled. Accompanying this beautiful trace of corn we received the following note. The statement alluded to will be found in another column.

MESSRS. EDITORS:—I send you by express to-day from my farm, a few ears of corn, a part of the product of one and one-half acres, which gave me last autumn 312 bushels of ears of shelled corn.

This gives fully 106 bushels to the acre. It was indeed a noble crop, and the corn in the bin is worth looking at, I can assure you. The specimen sent is a fair one. Two-thirds of the ears were as large and full as those you will examine. I gave in the *Journal of Chemistry* a brief account of the crop, some weeks since, which I enclose to you. I did not include in *Journal* statement of amount raised, the three or four bushels which were "traced up" for seed. Very truly yours,

JAS. R. NICHOLS.

*Lakeside, Haverhill, Mass., Jan. 10, 1870.*

#### MILK RAISING FOR CITIES.

It has been generally supposed by farmers and railroad managers that milk could be transported profitably only about one hundred miles. Hon. J. Z. Goodrich, of Stockbridge, Conn., has written a long letter addressed to the farmers of Berkshire county, Mass., for the purpose of showing that they are "practically as near the New York market for the sale of milk as those who live within twenty or thirty miles of the city."

He says that during the past season milk has been carried every day, even during the summer months, from Dalton and Pittsfield, Conn., to New York city by the Housatonic railroad, a distance of 160 to 170 miles. It has been brought to the stations in the afternoon, and delivered in New York in good condition the next morning in time to be served to city customers before breakfast.

The milk train was started on this road the 1st of October, 1867. It carried 44 cans of 40 quarts each the first day, and increased to an average of about 230 cans per day in 1868, and to about 390 cans per day in 1869. It is stated by Mr. Eli Smith of Sheffield, that at first only four cans of 40 quarts each was sent from that station, and that during last summer it run up to 87 cans, from 25 farmers, and that he expects from 140 to 150 cans, or a full carload, will be furnished next season.

Mr. Goodrich believes that this new business on the Housatonic road will greatly increase the value of farms on its route, and he says that one farmer admitted that the value of his farm had already been enhanced \$3000 thereby. He believes that this business has added twenty millions of dollars to the value of farms on the Harlem road. He also discusses its advantages to the railroad. He believes that the county of Berkshire alone may produce, and should produce within two or three years, 1000 cans, or 40,000 quarts a day, and that in no other way probably can its farming lands be improved so much. He says that the demand for good, sweet, pure milk is almost unlimited, and is yearly increasing in a ratio far greater than the development of new sources of supply.

If milk can be sent 150 to 175 miles on the roads centering at New York, we should suppose that the milk circle might be greatly extended around Boston.

**A HEAVY CROP OF CORN.**

Notwithstanding the unpromising appearance of our corn-fields at Lakeside in June, we have just harvested a crop, which must be regarded as extraordinary, even by those who most successfully cultivate the cereal. The field and crop have been carefully measured, and the result shows that *two hundred and nine bushels of ears* have been produced to the acre. This gives at least *one hundred and five bushels of shelled corn* to the acre. We have never heard of a larger yield in this section. If any of our farmer friends have done better, we shall be happy to record their success.

The corn in the bin is a splendid sight. The magnificent ears are of a brilliant yellow, and many of them 14 and 15 inches in length. In size and fullness of kernel, they could not be more satisfactory. Two and three ears grew upon a stalk, and so thick and luxuriant were the plants, it was difficult to penetrate into the field. Owing to this luxuriance, it was not touched with the hoe or cultivator *but once* from the time of planting. The field was a green sward turned over in the autumn of 1868, occupying a position midway between hills and lowland. In the spring, upon the furrows, were spread four cords of barnyard manure to the acre, and this was harrowed in and the soil finely pulverized with a Geddes harrow. The hills were three feet apart, and into them at planting was placed a handful of "bone and ashes" mixture; this was covered with a film of earth, and upon it five kernels of corn were dropped.

We attribute the success of the crop to *fall ploughing, manure which held the liquid excrement of the animals, thorough spring pulverization of the soil, applying the manure to the surface, and to the use of the bone and ash mixture in the hills.* We believe the influence of this fertilizer was very essential in the production of the crop. The cost of the corn per bushel, including in the estimate one-half the cost of the fertilizers, is forty-five cents. This does not take into account the fodder, which, in our view, has a high value. The market price of corn of this quality is now one dollar and twenty-five cents per bushel.—*Dr. J. Nichols, in Journal of Chemistry.*

*For the New England Farmer.*

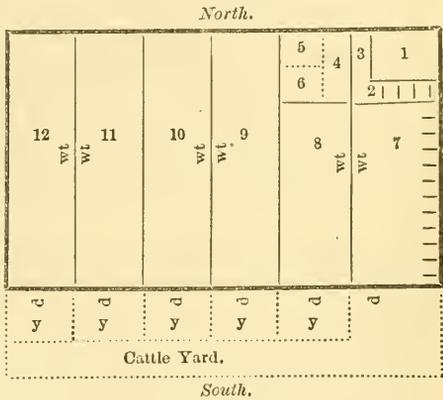
**PLAN OF A BARN.**

Seeing an inquiry in your paper for a plan of a barn, by Mr. W. H. Taylor, and having built one the past season, I will send you a description of it, although it may not suit Mr. Taylor. The barn is 50 feet in width by 110 feet in length, and 22 feet posts, with floor to drive through lengthwise 14 feet wide, leaving bays on either side 18 feet wide, which should be divided equally into divisions, so that hay or grain can be kept separate.

The floors over head, or high beams, are lowered 7 feet from top of posts or plates, and 3½ feet of floor on either side, between the divisions, should be made to turn back upon hinges so as to use a horse fork without obstruction, over-head. Such a barn as this will contain room enough to store 100 tons of hay and what grain and loose fodder would be raised on such a farm. By opening the feeding doors in floor, having a cupola, the cellar is well ventilated.

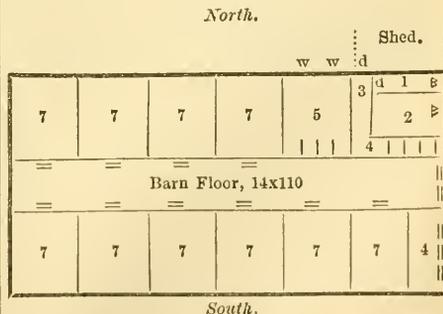
I will send you a little sketch of the basement and first floor, that you may perhaps understand it better.

**PLAN OF BASEMENT.**



*Explanation of Plan of Basement.*—No. 1 is the root cellar, 12x15 feet; No. 2 cellar stairs; No. 3, walk for feeding hogs, 6x18 feet; No. 4, feeding place for hogs, raised three feet; Nos. 5 and 6 apartments for hogs with stone floor and cement, 16x13 feet; No. 7, cattle stable, 18x32 feet; No. 8 division for cattle or sheep, 18x32; Nos. 9, 10, 11 and 12 divisions for cattle or sheep, 18x32 feet,—these division are furnished with racks for feeding,—also with doors 10 feet wide by 6 feet high, opening into the yards, y, and with windows above which turn up for ventilation; the water troughs are indicated by wt, doors by d, and windows by w. The basement is 9 feet in the clear.

**FIRST FLOOR.**



*Explanation of Plan of First Floor.*—No. 1 is the harness room, 5x12 feet; No. 2, the granary 10x12 feet; No. 3, walk, 6x18 feet; No. 4 space for stairs to cellar

and to lofts above; No. 5 horse stable, 18x18, directly over hogs; No. 6, walk for feeding cattle below, 4 by 18 feet; the parallels indicate trap doors for feeding stock in cellar and also for ventilation; the divisions of the bays for hay and grain are indicated by figures 7, all of which are 18x18 feet, except the one next to the walk for feeding below, which is 14x18 feet.

Should Mr. Taylor like the arrangement of this barn and it is too large for him, he can build one of any size he chooses; but by all means have the posts in same proportion to the size of the barn, as it costs no more to cover the roof of a tall barn than a low one.

JOHN M. FULLER.

Hanover, N. H., Dec. 28, 1869.

For the New England Farmer.

#### WINDOW GARDENING.

In these chilly wintry days, when Nature has droffed her green mantle and shrouded herself in her eider down covering of snow, all lovers of house plants pay close attention to their window gardens, and sigh to see the green leaves fade, the plants wither and finally die.

As we keep seventy-five pots of house plants, we think that we know a little concerning their cultivation. There are some plants which will thrive with scarcely any care; will send forth new leaves, and then the sweet, pure blossoms, regardless of the treatment they receive. Among these the *Chinese Primrose* takes front rank. Eight to ten months out of the twelve will find it covered with its showy white or brilliant pink flowers. Its cost is small; a twenty-five cent scrip will purchase a well-grown plant—and its flowers are a certainty. *Czar Violets* blossom all winter, and perfume the air with their wondrous fragrance. The flower is single, like a wild violet; but its sweetness is unsurpassed by its more dazzling sisters. *Belgium Daisies* will blossom for months. *Begonias* will also well repay the cultivator, and push forth their waxen petal blossoms during all the gloomy winter season. *Bouvardias*, with their coral flowers, adorn a window garden for many months with a quick succession of buds and blossoms. The variegated foliage plants are a charming addition to our *parterres*. Their brightly tinted leaves are almost as beautiful as flowers. The craze for these plants has developed largely of late years, and the Florist's Catalogues offer us a large assortment. There are various species of *Achyranthus*, and of *Coleus*, each and all of them very desirable to the amateur gardener. All the above mentioned plants grow without much coaxing, and with a Rose geranium, and several varieties of Horse Shoe geraniums, will form a very respectable "window garden;" and give great pleasure to not only their owner, but to the passer-by.

Flowers blooming in windows are very attractive, far more so than gorgeous upholstery

and filmy lace. They possess a charm above price. The amateur cultivator finds his greatest difficulty in flowering plants to proceed from the dryness of the air of the room. The plants cannot be sprinkled daily on account of their nearness to the windows; but the leaves can be sponged over with a soft cloth or a bit of sponge. This clears them of dust and keeps open the breathing pores, for a plant breathes through its leaves. They are its lungs; if they are clogged it must wither away and die. Without a sufficient amount of air, light and water they will also become weak and sickly, and will eventually perish. Fresh air should be given every day, unless the thermometer marks below zero all day. The window at which they stand can be opened from the top if the sun shines bright and warm upon the plants; if not, open one in another part of the room, for ten minutes at least. This supply of pure air is quite as needful for the human life which occupies the room as for the plant life. Every day, while we eat our dinner the parlor is aired by door and window, and when we return the room is so refreshing we enjoy it with the plants. Bad air kills more of our children than any disease, in fact it breeds it—is the cause of diphtheria, fevers, &c., &c., to the end of the catalogue of diseases.

There is an art in watering plants which a novice rarely knows. They should never be watered unless they are really thirsty; unless the surface of the soil is dry, then water until it runs out into the saucer. After all are thus thoroughly watered, turn out the surplus which is in the saucers, as it is injurious to most plants to have the pot stand in water. Hydrangeas, Calla Lilies and Lobelias are the exceptions which prove this rule. Plants which are budding and blossoming vigorously require more water than those which are not so healthy. In fact judgment is needful in this matter of watering, and it is only attained by practice. One thing is very necessary, and that is always to use water warm to the hand. Never apply even one drop of cold water. It chills the roots so that they cannot grow. We had a friend who used to water her plants with the tea left in the teapot after breakfast, and her success as a cultivator was marvelous! Rather expensive after "this cruel war;" but it certainly was efficacious. All plants kept in rooms should be well washed at least once a fortnight, and once a week will ensure a more healthy growth. A bathing or a wash tub does the work well. Set the pots in it, sprinkle the tops with warm water; then scrub off the pots and the saucers; set them in the kitchen to drain for awhile. If you are mistress of the kitchen this process can be accomplished without much trouble. If Bridget or Dinah is mistress—why—the case is altered! Still cleanliness is all important to plant culture. No plant will flourish unless it is attended to in this respect,

and it is one reason why so few succeed in raising house plants to perfection. If a newspaper is thrown over a stand of plants every time the carpet is swept a great deal of dust is warded off; but still the dust will eventually clog the pores and stifle the life of our cherished pets. If a lady would wash her plants as often as she washes her poodle dog there would be a much greater show of flowers on her stand. Newspapers are also invaluable for protecting plants on frosty nights, either pinned around them in cornucopia shape, or several thicknesses of them inserted between the plants and the windows. When the mercury early in December fell to twenty-five below zero, our plants were thus protected in a room warmed by a fireplace. Newspapers are invaluable assistants in more ways than one. How mortals lived before the art of printing was invented we cannot conceive! Surely the dwellers in remote country villages were to be pitied. But now by the medium of the newspaper we can learn all things desirable and undesirable; can be taught to keep house, carry on a farm, and last but not least, adorn our dwellings with the fairest of God's gifts—the pure, sweet flowers, which fully repay all the expense and attention they receive at our hands. The culture we bestow upon them is returned to us a hundred fold. The mind has a certain vegetative power which cannot remain inactive. If it is not employed and cultivated into a lovely garden it will soon become overrun with weeds of a wild, rank growth, and bear vicious fruit. Let us cherish a love for flowers in our children's heart—encourage them to tend and cultivate flowers—to love the Beautiful wherever it can be seen, and we shall learn,

“There is religion in every flower.  
Its still small voice is as the voice of conscience  
Mountains and oceans, planets, suns and systems  
Bear not the impress of Almighty power  
In characters more legible than those  
Which He has written on the tiniest flower,  
Whose light bell bends beneath the dew drops weight.”

*For the New England Farmer.*

#### NEW IMPORTATION OF DUTCH CATTLE.

In the monthly FARMER for January I notice an inquiry by “C. F. L.,” of Woodstock, Vt., about Dutch stock, and observe that, in his book on American Cattle, Mr. Allen says that, “Mr. Cheney's herd, mostly imported in 1861, is the *only* herd of pure bred Dutch or Holstein cattle known in the country, except their descendants which may be in some other hands.” This was probably the fact until last summer, when I imported nine head, arriving in New York on the 11th of August last.

They were selected last July out of the best herds in Holland, and in the selection I was assisted by a man who was recommended to me as being the best judge in Holland of Holstein cattle.

Of this lot of nine animals, one bull, two years old, and three heifers, are owned by Amos D. Smith, Esq., Providence, and are kept at his farm in Portsmouth, on the island of Rhode Island. The remainder, one bull, two years old, and four young cows, are owned by my brother Henry L. Greene and myself, and are at our farms in this place.

They are all black and white except one, which is a dark dun and white; the dun color possessing the peculiar distinctiveness from the white portions that marks the black color, in this breed of cattle. I learned while in Holland that a very small proportion of Holstein cattle were of this color, called by the Dutch “falb” or “fallow” and that a few were red and white, but nearly all are black and white.

My dun and white cow is considered by competent judges, the best in our herd. She dropped a bull calf, 25th of September, which is an unusually promising animal, being large, symmetrical and hardy. His color is a very dark brown, almost black, and white. One of my brother's cows also dropped a very fine black and white bull calf on the 5th inst. These two are all the increase of our herd at present.

All the animals have done finely, none appearing to feel any bad effects from the change in climate.

My opinion is that they will be the most valuable stock for dairy and beef purposes, that we have in this country. Although my cows are giving large quantities of milk,—the dun cow yielding 27½ quarts per day at the time of the birth of her calf—it is not to be expected that the best results will be attained until they are acclimated and have entirely recovered from the effects of their long sea voyage.

As they were intended for breeding purposes great care was exercised in selecting them from entirely distinct families, superior milking qualities and good size being most desirable points. Both the bulls and two of the cows took first premiums at the cattle fairs in Holland.

None of these animals are for sale, for our intention is to stock up before selling, unless we should have an excess of bull calves next season, in which case we may sell some of the young bulls. JOHN W. A. GREENE.  
*Riverport, R. I., Jan. 10, 1869.*

*For the New England Farmer.*

#### TOBACCO RAISING ON THE CONNECTICUT.

We grow tobacco for a living, or what seems more nearly true, we live to grow tobacco. For let me just say to you, Messrs. Editors, that those farmers that get their living by growing tobacco have to work harder and longer than any other class of farmers with which I am acquainted. It is true that some years we get together a greater amount

of money, at one time, than do farmers who engage in a mixed husbandry. But then, just look for one moment at the life we have to lead.

Many of us plough our lands in the fall, preparatory for the crop, and in the spring, as soon as we can, our seed-beds have to be got in readiness and sowed. In doing this great care must be taken to properly enrich the soil, and to thoroughly pulverize and mix with it the fertilizers. Our course is to manure with stable manure soon after we get through transplanting in the summer, and plough under what plants and weeds are remaining upon the bed. Then plough once a month or so through the season to keep down the weeds, applying manure once more, and then in spring simply sow about one and a half pecks of Russell Coe's superphosphate of lime, or one peck of guano to the rod, and rake it in thoroughly, after loosening the bed with a manure fork. Then in a short time your work begins in earnest. For, let me tell you, if it isn't earnest work to sit or lay down on the soft side of a plank, and pull weeds all day, then I wouldn't say so. Oh, my back aches now, only thinking of it.

Now, active labor has been begun in the field,—ploughing, harrowing, carting manure, spreading it, and ploughing and digging it in; using for this purpose either the common plough, the gang plough, or Shares' harrow, working the soil thoroughly, and at the same time working in the guano, that we have been pounding rainy days. Then comes the fitting the hills, preparatory to setting or transplanting the young tobacco plants; and this job—transplanting the young plants—is apt to make a man recollect that he has a back, or if he goes on his knees they will get sore, too. We love to have this work done in a damp day, or before a rain. But as we can't do everything just as we would like to, we often work all day in the rain. If we don't have a damp time, then we have to set and water from one to three times, for we must *keep it alive* some way after it is set.

Then we have to hunt the cut worms and kill them, and I have known a pint of them dug out and given to the hens by a single hand, all gathered in going over a single acre. Well, the rascals may have eaten up and destroyed nearly one-half of the plants on the piece, and the first rainy day it has got to be stocked over, and perhaps two or three times before we get a good stand. Hoeing in the meantime has been going on in all suitable weather, and it has to be hoed from three to five times,—about four is the usual number of times to hoe it. By this time the depredations of the *green worm* commences, and we have to look sharp for these fellows, as it is very desirable to put them in chancery before they have eaten very large holes into the leaves.

Then it has to be topped, and then comes

suckering,—a job that is about as undesirable as anything that can be done about it. Think of stooping over a plant to pull the suckers from top to bottom, not less than fifteen to a plant—gummy, nasty and disagreeable work, at best, only occasionally varied by catching and killing a big green tobacco worm, as big as your finger, that has been overlooked in your daily hunts after them. This is done by taking them by the head with the thumb and fore finger, giving a sort of rolling twist, and at the same time throwing them on to the ground. Don't hesitate to take hold of them even if they grate their teeth as loudly as a full grown woodchuck would do. It's a short job, if it isn't so pleasant. You have the satisfaction of knowing that he won't be able to eat any more of your tobacco.

Then comes cutting and hanging, and if the nights are a little cool, the anxious watching, and careful noting of every change of wind and weather, so as to be able to get it housed before Jack Frost has had a chance to destroy, in one night, the labors of the season. How earnestly we look at the thermometer, and how apt we are to step over to neighbor B.'s to see if he thinks it will be safe to risk it out. If not, with axe in hand, go to work, cut and pile up until it is frozen, or the wind shifts, or clouds arise, or the mercury indicates warmer weather.

When it is all housed begins our anxious care in curing it so as to have it all right. When cured we must take it down, and very often this has to be done in the night time, for it has to be done when it is damp and in a soft and pliable condition, after a rain or a foggy time. Then the leaves have to be stripped off the stalks, only tying up the fillers; then sort it all over again, putting the wrappers by themselves, and the seconds by themselves, tying up into hands from  $\frac{1}{2}$  to  $\frac{3}{4}$  of a pound in a hand. We then pack it in piles, butts out, and allow it to remain from two to four weeks to cure off the butts and then put it into boxes containing about 400 pounds each, the wrappers, the seconds and the fillers each in separate cases, and by this time we have nearly or quite used up the year and are ready to go the same rounds over again.

The fact is, there is no end of the work in caring for tobacco, and it has got to be done in the right time, to the exclusion of all other work. The haying has to be done when you can get the time. Tobacco first; haying, harvesting, corn, and potatoes, must be attended to when we can get to them.

Every moment of spare time must be devoted to getting together fertilizing material to enlarge the manure pile for this one crop. Care must be taken to keep it under sheds, or build cellars under our barns to enable us to increase the quantity and improve the quality.

So completely does this crop occupy our minds that you would think that there was no other topic of conversation in some regions,

from the time the seed is sown in the beds until it is sold. I have sometimes thought we did not need a telegraph to enable us to know what was being done among the tobacco growers, for a sale can't be made without its being known, instanter, for miles around. Talk about women circulating village gossip! Why, they are not to be named the same day with our tobacco growers. They scent the approach of a buyer from afar; and I have sometimes thought that they could smell Old Sam as far or farther than they could hear him swear. AGAWAM.

*North Hatfield, Mass., 1870.*

*For the New England Farmer.*

### SHALL WE RAISE ALL OUR CORN?

Something over one hundred years ago, men were moving up the Merrimac, Contoocook and Connecticut rivers into New Hampshire, attracted by the fertile soil along their banks, the food their waters supplied, and the highways they furnished ere the country was crossed by roads. Then, almost the only occupation of the new settlers was farming. If corn was consumed it had to be raised for two reasons: first, the difficulty of procuring it from older settled States, from want of transportation; and secondly, from want of means to pay for it, had it been easy of access.

Such arguments as were advanced at the farmers' convention at Manchester last month would have been appropriate then, when every man was a producer, when there were no manufacturing save the saw mill that cut only timber to meet the limited demand of a scattered people; grist mills, to grind the little grain consumed; blacksmith shops, where were made the only tools used upon the farm, or by the weaver, the tailor, and the shoemaker, who wrought in almost every kitchen. Then it might have been well to urge the raising of all the grain consumed, because it was possible to do so.

But now our rivers are used as highways only to carry the remnant of the forests to the mills below us. They have ceased to supply us with fish, and we are becoming a manufacturing people,—consumers, instead of producers. We are but one door from Massachusetts, the workshop of the nation.

Could the wise men of New Hampshire see no difference between the condition of the people of our State now and one hundred years ago? Could they see no difference between this time and that prior to the period when the canals and railroads brought the grain fields to our doors? Could they see no difference between those pioneers and the people of our manufacturing towns and cities, the products of whose labor is scattered over the world, bringing from the furthest corners their treasures—the means to purchase foot and clothing and the luxuries of refinement? Did they not know that the best fed people

are the most powerful? Were they not aware that there is no better index of the prosperity of a people, of their wealth, their refinement, and the relation they sustain to the outside world, than their markets?

What do we want of corn? One of the enthusiasts for corn-growing in New Hampshire he could realize two dollars per bushel for his corn by feeding it to hogs. If that was true he would have shown wisdom in purchasing a large amount of corn and transmuting it into pork; for there has been a good margin between the market price of corn and two dollars a bushel. By so doing, an untold amount of manure might have been obtained with which to increase his own crops.

The West wants to sell us corn; Massachusetts wants poultry, and wants it well corned before it is killed. May we not take the corn the West is crowding upon us and make it into choice turkeys and chickens, that our city friends will have? There is not enough poultry raised in New England to supply its markets. There is room enough, and boys and girls and women enough in New Hampshire to raise it, and the prices paid for choice poultry will prove remunerative, though turkey bantams may not pay for raising. Shall we buy the corn to raise it? thus furnishing employment to a class of our people needing it, and producing something to restore the wasting fertility of our soil.

If it will pay to feed corn to hogs, is it not for the interest of Eastern farmers to feed as much Western corn to them as possible, making employment for its people and manure for its soil? There is a constantly increasing demand for milk and cream and butter. It will pay to feed cows for *milk and beef*; milking them until they are fat. Shall we buy corn for that purpose, thus making a rich manure and a profitable business? Or, because there is not corn enough raised here, shall we milk poor cows that produce poor milk, and then fatten them for beef at a cost that *will not pay*? Good beef and good milk are made without corn, but not without hay or a substitute.

There is no more profitable crop than good grass. We cannot go to the far West for our hay; while the West will supply us with corn at prices which will allow us a margin for profit when fed for poultry or pork, or milk, or beef. Why, then, should we not buy Western corn and raise forage crops, such as hay, &c., and put our manure upon such fields as will pay for top dressing; plough and manure such lands as will produce good corn; sowing the corn broadcast, with grass seed, for it will grow as well with corn as with grain?

No one doubts the capacity of New Hampshire to grow corn or wheat. Cloth can be made in an old-fashioned hand-loom; but because cloth can be made in such a loom, shall we insist upon having all our clothing made in that way? When New Hampshire men urge

the raising of all our cereals, they forget the demands of our markets, and the relation we sustain to the rest of the States.

The United States have been called the nation of *homes*. And I would claim for New Hampshire the credit of being the home-State of the nation. In every house there are nursery and home rooms. Thither men retire for rest and enjoyment. In the homes of no other people is there so much to attract the weary from their labors, whether in the field, the study, the counting-room, or the unsatisfactory wealth of the metropolis. With mountain and lake scenery unsurpassed for grandeur and beauty, with the purest water and an atmosphere as pure, we should learn as far as possible the demand, of those who may be attracted hither. To the attractions of nature we should add those of art, not only in making our homes beautiful, our public conveyances models of convenience and comfort, but we should make every product of the farm and garden as near perfection as possible. Our fruit, our dairy products, our poultry, beef and mutton should be of the choicest kinds; and our streams and lakes should be restocked with the finest fish.

But what has all this to do with raising corn? Ask why fruit is not cultivated; the answer is, "I have no time." Ask why grass is not cut in the proper season; the answer is, "I was hoeing my corn the second time." Ask why the sheep were poor, the lambs weak and unfit for an early market; and the true answer would be, "the hay was cut late, because of the corn-hoeing, and consequently was fit to make nothing but frames of cattle and sheep." The stock are allowed to grow poor because it will not do to buy corn.

Hon. Joseph B. Walker, the orator at the Cotoocock Valley fair, last autumn, asked why so many farms had been abandoned in New Hampshire, and given up to pasturage and wood. The answer is, Because the occupants of those farms suffered them to remain as they were one hundred years ago. Cities had sprung up around them, but they cared neither for the city nor its fashions. The great grain fields of the West were offering their products at our doors by railroad, yet they did not use them, but spent their breath in denouncing city people and those who would place the luxuries of the earth within their reach, as "speculators."

As a farmer upon the banks of the Merrimac, I find it more difficult for me to buy hay than corn, and labor is too costly to raise it. For these reasons I use my manure for the grass crop. I plough after haying, manure and reseed in the fall, and am constantly improving the hay crop with comparatively little labor. Admitting that corn can be raised for fifty or sixty cents per bushel, while it is worth twice that in market, thus giving a profit of 100 per cent.; what would have been the cost of a crop of hay upon the same land at the

same time, and what the profit on that crop? Why urge the cultivation of corn and wheat, though paying crops, if grass will pay better? That it will, I think most of the farmers of New Hampshire will acknowledge. F.  
*Mast Yard, N. H., Jan., 1870.*

#### AMERICAN DAIRYMAN'S ASSOCIATION.

The fifth annual meeting of this Association was held at Utica, N. Y., Jan. 12 and 13. The sessions appear to have been mostly occupied by addresses. Prof. Law of Cornell University, delivered an address on the feeding of cattle in relation to their health and produce.

In discussing the dairy interest, Hon. X. A. Willard said, The operations of the past year have established three facts of importance in regard to dairy products. 1st. The beneficial influence of a low temperature and humid atmosphere upon the preservation of the flavor of cheese. 2d. That a healthy consumptive demand for cheese, does not depend upon extra low prices, and 3d. That there are markets and an outlet for our whole produce at a price above the cost. He recommended smaller sized cheese, as better adapted to the home market, which he thought cheese makers must chiefly rely upon, and named twenty cents per pound as the price cheese ought to command.

The premium of \$100 offered for the best essay on the claims of cheese as a wholesome, nutritious and economical article of food, was awarded to L. B. Arnold of Ithaca, N. Y. Fourteen essays were received, several of which were recommended for publication.

The election of officers resulted as follows:

*President*—Horatio Seymour of New York.

*Vice Presidents*—Hon. T. G. Alvord, New York; Anson Bartlett, Ohio; X. A. Willard, New York; Sanford Howard, Michigan; Henry Wade, Canada West; O. S. Bliss, Vermont; Moses Hawks, Illinois; Asahel Burnham, New York; ——— Bartholomew, Massachusetts; G. A. Kliphart, Ohio; T. S. Harrison, New York; N. W. Woodfine, North Carolina; C. H. Wilder, Wisconsin; John M. Webb, New York; S. M. Wells, Connecticut; H. Calmes, Kentucky; Levi Wells, Pennsylvania.

*Secretary*—G. B. Weeks, Syracuse, New York.

*Treasurer*—Dr. L. L. Wight, Whitesboro', N. Y.

Rennet, its nature and use, was the subject of a paper read by Mr. Arnold, in which he showed that the efficiency of rennet depended on the presence of an almost infinitely small speck of light colored liquid, inclosed with a very delicate sack, and having a darker colored nucleus in the center. They were found

to be what are called animal cells, and so very minute that a single drop of water in which rennet was soaked contained over 500,000 cells.

Fermentation and putrefaction in their relations to the manufacture of cheese, was the subject of an address by Prof. G. C. Caldwell of Cornell University. He said that,

Recent microscopic examination has revealed the fact that *every* case of fermentation or putrefaction is attended with the development or growth of living organisms, most of which, at least, belong to the vegetable kingdom, and the most generally accepted view, is that these organisms are the cause of all fermentation and putrefaction; that the dust of the atmosphere as well as all fermenting or putrifying matter, contains either the germs of these microscopic fungi, or the fungi themselves, in one stage of development or another; that these germs fall on all substances exposed to the air, and that, if the substance so exposed is one that can nourish their further development, they will vegetate and increase, and in so doing cause the substance to decompose.

From the moment that the milk leaves the cow, the work of the fungi commences—they begin to increase, and simultaneously the milk begins to change—both operations going on with a rapidity that varies according to the circumstances of temperature and exposure.

The following petition to Congress for change of revenue laws was adopted.

We, the undersigned, citizens of the United States, and manufacturers and producers of butter and cheese, respectfully petition your honorable body to so modify section 4 of the Internal Revenue law, passed March 31st, 1868, as to clearly exempt manufacturers of butter and cheese, and patrons of butter and cheese factories, from a tax upon their sales, as we believe it to have been the intention of Congress when said law was enacted; and your petitioners will ever pray, &c.

Prof. A. N. Prentiss of Cornell University, read a paper on ergot in connection with abortion; Mr. Lyman of New York made some suggestions about butter-making; and dairy products as seen from a mercantile view were considered at length by Mr. Webb of New York. He estimates the receipts of cheese in New York this year to be about the same as last year, viz., 1,330,000 boxes. He thought there was no danger of making too much really good cheese, and that, considering the decline in gold, prices had been well sustained. Dr. A. Bartlett of Ohio read a paper on "soil, climate, vegetation and water of the principal dairy regions of America."

O. S. Bliss, Secretary of the Vermont Dairymen's Association was present, as were delegates from Ohio, Illinois, Michigan, Wisconsin, Canada, North Carolina, &c.

Hon. Horatio Seymour, President of the association was detained by an accident till near the close of the last day's proceedings.

## EXTRACTS AND REPLIES.

### TANNING SHEEP SKINS. "GOLDEN SALVE."

Can you inform me how to tan sheep skins, &c., so they will make good mittens and gloves; and can you give me a receipt for making a good salve? A FARMER BOY.

*East Shelburne, Mass., Jan. 18, 1870.*

REMARKS.—The following process for tanning sheep skins with the wool on for mats or mittens—if for mittens the wool should be trimmed off evenly to half or three-fourths inch in length—we have seen recommended. Wash the wool thoroughly in cold soap suds, and rinse. For two skins dissolve half a pound each of alum and salt in a little hot water, which put into a tub of enough cold water to cover the skins; soak twelve hours, then hang them over a pole. Before entirely dry spread and stretch them on a board to dry, and while a little damp sprinkle on the flesh side of each skin an ounce of saltpetre and an ounce of alum pulverized and mixed; after rubbing this in well, put the flesh-sides together and lay in the shade for two or three days, turning the under skin uppermost every day. When perfectly dry scrape the flesh side with a blunt knife, and rub with pumice or rotten stone, till soft and pliable.

Some years ago Mr. J. Weston, of Rutland, Vt., who claimed to be the inventor of the "Golden Salve," and to have used it on man and beast for twenty years, gave the following receipt in the FARMER:—Linseed oil 2 quarts, beeswax 3 pounds, rosin 3 pounds,—heat and stir until well mixed.

### EGGS BY WEIGHT.

It seems to me that there can be but very little doubt that eggs will soon be sold by weight in the Eastern markets, the same as in San Francisco; and that the change would be of equal benefit to both the producer and consumer, there can be no doubt, for the following reasons:—

Almost every one has heard the story of the man who bought a dozen eggs, and when, on examination after he arrived home, he found a very small one, he took it back to the market to be exchanged.

Probably very few of your readers would be quite as particular; but they all must notice that some eggs will weigh nearly or quite one-third more than others for which the same price per dozen is asked—and I protest that this is not fair for either the buyer or seller.

Again, the farmer who keeps hens which receive little or no attention, and who sells or exchanges his eggs at the nearest market, would very soon notice that his neighbor who had better fowls and paid more attention to their feed and comfort, received a larger price per dozen than he was paid, and this fact would do more to spur him up to improve his breeds, and to increase their comfort, especially during the winter months, than all the excitement about fancy breeds, and fabulous prices for eggs to set, which for the past ten years have interested those who raise poultry and eggs for the market.

In conclusion, I have, as usual, a favor to ask. Please state in your answers to correspondents, the average weight per dozen for common eggs.

*Boston, Jan. 17, 1870.*

RAIL ROAD.

REMARKS.—We think we have seen it stated that in England, where large quantities of eggs

are imported, nine are commonly rated at one pound. But to test the matter at our own market, we have just put our correspondent's inquiry to a Faneuil Hall dealer in Maine eggs. He at once said that he believed that nine to the pound was the rule for common hen's eggs; but, he added, we will try it. Putting nine eggs into the scales from a tubful in his store, which he said he considered of more than average size, but taking which he considered a fair average, they weighed one pound and two ounces; adding large ones enough to make a dozen, the weight was one pound and a half,—equal to eight to a pound. Then taking nine of the smaller ones that lay on top of the tub their weight was one pound. From which he concluded that the old rule of nine to the pound for "common eggs" was about correct. We second the motion of our correspondent that eggs be sold by the pound, as an approximation to justice and fair dealing. We say "an approximation," because we believe there is as great difference in the quality of eggs as in their size and weight; that a pound of eggs from a well fed hen is about as much better than a pound from one half starved, as a pound of beef from a stalled ox is better than a pound from a scallawag. How shall we fix this, Mr. Rail Road?

#### WHEAT GROWING IN MAINE.

Nine farmers in the towns of Newport, Skowhegan and Madison report through their Farmers' Clubs an average yield of 32 bushels wheat to the acre—the smallest crop being 23½, the largest 44 bushels per acre.

These few farmers are among the successful wheat growers of Maine, who are scattered all over the State, and these crops are incontrovertible proof that the yield of Maine is about double that of many States in the West, whose average range from 12 to 13 bushels per acre, as appears by the Department report. Farms and labor are as cheap in Maine, Vermont, and New Hampshire as in Ohio, Indiana and Illinois. With the expenses for freight, insurance, &c., which must in many cases, be equal to the home value of a barrel of flour in the remote sections of the West, why may not the New England farmer compete successfully with the Western wheat grower? The extra manure required to get a large crop of wheat makes the land permanently better for the next crop. I am informed that some of the tobacco lands in the region of Northampton, Mass., have yielded fifty bushels of wheat per acre, the result of previous high manuring. Tobacco requires incessant labor and picks the farmer's pocket almost daily. Wheat is the cheapest crop raised on the farm.

The example of these farmers will not be lost, we hope, upon their neighbors, who have equal advantages with them. HENRY POOR.

*New York, Jan., 1870.*

#### ENGLISH TURNIPS.

About the only good crop I have raised the past season has been that of English turnips. The yield was so satisfactory, that the plan I pursued may be interesting to your readers.

A liberal dressing of manure was first spread and ploughed in. The principal crops planted were Indian corn, sweet corn and potatoes. The fields were faithfully hoed in dry weather, and

kept entirely free from weeds. In sowing the turnip seed I crossed the field both ways. As the ground was rich and shaded by the growing crops, the seed came up in abundance. We now passed through the rows, on hot days, and struck down with hoes, enough of the turnips to have them of the right thickness. This was no small job. I had never seen it done before; but it paid. I had few little turnips, and an immense crop—nine hundred bushels—of large ones. We began to gather them early in the fall, feeding the tops to the cattle. The tops were large, and rank, and palatable; and were invariably eaten up clean. I never allowed them to heat in piles, but gathered a few loads of turnips each day, so as to have the tops fresh and crisp. Many of the turnips weighed fifteen pounds, and were a foot in diameter. I sold one, for a quarter of a dollar for a show window, and should have been willing to sell more at the same price.

I am feeding the turnips this winter to oxen, cows and young stock, twice a day. I turn them upon the floor, five bushels at a time, and cut them up and feed them into the cribs with a large charcoal shovel, which will take up about a half a bushel at once.

The cattle are so greedy for their share that they almost tear the barn down, while it is being prepared. I sell some milk, which is not effected unfavorably by the turnips fed to the cows.

*Concord, Mass., Jan., 1870.* W. D. BROWN.

#### GOOD PIGS.

I have fattened three pigs the past season that have done so well that I will give you a brief statement of them, though I have never before written anything about my large vegetables or animals. The pigs were dropped March 20, and I got them when six weeks old. They were fed on the waste of the kitchen, and the residue of the milk of four small cows. In the early part of the season I gave them meal and shorts,—half and half,—and during the latter part, the portion of meal was doubled. The largest at the start, a barrow, I called No. 1; the next in size, a barrow, No. 2; and the other, a sow, No. 3. About the first of November, No. 2, then the heaviest, was slaughtered, weighing 295 pounds dressed. The other two were killed December 3d; No. 1 weighing 333, and No. 2, the sow, 364 pounds.

ELIAS E. PORTER.

*Danvers, Mass., Dec. 31, 1869.*

#### CORN GROWING IN NEW ENGLAND.

Having been raised on a farm in Massachusetts, and having resided in several other New England States, and travelled leisurely thousands of miles in the free States before I became a Western pioneer, some thirty-five years ago, my means of information have been more than ordinarily good to learn how farmers cultivate their crops.

Being fully satisfied that no cereal grown in North America south of 45° north latitude, yields so much aliment per acre, for man or beast, as Indian corn, and that none is more profitable to the land owners,—provided they adopt the very best methods of production, and skilfully appropriate the products of their corn fields.

My experience and observation have taught me that several mistakes in growing corn at the East have been transmitted from one generation to another, through successive ages, and have become so firmly rooted in the minds of Eastern corn growers, that, for a writer to treat them as gross errors, will doubtless be regarded by many of those growers, as good evidence that the writer must be a very unsafe guide, or that his mind or memory must be shattered.

I will mention at this time but two things, which

I urged as palpable mistakes in profitably growing the stalwart plants—*planting too early and hilling it up at all.*

And now, gentlemen, if you see fit to have this appear in the columns of the FARMER, I will at a future day endeavor to offer you my reasons for such notions, and point out other mistakes, and set forth some most effectual remedies.

Rochford, Ill., Dec., 1869.

J. WELDON.

REMARKS.—We shall be pleased to present the views of our correspondent more fully, and if he can suggest any mode or means that will increase the corn crop of New England, we can promise him open ears for every word he has to utter.

#### EXPERIMENTS WITH POTATOES.

I have raised this season about 2400 bushels of potatoes, consisting of Early Rose, Early Prince, Vandervere's Seedling, Bresee's Prolific, Climax, Harrison, Gleason, Calico, Excelsior, King of the Earlies, &c.

I paid \$60 for one bushel of Bresee's Prolific last spring, and have raised 145½ bushels of good sound potatoes from them. They are the handsomest lot of potatoes I ever saw. From one peck of the Climax I raised twenty-six bushels. The yield of the Bresee's Prolific, I think is the largest I ever read or heard of,—I mean from a bushel's planting. I have heard of some people planting a few pounds and doing the best they could with them, and getting a larger yield in proportion. All the manure that was used on the Bresee's Prolific was about half a shovel full of stable manure in the hill with one tablespoonful of E. F. Coo's Superphosphate, except about two hundred hills which had a light coat of manure ploughed in. I planted them about the 8th of June, and hoed them only once.

I paid \$5 for one eye of the King of the Earlier and raised one bushel from it this season. I planted the eye the 3d day of April, and after it came up I propagated from cuttings in a hot house, as all amateur gardeners will understand. This experiment beats W. C. Strong's experiment at Brighton last year with the Early Rose. He states that he raised eighty bushels of potatoes from six pounds of seed. He believes the result is unprecedented, being nearly ten times larger than the hundred fold of Scripture. According to his statement he did not get half as large a yield in proportion to the seed as I got, if his potatoes were of medium size.

I have experimented this season with six kinds of superphosphate, using about forty barrels, on fourteen acres of potatoes, and will give you the result soon.

Moses H. Hussey.

North Berwick, Me., 1869.

#### FARM HELP.—SUCCESS IN FARMING.

I have read much of late in the FARMER in regard to hiring help, and the most profitable kind to employ. I have been reminded of the old story of the chameleon. A employs a wide-awake Irishman, who does everything well and in proper time, and in short, is faithful to every trust that is committed to his care.

B sees the success of his neighbor and thinks he will try one of the same race, but unfortunately obtains an individual of different character and habits. He does all his work wrong and leaves everything at loose ends. The farmer comes home to find his cattle in the corn field, or his cows and calves in one pen, or his horse in the oat field, and all because the gate was left open or the bars down.

Now it so happens that A and B both are men that attend agricultural conventions, and in the

course of the session of one of them the question comes up what kind of help is the most profitable to employ. Now who will doubt the position that each of these men will take? or that both are honest in their convictions, though directly opposed to each other?

I am satisfied that little depends on the accident of birth, as regards the faithfulness of a man. I have had the charge many times of mixed gangs, and I say give me anything but the eye-servant if I have a hard job to do.

Again, success in farming depends a great deal on plan and management as well as on help. This is true in all kinds of business and professions. While taking the testimony of an important witness, you do not find the attention of a successful lawyer diverted by every little noise that may be made in the court room, or resting his head listlessly on his hand. On the contrary, he throws his *whole soul* into the case, and gains it. So with the successful physician at the bedside, with the mechanic on "a job." Only *live* men succeed,—only those who give their minds to their business.

Winchendon, Mass., Jan. 15, 1870.

L.

#### DRAINAGE OF LAND.

When Daniel Webster was on the stage of political life, I remember a conversation between a couple of men in relation to him. One remarked that Mr. Webster knew a great deal about governmental affairs. The other replied he must be a dull scholar if, after twenty-five years' experience in political matters, he did not. So we may say of farmers, mechanics or professional men, who have had a life experience in their respective callings. But is there not some danger with all men of falling into old ruts or practices, and following the beaten paths, till they come to regard all improvements as innovations? Thus some farmers think they know all that can be known of ploughing, manuring, planting, haying, seeding, &c. For one I confess my ignorance, and feel that I have yet much to learn.

I have in my mind a large number of acres of interval land which are yearly covered four or five feet deep by the rise of the river. When the stream settles away, water remains in holes and ponds to be evaporated by the sun or filtered into the soil. This might be drained off in most cases, with a small amount of labor. But it is believed by some farmers that this water does little or no harm, or that water within one or two or more feet of the surface is not injurious to crops. What is your opinion, Mr. FARMER, of the effect of cold water lying so near to the surface, on corn, potatoes, grass, &c.?

H. M. E.

Fisherville, N. H., 1869.

REMARKS.—The suggestions contained in the above letter indicate thought and good sense. The being tied up to usages, the "falling into old ruts," is one of the greatest obstacles to improvement in any pursuit. The farmer should study the conditions of his soil, and be governed by those conditions in its treatment. Soil such as you describe can bear nothing better than swale grasses. If it is ploughed and manured, and sowed to sweet grasses, you may get one or two crops of good hay, and then the sour meadow grasses will begin to show themselves, indicating its natural tendency. Draining so deeply as to take off the water below the roots of the grasses is the only remedy for this state of things, and this is a sovereign remedy. It is useless to attempt to cultivate corn, potatoes and other field crops, where the cold

water stands within reach of the roots of such crops. When the water can be taken off from the low places and pond holes, in such an interval as you describe, at a reasonable expense, it is certainly poor farming to allow it to remain.

When land is subject to such annual flooding, it is important to get the water off as soon as possible. We have sometimes thought that such land might be treated as they treat salt marshes,—cut deep, narrow, open ditches in the direction of the out-fall, which shall take off the water as fast as the river falls, and not allow it to filter through the soil, and be weeks in getting off. Evaporation carries off heat as well as water, and the land is kept cold a long time, and nothing but water grasses and bushes will grow on such soil until it becomes warm. We know a large tract of meadow on which the water is kept near the surface by means of a dam, and the good grasses which formerly grew there have been killed out, and only flat meadow grasses grow now; and the value of the land has been reduced from one hundred dollars to fifteen per acre.

#### BARLEY—WINTER vs. SPRING.

The statements of "E. R. S.," Cornish, N. H., in the FARMER for January 22, were doubly interesting to me, from the fact that I intended for the first time, to sow a piece of barley. As I sell milk (not butter) such food as will produce a good flow of milk is necessary. For this purpose I have heard barley highly recommended. But the barley crop is not a common one in my vicinity; and I wish to inquire of "E. R. S.," or of any one else who may be posted, which is the most profitable to raise for fodder to be cut green, the winter or the spring variety? Several farmers of whom I have inquired never heard of a winter variety before. Winter rye does much better here than spring. Winter wheat when not winter killed, does better than spring wheat. Winter grains sowed early, usually spread out and make several stalks. There is also more time to attend to such business in fall than in spring.

R. A. F.  
*Franklin, Mass., Jan. 24, 1870.*

REMARKS.—While handing over the above inquiry to "E. R. S.," or to any one posted on the subject, we will remark, that an Orleans County, N. Y., correspondent of the *Country Gentleman*, says that winter barley was raised in that section to some extent a few years ago, but there is very little sown now. It gives a very good yield when it does well, but is very apt to winter kill, and seldom does well unless sown on good, dry, rich land that is well protected from cutting winds.

In his essays on soiling cattle, Mr. Quincy speaks of sowing barley for green feed in April for an early, and in June, from the 15th to early in July, for a late crop, but we see no mention by him of experiments with the winter variety.

#### PURGING OR SCOURING IN A COW.—BUNCHES ON A COLT.

I have a cow that has been troubled by scouring for some time, and am unable thus far to check the complaint, or to assign a satisfactory cause therefor. I have also a two-year-old colt that

has bunches on its feet, which have somewhat the appearance of spavins.

ARVIN WOOD.

*Cheshire, Mass., Jan. 2, 1870.*

REMARKS.—Give the cow the following, and repeat the dose every twenty-four or thirty-six hours: Pulverized rhubarb, saleratus, extract of logwood, and cinnamon, of each one large tablespoonful. Mix well in a pint of milk, and administer; or the medicine may be formed into a ball with dough. If a more powerful astringent is needed, omit the saleratus, and in its stead add the same quantity of tannic acid, or gum kino.

For the colt, we would recommend that the hair be shaved off, and the bunches painted twice or thrice a day, with tincture of iodine. If that does not prove effective, apply the following:—Binioidide of mercury, two drachms; lard, one ounce. Mix, and form an ointment, and apply two or three times a day.

#### A HEIFER WITH A COUGH.

Can you or any of your readers tell me of a cure for a heifer that coughs hard? She was purchased last March, and coughed till she was turned to grass, but coughed but very little if any through the summer, but began again as soon as she began to eat hay this winter.

GEO. D. BARTON.

*Chester, Vt., Jan. 16, 1870.*

REMARKS.—This heifer has a chronic affection of the lungs, consisting in an *irritated*, and perhaps slightly *inflamed* condition of the mucous or lining membrane of the bronchial tubes and cells. The dust arising from hay and other dry feed, is inhaled, and by coming in contact with the diseased surface, causes the cough above described.

Medicines will be of little use so long as the exciting cause is continued. Discontinue the hay entirely, or else wet it thoroughly, and feed chopped corn stalks, moistened, and a little meal sprinkled on them,—also, roots, meal and bran mashes, &c. It will be better to steam the hay, stalks, or straw that may be fed.

#### ORCHARD GRASS.

I would like to inquire if the "orchard grass" is what some call "witch grass?" and how much it takes to seed an acre? how it yields? if it is profitable on dry land? and if it will stand a drought better than Timothy?

#### SCRATCHES ON HORSES OR CATTLE.

I have found the following remedy for scratches on horses or cattle to be excellent: Take a piece of alum the size of a robin's egg, dissolve in half a teacup of hot water, add half a teacup of strong vinegar and a tablespoonful of saleratus just before using,—and apply warm.

THOMAS ROBY.

*North Sutton, N. H., Jan. 5, 1870.*

REMARKS.—The orchard grass is the *Dactylis glomerata*, or cock's-foot. It grows in tufts or bunches, and is tall and coarse on good soil. It is not profitable for hay. On poor pasture land it is of some value, as it starts early. It does best in moist land, and in shady places. It does better on clay lands at the south and west than in New England. It is said to do well to sow with red

clover for hay as it blossoms at the same time. It is entirely distinct from witch grass. From what we know of it, we cannot recommend its cultivation to our correspondent.

#### COMPARATIVE VALUE OF RYE AND CORN.

Having raised a quantity of rye last season, and the price being low, I have thought of feeding it out instead of selling it and buying corn, as I could not get as much net for the rye as I must give for corn.

As I have taken the FARMER for some time as a source of information on farming interests in general, I would like to inquire what is the relative value and what the effects of rye as compared with Western corn, to feed to cattle, horses and swine.

*East Medway, Mass., Jan. 3, 1870.*

REMARKS.—Rye makes good food for cattle and swine. Some years since, we recollect the same state of facts existed as at present. Corn was worth more per bushel than rye. Several farmers then fed rye meal mixed with corn meal in equal parts, especially to milch cows, and thought well of the effect. If fed clear to swine, it is apt to physic them. It will do better mixed with corn meal. Its nutritive value is about the same as that of corn, and at the present prices, it will be better economy to use the rye for food, than to sell it and buy corn. We do not know its effect on horses.

#### LAME IN THE STIFLE-JOINT.

Please give me a cure for a horse that is lame in the stifle joint.

F. J.

*Ripton, Vt., Jan. 3, 1870.*

REMARKS.—Dissolve as much coarse salt as you can in one quart of warm water; when cold, put in a bottle, and add two fluid ounces of strong spirit of ammonia, and one fluid ounce of strong spirit of camphor. Mix, and bathe the joint thoroughly three or four times a day.

#### PRACTICAL SUGGESTIONS.

[Furnished for the New England Farmer by Wm. D. BROWN, Concord, Mass.]

—The rain that falls on the roof of a barn will water the cattle kept inside.

—A smart woman with dry wood and soft water close at hand has her work half done.

—Green wood cannot be burned. It is better to dry it by the heat of the summer sun, than in the stove.

—Neighborhoods should combine and buy together a good portable horse power, and then have their wood piles cut up with comfort and dispatch.

—Good house carpenters are very particular to have nice sharp tools. This is half the secret of their close work and popularity. Many farmers would accomplish more and easier by better tools.

—Farms soon run down that sell all their hay. Mr. Mechi, the great English farmer, prefers that the products of his farm should go to market on the foot.

—A hog weighing less than two hundred and

fifty pounds may be more conveniently scalded in a forty gallon cask filled half full of water, than in a tub.

—Those who house their carts and wagons in Robin Hood's barn—all out doors—are often seen travelling to the blacksmith and wheelwright shop for repairs. The hubs of wheels are made of elm, which is a poor timber to bear exposure.

—Every farmer who has paths to make about his premises, or to the schoolhouse and store, should own a good snow plough. It is but little work to make one that, with a good horse before it, will do the work of twenty men.

—Wooden shod sleds are no longer economical. It will cost less to keep one shod with iron or steel, in the long run. They start easier with a load on, and move with less friction. Old elliptic spring leaves are used for light sled shoes.

—A harness kept well oiled is easier for the animal, is stronger, and don't wear out half as fast as one allowed to go year in and year out without care. Clean the harness with a sponge and castile soap. Apply the oil with an old paint brush. A long tin pan saves the drip.

—Every farmer should own for convenient pig killing a set of pulleys, and three pieces of spruce or pine scantling, about two by five, sixteen feet long, for shears. The scantling should be connected at the top by a bolt, put through a hole bored slanting in the outside pieces, and straight through the central one.

—You had better not keep stock than allow their manure to be wasted. It must not burn up and fire-fang in great heaps, nor be washed away by water drenching it from the eaves. The liquid portions must be absorbed by something, and the solid kept from heating and exposure.

#### AGRICULTURAL ITEMS.

—N. H. Austin, of Tunbridge, Vt., raised the past season 900 bushels of potatoes from three and one-half acres of ground. He also raised 500 bushels of ears corn on three acres.

—S. N. & C. Russell of Pittsfield, have recently purchased 16,000 South American sheep pelts from which they obtained an average of four pounds each of a very superior article of wool, it being very long, fine staple and shrinkage slight.

—Mr. P. C. Shaw, of Durham, Me., has a cow that the 16th day of February, 1863, became the mother of two fine calves, and on January 10th, 1870, three more, all alive and doing well—five calves in ten months and twenty-four days.

—The *Western Farmer* says that W. G. Roberts, near Racine, Wis., has established a cheese factory on his farm, expecting to milk 100 cows of his own and to have facilities for manufacturing the milk from 200 to 300 cows.

—A correspondent of the *Western Farmer* figures a loss of \$4.59 per acre on wheat raised in that

State, at the rate of fifteen bushels per acre, and sold at 75 cents per bushel, the market price Dec. 20. As a remedy he proposes the encouragement of manufactories in the State.

—The *California Farmer* advises farmers and others never to employ unlucky men, as *unlucky* is only another name for laziness and incompetency. All such should be provided for in charity asylums, and not by industrious business men, as they generally prove clogs and hindrances.

—Mr. Stevens, of Herkimer Co., N. Y., being short of pasture has adopted this plan several times, and always with the best results. After taking off a crop, he sows winter rye and seeding with grass at the same time. The next season he turns stock upon the rye about the 10th of May, and it furnishes good feed through the entire season or until fall, when the grass begun to yield feed also.

—An Ohio correspondent of the *New York Rural* gives the following remedy for Poll Evil: "Build a platform, so that you can go up on it ten feet with a ladder. Place the horse underneath, with a groom to hold him in such a position that you can pour pure soft water from a teakettle into the sore. Pour into it two pails of water three times a day for two or three weeks, when the pipe and everything will come out clean, and the head heal over as good as ever."

—In reply to an inquiry of a farmer who complains that on land in Pennsylvania on which he formerly raised from 30 to 35 bushels of wheat, but now from only 12 to 20, and that the grain lodges badly, Mr. Geo. Geddes, of Fairmont, N. Y., advises, if the land is rich, to use the Treadwell, Deihl and other stiff-strawed varieties. Weak-strawed varieties, like the Mediterranean, will do best on poor lands; also to use less seed, and two or three bushels of salt, broadcast, to the acre.

—In a lecture before the Connecticut State Board of Agriculture, on parasites, Prof. Verrill said that the bed bug is nocturnal and gregarious in its habits and hence easy to get rid of. It loves home and returns when possible every night to the same haunts. They lay eggs with a lid on the top, about 100 each, and so a few dozens in a season will stock a house. They are allied to the louse. Six parts of crude petroleum to a hundred parts of water is a simple remedy.

—A former resident of Eden, Vt., now residing in Olmstead Co., Minn., writes to a friend: "I have raised this year 9000 bushels of wheat and 2000 bushels of oats, and have had to go back on my stock to pay expenses and taxes. While we are in prosperity and abundance of grain, we are in the midst of poverty, as wheat has but little more than paid for the harvesting. No. 1 wheat is only 55 cents per bushel, and during the fall the average price has only been 65 cents."

—In France there are 470 beet-root sugar factories, 116 in Belgium, and 255 in Prussia. Thirty

years ago only 50,000 tons of beet sugar were made in all Europe; last year, 2,500,000 tons were produced in Switzerland alone. In Austria, Russia, and many other countries in Europe, proportionate amounts are made. The aid to agriculture also, which at first was not thought of, has proved great. Beets are the best kind of food for horned cattle, and thousands are raised now where hundreds only were before. In the district of country surrounding the city of Valenciennes, where, before the production of beet sugar, 700 oxen was the total amount, 11,500 were raised last year.

#### NEW PUBLICATIONS.

REPORT OF THE COMMISSIONER OF AGRICULTURE for the year 1889.

The first report of Commissioner Capron shows, we think, a better appreciation of the proper character of a department report than any of the issues of his predecessors. The public expect from each department of the government a statement of its own operations. But whether the Treasury Department should employ a man by the year to enlighten Congress as to its duties, or to prepare electioneering documents for any of the parties into the people of the country are divided, or whether the Agricultural Department should print essays of individual farmers or scholars, or advertisements of different sections or books, are questions which will probably be answered differently by different people. There has been much dissatisfaction expressed with the character of the agricultural reports of the past, and many suggestions made for their improvement, and we believe that the present issue will be more generally acceptable than any previous volume from the department of agriculture, though it embraces some matters which it appears to us do not belong to a 'report.'

SOME OF THE HINDRANCES AND HELPS TO the advancement of Agriculture. An Address before the New York Agricultural Society, 1889, by George Buckland, Professor of Agriculture, University College, Toronto, Can., and Secretary of the Board of Agriculture of Toronto. Albany: 1889.

In speaking of the connection between science and agriculture, and of the valuable aid the former has of late years rendered the latter, with a prospect of still greater benefit in time to come, Prof. Buckland says, I wish to guard myself against being understood as countenancing the erroneous and impracticable idea that an intelligent and improving farmer must, in the *professional* sense of the term, be "a man of science." Such an opinion this audience need not to be told is quite utopian. The progress of the natural and experimental sciences of the present day is so marvelously great that it requires the energies of a life to keep pace with almost any one of them. If youths, intended for farming, as a means of obtaining a livelihood, were placed in the laboratory to acquire and master the very delicate art of manipulation in the higher branches of organic

analysis, with a view of becoming accomplished chemists, the time occupied in such studies and pursuits must preclude them from acquiring that practical knowledge and those business habits, apart from which farming must, commercially, at least, prove a disastrous failure. What is really needed, and what is, I think, practicable, is so to instruct our youth in the principles of science, as to enable them to appreciate the results obtained by scientific men, and advantageously co-operate with them in effecting practical improvements. The amount of scientific knowledge which such a view assumes is no contemptible modicum, and would demand years of patient study and careful observation of an active business life to acquire.

**AGRICULTURAL Qualitative and Quantitative Chemical Analysis.** After E. Wolff, Fresenius, Krocker, and others. Edited by G. C. Caldwell, Professor of Agricultural Chemistry in the Cornell, (N. Y.) University. New York: Orange Judd & Co. 1869. Price \$2, 307 pages.

The purpose of this work, the editor informs us, is to supply a complete manual of chemical analysis for the use, especially, of agricultural students. Though prepared for the use of the students in the New York agricultural college, it will undoubtedly aid the student of chemistry who may not enjoy the advantages of that or any other institution.

**HAMPSHIRE CATTLE SHOW JOURNAL.** Amherst, Mass., Sept. 1—Dec. 15, 1869.

This is a new form of publishing the transactions of a county agricultural society. It consists of six numbers, 16 pages each, published at different times from Sept. 1, to Dec. 15, and gives a history of the annual exhibition, &c., with names of officers, by-laws, &c.

**ON THE PROXIMATE COMPOSITION of Several Varieties of American Maize.** By W. O. Atwater, M. A. Ph. D. Graduating Theses presented to the Faculty of Philosophy and the Arts, Yale College, July, 1869 9 pages.

We are glad to see papers or dissertations of this kind printed in the cheap and convenient form of pamphlets or tracts. We wish we had some efficient system for their more general circulation.

**COMMERCIAL MANURES.** A Lecture delivered before the Farmers' Convention held at Augusta, January 1869, by S. L. Goodale, Secretary Maine Board of Agriculture. 30 pages.

#### ONE OF OUR CORRESPONDENTS.

For several reasons we have not adopted the practice of several of our contemporaries in printing a list of the names of the "distinguished writers" who have engaged to contribute to their columns. We should be very willing, however, to make a comparison of such names with any agricultural paper in the country. Though personally unacquainted with many of those whose names or initials are familiar to every reader of the FARMER, we have a family pride in the successes and honors of each one. We were therefore pleased to see by a report in the Woodstock, (Vt.) *Standard* of the proceedings of the late meeting of the Windsor County Agricultural Society at that place

that C. F. Lincoln of Woodstock, received the first premium offered for the best managed farm of twenty-five and less than one hundred acres.

The awarding committee, by Dr. H. Boynton, Chairman, say that the farm was examined in June and September, and found in good condition in all its departments. It comprises about eighty acres. Mr. Lincoln has doubled the productive capacity of his farm in about ten years, and that without the aid of imported fertilizers, except to a very limited degree. This has been accomplished by a judicious rotation of crops, and by utilizing every available source of manure, and keeping it well housed till applied to the land.

At the same time the first premium on orchards was awarded to the "highly meritorious" one belonging to J. C. McKenzie of Woodstock.

*For the New England Farmer.*

#### WINDOW GARDENING ---No. 2.

Now that the days begin to lengthen, we should stimulate our plants with liquid manures, to force them to bud and bloom. For this purpose, we prepare one small tablespoonful of Peruvian guano well mixed, into one gallon of water quite warm to the hand, and give our plants a very thorough watering once a week. The leaves should not be sprinkled with this decoction; but the roots may be fully wet with it, and allowed to suck up from the saucers all that they can for two or three hours, then turn away the remainder. Heliotropes, pelargoniums, zonal geraniums, primroses, verbenas, &c., treated in this manner will push forth most vigorous growth, and fully repay the extra attention and care.

Guano can be purchased for six cents per pound, and one pound will suffice for months. Those of our readers who dwell remote from towns and cities can improvise their guano from their hen-roosts. Two tablespoonfuls of the manure, collected in this way, should be dissolved in one gallon of hot water, letting it stand until cool enough to use, and then water as above. Care must be taken not to have too strong a solution. Last winter, in our absence, many of our plants were denuded of every leaf—from this cause. Horse manure furnishes a fertilizer not quite as efficacious as the hen's, but in default of that, it operates well. An old pail or bucket can be half filled with horse or cow manure (if the former is not come-at-able, the latter will do). Turn on to it two gallons of boiling water—when cool enough use it. This will make young plants grow rapidly. Seedlings, like tomatoes, and celery flourish finely under its stimulating properties. These home-made fertilizers have not the odors of "Araby the Blest," neither has guano, but it is less obnoxious to use in a parlor or dining room.

All of our readers have by this time laid in their winter supplies,—cellars and store-rooms bear evidence to this assertion, for every provident house-

holder desires to buy by the quantity, and thus save many a penny. Often such supplies as a "Window Garden" requires are omitted. They cannot be eaten nor worn; are only beautiful to the sight, and not worth the trouble of tending them. But if there be an innate love for flowers in any heart it will find expression in winter and summer. The hardest heart is softened at the sight of a real fragrant flower in mid-winter. We have had the roughest man stop and gaze upon our flowers, and have often heard from such persons the words, "Wa'al them be putty posies." How do you grow 'em." There is no reason that we should not make flowers bloom all the year—and if their habits are rightly studied, and plant-food well supplied, it is easily accomplished.

Every house is beautified by even one pot of flowers. Contrast a sitting room where the windows are filled with lovely flowers, hanging baskets suspended from the cornices, trailing vines enwreath the pictures, with a room where not a green thing is seen, and mark the difference. The one is attractive, inviting, delightful; the other, no matter how gorgeous its surroundings—how rich the satin, lace, and velvet,—has not the soul-entrancing charm of the other! Evelyn, that rare old Diarist of ancient English literature, styles it "*fenestral gardening*," and dilates upon its glories.

One of the chief drawbacks to successful "window gardening" is the need of a moist atmosphere, and the high temperature at which our "sitting-rooms" are usually kept. We gave in our first number, minute directions about keeping the plants clean. This is an all-important thing, and must be attended to. As yet, we have had a moderate winter, but we must bear in mind that "when the days begin to lengthen the cold begins to strengthen."

If you are so unfortunate as to have your plants frost bitten, sprinkle them with cold water directly, then place them in a perfectly dark closet or cellar, and oftentimes they will suffer no injury. We had plants frost-bitten in December, which are green and flourishing now. Cinerarias and fuchsias were both frozen, but being shut up in the dark, they soon revived. The same thing operates perfectly with frozen apples; place them in complete darkness and they will come out unharmed. Geraniums, fuchsias, verbenas, &c., should be repotted now, before you stimulate them highly. True lovers of flowers will have the needed soil carefully put away in the cellar. This should be baked in the oven an hour or two, to kill all worms' eggs, and insects. When cool to the hand, fill the pots to be used half or a third full, then run a knife around the inside of the pot containing the plant to be re-potted—cover the top with the left hand, and turn the pot bottom side up, if it does not come out directly, tap on the bottom of the pot—remove the drainage, (bits of broken pots, etc.,)—and plant the root carefully,

taking great care to press the dirt thoroughly upon the roots. Many a plant dies from this cause—the soil should be firmly pressed down all round the tender rootlets. Water them well, set in the shade for a few hours, and your plant will testify its gratitude for its new home, in lovely leaves, buds and flowers.

There are several variegated leaved plants which produce flowers—the *ageratura* is one, its leaves are prettily edged with white, also the *sedums*—whose blossoms are beautiful, but the greater part of this variety of plants, depend upon their leaves for beauty.

A recent writer speaks of them thus:—

"Do not these curious plants, that among their leaves of light have no need of flowers, resemble those rare human plants that develop all the beauties of mind and character at an exceptionally early age, and rapidly ripen for the tomb? They do not live to bring forth the flowers and fruit of life's vigorous prime, and therefore God converts their foliage into flowers, crowns the initial stage with the glories of the final, and makes their very leaves beautiful.

By the transfiguration of His grace, by the light that never was on sea or land, He adorns even their tender years with all the loveliness which in other cases comes only with full maturity."

Surely there is nothing else which can give us the unalloyed satisfaction which we receive in our "Window Gardens!" They perfume the air, delight the eye, make us acquainted with nature, and are something to care for and love. If they cannot love us in return they do not annoy us—they cannot speak crossly, even if we do neglect them, and they afford us the purest of pleasures.

Gray, the poet, has well observed that one of the chief enjoyments of life consists in "*having always something going forward*." We fully experience the truth of this. Living in a small village,—a "Sleepy Hollow,"—where life seems to stagnate, it is our chief delight to tend and care for our house plants. We take great pride in them, and are pleased when we can send a tiny bouquet to a sick friend, and can also contribute a few flowers to rob Death of some of its terrors;—can tenderly arrange the purely white blossoms of the primrose and the variegated leaved plants,—with the sweet scented verbenas, to be placed in the waxen hands of the infant, or the furrowed clasp of the aged.

S. O. J.

—A correspondent of the *English Agricultural Gazette* says: I consider 720 gallons (2880 quarts) a fair return in a year for a cow, and this quantity of milk, if the food does not contain more than 80 per cent. of moisture, will produce from 280 to 290 pounds of butter. That 25½ pounds of milk, or about 10 quarts, will make one pound of butter. He also states that five gallons, or 20 quarts, was the highest daily yield of one cow.

## PHOSPHATES IN WHEAT.



EXPERIMENTS to ascertain the amount of soluble and insoluble phosphates in wheat, upon which the nutritive value of this grain is supposed chiefly to depend, have been recently made by an English chemist, G. Calvert, F. R. S. The results of his experiments led him to inquire if the various

parts which constitute the grain of wheat, contain the same amount and nature of phosphates when separated by the successive and different processes carried out by the miller. He procured some sacks of wheat, and had the wheat ground and bolted, and separated into two qualities of coarse bran, and two of fine bran and flour. These he analyzed separately and arrives at the conclusion that the phosphates, especially the soluble phosphates, decrease gradually from the outer sections towards the central ones; thus while the flour contains only a trace of soluble phosphates, the bran contains a large quantity.

The practical importance of this result he expresses in the following words. "These analyses clearly illustrate that although habit and pride have gradually led us to prefer white bread to brown, still this practice is an error when we consider the nutritious properties of wheat, especially as food for children, when phosphates are so essential to the formation of bone and blood; and medical men would confer a great boon on society, if they were to impress the importance of feeding children with a wheaten preparation in which all the constituents of the grain were preserved."

The phosphoric acid in wheat does not exist as a free acid, but is combined with potash, magnesia, lime and iron; the two first being soluble and the two last insoluble. The soluble phosphates contribute especially to the formation of muscular fibre; and the insoluble furnish lime and iron to the bones and the blood.

The teaching of science in this respect is

abundantly confirmed by experience. But "habit and pride" pay little regard to either, and suffer the penalty in puny and scrofulous children, while our bread costs us double as much as it would, if it were made of unbolted wheat.

**FEEDING BEES.**—At a recent meeting of the Ohio Bee-keeper's Association, the opinion was expressed, as reported in the *Ohio Farmer*, that honey is the most profitable, as it is their only natural and safe food. Crushed sugar had been used with fair success, but the result was not good enough to recommend it. Dr. Conklin was in the habit of removing from a full hive one or two cards of comb containing young bees, and place them in a new hive with a small supply of honey. He introduces queen bees by an artificial process, not waiting for them to be reared in the natural course, thus saving much time in propagating. He said that the greatest profit in raising bees is obtained by keeping the swarms large and vigorous. One stock in May is worth four in July. If fed on rye or oat meal until natural "pollen" can be obtained, the prolific queens will lay from two to three thousand eggs per day during the propagating season.

**CALEDONIA COUNTY (Vt.), AGRICULTURAL SOCIETY.**—At the annual meeting of the Caledonia Agricultural Society, held at St. Johnsbury, Vt., Jan. 18, the following board of officers was elected for the year ensuing:—

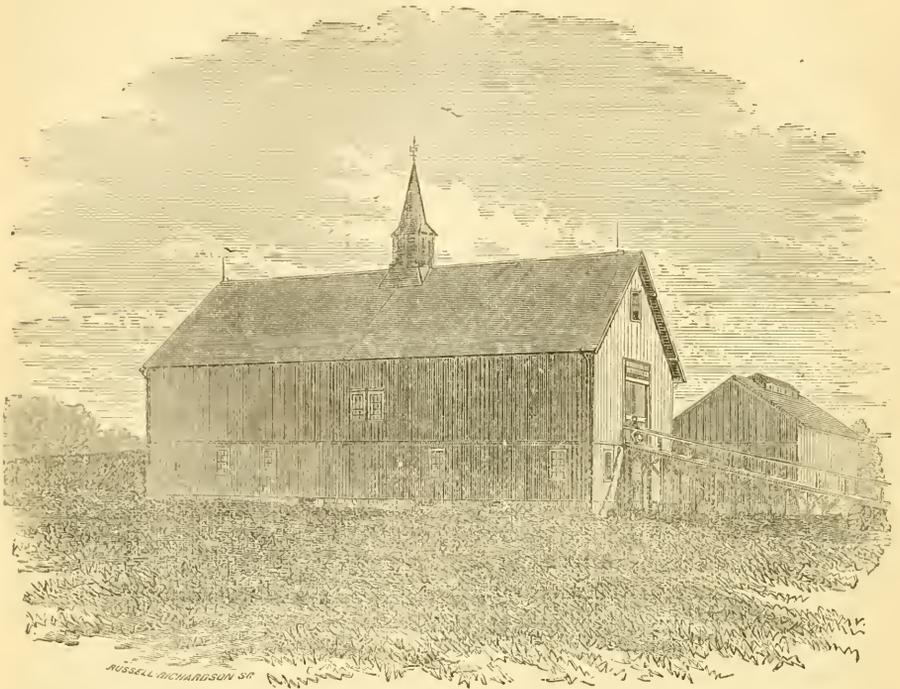
Harley M. Hall, East Burke, President; Chas. A. Sylvester, Barnet, Calvin Morrill, St. Johnsbury, Vice Presidents; I. W. Sanborn, Lyndon, Elisha May, St. Johnsbury, Chas. E. Parks, Waterford, A. P. Walter, Burke, C. J. B. Harris, Danville, H. C. Hastings, St. Johnsbury, Secretaries; C. M. Stone, St. Johnsbury, Treasurer. The attendance at the annual meeting was unusually large, and the interest manifested for the prosperity and success of the Society and its annual exhibitions evinced the true spirit of progress on the part of the farmers of the county.

Lyndonville, Vt., 1870.

I. W. SANBORN.

**FARMER'S CLUB.**—The farmers of Caledonia County, Vt., recently met in St. Johnsbury, and organized a County Farmers' Club, with the following board of officers:—J. R. Kincerson, of Peacham, President; J. G. Hovey, St. Johnsbury, A. Warden, Barnet, Jonathan Lawrence, Waterford, I. W. Sanborn, Lyndon, Vice Presidents; and D. K. Simonds, St. Johnsbury, Secretary. Executive Committee, E. A. Parks, E. L. Hovey, Horace Paddock. The meetings are held every Friday afternoon, and thus far they have been well attended, and the discussions animated and interesting.

I. W. S.



FARM BARN OF THE MASSACHUSETTS AGRICULTURAL COLLEGE.

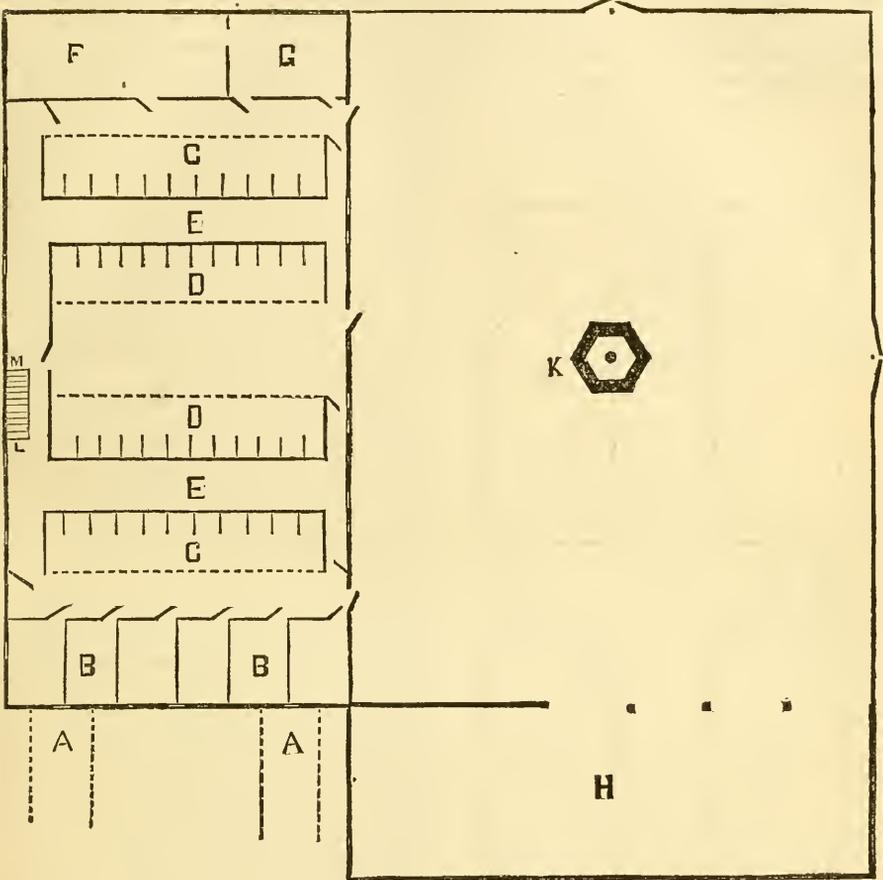
The barn erected during the past season, at the Massachusetts Agricultural College in Amherst, is especially designed for neat stock, sheep and swine. It will contain from 100 to 150 tons of hay, according to the method adopted for mowing it, and has accommodations for fifty head of cattle and fifty sheep. It is located on the west side of the central ridge of the farm, which runs north and south, and the principal entrance is at the east end. The yard is on the south side of the barn and protected from the west winds by an ell 26x75 feet, containing a sheep pen and a shed for cattle, above which is room for fodder. The ell is represented on the diagram at H, and at K is a trough for water. This is in the centre of the yard, which is 75x100 feet, and enclosed on the east and south by a tight board fence, five feet in height. The water flows through a two-inch iron pipe, with fifty feet of fall, the supply being regulated by a valve, and the surplus is carried to the sheep-pen, and thence to the slope in the

rear of the barn. The trough is only six inches deep, so that the water is always fresh and clean. The barn is built of wood upon a foundation of granite, and is 50x100 feet.

The cellar for manure is 11 feet in the clear, and extends under the entire building. It is lighted and ventilated by windows on the north and south sides. The entrances for teams AA are at the west, and nearly on the level of the cellar bottom, and are twelve feet in width. The stairs from the story above are at M.

The first floor is about two feet above the ground in the yard, into which it opens by three doors. This story is well lighted by twelve windows 3x6 feet, and ventilated by four ventilating flues, vvvv, extending from the four corners to the roof, and by the lowering of the upper sashes of the windows, which are hung with weights. It is eight feet in the clear, and contains, at BB, six box stalls 8x10 feet; at G a calf pen 10x20 feet; and at F a root-room 10x30 feet into which roots are

Plan of First Floor and Yard.



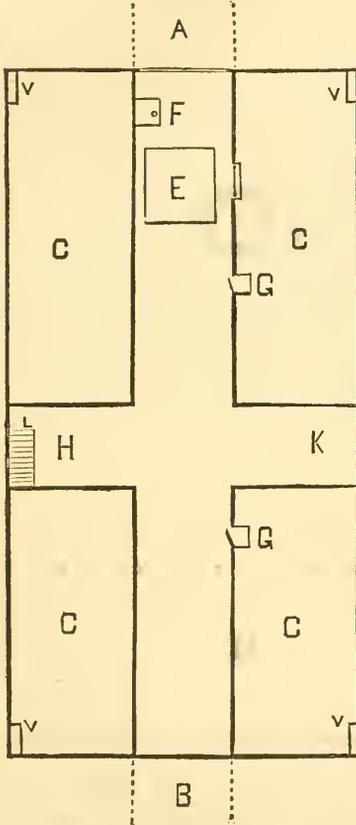
dumped from the drive-way above. This room can be enlarged by inclosing the calf-pen, or by using the cellar directly under it, if necessary. The roots being on the same floor with the cattle, can be readily brought out in baskets or on a barrow or truck. The stalls at CC are furnished with stanchions, and the platforms on which cows are to stand are  $4\frac{1}{2}$  feet wide. The stalls at DD are separated by partitions extending across the mangers, and two feet back between the cattle which are fastened by chains about the neck. At EE are passage ways, six feet wide, between mangers, which open into them by hanging doors at the bottom for convenience in cleaning. The mangers are boarded up three feet from the floor, and the doors

are one foot wide. The fodder is thrown down from the floor above into the passage ways through openings, 3x3 feet, seen at GG, in the plan of the upper story, which is reached from below by the stairs at L.

The upper floor is entered at A on the east end of the barn, by an easy ascent upon a drive-way of earth about 60 feet long and 20 feet wide at the top. To support the weight of this at the barn, the cellar wall is carried up 18 feet, and strengthened by buttresses on the inside. The threshing floor is 15 feet wide by a driveway of timber at B. The bays for hay are 17x43 feet, and represented at CCC. The posts of this story are 16 feet in height. At K is a room 14x27 feet, with a window,

which may be occupied by a horse power or other machinery. At H is a similar compartment with bins for grain, furnished with spouts for conducting it to the floor below. At E is a Fairbanks' scale, and at F a trap-door opening into the root-room.

Plan of Second Floor.



No provision has been made for teams or farm implements, because these are kept elsewhere. Apparatus for steaming food will doubtless be procured before another winter, sufficient at least for experimental purposes. If sand or fine loam be used for bedding, it may be stored in the cellar. The upper story of the barn is well lighted, and ventilated both by windows and in the roof through the cupola.

**PASTURES FOR COWS.**—At a meeting of the Little Falls Farmers' Club, Mr. Willard said his observation led him to believe that it was better to have one large pasture than to alternate from one to another.

*For the New England Farmer.*

### THE CULTURE OF SMALL FRUITS.

An Essay read before the Concord, Mass., Farmers' Club, January 6, 1870. By Capt. JOHN B. MOORE.

It is generally understood by the intelligent portion of our community that the use of well-ripened fruit at all seasons of the year, is necessary, and really essential for our health and comfort. That in the long-continued terms of heat which we are subjected to almost every summer, when we become debilitated to some extent, small fruits, the strawberry, raspberry, currant and blackberry, are particularly agreeable, not only as an article of food, but as a cheap luxury; cheap, because they promote health, and because they can be so readily served upon our tables. They are also a cooling and invigorating article of diet for the invalid, and a preventive of sickness in many instances.

Another reason why we should grow them is this: that by so doing, we should have them fresh, and in their full perfection from the vines or bushes, and it would be our own fault if they were not perfectly ripe. Now a fresh and perfectly ripened fruit is quite a different thing from the kind generally for sale in our markets, and is a much superior article.

Another reason why farmers should grow them is this: they can be made, and are, a profitable crop. They are light freight, as compared with many of our farm products. One acre of strawberries, producing four thousand quarts of fruit, with the crates and baskets to hold them, will weigh about seven thousand five hundred pounds. One acre of potatoes, producing one hundred and fifty bushels, with the barrels to hold them, will weigh about 10,500 pounds. The acre of strawberries, at twenty-three cents a quart, would amount to \$920.00; the acre of potatoes, at \$2.00 a barrel, to \$120.00. It would, therefore, take the product of seven and eleven-twelfths acres of potatoes, at the above prices, to amount to as much as one acre of strawberries. Hence the weight to be transported to market, for the same amount of money received, would be 83,120 pounds of potatoes and 7,500 pounds of strawberries, a difference of 75,620 pounds. The cost of teaming this difference at \$5.00 a ton, would be \$187.02 against the potatoes; not a small item for a farmer to save in transportation alone. I cannot impress too strongly upon the minds of the members of this Club, the importance of selecting crops to grow for market of comparatively light weight, and for this purpose I have compared the weight to be transported of the strawberry with the potato crop, not to discourage the growing of potatoes, for I consider them a valuable and advantageous crop in many instances, even as far as we are from market, but to show the difference in weight of the two crops. These same remarks

and comparisons will apply to all the other small fruits, as compared with the more weighty crops. These are some of the reasons that have presented themselves to my mind for growing small fruits for market and home consumption.

In the cultivation of the strawberry, I would select a good, strong soil, rather moist than dry; but if quite wet I should want it underdrained. With us it would be sandy loam, as that is the nature of most of our soils. Many growers prefer a mixture of clay, but a good sandy loam is a good soil for strawberries. It should be old ground that has been cultivated with some hoed crop one or two years, and should be free from weeds and foul grasses. As a rule, strawberries should never be planted on sod ground, as on such they are very liable to be destroyed by the large white grub. The soil should be well enriched with manure, somewhat decomposed, and a portion of it should be near the surface, for the purpose of giving the plants a quick start. The soil should be thoroughly worked both with the plough and harrow. If there is danger of water standing on the surface, either in summer or winter, it should be ploughed into beds, leaving the dead furrows open for surface drains.

Having prepared the soil and made it perfectly fine, the next thing is to prepare the plants. Let this also be done well; be sure and have good plants; cut off all the runners and dead leaves, and about one-third in length of the roots. If the runners are left on, many of the plants will be pulled out of the ground with the hoe. When the plants are ready for setting, see to it that they are not exposed to the drying winds before planting. Set the plants in straight rows, and of a uniform width, as early in the season as possible after the soil is dry and in good condition, say last of April or early in May, so that the plants may become established before dry, hot weather. The next thing is to cut away all the blossoms as soon as they make their appearance, or the plants will bear fruit and become exhausted the first season. The after cultivation is simply to keep the ground loose, and entirely free from weeds, not only in summer but through the fall, even to snow time.

To secure a good crop, it is necessary that a large portion of the labor for its growth should be performed the first year. About the first of December, the bed should be covered with coarse hay or straw, rather thin, but evenly, to protect the plants in winter; this completes the first year's work, and it is now too late to remedy any defects, from bad cultivation, bad plants, or want of manure. If the grower has unfortunately allowed anything of the kind to happen, he must take the consequences, which will be a less crop of poorer fruit.

In the spring, as soon as the ground be-

comes settled, the hay should be raked from the bed, the spaces or paths between the rows worked over, and the whole bed thoroughly cleaned from grass and weeds, and some time in May the paths and all vacant spaces covered with hay to keep the fruit clean. This constitutes the labor until the time of picking, which should be carefully and cleanly done, and without bruising the fruit.

After gathering the crop, the question of a second crop from the same bed, is to be considered. If the plants have been cultivated in rows, or hills, and the runners kept cut off, then I would keep it over the second year; but if in the matted bed system, I would plough them up immediately after the fruit is all picked, and sow with turnips or oats. If a bed is to be kept over the second year, it will be very much improved by mowing the foliage off clean to the ground, as soon as you have finished picking the fruit.

#### Raspberries.

Raspberries require a strong, rich and rather moist soil, to succeed best, and should be planted in rows from six to seven feet apart, and three feet in the rows. When planted, the canes should be cut away nearly to the ground, so as to prevent their bearing the first year. Late in the fall, the tops should be bent over to the ground and covered with soil taken from between the rows. Almost every variety would winter-kill unless protected in the winter. In the spring, as soon as the frost is out of the ground, the canes should be uncovered and tied to stakes or a wire. I find a wire as large as a telegraph wire, fastened to posts and stretched directly over the middle of the row, about three feet above the ground, the best. Have the canes tied to the wire with a matting string, and spread evenly on the same. Do not save too many canes, or at least more than the roots can support vigorously, if so, the result may be poorer fruit and weaker plants. The ground between the rows should be worked over in the spring, and kept level, and, if possible, mulched with cheap hay. I use the same hay that has been used on the strawberries for that purpose. Raspberries are very sensitive to the drought, and mulching often saves the crop. With good care and manuring, the bushes will continue to bear a number of years.

#### Currants.

The currant is another small fruit and is a general favorite, as it can be used in so many ways, and continues in bearing so long a time. It is also easily grown, but to grow it in its greatest perfection, the soil must be rich, and well cultivated, and a portion of the old wood cut out every year.

There are two insects that trouble the currant very much in some localities. I mean the borer that works into the centre of a

branch, and eats its way through the pith some distance, and finally destroying the entire branch. He can be kept down by frequent attention, cutting out all weak and sickly looking branches, and burning them. The other is the leaf worm, and is more to be feared than the first. They come at two or more times in the season, and if not prevented, will eat up the entire foliage, which often causes a loss of the crop. They can be destroyed by dusting the leaves when wet with white hellebore, powdered, or by syringing with carbolic acid soapsuds.

#### Blackberries.

The high bush blackberry, when grown in perfection and well ripened, is one of our finest small fruits. This fruit was not cultivated until about the year 1840. The Dorchester was the first variety cultivated to any extent, and was brought into notice by the late Capt. Lovett, of Beverly. This variety was soon followed by the Lawton or New Rochelle, Newman's Thornless, and some others, and still later, by the Kittatinny, Wilson's Early, and other kinds. Both of the last named varieties are thought to be more hardy, and to produce larger fruit than the Dorchester, but probably of no better quality.

The high blackberry is liable to have its canes killed in our severe winters, unless covered. The canes are stiff and brittle; some varieties more brittle than others, and are difficult to lay down and cover with earth without breaking them more or less. The riper the wood of any plant in the autumn, the more successfully it can withstand the cold of winter; therefore, it would be better to select a soil that is high, dry and warm, where the canes will ripen thoroughly, and not allow them to be stimulated by high manuring to make a large and late growth.

Many persons fail to produce satisfactory crops of fruit from planting varieties not naturally productive, or not adapted to their particular soil; for that reason it becomes very important to select the right kinds.

We want a variety that will grow well, be productive, of large size and regular form; of a bright, handsome color; of good quality and firm enough to bear transportation without injury. It will be impossible to get all these qualities in one fruit, therefore, get as near to it as you can; but at any rate, if you are growing for market, see that you have a variety that is productive and marketable.

A person growing strawberries for market ought to plant two or three varieties coming in at different times in the season, if he can find them adapted to his soil. For profit there is nothing better than the Wilson's Albany,—for eating without cooking there is nothing poorer in quality; still, it is good to yield, to ship and to can. The President Wilder is a very handsome variety, of good quality and promising. Of raspberries Kne-

vett's Giant and Franconia, are the principal varieties grown for this market. The Clarke and Philadelphia are attracting considerable attention, and are said to be sufficiently hardy to bear our winters without protection. The two varieties of currants now thought to be the best for general use are the La Versaille and Dana's New White Transparent. Both of these have large bunches and berries; the White is tender fleshed, and not quite so acid as the red varieties, and is undoubtedly the best white variety in cultivation.

Now as to the future, or continued demand for fruit, what will it be? A friend of mine, one of the best and most skilful growers of strawberries in the State, says that the market of Fall River consumed 2400 boxes of strawberries in 1861, at an average price of seventeen cents per box; in 1868, 11,000 boxes, at an average price of twenty-five cents! The population increased in that period forty per cent; the consumption of strawberries over three hundred and fifty per cent! Some fifty years ago, Mr Barnard, a farmer living on Wellington Hill, then in West Cambridge, now in Belmont, was almost the only grower of strawberries for Boston market, and he scarcely raised two hundred boxes in a year, of the old Wood variety, which was then about the only variety in cultivation. His son is now one of the best growers of this fruit in Belmont, and from the same old place continues to send fine fruit to Boston. Compare this with the consumption now in the same market, when one of the many dealers has sold 10,000 quarts in one day!

Perhaps it would interest some of us to know how far we have advanced in raising and selling fruit, as a town. I have the means of knowing very nearly the value of small fruits cultivated and sent to market from Concord the present year. The fruit growers have received, after all commissions were paid, about \$8000,00 for their strawberries, raspberries and blackberries; the larger portion of it for strawberries. This branch of production is increasing very fast. If I were a prophet instead of a Yankee, I would undertake to prophecy, but as I am not, I will simply exercise the Yankees right of guessing. Now I guess that within three years our good old town of Concord will send more small fruit to Boston than any other town in the State. It will be creditable and profitable to us to do so.

There is a certain fascination attending the cultivation of fruits and flowers, and to be successful, it requires a more thorough knowledge of cultivation, preparation and adaptation of soil to the particular plant, including manuring, than it would require for some other crops. This, with the originating of new varieties, either by hybridization, or the natural variation from seed, is really the poetry of farming. A high cultivation of the land is absolutely necessary to the successful

cultivation of small fruits. This high cultivation is what each one of you declares by his *acts* that he wishes to attain. This is what keeps up so lively an interest in this club. We do not meet to while away an evening pleasantly. I trust not. It is an earnest desire for more information in regard to our business; a desire to know and practice the best methods, and this is the first step towards securing what we want,—a better and higher cultivation of the soil. And not only a higher cultivation of the soil, but of ourselves also, and this would imply a more intelligent, and a more highly cultivated farmer.

*For the New England Farmer.*

#### MASSACHUSETTS AGRICULTURAL COLLEGE.

Called to Amherst, to-day, on business of a somewhat personal character, I improved the opportunity for a brief examination of the Massachusetts Agricultural College establishment, and an inspection of its buildings; the result being that I came away much pleased with what I saw and heard. From the necessary briefness of my time I was unable either to question or examine so thoroughly as I could wish, and in what follows I speak entirely from memory,—a heavy great coat and winter fixings not being peculiarly convenient for note-taking.

Since I was here in the spring of 1868, there have been some marked alterations. The old laboratory, which then stood on a line with the other buildings, has been moved back some 100 feet, and entirely remodelled, making it a handsome building, and very convenient for the purposes to which it is devoted. The class in chemistry, after a course of study in the rudimentary principles of the science, is set to practical application of what they learn, and their class room is very conveniently arranged and provided with suitable apparatus. One large room in this building is used as a chapel. The attic forms a large hall, the roof being supported by a strong truss, and is used for a drill room, where the students are thoroughly trained in military tactics by an army officer, detailed for the purpose by the Government. By the way, I am informed that this is the only Agricultural College that has, as yet, established military instruction as a part of the regular course, although that is made one of the conditions of the grant by Government. The College now has a complete equipment of arms, which are kept in an armory on the same floor with the drill room. Two cannon are also promised by the State, which will be used in artillery instruction.

Immediately south of the laboratory stands a fine building erected in 1868, as a dormitory. Of this I had only an exterior view, as the students were all absent, and my time limited. With the increase of students, and the necessity of providing for a new class next fall, the

faculty will urge the erection of a similar building at once, to meet the want.

North of the laboratory, and next to the house formerly used as a boarding house, is a story and a half building erected the past season and used as a boarding place by the students.

Last, but not least, of the improvements, I come to the barn erected the past season; a building of which there was much need at my previous visit. This stands some little distance south of the other buildings, and is about 50x100 feet, with a shed on the southwest end, 26x75 ft. Standing on a gentle slope, a barn cellar under the whole building gives ample room for the manure, and can be entered on a level by the teams to cart out the manure. This cellar is about eleven feet in height. The next floor, also entered on a level from the upper side of the yard, is suitably divided into stalls for the stock. Here were handsome specimens of the Jersey, Durham and Devon cattle, and Ayrshire are to be added. On the same floor is a large and commodious room for root crops, where they are securely protected from frosts. The arrangement of the tie-ups and the ease with which the manure and the refuse fodder can be cleaned out and disposed of were noteworthy. The main floor of the barn has a drive-way running the entire length, and is entered by a gentle rise of about six feet in a distance of sixty feet, on the east. At the opposite end the grade will be longer, as the land falls off to the rear. Near the centre of the barn, are two recesses, about the width of the drive-way, dividing it into four equal parts, which are used as bays, and which are capacious enough to meet any immediate want of the farm. One of the recesses is to be used as a room for a horse power, by which to cut fodder, and do other farm work. Opposite to it will be placed the meal chests. The same general convenience of arrangement is to be noticed on this floor as in other parts of the building. Ventilation is provided for by four ventilators, one in each corner from the first floor, and a large one in the centre of the roof, and I was informed that they work satisfactorily. As the State barn, this will doubtless be regarded as a model, and I hope you may at some other time, give a fuller description of it than I have space for.\* The neatness and complete order in which everything was kept impressed me forcibly, and I thought that every farmer might obtain some useful hints in this direction, if no other.

In the yard, running water is furnished the cattle, brought from a spring on the hill, some fifty or sixty rods distant.

The only other buildings which I found time to visit were the Botanical Museum and the Plant House. In the former is the valuable herbarium, comprising some 16,000 varieties

\*NOTE.—Our correspondent will perceive, on another page, that we have followed his suggestion, and at the same time will understand why his communication has been postponed for a few weeks.—ED.

of plants, arranged scientifically, and prepared in the most careful and neatest manner. There are some very valuable specimens in this collection, which is said to be unequalled in this country. A very neat room is fitted up for the class in botany, and a small room for the President.

The plant house, although rather early in the season to see it in its glory, was looking well, and I noticed some unique and beautiful plants, that might well gladden the heart of any botanical amateur. I will not attempt to set down the scientific names of these floral wonders, for my Latin has grown rusty from disuse, and I have already intimated that I did not take notes.

From inquiries of some of the faculty and friends of the College, I obtained, on the whole, a very encouraging statement as to its progress and prospects. The present number of students is about 100, the Freshman class numbering about thirty. The students are represented as progressing well, and enthusiastic in their studies. A large part of the work on the farm the past year has been done by them, and they have thus obtained just the practical knowledge and manual dexterity indispensable to the farmer, without interference with their studies,—the record showing a highly gratifying standard as compared with their rank when admitted.

With one feature I was especially pleased. It is, that the teachers, while pointing with commendable pride to the present standing of the College and the improvements of the past, and while detailing some of the plans for the immediate future, do not claim that they have made no mistakes, nor that their system might not possibly be bettered. But, having a plan well defined, they deem it better and more profitable to all concerned to follow it steadily and amend it when the need is demonstrated, than to be continually trying experiments, or laying plans of such magnitude that their very unfolding deters us from undertaking them. Such, at least, is the impression I received, and the result rather of natural inference from general conversation than from any direct statement or claim.

I transmit to you, with this, a view and plans of the new barn, which you may find available for use. The length to which I have extended these notes will preclude any theorizing on the College and its system of instruction, even were I familiar enough with them to warrant such discussion.

CUSHNOC.

Amherst, Mass., Dec. 14, 1869.

BUCKWHEAT STRAW used for bedding live stock of any kind, causes an eruption of the skin. It has been frequently noticed that hogs when feeding among buckwheat stubbles are subject to an eruption of the skin of the neck and ears, owing to an acrid juice which exudes from the cuts of the stubbles.

#### COVERING FOR ROOFS.

HERE are few items of expense which so severely tax the patience and the pocket of the farmer, as that of providing suitable covering for roofs. The general opinion is, that shingles do not last, now, much more than half as long as they once did. It is not uncommon that the poorer quality of shingles decay so much in ten years as to make it necessary to lay new ones over the entire roof. In some localities, the first quality are so far gone as to cause bad leakages in twenty years, and sometimes in even a less period.

What can be the cause of this? Is the timber of which they are made less durable than it was fifty years ago, or are there some climatic changes which cause a more rapid decay?

When shingles become so far decayed as to allow water to pass under them, they are not only rotting rapidly themselves, but are destroying the roof-boards upon which they are nailed, so that this portion of the roof needs renewing as often again as it would if the shingles were tight. Here is another item of cost, which is burdensome where so many buildings are required in farm operations.

Many kinds of materials are used for covering roofs, and various devices employed for the purpose, but so far, none are so unobjectionable as to bring them into popular use. Some are too expensive; some keep out wind and weather for a brief time, and then fail; some crack and let in the rain, while others warp and the winds blow them away. Flat roofs are still covered with gravel and tar, or some other cohesive substance, and withstand the "tooth of time" admirably. Among the old buildings in Boston, roofs may still be seen that were so covered from fifty to one hundred years ago, and with occasional repairing, are still tight.

The "*Plastic Slate Roofing*" material was extolled more than roof-high for a time. There were plenty of certificates of its superior excellence, and all persons with leaky roofs looked to it as *the thing* that would cover their buildings once for all; pine and cedar trees might go for pails and tubs,—they were wanted no longer for shingles! But we do not see any particular evidences of the

superiority of this article on the roofs, or in the lumber yards. Shingles still abound in both places, and prices of them are higher than ever. We sincerely hope the plastic roofing has, or will prove a decided success; that it will be cheap, permanent, and in every way effective.

The various ways of *preserving* shingles are not enough. We want some combination of materials that are as "cheap as dirt," and as common as the air we breathe, or the ground upon which we tread, and which will require little skill to mingle or apply them.

There is great encouragement that this may yet be accomplished, so that the farmer may cover his building with an imperishable material, do it principally with his own hands, and at one-half the present cost of shingling! This encouragement comes to us in part, from the wonderful achievement in constructing the *Suez Canal*, one of the most stupendous works of art ever undertaken by man. The walls of the canal are of stones, twenty feet long, two feet wide, and about one foot thick, made there, upon, and of, the sands of the desert, and united by a peculiar cement. And in part, from the success attending the efforts of a company of gentlemen in Boston, in cementing all sorts of earths and stones into a solid mass of great strength. While the process of mixing is going on, the materials are so plastic that they are formed into any desirable shape, such as beautiful soapstone stoves, whetstones, medallions as smooth as polished ivory, emery wheels, side walks, stable floors, and numerous other valuable articles.

It does not seem improbable that this device may be carried so far as to furnish coverings for buildings, and even underpinning, where stones cannot be had short of heavy cost of transportation. The heavy, awkward "tile" has long been used in England as a covering for roofs, and has the rare merit of being both permanent and effective. Why may not these gentlemen furnish a thinner and lighter material, and at the same time secure all the advantages of the English tile? We believe they will do it.

These remarks have been suggested at this time by reading an article in the *Country Gentleman*, entitled:—

NEAL'S NO-PATENT ROOFING.—Eighteen years ago I made a flat roof over the central portion of my dwelling, in the following manner: I first laid

jointed flooring boards upon the joists, and covered this surface with roofing paper. Then I poured upon a section of the roof a small quantity of raw coal tar, spreading it evenly with a shingle, to the depth, perhaps, of a sixteenth of an inch. Upon this I then sifted common road dust, putting it on evenly to the depth of half or three-fourths of an inch, that is, as long as the dust continued to be wet through to the top by the tar. It took me but an hour or two to go over the whole roof—18 feet by 18—in this manner. My first application was made in May, and about six weeks later I went over the whole surface again in like manner, finishing up with the fourth application in September. Since the application of the first coating of tar and dust, to the present time, the roof has not leaked a drop and looks good for a century at least to come. Since the first year it has been like a firm sheet of stone, about half an inch thick, on which the family can sit, walk, run or dance, without injury to it.

Let me also tell you how I made it water tight around my brick chimneys, extending through the shingled portion of the roof. I thoroughly mixed a quantity of the tar and dust into a thick paste, and with a trowel applied it as a collar around the chimneys, extending it about four inches out on the roof and as high up the side of the brickwork, and compactly filling the space with the mortar. The collar clung, as first placed, a perfect defence against leakage till the roof required renewal, and then the ends of the shingles beneath it were perfectly sound; the tar and dust mortar itself resembling a species of soft stone that could be easily and smoothly whittled with a knife.

Mt. Gilead, O.

D. B. NEAL.

## EXTRACTS AND REPLIES.

### FEEDING BEES.

Will you please inform me through your paper if bees can be fed in winter, and if they can, how? What book on bee culture is the best? Which hive is the best?

W. BROWNING.

Keene, N. H., Jan., 1870.

REMARKS.—Bees can be fed in winter, but experience is needed to do it successfully. It is generally considered poor policy to attempt to winter a swarm that has not laid up a sufficient store of honey for the winter season. Various plans are adopted for feeding bees. Honey or a syrup made by dissolving refined sugar in just water enough to make a syrup about as thick as molasses are much used. Sometimes a piece of empty comb is filled by letting the syrup drip from a tin dish in the bottom of which holes are punched for this purpose. Place this in the chamber if you have a chamber hive, or if an old fashioned hive, bore through the centre of the top with an inch and a quarter bit or auger, remove the chips and trim off the splinters with a knife. If the bees come up drop in a little of the feed; then place the comb-filled with the feed on the top of the hive and cover it with an inverted box or peck measure. Others put the syrup in tin pans of convenient size, on which is a cover of thin wood, pierced with holes, or sawed into, so that the bees feed without getting stuck in the syrup. This cover must be fitted to the tin dish with a small space around the edges, and float on the syrup.

We cannot say which is the best book on bees,

as several have been published. Mr. Quinby's is the latest work we have in our office, and we think it a good work. Its price is \$1.50. Some bee-keepers prefer one hive, some another.

CLARKSBURG, MASS.—CONCENTRATED FERTILIZERS.

In acknowledging the receipt of my first number of your paper, I would say that I am glad your agent got strayed into this county, as I understand he got a goodly number of subscribers.

Clarksburg is a small town, three by six miles, in the northwest corner of the Commonwealth of Massachusetts. It is identified with North Adams, as the south line of the town runs very near the village. On the east, towers the lofty range of the Green Mountains, called the Hoosac. This town has a nice view of Greylock mountain, and the unevenness of the surface of the town makes it rather unpopular for agricultural purposes, except when stimulated by some other business that will produce more than one crop in a year.

In these fast days of steam and electricity, mankind, and particularly Young America, have become electrified, and they must "get up and get," or there is no enjoyment. Live fast and die young is the principle. For farming it on a large scale, and with machinery, and to make it profitable and popular, the West offers great inducements. But we who are attached to New England, and to Berkshire County, who love the mountains, the hills and valleys, the springs of pure water and an unsurpassed climate, are reluctant to leave.

And now, Mr. FARMER, and ye learned agricultural chemists, we look to you and ask, is there not a concentrated fertilizer, of which one load on an acre of these Berkshire hills will produce the like effect of one hundred loads of barn yard manure? We have tried the superphosphates of Coe and Bradley, and we think there is not much profit in them. As an assistant fertilizer on chestnut and oak lands, Nova Scotia plaster pays the best; but on our hemlock, spruce, beech and maple lands, it is not worth near as much. Please let me know the best concentrated fertilizer there is, and I will promise to try it and report the result. G. W. R.

Clarksburg, Mass., Jan., 1870.

REMARKS.—By and by we hope to be able to answer such questions. Farmers' clubs, agricultural colleges, and agricultural newspapers are all at work on the problem, and who can doubt that the time is coming when he who runs may read just what he wants to know?

GREEN AND DRY CORN FODDER.

Though my experience may not be as extensive as many others, in the use of corn fodder, I would say that I have been led to somewhat similar conclusions with those stated by Asa G. Sheldon and Dr. Nichols, in a late number of the FARMER. I have planted sweet corn for green fodder for my cows, and have sown it broadcast, and drilled it in, but have got better results from planting about three feet one way, and putting the hills one foot apart, with three or four kernels in a hill than any other way. I have commenced to cut it up and feed green as soon as the pastures began to fail, but it would make the cows scour, and I thought injured them. So I would cut and stock round a horse, and let it cure two or three and sometimes four days, and then give it to them, and it had a very different effect. Hence, I prefer to have it thoroughly wilted before I give it to them. I have fed green clover and green oats, but I prefer the sweet corn to either, cured in the way I have named. I have sometimes had more sweet corn than

I wanted to feed before putting my cows into the rowen. In such cases I cut and cure as other corn. I then pack it away for winter use. I had quite a lot this year, and my cows have given a large flow of milk, and we have made butter up to the present time from cows that come in the first of March next, but for two weeks I have given them half a bushel of sugar beets and carrots, equal parts, each per day. Were I to feed clover or oats I should wilt them before giving them to the cows.

I have one cow now that I took of one of my neighbors last fall, that was spoiled last summer, as I think, by giving her green corn.

Hartford, Vt., Jan. 25, 1870. R. H. SIMONDS.

CATTLE CHEWING BOARDS, &c.

One lot of my cattle, consisting of three cows, two yearlings, and one calf, have a habit of gnawing boards, stanchions, sticks, &c. They are in good condition, and have been fed on early cut hay, and have been salted regularly. My other stock, kept in the same barn, are free from this habit. What shall I do for them. A READER.

Simonsville, Vt., Jan., 1870.

REMARKS.—It is generally supposed that this taste results from the lack of phosphate of lime in their food, and many farmers buy ground bone as a medicine for this complaint. Prof. S. W. Johnson says that superphosphate sowed on old pastures will prevent this trouble while increasing the amount of grass. If you cannot get the bone meal, try a change of hay, with browse of evergreens or other trees. If the ground is not covered with snow let them out on to ploughed ground and see if they will not lick the earth; or give them some clean soil to eat, if they will. Some farmers have pounded up bones fine with a sledge hammer for their cattle.

MAKING BUTTER IN WINTER.

Being a farmer's wife, and having had over thirty years' experience in butter making, a few hints as to my method may be of use to some of your readers.

As soon as the weather becomes frosty, I begin to scald the milk. There are various ways of doing this, but as my milk pans are stone, I set them on the stove after the milk is strained and let it get quite hot. The cream rises quickly. I skim it in three or four days, at most. After I get enough cream for a churning, I set the churn by the stove a short time, turning it occasionally so it may become slightly warm all through. I never have to churn more than an hour, and often not over thirty minutes before the butter will come as nice and sweet as one can wish, and if the buttermilk is all worked out and plenty of the best salt used, it will keep well until warm weather. c. s. B.

Somerset, Mass., Jan. 25, 1870.

COMMISSIONER'S REPORT.—LICE ON HENS.

In a late editorial you spoke of the report of the Commissioner of Agriculture. How and where can I obtain this work? What will be the expense?

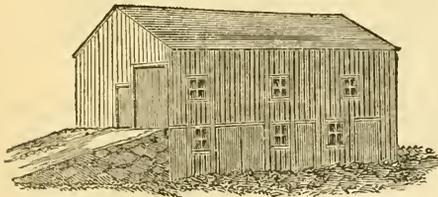
Will some of your correspondents state the best way to kill lice on hens? C. C. FULLER.

South Gardner, Mass., Jan. 19, 1870.

REMARKS.—For the Report, write to the member in Congress from your district. The expense will be the cost of postage, only. These reports

belong to the farmers of the country. Write early, before they are all distributed.

In relation to your other inquiry, we are happy to refer you to an article in this paper by "L. B."



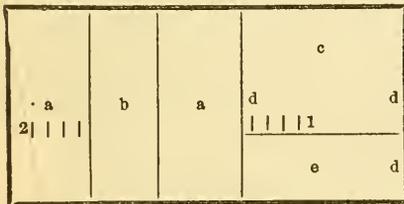
BARN WITH DRIVEWAY TO SECOND FLOOR.

Agreeably to your request for plans of convenient barns, I send you those of mine, which is 40x60 feet. The length of posts, between sills and plates, is 21 feet. The height of stables is eight feet; of cellar the same, with wall running down two feet for drainage. Length of platform for cows, tied with chains, five feet and three inches, with an inclination of 1 1/2 inches. The annexed plans and descriptions will, I think, give a good idea of my barn. WILLIAM H. GRAY.

Ashfield, Mass., Jan. 11, 1870.

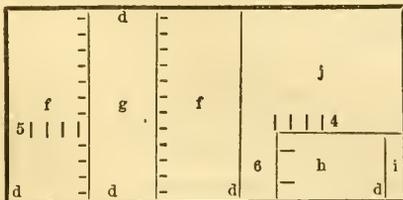
*Perspective View.*—From the mere outlines of the building as a whole, which were furnished by Mr. Gray, our artists have produced a very pretty picture. We mistrust, however, that they have made their stable doors of the first floor rather large; and, not being farmers, they have allowed the grass and weeds so large a growth in their yard as to hide too much the thresholds of the doors and the wall on which the sills rest.—EDS. FARMER.

PLAN OF BASEMENT.



*Explanation of Plan of Basement.*—*a a* are cellars for manure from stables above, 13x40 feet; *b*, place for muck, soil, &c., 10x40 feet, with stairs, fig. 2, leading to stable above; *c*, pen for calves or sheep, 24x23 feet, with stairs, fig. 1, leading to alley above in front of horses; *e*, pigery, 12x24 feet.

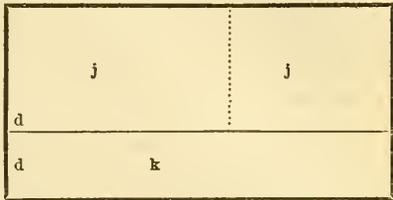
FIRST STORY.



*Plan of First Floor.*—*f f*, cattle stables, each 13x40 feet; *g*, feeding alley and driveway for dumping muck into cellar, 10x40 feet, with stairs at fig. 5, leading to

floor above and to stable below; *h*, horse stable, 12x16 feet; *i*, closet for harness; *j*, bay for hay, with stairs at fig. 6, and alley in front of horses at fig. 6.

SECOND STORY.



*Plan of Second Floor.*—*j j*, bays for hay, one 28x36, the other 24x28 feet; *k*, floor for drawing in hay, 12x60 feet, which is reached by an inclined bankment.

SUGAR MAKING.

Some of your correspondents last spring spoke unfavorably of the use of metallic spouts in sugar making, and expressed a preference for wooden ones. Having tried many kinds of sprouts, I will give a few hints from my experience. I prefer the tin spout to any other that I have used. I use the quarter-inch bit, and think I get nearly as much sap as from a three-quarter inch bore, and do not injure the tree one-half as much. Bored with the small bit, the hole in the tree closes up the first season, and consequently leaves less chance for borers and other insects. I use a five-eighths inch tin spout made like a dipper handle by any tinman. They are driven just into the bark of the tree. I find sap will run through tubes thus adjusted in a colder day than in open wood spouts,—and that the sap will start earlier in the morning and continue flowing later at night. They are more easily kept clean, and not as liable to be clogged with chips, leaves, &c. As sap flows the most freely close to the bark, wooden sprouts are often driven in so far as to stop the best run of the sap. I have seen them driven into the tree so firmly as to support the bucket by a wire passing over the spout. Where spouts are driven under the hole made by the bit, the sun will often dry up the wood of the tree so as to stop the running of the sap.

I have made sugar out-doors with only a few stones laid up to set the boilers on, and to make a place for the fire, where the wind would blow dust and ashes into the syrup, and have had my hair and eye brows scorched by a flame suddenly blown into my face by a gust of wind, and from my own experience would advise all sugar makers to have some kind of sugar house. J.

Hardwick, Mass., Jan. 10, 1870.

ADULTERATION OF MILK.

I have read the reports of the discussions at the Milk Producers' Association, with some pleasure, and with much pain. It was there stated that twenty-five per cent. of the so-called milk sold in Boston was some foreign article; thus charging the milkmen with swindling, and no small amount of it either. Now I know but little about the milkmen who get their milk at other roads than the Boston and Albany. But most of these men I have known personally for from twelve to twenty-five years.

Perhaps your readers will think I make a strong statement when I say, I know most of these men do not adulterate their milk. They are honorable, square dealing men, who would despise such business as much as any one.

The large quantity of milk that goes to Boston,

over the Boston and Albany road, must give a good many people pure milk. I think there is not a more hard working, industrious set of men in Boston than the milkmen. They deserve to make money, and some who are smart and tough enough to stand the exposure and hard labor, get along well. No doubt there is much impure milk sold in all cities, but because these producers happened to stumble on to milk which was one-quarter water, they ought not to charge honest men with crime.

W. P. BRIGHAM.

*Attleboro', Mass., Jan. 24, 1870.*

#### THE WINTER IN PRINCE EDWARD COUNTY, C. W.

Thus far we have had a rather singular winter. Some snow fell early, and cold weather set in, freezing apples and fastening many vegetables in the ground. Stock came to the barn earlier than usual; but the crop of hay and of straw was so great that there will probably be no scarcity of fodder. The snow remained but a short time, and we had but little sleighing before the close of 1869. A great deal of rain fell last month, and the 28th and 29th were thawing, so that the roads were muddy. The depth of rain and melted snow in the year 1869, at this place, was thirty-seven and sixty-one hundredths inches.

The first week in this year was colder, and some snow fell making sleighing a few days. We have had several heavy gales, but the damage was chiefly in blowing down wood and timber. The 9th inst. the temperature was 10° below zero; the 10th it was 30° above. On the morning of the 14th it fell 12° below, and did not rise above zero until near 9 o'clock, P. M. The 15th was very rainy, with mercury as high as 38° above. Sleighing failed here, and since that time wheeling has been good, and the weather mild for winter. It is now, the 25th, cold, and several inches of snow fell last night, but it is drifted too much to make good sleighing.

GRANITE.

*Bloomfield, C. W., 1st mo., 1870.*

#### GRUB IN THE HEAD OF SHEEP.

In reply to Mr. Sowles' inquiry in FARMER of January 8, about sheep diseased in the head, I would say that I have had considerable experience in such disease of sheep, and have never known the following to fail of a cure. Turn the sheep on the back, and put a teaspoonful of spirits of turpentine in each nostril. It will not hurt them. I call the disease worm in the head. I wish to inquire if any one in this part of the State has the White Leghorn hens.

S. C. RYDER.

*North Bradford, Me., Jan. 14, 1870.*

#### FEED FOR YEANING EWES.

What is the best kind of grain to feed sheep that are to have lambs,—how much, and what is the difference in prices between cotton seed meal and other feeds?

SUBSCRIBER.

*South Hadley, Mass., Jan. 19, 1870.*

REMARKS.—In soliciting an answer to these inquiries from experienced sheep men, we will say that while corn is perhaps the best grain for fattening sheep, we do not think it as good as oats, bran slops, roots and similar feed for the production of milk.

#### WHEAT IN CONNECTICUT.

Herewith I send you a small sample of Winter wheat grown on our place the past season. It is not as nice as what we have heretofore grown, yet the yield was very fair, being thirteen bushels, mill measure, from half an acre. Less than one bushel of seed was sown the last of September.

The ground had been used for tobacco the season of sowing. The soil a light sandy loam, with yellow subsoil. The wheat is a red, bearded variety, for which we paid \$4.00 per bushel for seed two years ago last fall.

W. H. W.

*South Windsor, Conn., Jan. 26, 1870.*

REMARKS.—The sample compares well with specimens from other sections now in our office.

#### GREEN CORN FODDER.

I have no doubt that Mr. Sheldon and Dr. Loring are both right in their estimates of the value of green corn fodder, if they feed Southern or Western corn, thickly planted, and not fed until nearly grown. It took me but a short time to learn that such fodder is very poor. I had learned, too, before Dr. Nichols told us, that corn planted too thick is not as good as that planted so thin that it will ear some. I have fed green corn, more or less, for fifteen years, to my cows when making butter, and when selling milk; beginning the first of August, or not far from it, and feeding until the first of October, giving in the morning all they will eat of corn cut the night before, or in the morning, as most convenient. With such feed my cows have always gained both in flesh and milk. But I have fed very little Southern corn, and think I shall never feed any more. Still, if I can raise Sweet or Narraganset corn, I shall continue feeding my cows all they will eat three times a day, and when they get so reduced that they want helping up, then I shall stop.

*Westboro', Mass., Jan. 24, 1870.* W. S. GROW.

#### SICK PIGS, AND THE CAUSE.

Having lost a valuable hog last summer, I have noticed by accounts in the FARMER that others in various places, as well as in my own town, have been similarly unfortunate. I have carefully compared the statements of others with my own experience and observation, and am fully of the opinion that foul pens and improper food in hot weather are the principal procuring causes of the disease called hog cholera, and that producing red or purple spots on the skin, which spread rapidly and terminate in death. Hence I believe that wholesome food and pens free from foul stench and bad air will be a pretty sure preventive of such putrid diseases.

R. SMITH.

*Wilmington, Vt., Jan., 1870.*

#### SWEET FLAG.

Will some of the correspondents tell me how to kill sweet flag in a wet meadow? I have a piece of land that would be valuable if I could get rid of this pest.

A. B.

*Cambridgeport, Vt., Jan. 25, 1870.*

REMARKS.—You have a tough customer. If any one knows of any cheaper method than very thorough drainage, and seeding with grass, let him say so, for the benefit of our correspondent and others.

#### RICH MILK.

The last of December a two-gallon jar full of the milk of one of my cows produced four pounds and seven ounces of good yellow butter. If any one has a cow that gives better milk I should be glad to hear of it.

J. H. M.

*Farmington, Me., Jan. 24, 1870.*

REMARKS.—If you did not intend to say cream instead of "milk," isn't that two-gallon jar of yours an uncommonly big one of its size?



[Copied by permission from *Appleton's Juvenile Annual*.]

#### THE GORILLA.

### Youths' Department.

#### THE GORILLA.

One of the most remarkable animals in the world, and one, until recently, the least known, is the Gorilla. Uniting a wonderful physical likeness to man in man's barbarous

state, with an equally wonderful likeness to the most savage of beasts in temper and disposition, he comes nearest to a connecting link between the brute and the human creation, but still is not and cannot become that link. Du Chaillu, the great hunter of the African forests, has given us the best account of this animal yet published. He had many

personal encounters with them, of one of which we give his relation as follows:

"There must be gorillas not far off," whispered Malaouen into my ears, and at the same time he looked carefully at his gun. Querlaouen and Gampo gave a chuckle, and looked at Malaouen and at me. We all listened in silence; we were then in one of the thickest and densest parts of the forest; all was apparently still, but the quick ear of Malaouen had detected something, had heard a noise, and he wanted to know the cause of it.

We were so excited that our breathing was loud and distinctly audible. We were all close together and did not move. We at once cocked our guns, for we heard the moving of branches just ahead of us, when lo! the forest resounded with the terrific roar of the gorilla which made the very earth fairly shake under our feet. As soon as the gorilla saw us he stood up, and beat his chest with his powerful hands until it resounded like an immense bass drum. His intensely black face was something horrid to behold; his sunken deep gray eyes looked like the eyes of a demon, and he opened his mouth and gave vent to roar after roar, showing his powerful canine teeth.

It was a male gorilla, a real fighting fellow, and was not afraid of us. How horrid he looked, as the hair on top of his head twitched up and down, and as he made the woods ring with his awful roar until the forest was full of the din!

We stood in silence, gun in hand, and I was ready to fire, when Malaouen, who is a cool fellow, said, "Not yet." The monster, according to them, was not near enough. He stopped for a minute or so, and then seated himself, for his legs did not seem well adapted to support his huge body. The gorilla looked at us with his evil gray eyes, then beat his breast with his long, powerful, and gigantic arms, giving another howl of defiance. I was terribly excited, for I felt that, if the animal was not killed, some one of us would be killed.

I now judged he was not more than ten or twelve yards from us, and I could see plainly the ferocious and fiendish face of the monstrous ape. It was working with rage; his huge teeth were ground against each other, so that we could hear the sound; the skin of the forehead was moved rapidly back and forth, bringing a truly devilish expression upon the hideous face; then once more he opened his mouth and gave a roar which seemed to shake the woods like thunder, and, looking us in the eyes, and beating his breast, advanced again. This time he was within eight yards from us before he stopped again. Malaouen said "Steady," as he came up. When he stopped Malaouen said "Now;" and before he could utter the roar for which he was opening his mouth, three musket balls were in his body, and he fell dead almost without a struggle. It was a huge beast, and a very old one indeed. Gorillas vary in height like men. This one was over 5 feet 6 inches. Its arms spread out 7 feet and 2 inches. Its bare, huge, brawny chest measured 50 inches round; and the big toe or thumb of its foot measured nearly six inches in circumference. Its arm seemed only like an immense bunch of muscled, and its legs and claw-like feet were so well fitted for grabbing and holding on that I did not wonder that the negroes believed that this animal concealed itself in trees, and pulled up with his foot any living thing, leopard, ox, or man, that passed beneath. There is no doubt that the gorilla could do this, but that he does, I do not believe. They are ferocious and mischievous, but not carnivorous.

## GRANDPAPA'S SPECTACLES.

BY MRS. M. L. RAYNE.

Oh, Mamma, what will Grandpa do?  
He's gone away to Heaven,  
Without the silver spectacles  
That uncle John had given;  
How can he read the papers there,  
Or find his hickory staff;  
He'll put his coat on wrong side out,  
And make the people laugh.

And when he takes the Bible down  
And wipes the dusty lid,  
He'll never find his spectacles  
Within its cover hid;  
There won't be any little girl  
He likes as well as me,  
To run and hunt them up for him  
And put them on his knee.

Oh dear! he'll never find the place  
About "the wicked flee,"  
And how the bears ate children up,  
(That used to frighten me);  
So, Mamma, if you'll dress me up  
Just like an angel bright,  
I'll fix our ladder 'gainst the sky  
And take them up to-night.—*The Bright Side.*

## Ladies' Department.

### DOMESTIC ECONOMY;

OR,

### HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1866, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

#### CHAPTER XX.

#### ANIMAL FOOD AND ITS PRESERVATION.

As a general thing, we eat double the animal food that we ought. A certain portion is undoubtedly needed to secure a proper physical development and to sustain bodily and mental strength; but the excessive use of a flesh diet stimulates the passions, stupifies the brain, and fills the whole system with disease.

For persons of sedentary habits, and for children, a moderate supply of animal food once a day—and that as near the middle of the day as possible—is sufficient. Besides this reasonable amount at the noonday meal, for those who lead active lives—laboring much in the open air, or within doors at occupations which make great demands upon the bodily energies,—a small quantity of meat at breakfast is necessary. More than this is intemperance, as deleterious, if not quite so disgusting, as intemperance in the use of ardent spirits.

It is true, the season has something to do with this matter, the appetite craving larger quantities of meat,—on account of its heat-imparting properties,—in cold than in warm weather. But less hearty nourishment, when well-cooked and furnished in

abundance, is to be preferred for three-quarters of our diet where plenty of heat is obtained by means of comfortable rooms and warm clothing.

The expense of animal food is also no small consideration in the management of a family. No housekeeper need be told, in these days of high prices, that the very most should be made of everything that comes under that name. Still the best of cooks, and the most prudent, waste (we will call it *lose*) much, that, with a little ingenuity, may furnish many a palatable and nutritious dish.

A great deal depends, too, upon a thoughtful, observant care for the preservation as well as best use, of meat and fish,—even more than for fruits and vegetables; because by neglect what is really healthful and wholesome becomes frequently a noxious poison—is, indeed, often unwittingly served at table when in that condition.

In order to preserve animal food from decay it should lose its natural heat as soon as possible after killing, and then be kept cold till it is cooked. Fresh meat and fish may be kept in good condition a great while when frozen, but at the first signs of thawing they must be cooked, as decay then follows rapidly. During the winter closets, boxes, or tubs, where these articles of food can be placed and snow or ice retained without melting, are a great convenience for housekeepers.

Ice-houses and refrigerators are desirable where they can be had for summer use. Even the simple arrangements just mentioned can be made available, however, in warm weather,—the ice being kept from melting rapidly by wrapping it in woolen cloth; but there must be great pains taken to cleanse and ventilate often both these receptacles and the ice-cloths. The shelves and walls of ice-houses and refrigerators also need to be frequently attended to for the same purpose, lest the flavor of some articles of food become injured by the concentrated exhalations of different dishes, or from contact with the crumbs sometimes carelessly suffered to lie around. Most persons who rejoice in the luxury of a *well* know how convenient a closely closing bucket—better still a tier of tightly fitting boxes—is for affording this desired coldness,—that is if a windlass or some similar contrivance is employed to raise it easily.

If none of these conveniences are available, the housekeeper will wipe all moisture from the meat that is to be kept fresh, shake a little fine salt over the bare flesh and into all its crevices, and then, screening it from the flies, set it in the cellar, or in the coolest and airiest place she can command, till it can be cooked. Use the same care and precaution with all sorts of fresh meat. If it *should* get slightly tainted cover it with fine charcoal for a few hours before cooking.

Salt is considered the best preservative for meats and fish, as, while preventing decay it retains their fibres in a natural state. Dessiccation—drying—causing an evaporation, or concentration of the juices, and consequent hardening of

the fibres, is at times a desirable process of preservation; but unless such food is properly cooked it is exceedingly indigestible. The antiseptic properties of smoke are also called in for keeping flesh and fish from decay,—the flavor which it imparts being agreeable to some palates; and though smoked meats are not so healthful as the fresh, they can be used sparingly with no ill effects. Spices, too, sometimes serve in the same capacity; but not much of *such* preserved food is to be commended. Of all these methods salting, or corning is the least objectionable. When properly performed and the salted food well cooked, its occasional use makes a variety in diet, and it is scarcely less nutritious and salutary than when in its fresh state; while, for obvious reasons, it must be the chief dependence for an economical management of much of our animal food.

In cities and large towns, where meat shops and stalls can be visited at will, or where the butcher calls every day at the house, one can purchase a small quantity of fresh or of salted meat, and there is little danger of its spoiling. Still, even then, advantage can be taken of overstocked markets, and consequent lower prices, and considerable be purchased with prudence; some of which can be eaten fresh, and the rest salted, smoked, or dried. And in the country, where the butcher's visits are infrequent, or the neighbors only obtain animal food by accommodating each other in the killing of stock by turns, there is often a quantity to dispose of in the same way. A quarter of beef, or a half of a sheep or a hog, is as much, however, as a thrifty housewife desires to see at once; and until this is all well cared for she is as busy and anxious as she ever wishes to be. But in view of the leisure from care and toil for some months to come, which it foreshadows, and of the nice dinners it promises, she goes through it cheerfully; rather desires it—in early winter,—being content with smaller portions for warm weather.

We will suppose that the good man of the house, understanding what is true economy, gets the best meat *always*; if he purchases beef, not the pale flabby flesh of a heifer, but good ox beef, a bright clear red in color, and fine and firm in grain; well streaked with fat that is solid and fair—(*nearly white*—yellow fat is a sign of disease). It is convenient to have it cut into handy pieces by the butcher. Roasting and steak pieces may be packed in ice or snow, or laid in the ice-closet or box, or refrigerator, till needed.

The best roasting pieces are the thick end of the sirloin, the rump, and the second cut in the fore quarter; the best for steaks are slices through the sirloin, and from the rump,—but very good slices for the same may be cut from the top of the leg—the round—which, if kept a little longer than the others and properly cooked, are tender and nearly as juicy as those.

The best corning pieces are the rattle-ran, (as the butchers call it,) and the next cut to it, the thin end of the sirloin, the end of the rump, and

the edge-bone (or H-bone). The rattle-ran gives alternatè streaks of fat and lean—the H-bone a great deal of lean meat.

A piece of beef may be lightly corned in summer, by rubbing it thoroughly with salt, and then sprinkling it plentifully with the same as it lies in a deep dish, which is then filled with water sufficient to cover the meat. Three or four days is long enough for it to remain thus before cooking.

To prepare a winter's or a year's supply of salt beef get first a clean oaken or maple barrel or keg to hold it, with a circular piece of the same sort of wood just small enough to pass in and out of the top easily;—this is for a sinker—to keep the meat under the brine,—and it should have a knob, or something of that sort, to raise it by. There must be also a heavy clean stone to rest upon this for pressure. The barrel should also have a closely-fitting cover.

Beef that is to be corned should be allowed to hang up in an airy place two days, at least, after it is killed, before it is salted, so that the fibres may become tender. Then make a brine to pour over it after it is packed in the barrel. For one hundred weight of beef take four gallons of rain water, heat it to boiling, dissolve in it four quarts of fine rock salt, one ounce of salt petre, three pints of brown sugar or two quarts of molasses, and one ounce of saleratus. Let it boil till all impurities have risen to the surface and been skimmed off. Set it aside till cold, then pour it over the beef. If there is not enough to cover the meat make a little more brine, using a correct proportion of the same ingredients. The meat will be ready for cooking in three or four weeks, and will keep nice in a cool cellar over a year. But if there is the least hint of a rancid odor, the brine should be turned off, scalded, and half the quantity of salt and molasses added. Do not use old brine, even with the most thorough scalding, to corn a new supply of meat;—it is quite valuable as a fertilizer for the soil, but is worse than useless as a preservative for meat, because of its rank and bitter flavor.

Beeves' tongues, and pieces for smoking and drying, require a brine somewhat stronger, which must be made thus: Dissolve in one gallon of water three pints of salt, half an ounce of salt petre, and one quart of molasses. Three weeks will cure them. The tongues will then be fit for boiling as they are, or to go with the pieces to be smoked; they need two weeks in the smoke-house. Those to be dried only should be spread on hurdles, or hung up loosely, for a month, in a cool, dry room, where no insects nor vermin can gain access, and the out-door air frequently admitted. February is the best time for drying beef.

Another way to preserve beef is to make it into cakes and dry them, which may afterward be broiled or baked. Take for these lean beef and suet,—one third as much suet as meat. Chop them very fine and season with pepper and salt. Mix

well, and form into cakes rather more than half an inch thick and three inches square, and spread them to partially dry on a table in a cool room.

A beef's heart is nearly as nice as a tongue when slightly corned. Split it in two, and pickle it in two quarts of water in which a pint of salt and a cup of molasses have been dissolved. It should remain in this four or five days.

For soups the shin, the hough, and the tail are best. The brisket and ribs are used for stews or soups by some persons instead of roasting them, or corning them,—also the flanks. The upper cut of the breast and the neck are excellent for soups,—they also are the best portions for mince-pies.

The head, though the cheapest part of the animal, may furnish several nice dishes;—the cheeks being corned, or boiled fresh for mince-pies, or for making head-cheese, or serving for a stew.

All of those inferior parts need especial care in order to keep them sweet and good, and much washing and soaking before they are cooked; but they well repay the pains taken with them.

Suet is an important ingredient in pies, and makes good puddings. It is also needed to furnish fat for mixing with lard for frying pies and pancakes. It may be kept uncorked in cold weather a long time by removing its skinny parts and then tying it in a close paper bag and placing it in a cold closet.

Good mutton is fine and close grained, and of clean white and clear red hues. Any part of the animal is nice for roasting (or baking rather; there is very little wasting of any sort of meat now-a-days)—the loin and the hind quarter are considered the best. The leg is suitable for a broth or stem; or to be boiled either fresh or corned; or steaks may be cut from it. Take chops from the loin or the lower part of the neck. The shoulder and neck use for broth or stew. Corn the breast,—the loin is also nice corned a few days,—by rubbing it well with salt, and sprinkling a handful of salt over it after immersing it in water.

Lamb is best in July or August. It should be fat, and fine in fibre. The fore quarter is the sweetest and most juicy for roasting; the breast is nice boiled; the leg should be stuffed and baked; of the loins, and the shoulder also, make broth.

Veal is only good in the spring. It should be firm and close-grained, white, and fat. Roast the breast and the loin plainly. Stuff and roast the leg. Make a pot-pie of the shoulder and neck. Take steaks or cutlets from a leg or loin. Stew the head and heart.

Pork is best young; it should be brought to the knife when a year old, at the farthest. Some persons consider pork as unhealthy food, but if the creature has been kept in good health, and allowed nothing but vegetables, or grain, for sustenance (with the exception of milk,) and has had plenty of fresh air to breathe and pure water to drink, it is probably as wholesome as beef or mutton—

though its invigorating power is much lower than theirs.

Within a few years the trichina having infested a number of hogs, which have transmitted their baleful effects to those who have eaten of the pork, has led to much false alarm in the matter. Their presence, however can always be detected in the raw flesh, and thus the evil be avoided. "As measly" pork they have always more or less troubled the pig-raisers. Small lumps, like oblong white pimples, resembling grains of wheat, scattered through the fatty portions of pork, being these pests. No part of any animal where these are seen is fit to be eaten.

It is good economy for the head of a large family, who has a garden, or enough yard-room for a pig pen, to buy a little porker in the spring and raise his own pork; one is sure then that it is properly fed and cared for. Of course this advice does not apply to farmers or farmers' wives, who always have plenty of corn fed pork that is healthy and nice. But those who cannot manage thus will find it for their advantage to purchase half a slaughtered pig in the early part of the winter, so that they can salt enough for cooking purposes through the next year, cure their own hams, make what sausages they desire, and try out the lard they need; beside supplying the table with roast, or baked, or broiled, or fried, for some weeks.

The spare ribs of pork are the most juicy parts for roasting; the chine, having more solid meat, is the most substantial for the same mode of cooking; the upper part of the shoulder and the cheeks, are also suitable for roasting. Steaks for frying or broiling cut from the neck, leg or loin. The legs and shoulders, and the cheeks, may be corned or pickled and smoked.

Cut the clear pork into strips four or five inches wide for salting. Be sure that it has lost its natural heat before you salt it. Procure a clean oaken, ash or maple barrel or firkin, with a cover and sinker, and stone similar to those used in your beef barrel. Then get half a bushel of rock salt for a hundred weight of pork—a peck for fifty pounds. Scatter enough salt on the bottom of the barrel to make a layer an inch thick; then arrange a layer of pork; fit the pieces so that they lie closely. Then sprinkle as much salt upon this as on the bottom of the barrel. Follow this with pork, and then that with salt, till all is packed and the upper layer is of salt. Pour in then cold water enough to cover it, and place your sinker and weight and cover. After two days see if the salt is all dissolved; if so, throw in two or three quarts more, for the pork will not keep sweet unless there is a good deal of undissolved salt among and around it. As the pork is loosened from its packing, and thus set floating, take pains to keep it wholly in the brine by means of the sinker,—it soon gets rancid and rusty if the least portion rises from the brine. It will be salt enough to use in five or six weeks, and will keep years if the

brine is kept strong by adding salt enough from time to time to keep a good body of it undissolved.

To pickle hams take for fifty pounds two quarts of molasses, and half a pound of saltpetre, with three quarts of salt, and dissolve them in two gallons of warm water. Let it cool, then pour it over the hams in a keg or firkin. If there is not enough liquor to cover them, pour in water. At the end of a week take out the hams and place the top ones at the bottom of the vessel, and the lower ones at the top; and change them thus every week till they are thoroughly pickled—six weeks is the usual time. The cheeks and shoulders may be cured in the same way.

To make bacon of pork or beef, a smoke-house is very convenient; but they can be smoked just as well in the common fire-place of some unoccupied room. Arrange the pieces along the crane, suspending them by stout strings, or hooks, about a foot above the materials to be burnt for smoke. Sawdust and corn cobs used together make the best smoke, and impart an agreeable flavor. The fire should be continued smoldering night and day, for a fortnight or three weeks. At the end of that time take them to a dark, cool closet, or put them in tight cloth bags till they are needed. It is now the most general plan to send these pieces to some establishment where creosote is used instead of smoke for making bacon, and the business is conducted on a large scale. But this simple domestic method is much to be preferred, as you are sure of having your own pork, and know that it is thoroughly cured and preserved.

In preparing clear pork for salting there is always much to trim off, and also in cutting the hams and roasting pieces a good deal to be spared, which it is well to make into sausage meat. It is a great deal of trouble to prepare the skins for holding it. A much better way—and greatly to be preferred to the method of stuffing it into bags of cotton cloth—is to make the meat into round cakes about three inches in diameter and three quarters of an inch in thickness; which should be spread on dishes or clean tables, in an airy room, till they are a little dry, and then set away with other fresh meat till needed for the table.

Sausages are improved by the addition of a third part of beef to the pork of which they are made. Chop it all together till it is quite fine. If frozen a little it will chop easier and more quickly. There is no danger of chopping it too fine; none of it should be larger than half a small pea. To season the meat, after mixing it well, (adding cold water enough to give it the consistency of dough) stir into ten pounds of the material two tablespoonfuls of fine salt, one of ground pepper, and four of pulverized and sifted sage. Before making the cakes—they must be moulded and patted into shape in the hands with cold water—it is best to fry a little of the meat to ascertain if the seasoning is right, and if needed to add more.

To try, or render the lard, cut the flakes into

inch pieces and fry them in a deep kettle over a slow fire. Dip the fat as fast as it accumulates into a perforated strainer, through which it falls into the vessel that is to hold it; an oaken firkin or stone pot this should be. The scraps—*scrappnels*, some call them—from which the lard is thus separated, if salted and seasoned with pulverized sage, make a good relish with bread and butter for any meal. Beside the leaves, all loose or coarse pieces of fat should be cut and tried in the same way for lard.

Little need be said about the care or preservation of fish, except that when fresh even greater vigilance than for meat is needed, that it do not become tainted, and that when salt it shall not rust from scarcity of brine. Dry fish, if kept in a dry place, will remain good for years.

The next chapter will be devoted to the cooking of meats and fish.

#### DOMESTIC RECEIPTS.

**PHEASANT, PARTRIDGE, OR GROUSE PIE.**—Pick and singe two pheasants, or four partridges or grouse; cut off the legs at the knee; season with pepper; salt, chopped parsley, thyme and mushrooms. Lay a veal steak and a slice of ham at the bottom of the dish; put the partridge in, and a pint of good broth. Put puff paste on the edge of the dish, and cover with the same; brush over with egg, and bake an hour; or place them in a raised crust.

**TO STEW A FOWL WITH ONIONS.**—Wash it clean, dry and truss it as for boiling, put a little pepper and salt into it, rub it with a bit of butter, as also the saucepan; put in with the fowl a pint of veal stock or water, a little pepper and salt, turn it now and then, and when it becomes quite tender, add twelve or sixteen small onions, and let them stew for half an hour; a young fowl will take one hour, and an old one three hours to stew.

**RICH MINCE PIES.**—Eight pounds of beef, one pound suet, two pounds currants, two pounds raisins, one half peck apples, two ounces ground cloves, two ounces allspice, one-half ounce mace, one ounce nutmegs, three-quarter pounds citron, one-quarter pound cinnamon, eight pounds sugar, half a gallon sweet cider, six lemons.

**CARROT PIES.**—Select orange carrots, scrape and boil them and press through a sieve; to a pint of the pulp add one quart of milk, six eggs,

two tablespoonfuls of melted butter, one grated nutmeg and sugar to taste. Other spices may be added if desired. Bake in one crust.

**RECIPE FOR A LINIMENT.**—No better liniment for bruises, on man or beast, was ever used, than equal parts of laudanum, alcohol and oil of wormwood. It reduces the swelling rapidly, if inflamed, and removes soreness like a charm. The sooner applied, of course, the better.

**TO REMOVE STAINS.**—A solution of gum arabic will remove dirt and stains from marble. Let it remain till it dries, when it will peel off or can be washed off.

#### WHEN YOU WERE SEVENTEEN.

When the hay was mown, Mary,  
In the years long ago,  
And while the western sky was rich  
With sunset's rosy glow,  
Then hand in hand close linked we passed  
The dewy ricks between,  
And I was one-and-twenty, May,  
And you were seventeen.

Your voice was low and sweet, Mary;  
Your wavy hair was brown;  
Your cheek was like the wild red rose  
That showered its petals down;  
Your eyes were like the blue speedwell,  
With dewy moisture sheen,  
When I was one-and-twenty, May,  
And you were seventeen.

The spring was in our hearts, Mary,  
And all its hopes were ours;  
And we were children in the fields,  
Among the opening flowers.  
Ay! Life was like a summer day  
Amid the woodlands green,  
For I was one-and-twenty, May,  
And you were seventeen.

The years have come and gone, Mary,  
With sunshine and with shade,  
And silvered is the sliken hair,  
That o'er your shoulders strayed  
In many a soft and wayward tress—  
The fairest ever seen—  
When I was one-and twenty, May,  
And you were seventeen.

Though gently changing Time, Mary,  
Has touched you in his flight,  
Your voice has still the old sweet tone,  
Your eye the old love light;  
And years can never, never change  
The heart you gave, I ween,  
When I was one-and twenty, May,  
And you were seventeen.



THE

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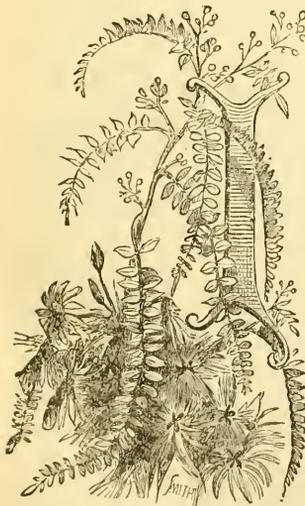
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MONTHLY.

SIMON BROWN, { EDITORS.  
S. FLETCHER, }

### FARM OPERATIONS IN APRIL.

"Than in the country, tell me where  
Men freer are from plowing care?  
Where can they sounder sleep enjoy,  
Or time more harmlessly employ?  
Do marble pavements more delight  
Than the green turf that cheers the sight?  
Or does the water of the town  
Taste sweeter than the crystal rills  
That trickle down the verdant hills?"



In this month the business of creation seems resumed. The vital spark rekindles in the dormant existences — and anon all things "live, and move, and have their being." The earth puts on her livery and awaits the call of her

lord; the air breathes gently on his cheek, and conducts to his senses the warbling of birds and the odors of new-born herbs and flowers; the great eye of the world "sees and shines" with bright and gladdening glances; the waters teem with life; man himself feels the revivifying and all-pervading influence; and his

"spirit holds communion sweet  
With the brighter spirits of the sky."

But this, though true of April, because it brings the first balmy airs and bursting flowers, is not all of *April*. Like the shifting scenes in the pathway of a good man's life, April has its clouds and tears, which succeed its genial sunshine, in chilling winds or storms of snow. But they are as evanescent as the month is fickle. The all-searching sun, strong and fervid in its new course, pours its melting beams upon them, and they disappear. Then the grass springs up, the flowers unfold, the earth opens her bosom and invites man forth to scatter seed into it, in the hope of a bountiful harvest.

The April work of the farmer is a sort of foundation-work for all the rest of the year. That which is not begun cannot be finished. Seed-time must be improved, or harvests will not succeed. Late in the morning, late all day. The laggard has no pluck. He who leads in the race is full of courage. And so it is on the farm.

April comes but once in a year, and April's work cannot be so well done at any other time as in April. Man cannot change the seasons at his will, but must perform the work adapted to them while they remain, or suffer the loss that is quite certain to follow.

The constant desire of the farmer is for more fertilizing materials in order to bring more profitable crops. There are two ways

of accomplishing this, which have been greatly overlooked.

1. The working of the soil. Growing plants have many roots, and as they increase in vigor are constantly throwing out new fibres in every direction. These fibres are in search of food. If the food lies in masses, only a few of the roots find it and the plant does not grow. But if the food is scattered about and thoroughly mingled with the soil in a finely pulverized condition the roots will find it wherever they may go. A peck of ashes may lie in the centre of a square rod of ground, and a few plants near it may be much improved, while those on the outer portions of the square would receive no benefit at all. Scatter the peck of ashes over the whole square and mix thoroughly with the soil, and the probability is that every plant on the square will be essentially benefited by it. Working and *mingling* the soil, is absolutely manuring it, because, first, it enables roots to find the food, and secondly, because it places the soil in a condition to be fed by the atmosphere. If *three-fourths* of all the substance of plants comes from the air, as is asserted by many scientific men, it can readily be seen how important it is that the soil be free from standing water, is fine, and all mingled together.

2. The next point greatly overlooked is the imperfect condition in which manure is applied to the soil. It is altogether too coarse and too unevenly distributed. A mass of one pound weight, finely divided and mingled with the soil, would probably exert more influence than two or three pounds lying in lumps.

Plants do not feed upon substances in solid form as cattle do upon hay or roots, but upon nutriment in the form of a liquid, and this liquid must come from matter dissolved from innumerable small particles which are lying about the roots of plants.

The way then to increase the manure, is by a more thorough breaking and mingling of the soil and of the fertilizing agents from the stalls.

The next important item in profitable farming is to have good seed. To accomplish this we must have a home-grown product; raise the seed ourselves or procure that grown in our own neighborhoods by persons who understand the business. Mr. Gregory, of Marblehead, in his excellent report upon Vegetables

to the Essex County Society says:—"There can be no good vegetables without good seed, and earnestly urges raising among ourselves; says it will "annihilate the vast intervals that usually exist between the producer and the planter, and keep a wholesome responsibility within easy access of the purchaser."

We would caution all, however, not to engage in raising seeds, even for the use of a single farm, without first consulting those who know what good seeds are, and are skilful in producing them.

The next step to success in the April work is to *sow early*. Spring wheat and oats ought to be put upon soil that can be handled so as to get the crop in by the middle of the month, certainly; by the 10th or 12th would be better still. They need *April* influences in order to secure the fullest influences of May and June. And so of grass or any other seeds. Whatever the period of sowing is that is best adapted to them, sow them *early* in that period, whether it be April, May or July.

Many a crop is puny and unsatisfactory, even on tolerably good land, because it was not seeded in season to receive the peculiar influences it needed during its early growth.

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*For the New England Farmer.*

#### THE GARDEN IN APRIL.

April brings us, here in New England, to the commencement of active out-door operations on the farm, and it is well if we have in the past months remembered the garden, and have done what we could by way of preparation for the planting season; and it will be well if in the press of other spring work, the garden is not neglected. Labor judiciously laid out in the vegetable garden returns a greater profit than a corresponding amount expended on other portions of the farm. Not only does labor in a vegetable garden pay, but labor rightly directed in ornamenting the home of the farmer and rural resident, also pays,—if not directly in dollars and cents, the same as a fine crop of corn, oats or potatoes,—indirectly by adding to the money value of a farm or place, by increasing its attractiveness. Not only this, it also imparts to rural life something of that attractiveness which draws so many to the more thickly settled communities, villages and cities. But how few farmers look upon gardening and home attractions in this light. Their good wives and families would appreciate the products of an early, good garden, and the handsome and neatly kept surroundings of the house. It is for the benefit

of the wife and family that we have so often urged the importance of the garden, and again say if you *cultivate nothing else have a good garden*. As a class, farmers are too much meat and meal-eaters, and to whatever else may be laid our lack of taste for vegetables, it certainly is not because they are not healthful, economical and enjoyable that better and fresher vegetables are not found on our tables at all seasons of the year.

A garden, to give its greatest profit, should have a little variety in soil, and the whole of it well drained, either naturally or artificially. It should also be protected from prevailing cold winds. The soil should be made rich and deep, not by bringing too much cold under-soil to the top, but by working and mixing with it suitable fertilizers, keeping the best soil at the surface and bringing but a little of the deeper soil up to become ameliorated.

**ASPARAGUS**—Clear off straw and litter, forking in the fine, using care not to injure the crowns of the plants. A sprinkling of salt worked in with the manure will be beneficial.

**BEANS**.—Little is gained in hurrying the seed into the ground, as the bean is a tender plant, and will not endure frosts. The soil needs to get well settled and warmed before they will grow. Prepare poles, if not already done. Do not cut them too long, eight feet is plenty long enough,—six feet and a half out of ground; cut them to an even length, and let them be straight and smoothly trimmed.

**BEETS**.—These are hardy, and the seed may be sown as soon as the ground can be worked well. The seed is hard, horny, and is sometime in softening so as to germinate. It would be well to separate the seed. That which is generally called a single seed is in reality several seed joined in a bunch, and unless separated will grow several plants.

**CABBAGE TRIBE**.—Borecole, or Curly Kale, Broccoli, Brussels Sprouts, Borage, Cabbage and Cauliflower, all are hardy and will endure with little protection, considerable cold, and may be sown after the ground is well settled and dry, or may be sown in the hot bed, when desired for transplanting. All these make excellent greens while young.

**COLD FRAMES**—Except when the weather is cold or rainy these may be left open.

**CRESS** (*Pepper grass*).—Sow as early as the soil and weather will permit, thickly in six inch rows. It soon comes up and the leaves are fit for a salad in a short time. Give warm soil.

**GARLIC**—A vegetable but little used, yet to those who are fond of onions in a milder shape, this may be desirable, its flavor being somewhat different. Sow seeds in rich, mellow soil, or set out divisions of bulbs six inches apart, in drills. Treat like onions.

**HOT-BEDS**—For general purposes farmers will find hot-beds quite as serviceable, made early this month as if made earlier. Direc-

tions have so often been given for making them that there is little need to repeat them here. The main requisites are a frame and glazed sash set over a bed, two to three feet of manure, for heating material, covered with a few inches of rich fine soil to furnish a foothold for the plants, or to deposit the seed in. The seed should not be planted till the heat recedes a little from its highest point, as it will go to 100 degrees or over, and prove fatal to the vitality of seeds.

**LEEKS**—Sow when the soil is open and warm; the seed may be mixed with onion seed, and the plants treated alike till the onions are pulled, when the leeks are left to grow.

**LETTUCE**.—Sow in hot-bed and in the open air as soon as the ground will admit. Varieties are numerous; some preferring one to another, so different tastes may be accommodated.

**MANURE**.—For the garden the manure should be free of weed seeds. Compost, stable manure and muck, half and half, well decomposed and fined, is the best general fertilizer. Liquid manure is one of the very best inducers to rapid growth. Sink a cask in the ground in some out-of-the-way corner, but of convenient access, and into it deposit all the house slops and any other liquid manure. Keep it well covered, and reduce it as applied.

**ONIONS**.—Sow seed in rich well prepared soil. Yellow and white varieties are usually better flavored than the large red, but the potato onions are the best of all for table use. These are offsets from bulbs, which should be planted one foot apart each way, in rich, mellow soil, and the soil be kept loose and clean. Top onions and "rareripes" are set in similar soil, three to six apart, and rows ten to twelve inches.

**PARSNIPS**.—Sow in deep worked, rich soil, in drills, eighteen inches apart, thinly covering the seed half to three-fourths an inch and firm well. The seed is a long time coming.

**RADISHES**.—Sow in warm, rich sandy soil, protected from cold; water with liquid manure, to induce rapid growth; a slow-grown radish is usually tough and woody. Sow seed in any vacant place. Sow at intervals for a succession.

**SEEDS**.—So far as possible test all before using. Sown in wet cotton in a glass or in moist soil, kept warm, they sprout in a few days, at most.

**STRAWBERRIES**, and other small fruits may now be planted out, pruned, tied up, dug about and manured, if not already done.

**TOMATOES**.—Sow seed in hot-bed, or in boxes of soil, to be kept in the sunny window of a warm room. Gen. Grant, Dwarf Prolific, Crimson Cluster, Feejee Improved, King of Tomatoes are the best.

**TOOLS**.—A few durable, light and good tools ought to be an appendage of every garden,

and these should be kept in perfect working order. Clean them every time after being used, as soon as done with, and put away in the tool room, under cover, where they will keep dry.

W. H. WHITE.

*South Windsor, Conn., 1870.*

*For the New England Farmer.*

#### ARRANGEMENT OF BARNs.

DISCUSSION BY THE RANDOLPH, VT., FARMERS' CLUB

W. W. Walbridge. Twenty years ago there were but two barns with basements within two miles of this village. They are convenient for saving manure, and are economical because they afford additional room without increased expense in covering. Formerly little was done to save liquid manure, now every good farmer uses some absorbent to utilize the whole. Where one roof covers all the fodder and shelters all the cattle much time is saved in "doing the chores."

Rufus Nutting. In building barns reference should be had to the comfort of cattle and the convenience of those who tend them. The size of stables should be in proportion to the number of cattle kept in them. An animal's body will warm a space containing five times the number of cubic feet that its body occupies. I would not heat my stables to 60° or 65°, as is recommended by some, but would never have frost in them. I would never allow animals to stand on an inclined floor, as it is unnatural; prefer grooves between the planks to allow the liquids to run off.

Elijah Blodgett. Were I to build again, would clapboard my barn as much as my house; would never hang a door on rollers at the top, as they are continually getting out of order; would have a good number of windows, as light is conducive to the thrift of all kinds of stock; would finish off a root cellar in the basement. In some localities, would arrange a driveway over the beams, but on level land the profit of this would not pay the expense of construction. Roofs covered with slate will last for generations, but in these matters farmers must be governed by the length of their purses.

G. F. Nutting. I know of scarcely a barn in this vicinity that fairly answers the purpose for which it was built. On the Winooski river there are some of the nicest barns to be found in this State. My ideal barn contains the greatest amount of storage for the surface shingled, and has an upper driveway, that the crops may be pitched down into, rather than up on to the mow. The proper arrangement of the stables would be not so much for the convenience of the stock as for the man who owns it. Cattle are just as comfortable if their food is carried three rods through the mud to them, but the one that carries it is not.

J. W. Carter. Our barns are too far from our houses; it is irksome business to wade

rods through the snow to do our chores. All animals love the sunlight, and the more windows the better. When the sun shines, my lambs crowd together in it, and seem really to enjoy it.

Samuel Howard. To obtain good crops from our exhausted soils, we must save all our manures, hence we must have basements. I would as soon think of building a house without a kitchen as a barn without a basement. It should be about eight feet deep, and then if one is lucky enough to own a muck bed, he can tip up his cart and unload without danger of breaking either the cart or his head. I would not undertake to finish a root cellar in the basement. It is difficult to make them sufficiently warm to be of use; the frost heaves and cracks the mortar; the doors swell and will not shut, leaving crevices to let cold air in, and your roots freeze. A stable for cows should contain a platform four feet five inches long, for the cows to stand on, then a drop of five inches; it should be roomy and well ventilated, not kept too warm by steaming manure or the breath of the cows.

J. McIntyre. Stable floors should slant a little backward. I believe it natural for cattle to stand with the head up hill. I frequently notice my cows standing with hind feet off the platform, four inches lower than their forward feet; and it seems to rest them.

A correspondent asks the following questions:—

1st. How to freeze water running at the door to fill an ice closet?

2d. Can anything be saved by feeding corn in the ear to store cattle, instead of grinding it?

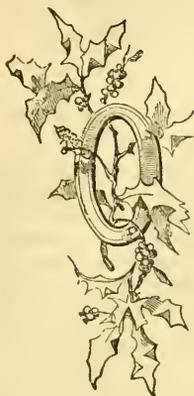
3d. Which are cheapest, tin sap tubs at 33½ cents or good painted wooden ones at 25 cents?

Answers solicited, addressed to the Secretary of Farmers' Club, Randolph, Vt.

J. J. W.

LABOR IN AGRICULTURAL COLLEGES.—Prof. Johnson, of the Maine College, says:—"That the labor system is a benefit to the students, is very apparent. Aside from the amount earned, the labor performed keeps up industrious habits, promotes health, is to a certain extent a source of instruction to the student, and prevents that wide disseverance from manual labor and distaste for it which is so observable in the graduates of our old colleges. Besides, we think it plainly observable, that a few hours of labor each day makes the student more quiet and studious during the hours devoted to study. The time spent in labor would in most cases be spent in idle talk and in various kinds of recreation, perhaps of dissipation. Labor is the 'safety valve' for the overflowing animal spirits. There has been observed a remarkable willingness on the part of the students to engage in all the kinds of work required to be done."

## MEADOWS AND SWAMPS.



UR fathers, in the early part of the seventeenth century, settled near tide water, at Boston, Dorchester, Charlestown, Newton and Salem. As their number increased, they sent out parties into the surrounding country to select suitable places for settlement. They pursued their way through pathless forests, wading the swamps, crossing the bridgeless

streams, and climbing hills, and when they found a level tract cleared of trees, which had been cultivated in corn by the Indians, they selected it as the centre of a settlement, especially if it was near a stream of water. They inferred that if it had been cultivated by the Indians, it must be good land. Did not the Indians know what was the best land? So they settled on the borders of these old, worn-out plains, and planted their corn.

They had but few implements and those of the simplest form—clumsy hoes, and wooden spades, or shovels shod with iron, were almost the only tools they had.

Of course their cultivation was of the rudest kind, and it is no wonder that their crops were poor. But they were observing men, and they soon learned that although the lands they first planted were easy of cultivation, yet they would yield but little reward for their labor.

As their means increased and they obtained cattle and horses, and built themselves ploughs and carts, they began to cut down the forests and plant where the soil was enriched by the decay of vegetables for centuries. This virgin soil returned large crops, with even the slightest cultivation. They used but little manure, and when the soil began to show signs of being exhausted, they cleared another field and transferred their cultivation to that. But as in every new country, so in this, the process of exhausting the soil came to an end; and farmers learned by hard experience that if they would have the soil feed them they must feed it; yet many of them have not yet learned this lesson, except in theory, and so they continue to try to force a hard, dry and exhausted

soil to yield a crop without furnishing it the means of doing so.

Now Nature has done better for them than they know. There is virgin soil all around them,—that is, soil made up of the *debris* of vegetable matter,—that has not been exhausted by constant cropping, accumulated in the meadows, swamps, and ponds. Almost every farm in New England has rich mines of this material, which have not yet been worked, and many of them inexhaustible mines, capable of making their owners rich and thriving farmers. It has been truly said that he who has a peat bog cannot be called a poor man. Now this mine of wealth may be worked in two ways.

One way is to transfer it to the dry and hungry soil in sufficient quantity to restore the waste which has been caused by long continued cropping, either directly, or by composting it with manure or other materials, and mix it with it by means of the plough and the harrow, until a deep and mellow tilth has been obtained to sustain the growing crops, and then by means of mineral materials, restoring what the soil has lost.

The other way, and that to which we would specially call attention at this time, is the draining and cultivation of the meadows and swamps themselves. Turn out the worn-out soils to pasture, or allow them to grow up to wood, and give your strength and attention to your low grounds, which have never yet been broken by the plough. When we see a farmer employing his leisure in digging ditches, or putting in tiles, or spreading sand or gravel on his meadows, we set him down as a thriving man, as one who will succeed. He knows where his labor will pay. Most of these low lands may be drained. Let them be well surveyed; ascertain where is the best out-fall, and how deep it must be made, and then set about it with a will, even if the main ditch has to be made four or five feet in depth. Having made the main drain, then make as many side drains as may be necessary to take off all the water standing within two or three feet of the surface. Tiles will be best in most cases, for the side drains. These will take up no land, and will be out of the way of the plough and the mowing machine. This is probably the most effectual and permanent method of reclaiming these lands. The draining accomplished, the subsequent treatment must depend

upon circumstances. In some cases, top-dressing, seeding and harrowing will be best. In other cases, ploughing and cultivating hoed crops until a good tilth has been obtained. Where the soil is sufficiently dry and free from stones and stumps to allow of the free use of the plough, this will generally be found the best method, and will most speedily destroy the sour and worthless grasses. The ultimate object of reclaiming such lands is to get them into a condition to yield large crops of good grasses, as this is in general the most profitable use to which they can be devoted.

During the process of reclaiming, potatoes will generally be found the best and most profitable crop for cultivation. Such lands when once brought into good grass will be found the most profitable land on the farm.

After the water grasses have been effectually rooted out, they will not require frequent ploughing, but should be kept in good condition by top-dressing with stimulating manures as often as may be required. Good loam composted with air slacked lime, or plaster, will be found a good top-dressing once in two or three years.

The products of such lands will be found the best means of enabling us to keep more stock, and renovating our drier and worn-out lands, and upon them we must depend for accomplishing this most necessary purpose. Indeed we see no other means by which it can be done permanently. Commercial manures may aid us in the work; but our old lands are exhausted not only of mineral elements of fertility, but of carbonaceous elements as well, and they need a supply of stable manures and decayed vegetable matter to yield the humus, the staple food of plants. This must be obtained by feeding to stock the grasses from our low lands, as the basis of our farm improvement. To this we may add superphosphate, bone, lime, plaster and ashes, and by a persevering use of them we may again take large crops from lands that now yield but a scanty reward for our labor. But we must begin at the bottom and first reclaim our low lands.

These lands, well reclaimed and enriched, are the very best soil for the cultivation of strawberries, cabbage, celery, and many vegetables for the market, and the market gardener will find in them a source of profit for which he is looking in vain in dry and exhausted soils.

Such lands demand immediate, persistent and skilful attention, and it is through them that the labor of the farmer is to secure a satisfactory reward.

*For the New England Farmer.*

#### A VERMONT FARMER.

Young people who have been brought up on farms in New England are much in the habit of contrasting unfavorably the profits of the farm with those of the trades and professions; and many New England farmers contrast as unfavorably their advantages with those of the tillers of the prairies of the West. They dwell on the rough surface and hard soil of their farms, and the meagre returns which sometimes so poorly rewards their toil and risks and investments, without duly considering the advantages they enjoy of proximity to market, variety of products, good society, healthy climate, &c. Though here in Vermont we are more remote from cities and manufacturing towns, than the farmers in some of our sister States, it is believed that the industry and self-denial submitted to by the pioneer settler at the West, would be rewarded as richly here as there. I think there is danger of indulging these discontented feelings till we come to lose faith in the fact that here, as elsewhere, industry, economy and a good name are the best capital,—the surest means of success; and that labor, when judiciously applied to farming, is sure of an ample reward,—as sure and as ample as when applied to the speculative and distributive departments of trade, in which men hope to avoid the edict that "by the sweat of thy face shalt thou eat bread."

As an example of the reward which the soil of Vermont offers to the exercise of persistent industry, applied and guided by intelligence and an honest and faithful purpose, I will give you a brief history of one of your subscribers, Mr. JOHN QUINLAN of this town.

He was born in Tipperary county, Ireland. His father, several of his uncles and other near relatives were either stewards or herdsmen for large landed proprietors, and hence he was early in life familiarized with stock breeding and stock dealing, while his moral habits were influenced by the teachings of Father Matthew, and the direction of his mind by the eloquence of Daniel O'Connell, to whom he often listened.

Coming to America at the age of twenty, with scarce a shilling in his pocket, his good sense and mother wit soon won for him the confidence of men who were able and willing to give a *good word*, which is all anybody ever gave him; though I see I am about to perpetrate an Irish Bull, since even that was never given, as he most emphatically earned it by his faithfulness and punctuality in all the engagements of his early life.

Among his first homes about the time of his

marriage, which was soon after his majority, was the family of H. S. Morse, of Shelburn, a farmer of rare taste and energy, well known as President of the Vermont State Agricultural Society,—with whom he spent several years. He was next employed by Hon. Ezra Meech, one of the largest land-owners and wealthiest farmers in the Champlain Valley. Here he remained, either for wages or as a tenant, until after he had accumulated not only a snug little sum of money, but a household of promising boys, when he made a purchase of a small piece of land,—less than fifty acres,—and commenced to make himself a home. Mr. Meech continued to employ him to make large purchases of live stock for his broad pastures, and with him he remained as a tenant, retaining his first purchase of real estate, until he had an opportunity to secure one of the best grazing tracts in the neighborhood, when his first purchase was sold.

With an invalid wife he moved on to his new farm, giving shelter to an older brother and family who had followed him to America. But his prospects were soon darkened by the destruction of his buildings by fire, which originated from a pile of ashes set in an outbuilding. This brother lost his life in this fire, in his daring attempt to stay its progress, and his sister, at the peril of her own life, rescued three little children, so badly burned that only one of them survived, which was adopted into the family of the bereaved uncle.

Notwithstanding the outlay necessary to provide a shelter for a large family, Mr. Quinlan was not disheartened, but repaired the wastes of the fire as well as he could, and went forward with the cultivation of his land. Soon afterwards, as he raised stock of his own, he took it to Cambridge market, and gradually added to his other business that of a drover, in which he of course met with the sharp competition of those who were already established in the business, so far at least as he purchased of others. But here, as in the management of his farm, his good judgment, indefatigable industry, fair dealing and honesty of purpose secured the respect of his associates at home, on the road, and at market.

Without detailing more minutely his business history, we will merely add that he now owns in "fee simple" one thousand acres of Champlain Valley soil, embracing meadow, pasture, and woodland, and that his home is in the midst of one of the most prosperous and enterprising communities in Vermont, and one which appreciates and honors him as a citizen and neighbor,—an appreciation and honor that has been manifested by entrusting him with public business and official duties.

Though not sympathizing politically with the party in power, he sent two of his sons into the army, to sustain the free institutions under which he had so signally prospered. Adhering to the religious faith of his fathers, he has been liberal in support of the services

of the church in his neighborhood, which may be said to have grown up under his fostering care.

And now, young men of Vermont, you who have been brought up farmers, allow me to ask what advantages Mr. Quinlan enjoyed or now enjoys, of which you are deprived? And also, What do you think you will be likely to gain by changing location or business? W.

*Charlotte, Vt., March, 1870.*

#### MAPLE SUGAR MAKING.

The great secret of sugar making is in being prepared when the season opens; so contriving the operations of manufacture as to make them the least laborious; to care for the preservation of the forest, and save all the sap that is taken from the trees. There is probably no greater source of loss in sugar making than the waste of sap, and the waste usually comes from leaky store troughs, neglect, carelessness in gathering, and small buckets. How often does the farmer find, when going to the woods, "everything running over?" How long they have been doing so is not known, and therefore no correct estimate of loss can be made. But we can determine with some accuracy the loss attending the use of small vessels. We will suppose that in one-half of the camp tin pans, jars, or troughs are used which will hold but six quarts each, and in the remaining half buckets which will hold sixteen quarts each. Now, when the gathering has been neglected until the larger buckets are full, which will ordinarily occur several times in a season, there has been a waste of ten quarts at each of the trees having the small vessels, and supposing that number to be two hundred, there has been a loss of two thousand quarts, or five hundred gallons of sap, which, at a safe calculation, would have made *one hundred and twenty-five pounds of sugar.*

A number of years ago we knew a man who was particularly noted for the amount of maple sugar he made every season per tree, so much so that it was asserted he could get more sugar out of creek water than others could out of sap. When this man was asked for the secret of his success, he replied, "*I save all the sap.*"—*Ohio Farmer.*

**METALLIC DOOR-MAT.**—A new door-mat or scraper, has been recently invented in England. It is made of cast-iron, steel, or other similar metal. Its form is that of a trellis, the upper edges of which are sharper than the lower. It can be laid on a box, to receive the dirt which falls off from the shoes. The openings of the trellis may be of various sizes. The invention seems likely to be of use; it is very simple, and, no doubt, will remove all dirt from shoes or boots more effectually than the ordinary scraper.—*Manufacturer and Builder.*



MOUNTAIN SEEDLING GOOSEBERRY

The statement made by J. B. Moore, Esq., in his essay on the culture of small fruits, recently published in the *FARMER*, that the fruit growers of the town of Concord, situated twenty miles from Boston, received the past year, after deducting commissions, about eight thousand dollars, will be likely to arrest the attention of farmers and others in the vicinity of good markets. Mr. Manning of Reading, Mass., states that seven dollars and fifty cents per bushels were eagerly paid, for bottling, by a Boston Fruit Preserving Company, for a lot of fifty bushels of the larger varieties of currants, and thirty-five cents per quart were readily obtained for the Cherry and La Versailles varieties, at retail. For the purpose of suggesting the more extensive cultivation of small fruits by those within the reach of good markets, we present this week a cut of a gooseberry, which was originated several years ago in New Lebanon, N. Y.

The Gooseberry likes a good, deep, moist soil, says Mr. Fuller in his *Small Fruit Culturist*, but one that is not really wet. A rich soil is also essential, because it is only by keeping up a vigorous growth that large fruit and abundant crops can be secured. An open, airy situation is better than one that is confined, and in many sections of the country the north side of a hill would be far preferable to

a southern exposure. The extreme heat of summer has been the greatest impediment to the successful cultivation of the English Gooseberries, and to counteract this, the coolest available situation should be selected. Also, in enriching the ground, use no fermenting manure; apply none but that which is old and well rotted. Cow manure is far better than horse manure, particularly on light, warm soils. Mulching the plants in summer is very beneficial, and if tan bark or spent hops from a brewery can be obtained, they should be used in preference to hay or straw. Good culture is required to produce good crops, the same as with other fruits.

Mildew is the great trouble in growing the gooseberry. Old plants are more subject to this disease than new ones. The following remedies are recommended. Scatter flour of sulphur over the bushes soon after the berries have set, and repeat the application occasionally until the fruit is ripe. Water the plants with strong soap-suds, or dissolve one pound of potash in a barrel of water, and then sprinkle the plants once a week with it. Soak fresh mown or dry hay in brine for twelve hours; then cover the entire surface of the soil about the plants with this, as a mulch. If hops, tan bark, or other mulch has previously been applied, then sprinkle it with salt; a single handful to each plant will be sufficient.

### FARMER'S CONVENTIONS.

In Massachusetts—New Hampshire—Maine—Effects of—A new spirit aroused—Men find new powers in themselves—How lasting impressions are made on the mind—Value of a New Hampshire meeting—New practice in hay making approved—Capt. Taylor's statement.

The winter meetings among farmers which have been held in most of the New England States, for several years past, have met with general favor, and are producing excellent results. Nothing that has yet transpired, having for its object the promotion of our agricultural interests, has accomplished so much in so short a space of time. The meeting of the Massachusetts Board at Amherst last winter, and at Pittsfield the present season, brought out an amount of talent and interest in the cause that proved the existence of an under current of thought, comparison and experiment, which surprised the most sanguine.

The meetings of this season and of last winter, at Manchester, N. H., under the management of the officers of the State Agricultural Society, were distinguished by the attendance of large numbers of people, who manifested a deep interest in the objects which were brought under consideration. All the sessions had attentive audiences, and many farmers who had rarely, or never, perhaps, spoken in public, took part in the discussions, and gave them great force by their practical illustrations and statement of experiences.

This single point accomplished, and no other benefits derived from the gathering, would have been one of signal success. Our interest is usually in matters in which we are personally engaged. We may listen attentively to the eloquent teachings of others, and be gratified and instructed, and bear away in the memory many pleasing and useful facts, but they have little weight compared with what they would have, were we in turn, to enter the lists ourselves, express our own views and press their truthfulness and importance upon others. This is what will excite new thought, enliven the imagination and fit the mind to be impressed by facts presented to it.

Many a man has returned to his home from these winter meetings with the consciousness that he possesses powers unknown to himself before, and this consciousness elevates him in his own estimation, as well as in that of his

friends. They are, to him, *new powers*. Of what use would the most important thought be to the world, if there were no power of expressing it, or the most ingenious device for saving labor, building houses, or ships, or railroads, or anything else? We have no doubt that the late meeting at Manchester will be worth more than the gift of \$50,000 in gold deposited with the Treasurer of the State.

The meeting of the Maine State Board of Agriculture, at Augusta, last winter, that at Bangor in the autumn, and the recent meeting at Lewiston, are all of the same character, and will have an immense influence upon agricultural interests.

At Lewiston it was pleasant to observe how every department of the farm found some able advocate, and how thoroughly many theories had been tested, and were approved or condemned. For two or three years past occasional paragraphs have appeared in the papers, stating that grass which is merely wilted may be housed and preserved in good condition, and that, so cured, it retains its *grass qualities*, and is some ten to twenty-five per cent. better than when cured in the old way.

It was not generally supposed that this new process had been thoroughly tested by any New England farmer, or that the practice would ever become general. But in the meeting at Lewiston, a dozen persons expressed their belief that this process was the *true one*, and stated their experiences in curing grass in this way. Some of them had been in the practice of curing their grass so for years. One of them Capt. TAYLOR, of Winthrop, as may be seen by our report of the meeting, gave minute details of his hay-making for ten years in succession, and after all this experience, stated that grass cured by wilting only, and then stowed in large quantities in tight barns, is worth twenty five per cent. more than grass made into hay in the old way.

In a similar manner the modes of managing several other crops passed under review, and old and new practices were compared, and approved or condemned according to the convictions of the speaker.

We trust these meetings will be continued. They have not yet reached the class that needs their influences most. Progressive men, those who make the same number of acres support one more animal each succeeding year, who

read books and newspapers which treat of their profession and are proud of their calling, have made up most of the audiences so far. The good influence of these winter meetings must be extended, until the most indifferent now, shall become among the most zealous.

#### NEW PUBLICATIONS.

SEVENTH ANNUAL REPORT OF THE TRUSTEES OF THE Massachusetts Agricultural College, January, 1870.

To an encouraging and hopeful review of the past years' operations of this institution, are added a Catalogue of Trustees, Overseers, Faculty and Students, the Course of Study and Instruction, Financial Statement, &c. The Junior class numbers 35, the Sophomore 41, the Freshman 24, Select Class 19; total 119. While it is regarded as desirable that the students should go through the regular four years' course of study, provision is made for the instruction of those who are unable to do so, in any of the studies for which they are qualified, during a single term or longer, as they please. We think this is a very important feature in the college. To a great number of farmers' boys the college thus becomes practically an academy or high school. Here one can spend the winter months, or any other time at his command, and enjoy the advantages of the apparatus, the professors, the lecturers, &c., which the institution affords, and thus with little expense of money or time, may have put into his hands the "key to the door of knowledge," which President Clark says in his report is the great object of all instruction in the college; or at least may get the key to the door of some particular branch of knowledge. If a young man wishes for the key to the door of chemistry, Dr. Goessmann will review his lessons and illustrate the principles of the science in the college laboratory; if he would open the door that leads to a knowledge of the diseases of domestic animals, Prof. Law will direct and aid his studies by all the appliances enjoyed by those who pursue the regular course; if he wants instruction in Botany, President Clark himself offers his services as instructor, with the use of an extensive herbarium and of the Durfee plant-house, with about one thousand live and growing specimens; and the same may be said to those who desire to make a specialty of any other science embraced in the regular course.

The students of the regular classes are required to work six hours a week without compensation, and are allowed to work, at ten to twenty cents an hour, as much as they please, provided their studies are not neglected.

Among the results of ordinary operations on the college farm of 384 acres, during the past year, President Clark mentions the laying down to grass of about fifteen acres, the hay crop of one hundred and fifty tons, seven hundred and fifty bushels of corn, six hundred of oats, and six hundred of po-

tatoes. The College now owns good specimens of the four principal breeds of cattle. The *Short-horns* are represented by a bull, Mountain Lad, bred by Augustus Whitman, of Fitchburg; a cow, Young Acacia, bred by G. Munson, of Huntington; a heifer, Yarico 57th, from the herd of Paoli Lathrop, of South Hadley; and another, Autumn Rose, from that of Phineas Stedman, of Chicopee. The *Devons* are from the stock of E. H. Hyde, of Stafford, Conn., and consist of a bull, General Lyon, and two cows, Gem 3d and Winona 2d. The *Ayrshires* are a bull, Colfax, bred by H. S. Collins, of Collinsville, Conn.; and a heifer, Lulie, bred by H. F. Hills, of Amherst. The *Jerseys* consist of a bull, Essex, from the herd of Charles G. Loring, of Boston; a bull calf, Enterprise, bred by James Thompson, of Nantucket; and a cow, Lucy, from the stock of Henry Cobb, of Amherst. Besides the above-named, thoroughbred animals, the College has about forty natives, mostly cows, and steers designed for slaughter. There are also upon the farm twenty-five fine Southdown sheep, from the stock of Thomas Buffum, of Newport, R. I., and twenty-four swine of the Suffolk, Berkshire and Chester County breeds. The teams consist of two pairs of oxen and five horses.

Much other work has been done in underdraining, road-making, planting trees, vines, &c.

Students pay term-bills to the amount of \$54 per annum, and the absolute necessary cost of a residence at the institution for a year, aside from clothing, it is stated, will not exceed \$250.

THE AMERICAN HERD BOOK, containing Pedigrees of Short-horned Cattle, with Introductory Notes, by Lewis F. Allen. Vol. IX. Part I.—Bulls; Part II.—Cows. Buffalo: Warren, Johnson & Co. 1870.

The disposition that has been manifested by agricultural societies to confine their premiums for thoroughbred stock to animals with a herd-book pedigree, and the superior price which such animals command, will undoubtedly excite a greater interest in herd-books than has heretofore been manifested by cattle breeders. The present volume contains about 5386 pedigrees, a much larger number than any previous volume, and about the same as that of the last volume of the English Herd-book. American Short-horn breeders are congratulated on the increasing popularity and profitableness of their herds, and Mr. Allen says, "It has been conclusively ascertained that our American breeders have fully maintained, if not improved the quality of their stock over those of the same tribes and strains of blood retained in England. Some of the most eminent among English breeders have, in several instances, sent to America for Animals descended from some of their own choice tribes, years ago imported here, with which to re invigorate the blood of their native herds. Such facts settle the question, not only of the adaptability of our country to the increase and thrift of the cattle themselves, but that our American breeders possess the skill and ability to develop them in all the nobility and excel-

lence of which their race is susceptible. So well established have become their merits in all parts of our country where good grasses abound, that no hesitation is now indulged by those who want the best breed of cattle for general purposes, to select the Short-horn as fitted for their uses. The future demand for them, as our broad Western country increases in settlement and cultivation, must be almost illimitable. Never were the prospects for their sale so promising as now."

**THE AMERICAN BOTANIST AND FLORIST:** including Lessons in the Structure, Life, and Growth of Plants; together with a Simple Analytical Flora, descriptive of the Native and Cultivated Plants growing in the Atlantic division of the American Union. By Alphonse Wood, A. M., Author of the Class book of Botany, &c. A. B. Barnes & Co. New York and Chicago. 1870. 664 pages, price \$2.50, post paid.

Our acquaintance with the author's Class Book of Botany, and a personal knowledge of his industry and devotion to his favorite science, have prepared us for a favorable opinion of the more elaborate volume, of which the above is the title-page. By avoiding repetitions and otherwise economizing space, it was his purpose in preparing this work to furnish the student in botany with a complete manual within the compass of an ordinary duodecimo volume. Nearly 4000 species of plants are defined, and the text is illustrated by a large number of cuts. The volume is supplied with Latin and English indexes, glossary, &c.

*For the New England Farmer.*

#### "TERRITORIAL EXPANSION."

The time has come when such books as "Ten Acres Enough" seem to be considered all "bosh," and we see the notice of a book taking off the absurdities of such writers, entitled "Five Acres Too Much."

While the impracticability of the teachings of these writers is evident, the impracticability of making it profitable to cultivate so much land as we do, in the manner we do, is still more apparent. Another fact is also apparent,—that an entire change in our farm operations is required to make farming a respectable business, when farms are offered at less than their buildings are worth, and that upon a glutted farm market; while about every boy who "knows enough to go in when it rains," leaves the worn-out ancestral acres for some mercantile, mechanical, or professional calling.

I have just been reading a suggestive article from an 1866 FARMER. I can't tell the exact date, as the article was cut out. It is entitled "Farming on a Small Scale," by which the author, "P. C. S.," East Bethel, Vt., evidently meant cultivating a small surface; as I judge the profits were larger than most of our "large farmers" can obtain. "P. C. S." did not give his neighbor's name, as that modest individual preferred hiding his light under a bushel. But here is what he says: "His farm consists of only seven acres, yet the produce of that seven acres" (he says nothing about

pasturing) "last winter, carried through, in the best manner, forty sheep, two cows, one horse, and he thinks he had hay enough left to have wintered two cows more. This winter he has fifty-two sheep, one horse, one cow, and one yearling, while one acre of his land was laid down to grass so late this spring, that it produced nothing, no grain being sown." And he goes on with some of the details of his management. (Wouldn't it be well to republish that article, Messrs. Editors?) And wouldn't it be well to hear from you, now, Mr. "P. C. S.?" "Such farmers," says "Remarks," "are the pride of New England."

In the September No. of the *Atlantic Monthly*, in an article entitled "Confucius and the Chinese," the author, probably Mr. C. C. Coffin, says: "Farms are small, of one or two acres; and each family raises on its farm all it consumes." In regard to the strict correctness of all these statements, doubts may be entertained by some; and no one wishes the people of this country to come down to the Chinese standard of living. Still, in the main, these statements are doubtless correct, and it requires something to live, even in China; and instances can be pointed out in every town, where immense crops are raised from a small farm, with more profit than is obtained from much larger ones.

However, the question is not altogether "what size shall a farm be," but rather "to how high a state of fertilization and cultivation should a farm be carried?" One man may be able to carry on advantageously a hundred times more business than another; and one piece of land may have a soil which will make a higher state of cultivation more profitable than another. A very lechy soil may, in some cases, be manured less heavily than a more retentive one, for the good reason that the fertilizing properties contained in the former are more likely to be carried below the reach of plant roots. Such soils may be manured lightly and often, and medium crops obtained with greater profit, than by the process of very heavy manuring, and larger crops. At the same time most of our cultivated soils may be made to produce very heavily, with more profit from an acre with a double crop, than from two with a single one.

Now, suppose I have a three acre lot, the soil being alike throughout, *naturally*; and with a full average capacity for the production of grass. Supposing the lot to be equally divided into three parts, we will say that one of the acres yields two tons of hay, while each of the other two, yields only one ton; that is, two tons to both. Meanwhile the proportion of the different elements contained in the fertilizing materials used is the same, and such as to fit the soil for the growth of grass, and also to produce a permanent fertility of the soil—not like some of our concentrated manures, which cause the production of a few immense crops, to the injury of the land.

Then, suppose I cultivate the soil of the different parts of the whole field for a long term of years, maintaining each part in its present state of productiveness, annually taking my two tons of hay from the best one acre, and the same from the other two; which, I ask, would yield the most net profit; the one acre yielding the heavy crop, or the other two, bearing only an equal amount.

The two acres, as they stand, may, indeed, be of more value than the one acre; as each of them may, perhaps, be brought up to the standard of the other at a cost which will leave a profit sufficient to make them so; but this does not interfere with the application of the principle.

The one acre requires less cost for fencing. The toughness of the sward, may, indeed, make it harder to plough, *according to its size*; but the whole expense is less. The securing of the two tons from the one acre, is at less cost than from the two acres. The amount of seed required is less, for *the same surface*, even, of the most fertile soil, and the cost of sowing proportionately small. Then there is the saving in removing stones, and, in fact, a saving in about every one of the details connected with the business. If we were, however, to come to the false conclusion that the profits of the two parts of this field were alike, we should then want to know what were the costs of the two, including that of purchase, and of cultivation, up to the time of getting them into their present state.

The cost of land, and of seed, and the labor of going through all the details except the application of manure, would be less on the single acre. The amount of manure and its cost would be greater. We think the difference, on the whole, would be small, in an average of cases.

But it is not always practicable to buy just such a farm as we want, and we sometimes inherit, or somehow get a few barren acres, which may be so mixed up with the good as not to be easily separated, while a mortgage and other incumbrances may hinder our prosperity.

If, with all these, a not very hardy physical constitution is ours, we may be led to study economy as it relates to the saving of labor, and the getting of a fair remuneration for the capital—time is money—expended on the soil. And we may conclude that millions of acres in New England are pastured, and otherwise cultivated, at a loss. Also that it is better to let much of our poorest land grow up to wood, and thus get a sure, though a slow profit, while time, labor and manure, are concentrated in the higher cultivation of the better part.

The same general principles may be applied to the keeping of stock. Much of our poor stock should be rejected and the rest kept better. A man may feed a cow just enough to keep the breath of life in her, without

getting anything from her, or in any way increasing her value. Up to this point, we all feed our cows at a dead loss. Beyond it, if fed properly, we feed to a profit, if there is any profit anywhere! What stock you keep, keep well, and keep no more than you can so keep.

You may cultivate a piece of ground just enough to get crops which will barely pay you for all the capital you invest on it. All below this point is a dead loss. If anywhere, the net profit is in cultivating your soil to a higher degree. As your means increase, increase your stock as you can, and keep it well. The same rule applies to cultivated land.

There are thousands of farmers, who, had they bought small instead of large farms, and kept their encumbrances reduced, and also kept a small number of cattle, and made the best of what they had, would have made larger net profits, and been richer men, while they and their families would have had more time for recreation and for mental improvement, and been blessed with more of the comforts of life; and their sons would not have abandoned the farm for easier and more profitable employment.

Another thing to be considered is, the better quality of crops where grown luxuriantly. John Johnston, the great western New York farmer, is reported as having said that the same weight of hay from luxuriant grass is more valuable than that of a light growth. And I think reason teaches the truth of this doctrine. Of course, luxuriant, heavy crops must be cut when young, fine and tender, so that the hay will be succulent and digestible, and before the sugar and starch made up from the carbon of the plant have become changed to woody fibre. The crops from a grass field may be often taken off at two cuttings instead of one, to a much greater advantage. Our grain crops are also of better quality from soil well enriched with organic plant food, and not too much strongly ammoniated manure, which sometimes, as in the case of wheat, tends more to the production of straw than of seed.

The same may be said of potatoes. Mineral manures like ashes, plaster, salt, bone, &c., do not cause them to rot. Probably Prof. Ville's statement, that a lack of phosphate of lime, and of potash, and too much nitrogen, caused the rotting of potatoes, is about correct. An extensive use of absorbents under our cattle, which no good farmer neglects, is a great economizer of fertilizing material, and a partial correcter of these evils.

So we see judicious, as well as high manuring is required. Another disadvantage of poor manuring is, we have small potatoes, and other refuse crops, which are worth far less by the quantity than the larger and better productions of highly fertilized soils.

Meanwhile, in the cultivation of our soils to the greatest advantage, and in the equalization of our crops for the various purposes of

summer and of winter feed, the practice of the soiling of cattle comes in, to a greater or less degree. Many of us can winter more stock than we can pasture. It is not necessary to soil wholly to correct this evil, or to hire pasturing in order to use up our winter feed at home; but our cows can be fed in the stall, and their manure saved during a part of each day, in summer. The summer manure is of more value than that made during other season of the year. There are many farmers in this region who have good soils near their buildings, neglected and profitless, who drive their cattle to and from distant pastures daily, where the feed is poor both in quantity and quality.

No wonder the boys leave the farm, and that it is finally sold at less than the buildings are worth. No wonder that such a system of farming has made many an honest, hard working, temperate, frugal family, to live in poverty all their days.

O, that we could honor our father and mother that our days might be long in the land which the Lord our God giveth us, and at the same time not feel that we were desecrating their memory by improving our system of agriculture, as mechanics have improved the various arts.

Why is it that the farmer is so conservative? Let us take the stone out of the bag.

From one who has had sad experience, and is trying to improve, without leaving the farm.  
*Franklin, Mass., 1870.* R. A.

#### SOME OTHER BUSINESS OR PLACE.

Of all the men who till the soil, the man who don't expect to farm it long, is by far the poorest specimen. His fences are down, his freaky cattle run at large; while the seeds of his foul weeds are blowing over all his neighbors' fields. He is always ready to borrow farming tools, but never ready to return them. His place is an eyesore in the neighborhood, and his example is to be dreaded by every thrifty farmer who has sons. A sailor who engages in a mutiny at sea is not more to be feared by his associates, than is such a man. Half a dozen such men in a neighborhood will do much to demoralize a whole community of farmers.

Next to the man who don't expect to farm it long, the man who expects soon to change his location is the poorest farmer that we know. He is likely to let everything go to rack and ruin. He has got his mind fixed on a location where crops grow with little or no labor being bestowed on them, and thinks to till fields on which an enemy has sowed no tares. He can't be expected to trim fruit trees, or to fuss with grape vines, when some one else is to eat the fruit that is to grow thereon. He expects to be a farmer all his days, perhaps, but he is tired of his present location, and counts all the labor spent in making lasting

improvements on his farm as so much labor spent in vain. He is not ashamed of farming, but his faith in it points to fairer skies, richer soils, and broader fields than those he has been accustomed to.—*Prairie Farmer.*

*For the New England Farmer.*

#### THE SNOW FLAKE.

BY ISAAC W. SANBORN.

O'er the meadow and the hill-side,  
On the mountain and the plain,  
Lightly falls the fleecy snow-flake,  
Falls to rise from Earth again.

Happy in its stainless virtue,  
Crystal wanderer, clad with grace;  
Having for its steed the North-wind,  
Searching every idle place,—

Every place in the dominion  
Of the Frost-king and his reign,  
Where the mighty lakes and rivers  
Grope beneath his icy chain.

There in numbers vast and countless,  
Thousands, millions, by the way;  
Clothing Earth in spotless beauty,  
Gathered hosts of snow-flakes lay,—

Lay a blessing to the Earth-world,  
Shielding it from Winter's sting,  
Till the march of Time advancing,  
Ushers in the reign of Spring.

#### FATTENING CATTLE.

Mr. Bela S. Hastings, whose name is familiar to the readers of our Cattle Market Reports, as one of the leading drovers from Vermont, gave his experience and observation in relation to fattening stock at a late meeting of the Caledonia County Farmers' Club:—

He said the main object of the farmer was to get the most out of his fodder. It does not pay to feed grain to a poor creature, one that does not take on flesh rapidly. Farmers will do better to dispose of such stock for what it will bring, and procure animals of good style. He believed that one-half of the grain fed was wasted by not being fed to good cattle. Another important point is, farmers do not feed heavy enough. He would commence with as much feed as they could bear at first, and then increase. In feeding twelve quarts of meal, the last four quarts are worth twice as much as the first four for fattening purposes. Some farmers complain that they do not get pay for the grain they feed out, but he had noticed that it was only those who fed light that thus complained. Whether the animal was to be fed a short or a long time, he would recommend heavy feeding.

Mr. Hastings said he knew of nothing better than corn meal. The cob is worth but little, if anything. Those persons of whom he

purchased fat stock, who were the most successful and made it most profitable, were those who fed meal largely. If a farmer has potatoes or other roots it is well enough to feed these in part, but a farmer will do better to exchange some of his roots for corn, than to feed roots altogether. It is important to feed regularly and not too often, as the stock will eat and lie down and ruminate. It is better to feed cattle but three times a day, and sheep but once.

#### MILLET.

The *Rural New Yorker* gives the following statement by Mr. Whitman at a meeting of the Herkimer County, New York Farmers' Club:—

Millet may be sown in June, after the time for planting corn, or, indeed, that for any other crop except buckwheat. It produces an excellent yield, both of stalk and grain, and cattle like it better than hay. The seed is particularly relished by fowls, and it was a profitable crop to grow for this purpose alone. He said we have occasion many times to break up lands late in the season. Corn and other grain crops are not unfrequently destroyed at a time when it would be too late to re-plant. In such cases millet could be used as a late crop with the best results. He found the average yield to be at the rate of twenty to twenty-five bushels of seed to the acre, and one and a half tons of straw, after the seed was taken out.

He always made a point of cutting millet while the stalk is green, and when harvested in this way cattle prefer it to hay. It grows to a good height, reaching to the shoulder, and may be cradled and bound like grain. Mr. W. said he had not been very particular in taking all the seed from the straw; he did not care to do that. His usual course was to throw the bundles on the floor, beating out the seed that would shell readily with the flail. The straw, with the remaining seed, was then fed to his cows, and it produced the very best results. In feeding millet to domestic animals he had not found it objectionable in any case except when used for horses. The seed was too rich and oily for this purpose, and, as he thought, was the occasion of horses passing too much urine.

**COMFORTABLE STALLS FOR CATTLE.**—One of the most disagreeable chores a farmer boy has to do is to sit down to milk a stable cow. He feels cross and so does the animal, and the consequence is he does not get a full flow of milk, and she is gradually dried up.

To make your cow stable comfortable, pin down a two inch plank where their hind feet stand, putting an inch strip under the edge of it towards the cow's head so as to give it an inclination towards the aisle or walk. Now

fill the space from this plank to the forward part of the stall with sawdust or some similar material to a depth of about four inches—a level with the upper edge of the plank. By this arrangement the excrements and urine are mostly dropped behind the plank in the walk, leaving a high, dry and warm bed for the animal. It is as easy for her feet as though she stood upon the sod of mother earth—as warm a bed as down to a human being.

I have had the fixtures in use about a month, and to-day the hams and flanks of my cows and calves are as clean and dry as in the summer. About once a week there needs an addition of sawdust to the bed. Just the comfortable looks of the cattle in an evening when they are reposing upon their comfortable bed is worth many times the cost of the fixture.—*W. H. Canfield, in Western Farmer.*

**PRESERVING BEEF.**—Mr. Foster of Madison county, writes to the New York Farmers' Club, that in the first place he puts the beef in weak brine and soaks all the blood out of it, letting it remain therein a week or ten days, then for one hundred pounds of meat he prepares a brine of nine pounds of salt, two pounds of sugar, two ounces saltpeter, two ounces black pepper and six gallons of water. Boils and skims this and pours it hot upon the meat after it is packed in the barrel. In the spring he draws the brine from the barrel by tapping it at the base, scalds and skims it, adds a little salt and pours it on the meat again while hot; and he has no difficulty in keeping the beef nicely the balance of the season. If at any time the brine should begin to smell bad, it should be drawn off, scalded and skimmed as before, and returned. Dr. Hexamer had used the same receipt for many years with the exception of the black pepper, which he did not regard as essential to preserve the meat. If more salt was used than the amount specified it made the beef hard; but the receipt would save beef perfectly.

**GOOD TEAMS.**—As a general thing, the teams of the farmers in Northern Ohio are too light. Mechanics, in selecting their power, act wiser than farmers, for when they buy an engine, care is taken to get one heavy enough to do their business thoroughly; but too often the farmer buys a cheap, light team that is not capable of performing one-half of the necessary labor, and the result is, that he gets into the habit—which is indeed a matter of necessity—of gauging the depth of his furrow by the strength of his team, and as a result he impoverishes his farm, and realizes small crops, and finally becomes discouraged and tries some other business. There is hardly any labor performed upon the farm with a team but that the farmer would realize the superior advantages of a large muscular team. I admit it will require more to keep such a

team than to feed a light fancy span, but the advantage gained in the increase of grain grown from thorough ploughing, and the time saved in dispatching other work, will make up the difference in feed many times over in a single season.—*Ohio Farmer.*

## EXTRACTS AND REPLIES.

### FOOT ROT IN SHEEP.

I notice in the FARMER of the 22d inst., that a brother wool grower, Mr. A. G. Noyes, of Lancaster, N. H., seems disposed to criticise the manner of treating foot rot, as recommended by myself in a late communication to your paper. He thinks I insist upon "precision" and "eternal vigilance" to a degree not practicable in flocks of 100 sheep or more—admitting that it might do in a small lot of a dozen "fancy" sheep.

That admission is all I could ask. If the method is practicable for a dozen sheep, why is it not for any larger number? I was driven to that "precision" in treatment by a dozen failures, such as all men have experienced who have attempted to rid their flocks of this disease. I found I was consuming a great amount of time, and experiencing no small amount of labor, in going over the flock in a superficial manner, many times, and still the job was not done. I left virus enough for seed each time, and a good crop of sore feet was sure to follow in due season. We all know men, I doubt not, who keep foot rot in their flocks from year to year, and never get rid of it. The general practice with such men is to "doctor" the sheep every rainy day, when it is convenient, "in the old-fashioned," "diabolical" way, and so the trouble remains. Now I wish to assure my friend Noyes, that the method I have proposed is as effectual for a large number as for a small one. He asks,—“But how is it in flocks of one to five hundred?” I cannot say how it would operate with five hundred; but I do know that with four hundred it will work like a charm. I have personally applied that "eternal vigilance" to that number, but I never went any higher.

And more than this, I can assure any man that I found less "back ache" in this method of treatment than in the old half-and-half way of going about it.

Let any man say which involves the most labor, to go over one hundred sheep as I have recommended *twice* and cure them, or to go over them eight or ten times carelessly and at uncertain intervals, and leave them in the end no better than when first taken in hand. One word in regard to the method recommended by Mr. Noyes. I think it a good one. The greatest objection I see to it is, that it is not adapted to winter use,—when the disease is apt to be the most persistent.

I would like to inquire of Mr. Noyes, why, if he depended as much upon the "brine" as upon the "solution of vitriol"—he did not depend altogether upon the brine? And once more, if he has "faith in the curative qualities of tobacco," will he tell us in what those curative qualities consist? HENRY BOYNTON.

*Woodstock, Vt., Jan. 29, 1870.*

### WHEAT CULTURE—COMPOST FOR WHEAT.

In my article of August 21, 1869, on Wheat Culture, I promised to give your readers my mode of cultivation. It may be proper for me to remark, in the first place, that I am but a small, or as some say, a one-horse farmer, having only about 85 acres of land, all told. I have raised from five to ten acres of wheat yearly. I sometimes sow winter

wheat, after corn, if the corn gets ripe, so that I can get in the wheat before the 15th of September; and if the ground is in a good state of cultivation, sufficient to raise 50 bushels of shelled corn to the acre, I will get 25 bushels of wheat on an average. Still I have had the best success with turf ground, or inverted sod. Say, take a piece of mowing ground that will not cut more than 1500 pounds of hay to the acre, turn it over as smooth as possible during lowly weather, in haying and harvesting, not ploughing over six or seven inches deep at most; then roll it before putting on the harrow, so as not to disturb the soils; then harrow until it is mellow; let it lay until about the 20th of August, and spread five or six cords of fine manure to the acre, if I have it. But if I have not the manure, I take fifteen bushels of wood ashes, five bushels of slaked lime, 300 pounds plaster, and three bushels salt, put it all in a cart, and mix by shoveling over. This makes the best compost or fertilizer that I have ever used for wheat. The above quantities are sufficient for an acre, and I think it is as good for the wheat as the five or six cords of manure, on my land, and the grass is as good where the compost is used as it is where I put the manure. After spreading on the manure, or compost, and harrowing twice in a place, I sow two bushels of wheat, that has been soaked two hours in a strong brine, and dried off, with half a bushel of lime to the acre. I then harrow and cross harrow twice in a place, each way; after which I sow my grass seed and harrow once in a place lengthways of the furrow, then bush with a light bush, and finish by rolling smooth, and in nine years have not had but one crop fail. About one-half of my land is a clay loam, and the other part a slate gravel.

I have ten acres of winter wheat in the ground now, the most of it on turf ground, sowed in August. The growth last fall was very heavy, but it has been a bad, open winter, thus far, for winter grain, in old Vermont.

### NORWAY OATS.

I sowed in the spring of 1868 three bushels of Norway oats on two acres of very rich ground, and got 43½ bushels that weighed twenty-seven pounds to the bushel. I sold to Mr. Ramsdell at \$1.25 per bushel. If I had sowed that same ground to wheat I should have got more bushels, and could have sold the wheat at \$2.50 per bushel.

### EARLY ROSE POTATOES.

I planted May 14th twelve ounces of seed, making seventeen hills of three eyes each, and dug September 14th, ninety-four pounds nice mealy hand-some potatoes; but I think that they will improve by planting, like all other seedlings, until they have been planted ten or twelve years, if it takes from eight to twelve years for potatoes started from seed balls to arrive to full maturity.

*Hartford, Vt., Jan. 25, 1870. R. H. SIMONDS.*

### CASE OF ABORTION WITH COW.

Nearly five weeks since, I butchered three hogs in my barn yard; also, a beef in the barn. I had one cow to calve next April. The following morning she lost a calf. On the third morning another calf, making two calves. Was the scent of blood the cause? I have slaughtered hogs and cattle many times in the presence of cows in calf, but have never known any such results before.

### EARLY RISING HENS.

I have ten hens, all in laying order. Six out of the ten invariably go to their nests before daylight in the morning,—usually between half past five and six o'clock,—leaving their nests as soon

as daylight comes, with an extra egg therein. They are Brahma fowls.

#### OUR WINTER.

The winter with us has been remarkably warm. Not one day of good sledding up to this date, though we have had several falls of snow of two or three inches at a time, followed by big rains. Hard for wood drawers. We use wagons, carts, sleds and sleighs all the same day. Unbanked cellars do not freeze. At this writing it is snowing smartly.

#### PRICES OF PRODUCE.

Hay \$12 and \$15 per ton; corn \$1.25 and \$1.30; wheat \$1.50 and \$1.75; potatoes 50 cents per bush.; butter 35 and 45 cents per pound; cheese, retail, 20 cts. per pound; eggs 30 cents per dozen; pork 12 and 14, beef 8 and 10 cents by the side; wood, hard, \$6 per cord. Business easy; trade very cautious.

H. N. SAVAGE.

*White River Junction, Vt., Jan. 30, 1870.*

REMARKS.—The legislature of the State of New York has expended large sums of money in the investigation, by the most competent men, of the causes of abortion in cows, but thus far without any very satisfactory results. For some mysterious reason, cows seem to have been of late, in certain localities, at least, predisposed to this disease. Your cows may have been thus predisposed, and hence the consequences of slaughtering animals in the barnyard were different this year from those of previous years when your cows were healthy. It is considered very dangerous to subject cows with calf to the sight and smell of slaughtered animals. Their sense of smell is very acute, and the presence of fresh blood often greatly excites them, and is frequently the immediate cause of abortion.

#### THE JOHN MORRILL HORSE.

Will some reader of the FARMER give me the particulars in relation to this horse which is or has been owned in the northern part or Vermont. I would like to know his pedigree, color, weight, and general character as a horse. Such information will greatly oblige a great lover of a good horse. I have often wondered while reading the FARMER that more is not written of this noble animal. Excepting the members of one's own family, what is there on earth in which man has so much interest as the horse,—ever ready to do his bidding in sickness or health, in business or pleasure. And yet how often is he poorly fed and poorly cared for by his owner. A READER.

*Dummerston, Vt., Feb. 4, 1870.*

REMARKS.—We cannot furnish the desired information, but hope some correspondent will do so. We may, however, say that the Morrills belong to a branch of the Vermont Morgans; being the descendants of Bulrush Morgan, one of the three most celebrated colts of the original Justin Morgan. Among the Morrills, two horses known as Old and Young Morrill were the most celebrated. According to the pedigree given in Stonehenge, McClure and Harvey on the Horse, Old Morrill had two crosses of Diomed and four of Messenger, and Young Morrill had two lines of descent from Justin Morrill on his dam's side. Young Morrill is sire of Draco, Fearnought, Danville Boy, Mountain Maid, Hiram Woodruff, &c.

#### A SUCCESSFUL FARMER.

When a man has achieved success in any business, profession or occupation, we naturally turn to him and inquire, How was success obtained? What course was pursued, what stem followed? A recent visit to the milk farm of Mr. M. N. Bruce of Acton, Mass., furnished ample proof that he had been successful. His farm, of about 200 acres, is situated three-fourths of a mile from the station, on the Fitchburg railroad, with a pasture of sixty acres about one mile from the homestead, where his dry cows and young stock are kept.

His stock at present consists of twenty-four milk cows, twenty-two head of young cattle, one yoke of oxen and two horses. He devotes the whole produce of the farm to milk raising, and has made it a specialty since 1845. He now makes about twenty-four cans per day. He feeds about twelve tons of grain, besides what he raises upon the farm, and thinks wheat middlings the best feed for the health of his milk cows. He raises five or six calves yearly. He believes grade Ayrshires the best cows for milk, and has recently purchased of Geo. M. Barrett, of Concord, Mass., a full blood Ayrshire bull.

In 1852 Mr. Bruce built a new barn 40x100 feet and connected it by a shed and granary, 40 feet in length, to the house, which he has recently completely renovated. He has commodious and convenient buildings, which, together with the barn cellar, are furnished with water by an aqueduct.

Mr. Bruce has reclaimed ten acres of swamp meadow on which he cuts a large crop of English hay; has completely renovated fifty acres of shrub oaks and whortleberries into rich and succulent pasture, and has laid new and relaid old stone wall to the amount of 500 rods. All these and other improvements he has accomplished since 1840, at which time he purchased the farm which was then very much run out; the buildings being old and poor, the fences much dilapidated, and the farm then would barely keep six cows.

The capital which Mr. Bruce had at 21 years of age, was industry, honesty, economy and a strong will. With this capital he grappled with the farm as it then was, and now he is owner of the farm and stock as it now is, with something laid by for contingencies.

Mr. Bruce attributes his success to making one branch of farming a specialty and to a judicious application of the capital he started with.

*Littleton, Mass., Jan. 25, 1870.* s.

#### A WEeping CALF.—ALSIKE CLOVER.

I have a last spring's calf that weeps constantly and has done so for two months. What can be done for it?

I wish to procure some alsike clover seed. Who has it for sale? W. F. JONES.

*Worthington, Mass., Jan. 20, 1870.*

REMARKS.—Weeping may proceed from disease, injury, or some foreign substance in the eye; but from the description given we have no clew to the cause in this case.

The alsike clover seed is for sale at the agricultural seed stores at about fifty cents per pound.

#### OUR POTATOES.

We raised this year the Early Rose, and a nicer, sweeter potato never grew; Early Goodrich which sold well; Harrison, which also sold well, but which we dislike very much, on account of its strong taste; Davis' Seedling, which yielded well and sold well, but which we also dislike for the same reason; the Gleason, which is in every respect a splendid potato, great yielder, large size, —no small ones to speak of,—rough skin, shallow

eyes, mealy, sweet, delicious, and ranks next to the Early Rose in every respect; and the New York Peach Blow, which is very nice,—some call it better than the Gleason.

How different the public taste is now in regard to potatoes, from what it was twenty years ago. A potato, then, was a potato, and nothing more. Now they are prized according to their goodness; poor or even common ones, are discarded, and those nearest perfection chosen. S. B. S.

*West Amesbury, Mass., Feb. 7, 1870.*

#### WASHINGTON OATS.

I have an oat that came from Washington, where the big men go to get wisdom; and whence seeds of different kinds are scattered through our land, some of which prove to be good. The kind that I have will weigh forty pounds to the bushel, and ripens a week earlier than the common variety. I think it will be a good kind to grow where they are apt to rust. Mine grew some five and a half feet tall, stood up well to cradle, with long heads, stout straw, a plump berry, not crooked like the common oats. I send you a sample of a number of bushels that I raised.

#### A VENERABLE PUMPKIN.

I have a pumpkin that was raised in the year 1868, that is about as fresh looking as it was the fall that it was taken from the vine. I think it was the largest one I raised. I kept it where it would not freeze in the winter, out of the cellar, and in the milk room in the summer. It bids fair to winter again.

#### LAYING HENS.

I have twenty-five old hens and pullets from which I sold eggs in December and January to the amount of twelve dollars and sixty-six cents, besides using a few new ones, though we saved eggs that were laid in the fall. I sold at from twenty-five to forty cents a dozen. I feed the hens sand, gravel, ashes, burnt bones, scraps and dry mortar, with messes of potato and crumbs from the table, some oats, plenty of India and buckwheat, with some corn that did not get ripe. I keep feed by them all the time, and give them water and sour milk. I have a room in one corner the horse shed, with a window for the hens to look out and the sun to look in. Here they lay and set, with a roost one side. Their droppings are saved and I have a large load of it now which will be good to put on the grass next spring, and perhaps some on corn and potatoes. We have less than a foot of snow on the ground now, with cold weather and good sledding, though we have had but little before this winter. H. GRIFFIN.

*Essex Junction, Vt., Feb. 3, 1870.*

#### SEASONABLE CARE OF COWS.

The time is now at hand when farmers should be thinking about their cows that are coming in. To have them do well, I say feed them with good hay, but not too much; give them potatoes, turnips, carrots or beets, twice a week, with a little meal once a day, and keep them loose, warm and dry. When they drop their calves, if they do not clean well, send for some one to take it away. In bad cases it will create inflammation in twelve hours. Take a cloth or anything you please and pull lightly and cut it off, and it will disappear and pass off without any injury to the cow. Such has been my experience for fifty years. In the course of that time I have been called on to assist in more than a hundred cases, and in only one did the cow fail of doing well, and that was when I took it away, resulting in inflammation, loss of flesh and failure in her milk. I resolved then that I would assist, but never attempt to

force nature. If the Lord will, I may at a future time give directions how to manage in case a cow or mare is unable to drop its young, with a description of an instrument with which one man can do more than ten can without it.

*Brookfield, Vt., Feb., 1870.*

V. BAKER.

#### BUTTERMILK AND PIGS.

Will buttermilk cause a sow to cast her pigs? I have been told so by a farmer. W. B.

*Cohasset, Mass., 1870.*

REMARKS.—We do not think that buttermilk, or any other food usually given to swine, and in moderate quantities, will cause a sow to cast her pigs. The danger is, that breeding sows do not get a sufficient variety of food. During the whole time of gestation three things ought to be carefully observed; and when they have been we have never known a sow to cast her young. First, access to the ground, and sufficient space to root about in it. Second, some kind of animal food, at least once each week, such as butcher's scraps, bits of fresh meat of any kind, with a little salt in the swill; and Thirdly, a dry and roomy bed.

When these conditions are observed, the sow will do well.

#### CORN FODDER.

If the statement of Dr. Loring be correct, what shall I plant for fodder? W. B.

REMARKS.—We do not know. In the town where we reside, some fifteen hundred gallons of milk are sent to Boston every morning. Take away the corn fodder, and that flow milk of would nearly cease for two or more months. Nothing has yet been found to take its place. Fed on it, the cows continue their flow of milk, and keep in good condition during the trying time in August, September and part of October, when the pastures have nearly failed.

#### NORWAY OATS.

Please let me know where the *Norway* oats came from? Are they what the Downcasters call the Maine oats, or the Poland or Norway oats of Europe? W. B.

REMARKS.—The *Norway* oat is said to have been found in a package of *Norway* peas, distributed by the United States Patent office; but we believe that the name is claimed simply as a "trade mark," and not to indicate its origin.

Last summer, we took especial pains to visit several fields which had crops upon them of *Norway* oats. The growth was remarkable in several respects. The average height of the plants we thought would be nearly or quite four feet; the stalks were much larger than those of the common oat, and what is really wonderful, we found 40, 60, 100 or more stalks, which had evidently sprung from a single seed! Generally, the grain stood up firm and straight, and presented a most luxuriant appearance.

Another remarkable feature was apparent in every field which we visited; the young grass, the seed of which had been sown with the oats, had a growth and apparent energy altogether un-

usual. This was the case in every field we examined.

The impression left upon the mind was that a new cereal had been introduced which would prove valuable to the farmers of New England.

Under these impressions our interest has continued, and has led us to examine every parcel of them which has come to our observation in the agricultural exhibitions and other places, where we have been. What we want, is a heavy, well-formed, prolific grain or berry—not a stout over-luxuriant straw. This we have not yet found in a single parcel of the Norway oats. They bear no fair comparison with the "Surprise" oats, so called, in color, form or weight, as they stand side by side in the half bushel. The berry of the Norway is long, thin and light, and the centre small and covered by a large husk. What the comparative value of an acre of each would be we are not able to say. These tests will be made another season, perhaps, and then we shall know more about them. In the present spring sowing, then, we advise a careful comparison of the grain of several varieties, before sweeping away all others for one which as yet is but imperfectly understood.

When several experiments have been made on soil of the same quality, location, and manured and worked alike, and sowed with different varieties of oats, harvested equally well, cleaned up alike, measured and weighed, and their component parts carefully observed, then we shall have data upon which to decide of the merits of each.

We shall be thankful for samples of a gill each of any varieties of oats that were grown last summer, together with the names they bear.

#### FEEDING STRAW TO STOCK.

That there is a right and a wrong way to do everything is certain; and that there is a good and a poor way to feed straw to stock I have become fully convinced. When my stock came to the barn in the fall, I concluded that I was short of fodder for the winter, unless I fed a large lot of straw that I had, which by the way was rather poor, having laid out in the rain a number of days while harvesting, and become badly washed and colored. When my stock came to the barn, I commenced to feed good early cut hay, which kept them gaining in flesh. After they were well into the winter I commenced to feed corn and poorer fodder, with some straw. But to make them eat the straw, or even half of it, was more than I could do without starving them to it, which I did not like to do. What I should do was a question to be considered. To get a straw cutter and cut all the feed by hand for twelve head of cattle was something like work. And to get a cutter to go by horse power was more than I felt able to do, so I commenced to mix hay and straw together. To do this I commenced by cleaning my barn floor and removing everything out of the way, so as to give me the full swing of the floor which was 12x40 feet. Then I shook over the whole floor a layer of good hay, then some wheat straw, which I sprinkled with water to which a little salt had been added; then strewed one peck of meal, then some poorer hay, then oat straw, then good hay, then wheat straw again, to which I added the wa-

ter and meal as before. This being done I took a fork and commenced at one end of the floor and shook the whole mass together, being sure to put the fork down to the floor so as to get it thoroughly mixed. After I had it well shook together I packed it back on the bay side of the floor, leaving a place in front next to the stable, to feed. This done I walked the length of the whole pile two or three times so as to prevent it from drying up. This pile fed ten head of cattle one week, with but very little waste. The time to do this work did not exceed thirty minutes. *Does it pay to cut fodder for stock?*

S. B. BLODGETT.  
Cabot, Vt., Feb. 14, 1870.

#### HIDE-BOUND COW.

I have a nice cow with very poor appetite—her hide seems to be hard and cracked—hide-bound. Please inform me what to do for her.

A SUBSCRIBER.

Holmes Hole, Mass., Feb. 7, 1870.

REMARKS.—1st. Card your cow thoroughly twice a day.

2d. Every morning, after carding her, wash her all over with warm water, and rub her with a coarse cloth until the hair is dry. Perhaps a little saleratus in the water will improve it.

3d. Feed cut hay, roots, meal, &c.

4th. Every alternate day give her a table-spoonful of the following powder in her meal:—

Nitrate of potash (salt-petre) . . . . . one part  
Sulphur . . . . . two parts  
Bi-tartrate of potash (cream of tartar) . . . three parts

Pulverize and mix.

#### BURSAL SWELLING ON A HORSE.

What will cure a slight soft swelling just at the upper side of the knee of a horse, caused by a bruise by breaking through ice. The horse was lame for a week, but is nitely well now, except the swelling, which has remained now over a month. G. R. H.

Champlain, N. Y., Feb. 7, 1870.

REMARKS.—The soft swelling to which our correspondent refers, is a *ganglion*, or enlargement of one of the *bursae mucosae* (mucous bags) which are found in the neighborhood of joints, being parts of the sheaths of tendons or sinews. It was, doubtless, caused by mechanical injury, as suggested.

The best remedy is to paint the swelling twice a day with tincture of iodine or a strong solution of iodide of potassium, and keep a firm and constant pressure upon the swelling, by means of a plate of lead or pewter quilted into a properly constructed bandage.

#### BLOODY MILK.

Can you or some of your correspondents inform me what I can do to help a three-year-old heifer which has given bloody milk from one teat all the season since she calved last June. She is farrow, and gives milk now. Garget and saltpetre seem to do no good.

CHARLES WOODMAN.  
North Leeds, Me., Feb., 1870.

REMARKS.—The trouble in the case of this heifer consists in either inflammation or congestion of a portion of the udder. If there is inflammation there will be more or less unnatural heat in the part affected; and in that case we advise

bathing with cold water two or three times a day until the preternatural heat disappears, and then apply common iodine ointment twice a day, rubbing it in with the fingers. If there is no unnatural heat the gland is *congested*, and the ointment of iodine may be used without the previous bathing. The ointment can be obtained of any druggist.

#### A CALF WITH THE SCOURS.

I have a calf that is nearly a year old that has the scours, and is poor, and has been so for some time. Please tell me what will be good to relieve and build him up. I have been giving him oats, but he will not eat enough to do him much good.

*Benton, Me., Feb. 9, 1870.*

W. M.

REMARKS.—Card your calf twice every day, and feed him well cooked potatoes, with a little sweet milk added, if he will eat it as well, and a little cayenne pepper. If he continues to scour with this feed, give him some astringent, like a decoction of hemlock or white oak bark. If he has vermin, destroy them with carbolic acid or some other efficient remedy.

#### RELIEVING CHOKED ANIMALS.

Sometime since I read the description of an apparatus for relieving choked animals, which in the main was correct. Having seen a similar contrivance kept and used in the old country, I think I can suggest an improvement on the broom-handle or wooden rod, recommended for forcing down the obstruction. Wet, roll, and sew together a strip of sole leather of the desired length, and wide enough to be about an inch in diameter when finished, then get the tinman to rivet on to each end of the leather tube, pieces of lead so as to form an oblong hollow ball, soldered together, about an inch and a half in diameter, with one hole at the end of the ball and two or more holes in its side, through which the creature may breathe or gas escape, and you will have a flexible rod of sufficient strength to effect the purpose. In the one that I saw there, one of the end balls was left a little flaring, something like a tunnel, to fit more firmly to the obstruction in the throat, so that either end could be used as seemed most efficient.

B. CONNELLY.

*Careyville, Mass., Feb. 9, 1870.*

#### COTSWOLD SHEEP.

Some time in November, 1868, I made mention of the efforts of T. W. Gordon, Farmington Falls, Maine, to improve his flock of sheep by the purchase of a thoroughbred Cotswold ram, of Burdett Loomis, of Connecticut. He then set himself to work to procure a flock of large sheep. After an extensive ride, and paying from five to seven dollars per head, he succeeded in obtaining some forty-six that suited him.

Last summer he raised forty-four lambs, of which he sold nineteen this last fall for \$190; having twenty-five left, for some of which he has refused \$20 each, scarcely one of which will weigh less than 100 pounds. The wool on many of these lambs measures eight to nine inches in length and is of excellent quality.

The buck sheared 10½ pounds when a year old. Last spring, when two years old, he sheared 13½ pounds of clean wool,—not grease or tar,—and he weighed 300 pounds. Mr. G. has had extensive experience with sheep, and is, perhaps, as good a judge of them as any other breeder in Maine, and here perhaps lies the secret of his success. Good

judgment in making selections for breeding is of as much importance as good care after selecting. Mr. G. informed me that he visited Canada last fall for the purpose of purchasing thoroughbreds; examined many of the best flocks in the Dominion, but found none equal to the flock of Mr. Loomis. He found many flocks in Canada being thinned out by a disease called the "scours," which is slow in its progress, but very fatal. Mr. G. says his sheep are as docile and peaceable as any flock in the State, and manifest none of that roving disposition sometimes attributed to long wools by another class of breeders. They gave him no trouble last season, and he anticipates none the coming season. He is now well satisfied that Cotswolds and their grades are the most profitable sheep for wool and mutton. They are tough, hardy, easily raised and yield much larger returns than others. ZEN.

*Springvale, Me., Jan. 22, 1870.*

#### MANURING FOR GRASS.

During the recent discussion in the FARMER of the value of corn stalk fodder, it seems to have been generally admitted that when sown broadcast or too thickly in rows, the fodder is of inferior quality. May not the same principle apply to grass growing? Do not farmers miss it by putting their whole stock of manure on to their land at once and stocking down to grass, and thus getting some three or four tons of what they call hay to the acre? Would it not be for their interest to put on say one-third to begin with, and repeat it once in two years, and obtain from one and a half to two tons to the acre of good hay, such as their cattle would eat all up? In the first case they have no manure to replenish their land in case of winter kill; in the last case they would have their manure to spread with a sprinkling of seed, then brush it over and all is right. Don't all speak at once, but consider the matter. V. BAKER.

*Brookfield, Vt., Feb., 1870.*

#### THE MOTHERS.

Perhaps in no country and in no age have the habits of a people changed as greatly as have those of the people of New England during the past sixty years. Enjoying a happy, green old age, I know a lady in Berkshire county, Mass., who when nine years of age, spun tow yarn of sufficient fineness and evenness for the filling of a web of pocket-handkerchiefs; at fifteen she spun a week for a neighbor for sixty-seven cents, with which she bought the stockings in which she was married, and which she has lent to six other brides for the same purpose. She is expert in weaving diaper, coverlets, blankets, carpets, &c., also, with her needle as tailor, dressmaker, and embroiderer, &c. She is a good dairy woman, and understands every process of butter and cheese making, from milking cows to serving as committe on the award of premiums at the agricultural fair. She is the mother of eight children, four boys and four girls. "The fathers, where are they?" and the mothers, where are they? I.

*Cheshire, Mass., Jan., 1870.*

#### HOLDING ON TO THE FARM ANOTHER YEAR.

Six months ago I had about decided to sell our farm; but purchasers for farms of 300 acres or more with good buildings, pleasantly located on the Connecticut river, are not near as numerous as for farms valued from \$3000 to \$5000. As I do not find the right man to buy, I must be making preparation for the campaign of the coming season. And the first requisite to a successful prosecution of agricultural labor is a good selection of agricultural papers; with these and a supply of

good tools, implements and improved farm machinery, with a fair share of tact, skill and enterprise, aided by good health, one may become a successful farmer, and independent so far as freedom from debt can make a man so. Yet as every experienced man knows 'tis a slow road to wealth, though sure to furnish a competency to the frugal and industrious, which perhaps is a condition affording as much and perhaps more happiness than many others in life. **WILLIAM CHILD.**  
*Fairlee, Vt., Jan., 1870.*

#### LUNG DISEASE IN COWS.

Mr. W. D. Hall, of New Ashford, Mass., has lost two cows of some disease of the lungs and one that had the scours until she became so weak as to fall forward on her head, and he wishes to know if such is the effect or symptoms of horn-ail?  
**W.**

**REMARKS.**—Cows, and other animals are liable to have various diseases of the lungs. What particular one affected the two cows first mentioned, we cannot tell, as the symptoms are not mentioned. But the one that had the scours was effected with acute inflammation of the mucous or lining membrane of the intestines, and not with horn-ail.

#### EFFECT OF CHERRY LEAVES.

The statement of Mr. Haskell, from which he infers that cherry leaves are not poisonous, and that the only danger from cattle eating them arises from their indigestibility when wilted, seems to me to show conclusively that they are poisonous. Food is occasionally thrown from the stomach, after remaining there forty-eight hours, in a perfect state, without having produced any such symptoms as are witnessed in cases of "cherry poisoning." The effects he mentioned, I ascribe to poison—to some principle that destroyed the vital action of the animal functions,—a result never caused by healthy food remaining undigested some eight or twelve hours in the stomach. Wilted clover, red top, or herdsgrass produces no such fatal effects; why then should wilted cherry leaves, unless they contain some injurious principle which may properly be called poison? **V. BAKER.**  
*Brookfield, Vt., Jan. 24, 1870.*

#### CATTLE GNAWING BOARDS.

I am not entirely satisfied with your reply to a late inquiry for a remedy for this disease. I have had cows do the same, and my method is to give one heaping tablespoonful of saltpetre. This has cured them at once. It is also good for garget in cows; far better in my opinion than garget.

**MOSES HUNTLEY.**

*St. Johnsbury Centre, Vt., Feb. 14, 1870.*

Please request "A Reader" whose cattle have a habit of gnawing boards, &c., to try feeding a few quarts of rye or wheat bran, each, daily, and report result through FARMER. **G.**  
*Ashfield, Mass., Feb. 15, 1870.*

#### CREEPING CLOVER.

In the FARMER, some time last fall, I saw some remarks upon this variety of clover. It appears to be a new plant here as well as in Vermont and Massachusetts. A field near my house had a great deal of it this summer, and it attracted a good deal of attention. It grew very thick, and made fine hay, and a heavy crop in spots where red clover was killed out. Some farmers were of the opinion that it was best to save seed and sow

it, but I think none was threshed. I noticed it in many fields in this neighborhood. Some feared it would prove trouble-some, but I do not think so. Perhaps it may not be as plentiful again in several years. Time will tell. **GRANITE.**

*Bloomfield, C. W., 1870.*

#### SWEET FLAG.

I would say to "A. B." in FARMER of Feb. 12, that the only way to totally eradicate sweet flag is to take off the entire surface of the land in which it grows, haal it to a dry knoll and pile, and after a while it will rot. I once knew a neighbor to eradicate several large beds of it in a low meadow in this way, and it has never shown itself since. Care should be taken to get all the roots off. **M. C. PECK.**

*Benson, Vt., Feb. 15, 1870.*

#### TO EXTERMINATE HEN LICE.

A very easy and sure remedy for exterminating vermin from hen houses is to take from five to ten cents worth of chloride of lime, which can be procured at any apothecary's store, and sprinkle it over the roosts and about the house where the lice are most likely to be found; or make a wash of it and wash the roosts. I have found one or two applications an effectual remedy. **L. B.**

*Winchendon, Mass., Jan. 11, 1870.*

#### WEST MILTON, VT., CHEESE FACTORY.

The West Milton cheese factory was in operation five months, and received the milk of 300 to 500 cows; some of the patrons having brought milk only during the warmest weather. Whole amount of milk 1,335,717 pounds; amount of cheese, 187,398½ pounds. It required 9¾ pounds milk for a pound of cheese. Whole amount of sales, \$22,886.95. The net average price per pound was 14 3-10 cents. **D. L. FIELD.**

#### GREAT YIELD OF BUTTER.

Mr. Moses S. Saunders, of this town, owns a three-year old heifer,—half Devon, half Jersey,—from which in the present month of January, were made four pounds of butter from twenty-three quarts of milk. She has had but common feed, viz:—fresh and salt hay, with one quart of meal per day. **D. A. REED.**

*Rowley, Mass., Jan. 23, 1870.*

#### GREAT YIELD OF COMMON OATS.

A single oat that germinated in my garden near a bed of white beets, one of which weighed eight pounds, produced 53 heads, three of the largest of which contained 300 or more kernels each,—the total product, by patient count, amounting to 10,117 kernels, after rejecting those that were blighted. **C. R. HILLS.**

*Marshfield, Vt., 1870.*

—At the winter meeting of the Windsor County, Vt., Agricultural Society the first premium on best acre of corn was awarded to N. Harlow, Hartland, 94½ bushels; 2d, to J. Paddleford, Hartland, 88½ bushels; to Mr. P. also for best wheat, 27 1-12th bushels; 2d, S. Taylor, 21½ bushels; O. Paul, Pomfret, best oats, 93¾ bushels; 2d, J. Paddleford 78½ bushels; best rye, S. Taylor, Hartland, 23 3-5 bushels; N. Humphrey, Hartland, best potatoes, 324 bushels; C. Whitman, Pomfret, best carrots, 36¾ bushels on ten rods.

## CROPS IN MAINE.

During our late visits into the State of Maine, we not only listened to many public remarks in relation to agricultural practices and their results, but made many inquiries as to the general condition of the art in that State; what the leading crops are, and whether farmers, as a class, are gradually improving their farms so as to give them a permanent value of one or two per cent., or more, annually.

In all the public exercises, and in private conversations, an interest and earnestness in farming, was clearly manifested. It was evidently the earnestness of those who believe their calling to be honorable, tending to elevate the race, and indispensable in sustaining it.

The discussions in the State Board have greatly tended to encourage the farmers of the State, and have recognized the dignity and high character of the calling.

Its leading crops are grass and potatoes, but investigations showed that the wheat crop, which is adapted to a large portion of the soil, has been greatly neglected. There is official authority for saying that the State of Maine needs 650,000 barrels of flour yearly—nearly all of which is imported at an expense hitherto of nearly ten millions of dollars! Stimulated by this startling development, the legislature has made appropriations of money for premiums on wheat crops, under certain conditions, which have already had an influence to increase the breadth of land devoted to wheat.

In the sessions of the Board last year, much attention was given to the potato crop, where every means seem to have been used to elicit from the members information in regard to varieties, quality, productiveness, soils best adapted, kinds and quality of manure to be used, and every thing else bearing upon the crop.

In a lecture upon the *Culture of the Potato*, by Mr. Z. A. GILBERT, from the Androscoggin Society, he laid down several points for discussion:—

1. What we want.
2. What varieties shall we plant?
3. Preparation of the soil and manure.
4. Planting.
5. After culture.
6. Harvesting.
7. Marketing.

These points were thoroughly discussed, with the object to bring out facts and settle principles, so that

the cultivator when he goes into the field to plant shall have more definite conclusions as to what is best for him to do, than he ever had before. It is hardly probable that the principles or practices stated, fell alike upon all who heard them, so that a variety of opinion and practice will still prevail in procuring future crops.

The Hon. Samuel Wasson, President of the Board, read an interesting paper on the "History of the Potato," which affords a remarkable instance of what human skill can accomplish in ameliorating some of nature's pungent and poisonous plants, into mild and wholesome food.

Our word potato, is supposed to be a corruption of the Indian word *bataas*. The potato was first found in 33° south latitude, in the mountains near Valparaiso about 1550. Sir Walter Raleigh is said to have carried it to Ireland in 1610. In 1728, the potato was carried to Scotland, but the people opposed the introduction of this new vegetable, because its name was not mentioned in the Bible.

The priests in the Ionian isles, said the potato was one of the forbidden fruits—the cause of man's fall, and its use was irreligious.

In France, this vegetable was viewed with extreme disfavor. In vain did Louis XVI. and his court wear its flowers in the button-holes of their coats to enlist popular favor. At last, Parmentier, the chemist, hit upon the following ingenious plan. He planted a field near Paris, put up notices around the field that all persons who stole any of the fruit would be prosecuted with the utmost rigor of the law. *Within a fortnight thereafter every potato had been stolen and eaten!*

It is somewhat remarkable that in nearly every State in Europe its introduction met with great opposition; even as late as 1723, its use was interdicted in some of the German States, being accused of producing dysentery and leprosy.

In its wild state, it is a watery, bitter, unwholesome plant, with tubers rarely an inch in diameter, or exceeding half an ounce in weight.

In Maine, the value *per acre* of these several crops was as follows, in 1866:—Potatoes, \$79.56; corn, \$44.55; wheat, \$86.32.

This intrinsic value, and the facilities for

transporting the crop to distant markets by water and by rail, gives it the *first* value as an agricultural product, or, if not, only second to that of the hay crop. The importance of the crop, therefore, had led to the introduction of numerous varieties, by planting potato balls, until catalogues enumerate more than 500 varieties. The best of these are second only, as an article of diet, to bread and meat alone.

This value, and the universal use of the potato throughout the New England States, has called into action an amount of ability, experiment and investigation, which promises to more than make good several varieties of great excellence which were long popular, but which have greatly declined in quantity and quality.

At Lisbon Hall, in Lewiston, where the State Board held its annual session, Mr. MOSES H. HUSSEY, of North Berwick, had on exhibition a choice selection of potatoes, for which he has become somewhat famous for raising. At the late Farmers' Convention in Manchester, N. H., he received a silver medal for the best exhibition of potatoes. Among the varieties at Lisbon Hall, were the Early Rose, Climax, Harrison, Early Prince, Calico, Vanderveer and Bresee's Favorite; for the latter he paid \$60 per bushel, and raised from it 145½ bushels the last season. For the Climax, \$25 per peck. For the Excelsior \$1.00 per pound, and for a single eye of another variety he paid \$5. By careful propagation by means of slips, he raised from this a bushel of good potatoes.

Before leaving North Berwick, we had an opportunity of looking at the potatoes in Mr. Hussey's cellars. In one bin were 700 bushels of the Early Rose variety, in which not a mis-shapen or injured tuber could be seen. As many more, of different varieties, were ranged about the cellar, all appearing sound, and of fair size and shape. In a neighbor's cellar, near by, were nearly a thousand bushels of more, different varieties, but each variety selected for good qualities in flavor and productiveness. The activity already excited in regard to this invaluable vegetable, has already introduced some excellent varieties, and promises to enlarge the list, to supply the places of old and excellent ones which have had their day.

Mr. Hussey also raises cabbages for the Boston market, and lifted a few samples of 14 tons, covered with forest leaves and ever-green branches, which were as sound and bright as the day when they were placed there. These will be sent to market in the latter part of March and early April, and command a remunerative price.

It is fortunate that some persons make a specialty of this and other vegetables, by testing varieties, and thus enabling them to reject worthless or indifferent ones, and preserve, propagate, and sell the good.

#### VERMONT HORSE STOCK COMPANY.

We have received a circular addressed to the farmers of Vermont presenting the purposes of this association, and inviting subscriptions to its capital stock of not less than \$100,000. Circulars for subscriptions are now in the hands of the Directors and will soon be generally circulated. Some half a dozen towns have been canvassed and though not richer than the average of the 200 towns in the State, nearly \$1000 to the town were subscribed. Judge Colburn, of Springfield, the efficient Treasurer of the Vermont State Agricultural Society, says: "It is a good thing, and with such a board of Directors, it must pay, and I am in favor of our Society taking liberally of the stock." Hon. Carlos Baxter, of Burlington, Vt., offers to be one of ten to take \$1000 each in the county of Chittenden. These subscriptions are not gifts, but investments in stock, which it is believed will yield good dividends as well as greatly benefit the farmers of the State by assisting them to improve their breeds of horses.

We have much confidence in the success of this association. It proposes to do what individual farmers of comparatively small means are unable to do singly, however well satisfied they may be of the necessity of introducing better breeds of horses. The use of machinery has created a demand for heavier horses, while the "agricultural horse trot" of the few past years has had a tendency to encourage animals poorly fitted for the drudgery of farm work.

Some years since the old Massachusetts Society for the Promotion of Agriculture imported several Percheron horses from France, and have kept them at their stables, near Boston. A few years since one of these imported horses, "Conqueror," was sold at auction by the society for \$500. On putting him into a stable in the city, the owner immediately resold him for \$1000. He is now in Maine, and we understand his owner there has a standing offer of \$2500 for him. One of his colts from a large Canada mare, owned by B. F. Ricker of Brighton, was sold last summer to an Illinois gentleman, when the colt was two years and nine months old, for \$1 per pound, live weight, deliv-

ered in Chicago. With a halter and headstall, the colt then weighed 1510 pounds, and the bargain was finally compromised by the delivery of the colt at Brighton for \$1400. The buyer had visited Canada and various places in the States, but was better pleased with this animal than with any that he saw elsewhere, and we understand that he is well satisfied with his purchase, since getting him home.

With such a demand for good horses we do not see why the Vermont Company, managed by such men as now compose its directors, and possessing the soil and climate which developed the Morgans and Black Hawks, may not realize the expectations of its most sanguine friends.

#### CHEESE MANUFACTURERS' ASSOCIATION.

Having failed to receive a detailed account of the proceedings of the annual meeting of the Massachusetts Cheese Manufacturers' Association at Hardwick last week, we copy the following brief notice from the *Daily Journal*. There was a large attendance of farmers, the President, Thomas P. Root, of Barre, in the chair. The meeting was opened on Tuesday evening by an address from Alexander Hyde of Lee, on "The requisites for the production of milk." A discussion followed, and then the question, "How shall we improve our pastures?" was discussed. Stable management and winter feeding of cattle were also discussed. On Wednesday morning the following officers for 1870 were elected:—

*President*.—Thomas P. Root of Barre.  
*Vice Presidents*.—J. W. Powers of Hardwick, Alonzo Lincoln of Oakham.  
*Secretary*.—N. S. Hubbard of Brimfield.  
*Treasurer*.—B. F. Hamilton of New Braintree.  
*Executive Committee*.—Thomas P. Root of Barre, J. W. Powers of Hardwick, Alonzo Lincoln of Oakham, N. S. Hubbard of Brimfield, B. F. Hamilton of New Braintree.

Reports from the various factories were made. In the afternoon, Mr. Charles L. Flint, Secretary of the Board of Agriculture, delivered a very able address on "The production of milk and treatment of dairy stock." In the evening Richard Goodman of Lenox read a paper on the dairy stock of New England, its breeding and management.

THE "RICH" STEER.—On passing the stall of H. Bird & Co., 38 & 40 Faneuil Hall Market, recently, we noticed a crowd collected around some very extra beef then on the hooks. On inquiry, we learned that it was from the steer noticed by our cattle market reporter in his report of February 2, and which was fed by J. T. & V. Rich, Shoreham, Vt., and sold to George A. Sawyer, of Brighton. At the time of the sale at Cambridge, the steer weighed 2790 pounds. His dressed weight was 2125 pounds, a shrinkage of less than 24 per cent. from that weight. The meat weighed 1685, tallow 280, hide 160 pounds. One hind quar-

ter 414, the other 394; back halves of the two fore quarters 398, and the two rattle rans 479 pounds. The steer was very neatly dressed by Mr. Sawyer, and the beef, though from a "native" steer, was admitted by good judges to be equal to any that has been seen inside of Faneuil market for a long time.

MILITARY INSTRUCTION IN AG'L COLLEGES.—A correspondent of the NEW ENGLAND FARMER, in writing from the Massachusetts Agricultural College at Amherst, says:—"I am informed that this is the only Agricultural College that has, as yet, established military instruction as a part of the regular course, although that is made one of the conditions of the grant by Government;" but he is certainly in error. Our own institution at Orono has from the first given attention to military instruction, in conformity with the act of Congress, Capt. Henry E. Sellers of Bangor, having most acceptably filled the position of military instructor. The Trustees are hoping to secure the services of a government officer for this position at an early day.—*Maine Farmer*.

REMARKS.—We presume that our correspondent will be glad to learn that the "information" on which he based his remark is not correct. We hope that the provisions of the law establishing these institutions will be carefully observed by the managers of each one of them.

#### AGRICULTURAL ITEMS.

—A son of General P. P. Pitkin, of Montpelier, has a large sheep which he harnesses to a scraper and does good public service by clearing the sidewalks of snow.

—Mr. J. G. Huntington, of Atkinson, Maine, has invented a new horse rake, which is noted for its simplicity of construction, ease and efficiency of working and cheapness in price, and, so far as used, is pronounced the best made.

—The New York State Agricultural Society have agreed upon Utica as the place for holding the next State Fair. Solon D. Hungerford, of Jefferson County, has been elected President, and Thos. H. Faile, Jr., of New York, and others, Vice-Presidents.

—The Waterville, Maine, *Mail* says, a remarkably fine pair of grade Hereford oxen were weighed at the hay scales recently. Their weight was 4470 pounds, their measurement eight feet two inches—their age five years. They belong to Mr. H. C. Burleigh, of Fairfield, and reflect honor upon the best herd of Herefords in New England.

—S. P. Miller, Fayetteville, Vt., has a grade Durham cow which produced from April 20th to November 19th, 1869, 311 pounds of butter and 142 quarts of milk, beside the milk and cream used in a family of five persons. Her feed consisted of two quarts of meal and shorts per day, with ordinary pasture privileges.

—Four of the heaviest cattle ever raised in this country were shipped from Poughkeepsie to New York City recently. The heaviest of the four

weighed over 4,100 pounds and the lightest 3,300. They are each six years old, were raised in La Grange, Dutchess County, and were sold for \$3,200. Their hides are to be stuffed and placed in Central Park.

—A correspondent of the *NEW ENGLAND FARMER* has made skim-milk cheese in the fall when milk can be kept sweet several days, by putting the juice of grated carrots into the milk after skimming, as is done to color butter, and then treat the milk in the ordinary way of making cheese. After forty years' experience he pronounces such cheese nice.

—Mr. Hollis Daggett, of Monroe Co., N. Y., says many of the bees in his section are starving—that not over one-tenth of them will survive the winter without feeding, and adds that they can be easily and cheaply saved—especially if in movable comb-hives—by feeding them the syrup of coffee sugar. He is feeding his bees in this way, taking out the combs and filling them. When the syrup is put in the comb it should be as warm as milk when first drawn from the udder.

—The Massachusetts Agricultural College has property amounting to \$196,500, of which the live stock is valued at \$6880, tools and vehicles \$2240, produce \$4345. The balance of accounts between the farm and its expense is \$2567. There were 119 students in 1869. The trustees estimate that the buildings needed to accommodate the faculty and the next class will cost between \$100,000 and \$200,000, according to the number provided for.

—Mr. J. E. Porter of central Illinois has for several years mixed one third oats with his seed wheat, and according to the *Western Rural* gets much better crops than when wheat is sown alone. Last year wheat alone was nearly a failure, while that with oats produced fair crops. Mr. P. raised fifteen bushels of wheat and thirty of oats per acre. The two grains are harvested together, and are readily separated by any of the new fanning mills.

—Many cultivators ascribe much of the popularity of the Rose and other new varieties of potatoes, to the care with which they have been cultivated and the light seeding, generally single eyes, which their high price has induced. A correspondent of the *Country Gentleman* says that he has succeeded during the past three years in bringing some of the old varieties to the size and productiveness of the new ones, by the same cultivation which has been given to them.

—The Lexington, Ky., *Home Journal* says that several Southern planters went to Illinois and Indiana last season for laborers to harvest their crops, and succeeded beyond their expectation. As the cotton and sugar crops are not usually gathered and saved before December, and very frequently not until February, and consequently after the grain and grass crops of the north are secured, they obtained reliable men for these com-

paratively leisure months, who went to work cheerfully and saved the southern crops in excellent style. After a profitable late fall and winter engagement, these men return home in season for spring's work. It is thought larger numbers will be engaged next year.

—A correspondent of the *Country Gentleman* says, to be completely prosperous, stock-raising must be in a locality where good pastures and mowings can be kept permanently in grass; and on genuine natural grass land it will not answer under any circumstances to use the plough, as it takes many years of good management to bring the grass back to the established state. The very best grass land in the Southwest, the same as in England, never was seeded at all; and when the plough is put into such a turf it is synonymous with killing the goose which laid the golden eggs.

*For the New England Farmer.*

#### SHALL WE RAISE OUR CORN?

The discussion upon corn at the recent Farmers' Convention at Manchester, N. H. was earnest and practical. The successful growers regarded it as a profitable crop; regretted that the State should be obliged to buy so much, and warmly urged their brother farmers to raise their own corn.

There are some, it appears, who consider this counsel as old fogyish, and not in keeping with the times, and that it is better to buy corn, even if there is a net profit of 50 to 100 per cent. in raising it. Whether the growing of corn in New Hampshire is an antiquated notion or not, there are certainly sound arguments in favor of its cultivation, and the crop ought not to be condemned because of its antiquity.

It will be generally admitted that farmers require a large amount of some kind of grain to make their beef, pork, mutton, poultry, butter, &c., and for their working animals, and that corn is the best for all these purposes. The only question which admits of discussion is, Where shall we get it? From the West and South say the advocates of buying. At one time it was brought from these sections at marvellous low rates. If it could always be had from either section cheaper than we can raise it, all must admit buying is the best policy. But extensive home markets are arising at the South and West, and experience is teaching them that it is for their interest to raise less grain and expend more of what they do raise upon their farms and have beef, pork, mutton, wool and cheese and butter to sell.

The railroads and middle men are becoming very exacting in their demands—far more so than when they had lands to sell and sought patronage. The price has steadily advanced until there is now a wide margin for profit in raising it here,—our best cultivators claiming that it can be produced on our rough farms

for about 72 cents per bushel. This leaves a balance in favor of the home producer, for a net profit equal to what the Western farmer receives, on an average, for his delivered at the nearest market. If the present schemes of railroad consolidation are carried out, or if a few men can buy up and control long lines of road, the prospects of having lower freights or smaller commissions are not encouraging, and it is pretty certain that for some time to come New England farmers can fill their corn bins cheaper from their own acres than from the valley of the Mississippi. As long as we can realize as great and even greater net profit, per acre, is it not sufficient reason for raising more?

Again, the advocates of buying say that the cultivation of corn requires a good deal of attention and labor; the hoeing interferes with haying, &c.; therefore we had better raise more hay and sell a part of that or some other product and get money to buy corn. This may be a good policy for market gardeners and grass farmers to pursue. But every well appointed farm is supposed to have the requisite machinery, tools and help to raise some hoed crops, and it requires no very great ability to carry the hoeing through in time, without interfering with haying. Recent inventions enable us at the least to lessen the cost of planting and cultivating, and improved methods of cutting, curing and feeding the fodder it makes, has given an increased value to the stalks.

Well cured corn fodder is worth more than meadow hay. Where both the ears and stalks are consumed upon the farm, the stalks can be cut earlier and at the bottom, which greatly improves the fodder. Where neat stock is kept, the advantage of having the fodder ought to decide in favor of raising our own corn. Well filled bins of a home growth indicate that the stock will fare better than if their owners depended upon buying. As to the plan of selling hay and then buying corn with the proceeds, it may be advisable under some circumstances; still, by raising a few acres of corn and making a judicious use of the fodder, there would be more hay to be sold and no corn to be bought.

The potato is the only hoed crop that can compete with corn for supremacy in value in the New England States. In Maine and Vermont the potato leads by a large balance in its favor; in New Hampshire it is just ahead, while in Massachusetts, Connecticut and Rhode Island, corn ranks highest. Since 1862 the price of potatoes has been high and their culture has rapidly increased. But just now prices have a downward tendency, and will undoubtedly rule lower during the next decade. The Northwest has found that potatoes can be grown there at a profit, and is competing with us in the New Orleans and other Southern markets, and should the duties be taken off from the products of the British

Provinces, the profits of this crop would be still further reduced. Allowing, however, that an acre of potatoes gives more money than an acre of corn, is it advisable to grow them largely on the same farm? Even under skilful management, it is an exhausting crop. It draws largely upon the organic elements of the soil, beside the potash and soda, and returns nothing to it, and where the extravagantly wasteful system of burning is pursued to get new land for it, the ultimate effects of severe cropping are very injurious. In those localities in New Hampshire where it has been extensively raised for starch factories and the Boston market, this exhausting effect is already apparent. From first to last, both in raising and marketing, it is a heavy, laborious crop, and is attended with many risks. If the tubers fail to grow well, or if they rot, all is lost.

With corn, if the ears fail to ripen or fall out, the fodder is some remuneration. A large amount is returned to the soil through the fodder, stubble and roots, and since the phosphates can now be so readily restored to the soil, selling corn from a farm is not likely to prove as detrimental as raising potatoes. The freedom of corn from diseases, the almost certainty of a fair crop and the fact that both the grain and fodder can be kept, if not wanted immediately, give it preference to the potato. Corn, in these respects, is superior to all other hoed and root crops. It is surer and more remunerative than the other cereals, and deserves always to rank next to hay, even in New England. Perhaps, though, we should except the northern parts of Maine, New Hampshire and Vermont, which are better adapted to the potato.

Were there a few more public spirited men, like secretary Lyman of New Hampshire, in each State, a new zeal would be awakened in this truly valuable cereal, and our farmers would see that it is for their interest to raise more and buy less corn.

N. S. T.

*Lawrence, Mass., Feb. 3, 1870.*

*For the New England Farmer.*

#### CHEESE-MAKING.

The cheese that took the first premium at the Orleans County, Vt., fair in 1869, was over a year old and was made by Mrs. G. B. Brewster of Irasburg, who describes her method as follows:—

We have twenty-three cows, and make butter until the hot weather of July, then we make one cheese each day.

The night's milk is strained into a large tin tub and ice put into it to cool it and it is stirred until the ice is all melted, then it stands till morning, when it is skimmed and about a fifth part of the milk is taken out and so much warmed that when it is poured back it will make the whole as warm as new milk. Then the cream that was taken off is put into a cloth

strainer and the morning's milk strained upon and through it, so that the cream is all dissolved and mixed with the milk, which is then ready for the solution of rennet which is applied in sufficient quantity to bring the curd (or cause coagulation) in one hour; the quantity will be about a pint for thirty pails of milk. The curd is then cut into inch squares and stands until the curd settles. Then break it up carefully with the hands and let it stand till the curd settles again. After which dip off two pailfuls of whey to set aside to cool, also dip as much more to heat. When it is hot dip it upon the curd; then heat more whey and put on hot whey three times, which scalds or cooks the curd so that when a piece is bitten there is a slight squeaking sound. During this time it should be constantly stirred to prevent it settling together and breaking it finer. The warm whey is now drawn off and the cold whey poured on to cool it. When cool, drain dry and add a teacupful of salt to seventeen pounds of curd, working it in with the hands and continually breaking the curd. Then spread a cloth in the hoop and fill in the curd. Let it remain in the press twenty-four hours, turning it once in the time. When pressed enough put on the cloth sack which has been saturated with whey butter, and put the cheese on broad shelves, in a light, well-ventilated room to cure. During the ripening process it is turned and rubbed every day and oiled with whey butter to keep it from drying and cracking on the surface.

#### Rennet.

The stomach of calves a week or more old is filled with salt and hung to dry. When rennet is wanted put two or three into a stone jar full of water; after soaking a few days the liquid is ready for use. Add water to the jar in place of the liquid used, which keeps up the supply.

Z. E. J.

Irasburg, Vt., Feb. 10, 1870.

For the New England Farmer.

#### MEDICAL TOPICS.

BY A MEDICAL MAN.

#### How to Restore Frozen Persons.

The present winter having been unusually mild, thus far, we have heard of no cases of fatal, or even severe freezing. February and March, however, will probably give us weather of another sort; and it will be well for every person to know how to treat, properly, one who is near perishing from exposure to intense cold, or who has severely frozen some portion of his body or extremities.

The first effect of an exposure of the whole body to severe cold, is an almost irresistible impulse to sleep, which, if yielded to, is soon succeeded by coma or stupor, and death. During the state of coma, the body of the sufferer is found to be very pale and cold; the respiration and pulse are almost imperceptible,

and the pupils are dilated; but the limbs are flexible as long as life remains, unless the degree of cold be very great indeed.

Persons who have been exhausted by hunger, watching, or fatigue, and those who indulge in spirituous liquors, exhausted as they are by perpetual stimulation, are much more liable to suffer from cold, than are others.

The indications of treatment whenever a person has been exposed to severe cold, are, 1st. To produce moderate reaction, and restore the circulation and sensibility; and 2d. To avoid excessive reaction, which would surely lead to violent and dangerous inflammation. The body should first be rubbed with snow; and afterwards, when its warmth and sensibility are a little restored, it should be wiped quite dry, and well rubbed with fur or flannel. The patient should now be put into a cold bed, in a room without a fire, a stimulating *enema* should be administered, and a little wine and water, or very weak spirit and water, given as soon as he can swallow;—the *enema* may be composed of water and salt, with a little oil of turpentine. The after treatment must be regulated by the state of the patient. Mild cordials or stimulants, and nourishing food will be sufficient in most cases. Do not bring the patient into a warm room, nor apply artificial heat, in any way, until complete reaction has taken place, and all danger of excessive inflammation has passed by.

#### Frost-bite.

In cases where some portions of the body, only, are frozen, as the feet or the hands, the part or parts affected should be first rubbed with snow; for, whilst the friction restores the circulation and sensibility, the snow prevents any excessive reaction. After a time, cold water may be substituted for the snow and the friction may be brisker. These applications should be made in a room without a fire, and a high, or even a moderate temperature must be avoided for some time, if the patient would escape the subsequent inconvenience of *chilblains* and *running sores*. If the freezing has been so severe that mortification and sloughing ensue, stimulating poultices, washes, or ointments will be important. A poultice made of yeast, or of carrots, with a little pulverized charcoal; a wash of diluted creosote or carbolic acid; or an ointment in which creosote or carbolic acid is an ingredient,—either one of these will be useful.

*Chilblains* consist in an atonic inflammation of the skin, induced by sudden alternations of temperature, such as warming the feet and hands by the fire when cold and damp. A great variety of things have been proposed as remedies for these troublesome visitors; but all of them sometimes fail, though most of them possess some virtue. The following are among the best:—Soap liniment six parts, tincture of cantharides one part; spirit of camphor, and spirit of ammonia, either sepa-

rate or combined; common opodeldoc; common volatile liniment; diluted creosote, or carbolic acid; cold, shallow foot-baths, &c.

*For the New England Farmer.*

#### SENDING MILK TO THE CITY.

At the request of several farmers in Berkshire County, Mass., I send you the following suggestions from my experience in Eastern Massachusetts in relation to the transportation of milk from the country to the city.

The city peddlers or distributors should furnish ample security for the monthly payments for the amount of milk they receive of farmers or the car agents during the month, and provide three sets of cans, so that they shall leave as many empty, as they take of full ones each day.

The railroads must furnish box milk cars of suitable size, on springs, say thirty-four feet long, lined inside and top, and filled in with about six inches of charcoal, fitted up with shelves and racks for the milk, double doors, with windows in them, on each side.

The car agent must see that ice houses are erected and filled near the track, at the starting point; receive, examine and account for all milk left at the stations, set out the cans for each farmer, and see that they are not injured by handling; collect bills promptly of the city peddlers and pay over the same to each farmer monthly. He must make all contracts as to price and quantity by the six months; provide either in the city or elsewhere a butter or cheese factory to use up any surplus not required by the consumers, so that farmers may always dispose of all the milk they make.

With such arrangements, and with trustworthy and responsible agents on the route and in the city, farmers may have confidence in the business and keep as many cows and feed them as well as their means will justify. Notwithstanding Dr. Loring's caution, they will provide a supply of sweet or southern corn fodder to supplement their pasture feed, always wilting it two days before using it; also a supply of roots, which should be fed immediately after milking in the morning, or cut up with fodder, all of which, including hay and straw, should be cut and steamed, or hot water put upon it. The cans should be rinsed in cold water first, then scalded with hot water, and again rinsed in cold water, then placed bottom up on pins or a rack. The milk should be cooled and protected from heat, by water from a spring or well, and covered. In milking, be very careful to brush and clean the cow so that no dirt will get into the milk,—strain it carefully through linen strainers, and while cooling stir it two or three times with a dipper or paddle, and when cool close up the cans. While on the way to, or while at the station, allow no sun or heat to come in contact with the cans. No water,

barn-yard manure or other substance is wanted in milk, but it must be kept cool by a plenty of ice around the cans when in the car, which should be shut up as soon as loaded. With such precautions the milk will be transported in good order, and if the city peddlers complain of its being bad, hold the car agent responsible for not examining it when it left the cars.

If farmers find that these agents take any advantage in regard to price, &c., they must combine and manage their own business as those of Eastern Massachusetts and New Hampshire have done. If the farmers of Berkshire County will enter into such arrangements I am confident they will succeed. But if this cannot be done a butter and cheese factory should be established, the cost and plan of which may be the subject of another article. EASTERN MASSACHUSETTS.

*February, 16, 1870.*

*For the New England Farmer.*

#### PREPARING SHINGLES FOR ROOFS.

An editorial in the FARMER of the 12th inst., upon this subject, deserves the careful attention of every owner of buildings. Whatever may be the cause, it is certain that shingles do not last as long as they did fifty years ago. The "gravel and tar" covering for flat roofs is used to some extent here, and, so far, I think it proves satisfactory. The "Plastic Slate Roofing" has not been much used in this vicinity. Cedar and pine are plenty, yet shingles are dear, and farmers and others find it expensive keeping their roofs in repair.

Two or three years ago I was traveling on a steamboat, and a gentleman in the course of conversation informed me that his business for several years had been roofing buildings. He was then engaged in putting on *gravel and tar roofs*. He thought it a good material, but said he thought shingles might be prepared so as to do better. He had experimented considerably, and said he thought the following preparation would preserve shingles so that they would last sixty years.

Thinking the receipt worth remembering, I copied it, and now send it for publication.

Take a potash kettle, or a large tub, and put into it:—

One barrel of lye of wood ashes; five pounds of white vitriol; five pounds alum, and as much salt as will dissolve in the mixture.

Make the liquor quite warm, and put as many shingles in it as can be conveniently wet at once. Stir them up with a fork, and when well soaked, take them out, and put in more, renewing the liquor as necessary. Then lay the shingles as usual.

After they are laid, take the liquor that was left, put lime enough into it to make white-wash, and if any coloring is desirable, add ochre, Spanish brown, lampblack, &c., and apply to the roof with a brush or an old broom. This wash may be renewed from time to time.

Salt and lye are excellent preservatives of wood. It is well known that leach-tubs, troughs, and other articles used in the manufacture of potash, never rot. They become saturated with the alkali, turn yellowish inside, and remain impervious to the action of the weather.

I hope the experiment will be tried. The expense is trifling, which is one thing in its favor.

GRANITE.

Bloomfield, C. W., 2d mo., 19th, 1870.

REMARKS.—The use of salt in liquid for soaking shingles has been objected to on account of its causing the nails to rust. Sometimes the nails fail first, when the shingles are not soaked at all.

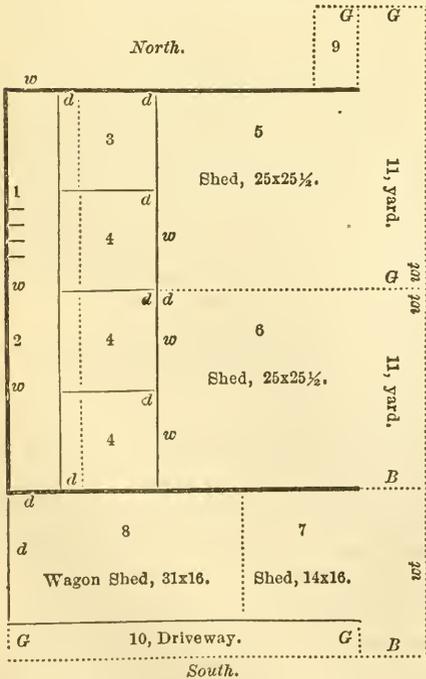
For the New England Farmer.

A CONVENIENT CATTLE BARN.

As I have seen several plans of barns, both for cattle and sheep, in your valuable paper, I send you a plan of one built in the summer of 1861.

The barn is fifty-one feet long and forty-five feet wide, with a shed on the south end, forty-five feet long and sixteen feet wide, with one roof attached to the barn. The following is the

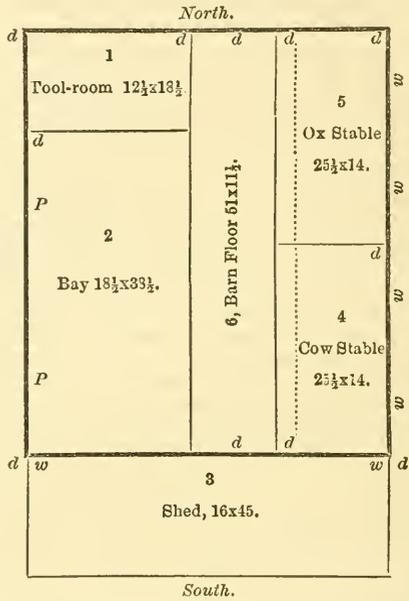
PLAN OF THE BASEMENT.



Explanation of Plan of Basement.—No. 1, stairway, 3 feet wide; No. 2, walk in front of the stable, 51x5 1/2; No. 3, bull pen, 12 1/2x13, including crib; No. 4, pens for

young stock or cows, while foaling, 12 1/2x13, including crib; No. 5, cow shed and yard; No. 6, ox shed and yard; No. 7, steer shed and yard; No. 8, place to store wagons, &c.; d, stands for door; w, for window; wt, for water troughs; B, for bars; G, for gates. The dotted lines represent the fence in the yard, and the crib in the stable; No. 9, walk for the cattle from the yard to the stable above; No. 10, drive way from the yard to the main road.

PLAN OF FIRST FLOOR.



Explanation of Plan of First Floor.—No. 1, tool room, 12 1/2x18 1/2 feet, with three doors and one window; No. 2, bay 18 1/2x33 1/2; No. 3, shed, 16x45, with two doors and one window over each door; No. 4, cow stable, 25 1/2x14, including crib; No. 5, ox stable, 25 1/2x14, including crib; No. 6, barn floor, 61x11 1/2. There is a long window over each of the two large doors; d, indicates door; w, window; P, pitch-holes for passing hay to the walk below.

The barn is supported by a whole wall on two sides, banked to the top with earth. The posts are sixteen feet in length.

We intend to keep good stock in this barn. And if you, Mr. Editor, or any of the readers of the FARMER happen in this neighborhood we shall be pleased to show both the barn and the stock that are fed in it.

H. BLACK.  
Putney, Vt., Jan. 25, 1870.

For the New England Farmer.

THE "JOHN MORRILL" OR "WOOD-STOCK" HORSE.

In your last issue an inquiry is made about the "John Morrill Horse." This horse was foaled in Barre, Vt., or in that immediate vicinity, in the spring of 1857. When one year and a few months old he was bought by

Moses Cheney, Esq., of Barnard, Vt., and taken to Bethel, and left in the care of J. J. Bowen, then of Bethel, Vt., now of Medford, Mass., who had a half interest in him. Mr. Bowen kept him till the latter part of the winter of 1861, when he became the property of John Robinson of Royalton. The colt was at that time merely "broken." Mr. Robinson, a drover, used him pretty constantly for a single driver till the September after he was four years old. At that time Mr. R. showed him for premium at the Windsor County, Vt., Fair, at Woodstock, and took the first premium in his class—the colt showing 3.12.

About that time Wm. C. Danforth, of Barnard, became principal owner of the colt, and took him to Barnard. Mr. D. kept him for stock purposes in his own and neighboring towns two seasons, trained him some, and exhibited him at the Windsor County Fair, when five years old, in time 2.54, and when six years old, at same Fair he was close on to Draco in 2.39½.

In March, before he was seven, he was purchased by Frederick Billings, Esq., of Woodstock, Vt., who kept him at White River Junction that season for stock purposes, and in the fall showed him at the New England Fair at Springfield, Mass., also at the Connecticut Valley Fair at Bradford, Vt., and Windsor County Fair at Woodstock, Vt. During this fall the horse was out of condition and did not do himself justice.

The next season I think he was kept for stock a short time, but am not sure. In the fall he was in fair condition, and though showed at several Fairs, I believe his best time was made at Woodstock, viz., 2.33.

The next season he was kept in train, and although showing high speed, he nowhere showed himself a reliable fast trotter. By this time from some cause he had acquired the habit of pulling hard and running some in spite of his driver. The horse is now in stable of Dr. F. Smith, of Stowe, Vt. It is said that the doctor has bought him of Mr. Billings.

John Morrill was bought by Mr. Billings for \$4250, who changed his name to "Woodstock," by which he is now known. This horse is about 15¾ hands and weighs 1150 pounds. He is black all over,—as black as the blackest raven; is very strongly made and powerful in his movements. Under more favorable circumstances he might have been a more reliable trotter. That he is very speedy no one who knows him can doubt.

His sire was Young Morrill. His dam was by the Hood Horse; he by Carson Horse, he by "Quicksilver." The stock from John Morrill or Woodstock is excellent.

LEONARD T. TUCKER.

South Royalton, Vt., Feb. 21, 1870.

—Sulphur burned in a room is said to neutralize at once the odor occasioned by a skunk.

For the New England Farmer.

### WINDOW GARDENING.—No. 3.

As the winter draws near its end, our "window gardens" require all the stimulants, sun and air, which we can give them. Sunlight, one of the most precious gifts of God, is essential to their growth—indeed, seclusion from sunshine is one of the misfortunes of our civilization. It fades our elegant carpets, furniture-coverings and curtains,—yes, and our daughters, ourselves and all who live under our roofs! In large cities, the parlors are shut up until a visitor calls, then a little light is allowed to enter. Such rooms are stifling to body and soul! Throw open the blinds, my friends, take down the gorgeous curtains, and bid the bright sunshine enter and enliven your home! Fill your windows with blossoming plants, and see how they turn to the glorious light which is so needful to our health and theirs. Many of our "olive plants" fade away, from living in dark, unhealthy rooms. Pale, and sickly are the girls that are reared in fashionable parlors. Expose them and your plants to the direct rays of the sun, and they will gain color, strength and health. Dyspepsia, and neuralgia will flee away under its life-giving influence. A slight digression from our subject, my friends, but we fear a needful one. Calla lilies are always beautiful, and much sought after at the blessed Easter service. They are of the easiest culture, and if rightly treated, can be in full bloom by the middle of March. They often refuse to blossom on account of the pot being clogged with the offsets or young tubers. Wet the soil thoroughly, run a knife round the edge of the pot, and turn it bottom side upwards over the hand. If the earth is filled up with small bulbs, take them out carefully, so as not to injure the long white, fibrous roots of the large bulbs. Fill up the pot with fresh soil, warmed through—*don't chill the roots!* Water it freely, keeping a saucer full of water under it. If the pot is placed in a pan of water so that it is nearly covered, it will bloom luxuriantly. In truth it is as easy to cultivate as a potato. Stimulate it with guano water or liquid manure twice a week, and soon the pure, white-sheathed bud will herald the glorious flower. Three to four blossoms can be produced on one pot of bulbs, by cultivating as many large bulbs in a place. We saw a forest of these pure lilies in bloom at a green house, last March. They were raised with special reference to Easter. The plants can be sprinkled by dipping a small bush broom into warm water and shaking it over them. A warm shower is thus produced, which washes away the dust so injurious to house-plants.

The growth of our "Window Gardens" is often checked by worms in the pots. They can be found by turning the pot upside down, giving the edge a sharp knock; the pot can then be removed, and the worms will usually be found on the outside of the soil, and can be picked out. Watering with lime water will often destroy them. Take a

pound, slack it in a pail with cold water; let it settle, then bottle and keep in a cool place, where it will not freeze; warm it before you turn it on the plants. It acts as a fertilizer as well as a worm destroyer. Wood ashes will also kill worms. Put a tablespoonful on the surface of a large pot—taking care not to touch the stem or leaves of the plants.

Insects seldom trouble plants which are often washed; but in parlors it is not convenient to shower frequently. A feather will brush off the green aphides, and by putting a newspaper under the pot, they can be burned up.

In England, the gardeners recommend washing the plants with alcohol water,—a tablespoonful of the former to four of water,—but the water itself will do the work as well. Summer showers keep our flowers free from them.

Red spiders will not always leave if plants are well watered; but a slight dusting of cayenne pepper routs them. Spread a paper over the surface of the pot to prevent its touching the soil, as it might injure the roots. Take the pepper castor, and dust the leaves and stems—in two or three days wash it off, and the spiders will not soon return. Bulbs always repay the cultivator. We have a glass dish filled with hyacinths which are in full bud. By watering them with warm water and a few drops of ammonia, we have doubled their growth. To a teacupful of water, add five drops of liquid ammonia. We filled our fernery this year with snow-drops, crocuses, anemones, colchicums, etc., and now it is a joy and beauty. Among the tall feathery ferns, the Lycopodiums, partridge vines, and green mosses, their bright flowers glow like tropical birds. No matter how dreary the weather, how few our visitors, we have "company" always. As we sit by the glowing fireside, we can gaze upon a miniature summer, though out of doors dread winter reigns supreme; and as I write, I feast my eyes upon its beauties, and wonder that all house-keepers do not avail themselves of the adornments which flowers offer to them. Costing but little, their influence is priceless! A fernery requires no attention—water is needed only once a month, so to those who dislike the daily care of flowers, it offers a floral treat without care. Mine is *home-made*—the tin man made the zinc pan ten inches by eighteen—the carpenter, the glass case which covers it—the whole expense was only \$3.50; and it will last for years. The woods and fields provided the ferns, mosses, and vines, and with the bulbs blossoming among them, it is a "*rest for the weary.*"

The double geraniums are a "*novelty*" worthy of the attention of all lovers of flowers. They do not drop their leaves like the single varieties, and the clusters are very large and ornamental in bouquet or vase. *Madame Lemoine* is considered one of the most beautiful yet produced. Its leaves are handsomely zoned with chocolate, the flowers are very durable and of a bright rose color, and the

tresses are enormous in size. \$3 was asked for this rarity last year. This year it can be purchased for \$1. *Triomphe de Lorraine* has immense, very durable flowers of a rosy carmine color, striped white; last year it was \$1—now it can be had for fifty cents. *Triomphe De Thumesnil* is of a violet rose, shaded with carmine, and its trusses often boast of from fifty to sixty flowers. This rare "*novelty*" is seventy-five cents. Novelties, *en masse*, we are apt to class as *humbugs*; but these flowers are what they pretend to be, and worthy the attention of every florist. They come to us from the French florists, and are the results of the most careful hybridization. With a camel's hair pencil they deposited the precious pollen upon the stigma of another flower, and if but one more petal was produced, that flower was treated in the same manner. So after years of careful investigation and patient toil, they are rewarded by

"The bright consummate flower,"

and feel fully repaid for all their care. By this process, these perfectly double geraniums were produced; also the double *Zinnias*, *Asters*, and *Balsams*, which delight all florists and amateurs. While we write of these brilliant flowers, we can imagine them springing up about us, in all the luxuriance of summer, but a glance out of doors, shows us that—

"Gently as lilies shed their leaves,  
When summer days are fair,  
The feathery snow comes floating down,  
Like blossoms on the air,"

and our visions fade away.

S. O. J.

*For the New England Farmer.*

#### WINDHAM COUNTY WOOL GROWERS' ASSOCIATION.

The Windham County Wool Grower's Association met in Westminster East, Feb. 7th, and after a free and full discussion of the subject of wool growing and the working of the present tariff, if rightfully administered, also its effects under the present erroneous construction, adopted the following preamble and resolutions:—

*Whereas* during the year previous to the passage of our present Tariff great inducements were held out to capitalists to enter largely into the importation of foreign wool and woolsens, with a view to set their goods into our markets under the old Tariff of low duties and hold them until after its passage, and

*Whereas* such vast importations were made as to cause a glut in all of our markets, and a reduction in prices of wool and woolsens to such an extent as to seriously cripple these two great interests; and had it not been for the intervention of our Tariff, passed in March, 1867, the Wool Growing interest would have speedily been annihilated, and

*Whereas* Wool Growing is one of the material products of this our Commonwealth, and from its adaptation ought to be one of the leading pursuits of its citizens, as it has been heretofore, and

*Whereas* the prices of domestic wool under the operations of the present Tariff, as now administered, do not pay for its production in this section of our country, and can be remunerative in no considerable portion thereof, and is fast being abandoned, and

*Whereas* by the ruling of the head of our Treasury Department, a very important and essential proviso is

rendered null and void; whereby foreign wool of all qualities, (except Merino and English blood wools) are now admitted into our ports at low nominal duty of the third class wool,—therefore,

*Resolved*, That in the opinion of this Association, and in view of the foregoing facts, the usefulness of our existing Tariff has been partially crippled and diverted from its proper channel, we as "Wool Growers," would very respectfully ask for a continuation of this Tariff upon the principles on which it was framed, by the joint committee of Wool Growers and Manufacturers in convention mutually agreed, believing that upon a further and fair trial, it will prove advantageous to the best interest of our country.

*Resolved*, That we regard the annual reports of Commissioner Wells of the revenue in many respects erroneous, not warranted by facts, made in the interest of free trade, detrimental to the industry and best interest of our country and calculated to cherish and foster foreign labor and foreign trade to the expense of our own.

*Resolved*, That the importation of over 7,000,000 lbs. of third class wool into the city of New York alone during the year following the unfavorable decision of our Treasury Department, over the previous year, when the law was partially executed as its framers intended, conclusively proves that the "Wool Grower" does not receive the full benefit of the "Tariff" as intended by its framers.

*Resolved*, That the manufacturers of woolen fabrics who are realizing all the protection under the present law as now construed, should be entitled to no more, at the expense of the Wool Grower, and should not have the privilege of purchasing foreign clothing wool in our own markets for less price than it costs to produce the domestic of like quality.

*Resolved*, That Congress should by a plain, brief, specific statute make it peremptory upon the appraisers at the Custom House, to place all wool not clearly designed as carpet wool (third class in present law) in the second class, to be treated as clothing wool and subject to the duties thereof.

*Resolved*, That the Secretary be directed to furnish a copy of these Resolutions to each of our county papers, also to each of our members of Congress, with a request to move for a remedy in this matter, if in their judgment there is a reasonable hope for success.

M. W. DAVIS, Secretary.

Westminster, Vt., Feb. 22, 1870.

### CHEESE FACTORIES OF MASS.

In addition to the notice published in our last of the proceedings of the Convention of Massachusetts cheese makers at Hardwick in Worcester county, we publish the following from the report of the Secretary of the Board of Agriculture published in the Massachusetts *Ploughman*.

On Wednesday, after the election of officers, the reports of Cheese Factories were read as follows:—

#### Hardwick Centre Cheese Factory.

Capital invested \$4250; 42½ shares, all sold and paid for, and surplus of \$931.28 for repairs, &c. Commenced making cheese April 1, closing November 23; amount of milk used, 2,224,023 pounds, being about 9½ pounds of milk used to one of cheese made; cheese kept 30 to 40 days before marketed; each eighteen inches diameter, weighing 74 pounds; help, two males and one female; cost of help, including board, \$1692.93; 1017 rennets cost \$271; 29.0 boxes cost 30 cents each. Use Ralph vat, with wood; burned 11½ cords of wood, costing \$59; coal in dry room, cost \$104; used 21 barrels and 4 sacks salt, costing \$105; expense of freight and marketing, .61½ cents per 100 pounds; amount of salt per 1000 pounds milk, 2½; amount of cheese cured, 230,792 pounds; net income per 100, \$15.50; average price of cheese in market, 17.849; average price to milk contributors, \$15.447. Whole expense of everything, \$2,301 per 100 pounds.

#### Barre South Cheese Factory.

Capital \$5200. Commenced April 1, closing November 17. Pounds of milk used, 1,211,578, being 0½ pounds milk to each pound of cheese cured. Kept on average five weeks before marketed. Average weight 75 pounds each. Help one man, seven months, two men

six months, three men, three months. Cost of help \$971.73. 521 rennets cost \$135. 1573 boxes cost 30 cents per box. Ralph vats used in heating. Fuel cost \$109.69; salt \$57.06; expense per pound in getting cheese ready for market \$ 0218 expense of freight and marketing, .66 per 100 pounds; 42 ounces salt per 1000 pounds milk; 124,122 pounds cheese cured; net income per 100 pounds, \$15.13; some of whey sold for 20 cents per barrel. 44 hogs kept on whey, &c.; they cost in spring, live weight, 14 cent per pound. Net profit on hogs \$200.

#### New Braintree Cheese Factory.

Capital \$9000. Commenced making April 1, closed November 29; 2,152,004 pounds milk used, being 10.2 pounds to one of cured cheese; kept four to eight weeks before marketed; two sizes, 13 by 3 inches and 16 by 5 inches, weighing respectively 82 and 36 pounds each; help, one male and two females all the time, and one man 5½ months; cost of help, \$1343.50; 27 rennets cost \$167.75; 2817 boxes cost \$706.50; 1867 yards cloth used cost \$217.59; 42 cords wood cost \$222.35; 8¼ tons coal cost \$112.72; 28 sacks salt cost \$105.75; expense per pound in getting cheese ready to send from factory \$ .156; expense of freightage and marketing \$1,063.03; 2½ pounds salt used per 1000 pounds milk; 210,980 pounds cheese cured; net income per 100 pounds \$14.54; average 500 cows per month; average 420 pounds cheese per cow; 60 hogs kept cost \$1311.65; corn and meal fed to hogs cost \$493.23; 59 hogs were sold at from 14½ to 15 cents per pound dressed, and with the lard amounted to \$2,775.94. Whole cost of everything in keeping the hogs \$2,122.21; net balance in favor of hogs \$653.63. The hogs were fed some corn with the whey the second week in May, when they were bought; commenced feeding meal August 15.

#### Worcester County Cheese Factory.

At Warren—Capital \$5200; commenced making April 12; closed November 8; 1,337,933 pounds of milk used, being 9½ pounds to each pound cured cheese; 2060 cheeses made, costing \$998.70; 477 rennets cost \$95.49; help, two males, one female; 2,600 boxes cost \$618; 1075 yards of cloth used, cost \$113.25; 27 cords of wood used cost \$95; 2 tons of coal \$22; salt \$35.50; all other expenses \$1,138.39; expenses per pound getting cheese ready for market 2½ cents; 216 pounds of salt per 10.0 pounds cheese; 140,718 pounds of cheese cured; net income per 100 pounds \$15.044; average 335 cows per month; 365½ pounds of cheese per cow.

#### Coy's Hill Factory.

Warren—Capital \$6000; commenced working April 1st, closed October 1st; 1,122,250 pounds of milk used, being 9.355 pounds of milk to one pound of cheese cured; average weight, 80 pounds each; help, man and wife; cost of help \$970; 481 rennets cost \$99.89; 1462 boxes cost \$433.22; 113 yards of cloth cost \$112.25; Miller's circulating coil cheese vat used for heating; 13¼ cords of wood cost \$67.50; 3496 pounds of salt \$43.50; 119,960 pounds cured cheese; net income per 100 pounds, \$18.33.

#### Belchertown Cheese Factory.

Capital \$1200; commenced making May 24, closed September 11; 226,247 pounds milk used, being 9½ pounds to one of cheese cured; kept twenty-five days before marketed; 411 weighed 56 pounds each; and 175 about 13 pounds each; help one male all the time, one female one-half the time; cost of help \$100 per month; 60 rennets cost \$10; cost of cloth \$25.00; 5½ cords wood cost \$21; 23.515 pounds cured cheese; cheese sold on average at 16 cents per pound.

#### Greylock Cheese Factory.

At South Adams—Commenced April 15, closed December 1; 1,140,075 pounds milk used, being 9.6 pounds milk to one pound of cheese cured; kept 60 days before marketed; average weight 78 pounds each; help, one male and one female; cost of help \$600; cost of manufacturing per 100 pounds \$2.00; amount of cheese cured 118,233 pounds; 15½ yards of cloth used; 17 sacks Ashton salt, cost \$4.70 per sack; 12 pounds annatto, \$20; 1514 boxes cost \$481.43; whole expense of manufacturing, including freight and marketing \$2,444.93; net income per 100 pounds \$14.67; average 408 pounds cheese per cow.

In the following, only partial reports were made, the cheese not being all sold:—

**Barre Central Cheese Factory.**

1,890,674 pounds milk, 194,966 pounds cheese; average 9.69 pounds milk to one of cheese cured.

**Barre South West Factory.**

361,075 pounds milk and 26,000 pounds cheese.

**Petersham Factory.**

573,554 pounds milk; being 9.95 pounds milk to one of cheese cured.

**Prescott Factory.**

Capital \$2000; 334,723 pounds milk and 33,472 pounds of cheese, or 10 1-6 pounds of milk to one of cheese; whole expense, \$1160. Commenced making May 10, closed October 10; help, one man, \$75 per month. Kept eighty cows.

**Oakham and Hardwick Cheese Factories.**

No report.

The President having brought the subject of the Government tax on butter and cheese, before the convention, a committee consisting of A. H. Holland, of Barre; N. S. Johnson, of Dana; D. S. Ellis, of Warren; W. A. Warner, of Hardwick, and Mr. Hall, of Greenfield, were appointed on resolutions, who reported the following, which were adopted:—

*Resolved*, That the officers of this Association be and are hereby instructed to petition Congress that the revenue laws of the United States be so amended that the manufacture of butter and cheese may be exempted from taxation.

*Resolved*, That the thanks of this Association are hereby tendered to Messrs. Eli t, Hyde, and Goodman for the able and instructive addresses with which they have favored it.

*Resolved*, That the thanks of the Association be tendered to the citizens of Hardwick for their courtesy and attention on this occasion.

**ORCHARD GRASS IN KENTUCKY.**—A correspondent of the *Lexington Farmer's Home Journal*, Mr. Richard Waters, of Goshen, Ky., gives a favorable opinion of this grass in his section. He says it is extensively grown in the north of England and Scotland under the name of Cock's Foot, from the resemblance of its top to a cock's foot. In Kentucky it is sown from the first of January to first of April. He prefers to sow it after corn, 20 pounds of seed to the acre, with about three quarts of clover. Should be pastured hard to tread the land. Rightly managed and on good land—would not sow on light loam or sandy land—he says it will afford a quarter more than Timothy, bluegrass, herdsgrass, or clover. It is of very rapid growth, and is a permanent grass. If cut when first in bloom, it makes good hay; but if suffered to ripen, the stalks become too hard. In open woodlands, where weeds or briars will grow, the orchard grass thrives well. He sows on such lands thirty pounds of seed per acre, and by feeding shelled corn scattered over the land, from day to day, makes his hogs harrow in the orchard grass seed. Commences to pasture as soon as the grass is two inches high, and pastures close to cause it to form a sod. He says it will grow under the shade of a beech tree. Cattle fatten rapidly on this grass.

—The State of California has 800,000 peach trees, enough to produce more than 100 pounds of fruit annually for every person in the State.

**DIANTHUS HEDDEWIGII DIADEMATUS.**

We present on the opposite page a fine representation of one of the latest novelties in the flower garden. The dianthus belongs to the same family as the Carnation, Picotee Pink, and Sweet William. It is of Japan or Chinese origin, and may be regarded as among the most beautiful and effective of our hardy annuals. The recently introduced species, the *Dianthus Heddewigii* and *Laciniatus*, with their large and rich colored flowers, three to four inches in diameter, close, compact habit, and profusion of bloom, are unsurpassed for effectiveness in beds and mixed borders. In Breck's *Book of Flowers*, we find the following description of these flowers:—

Mr. Heddewig, the originator, gives the following account of their origin:—"I had the fortune to raise from Japan seed, a new splendid Pink, which Dr. Kornicke describes already in *Regels Gartenflora* as *Dianthus laciniatus*. I raised last year 800 seeds from it, which I sowed early; and already at the end of May they commenced to display their most magnificent flowers, of a diameter of four inches. I was greatly rejoiced to see a part of them of splendid, dense, double flowers, in the greatest variety of colors, viz. ; pure white, rose, lilac, carmine, crimson, purple-violet, the darkest black brown, spotted and striped; a splendid sight, far beyond description. August 3, 1859, I exhibited 18 plants in as many different varieties, and received the highest reward for novelties, 'The Golden Medal,' from the Imperial Horticultural Society. This Pink grows two feet high; the small leaves have a length of four inches, and the double varieties, from their dense double form, and the lacinate petals, somewhat resemble the flower *Papaver pœoniflorum*. Some plants endured our last Russian winter without being covered." I have had the pleasure, adds Mr. Breck, of cultivating these novelties since 1861, and find them to correspond nearly with these descriptions. I have not had any that attained a greater height than a foot, or foot and one-half, but have had all the shades of color mentioned by Mr. Heddewig. The foliage is somewhat glaucous and lanceolate. Both varieties produce double flowers. To ascertain whether they would survive our winters, I protected a large bed of them with leaves in the autumn of 1864, and they came out bright in the spring of 1865 and flowered superbly during the summer. If they are not hardy enough to stand the winter without covering, they are very valuable acquisitions to the flower-garden as annuals. Like the China Pinks, they are destitute of fragrance.

The particular species shown in our engraving



**DIANTHUS HEDEWIGII DIADEMATUS.**

ing, the "Double Diadem Pink," is described in Washburn & Co.'s catalogue (from which we copy) as a striking novelty of wonderful beauty. It differs from the *D. Heddewigii*, being more luxuriant, compact and dwarfish; its flowers have a diameter of two to four inch-

es each. They are regular, densely double, and have all tints, from lilac, crimson and purple, to the deepest black purple.

Our lady readers who may be inclined to try these flowers will find them of easy culture, and very satisfactory in their appearance.

## NEW PUBLICATIONS.

THE AMERICAN NATURALIST, a Popular Illustrated Magazine of Natural History. Edited by A. S. Packard, Jr., E. S. Morse, A. Hyatt, and F. W. Putnam. Vol. III. Salem, Mass.: Peabody Academy of Science, 1870. For sale by Crosby & Damrell, 100 Washington St., Boston. \$4 a year.

The February number completes the third volume of this work, and furnishes the title-page, index, &c. "Skates' Eggs and Young," "Notes on some of the Rarer Birds of Massachusetts," "Our Common Fresh Water Shells," "What is Bathytibus?" are among the illustrated articles in this closing number of the third volume of the *American Naturalist*. The twelve monthly numbers make a volume of nearly 700 pages, with eleven plates and 102 wood cuts, forming an illustrated encyclopædia of natural history of a non-technical character, designed for the student, the farmer and for the general reader who is interested in the mysteries of nature. We are pleased to notice that the publishers propose to give eight pages of reading matter in each number for the next volume, which commences in March, more than was given the past year. We invite parents and others who question the influence of the "light literature" which is now so abundant in nearly every family, to consider the claims of this publication on their patronage.

BARNs, OUTBUILDINGS AND FENCES. By Geo. E. Harney, Architect, Newburg and Cold Springs, N. Y. New York: Geo. E. Woodward. Engraved and Printed by Korff Broa. Quarto, \$10.

Our readers who have had an opportunity of seeing wood-cut illustrations in newspaper print of Mr. Harney's taste, skill and judgment as an architect, will be curious to see fine lithographic representations of the same, on clear paper, and in elegant book form. This volume contains a series of 120 original designs and plans, with descriptive matter, for the different kinds of out-buildings required on farms and village lots. It is divided into three sections. The first comprises stables; the second, wood-houses, workshops, poultry-houses, ice-houses, &c.; the third, rustic and finished fences and gate-ways, covered gate-ways, carriage-gates, gate and gate-house combined, rustic stables, summer-houses, well-houses, &c. We notice that one whole page is devoted to an illustration of "a new method of hanging up harness," which not only pleases us much, as we have had so much trouble in keeping our harness in place, but illustrates the minuteness of detail which characterizes these designs and plans. If the book is too costly for individual farmers, we would call the attention of the library committees to this splendid volume. It is for sale in Boston by A. Williams & Co., at the corner of Washington and School Sts.

For the New England Farmer.

## WINDOW GARDENING.—No. 4.

Now the wild March winds roar through forest and vale—and they have their work to accomplish—they prepare the soil for the farmer and gardener. It has been said that "a bushel of March dust is worth a king's ransom." It indicates that there has been drying winds, and in April the fields will be ready for the seed. Another proverb runs thus: "A dry, cold March never begs bread." And still another: "A wet, warm March makes a sad autumn." So we will hope that high winds may prevail, and make ready the gardens which will nurture our "window pets" and annuals.

For the past week the seedsmen's catalogues have attracted our attention from our "Window Gardening." Five cents will purchase a packet of seeds which may produce fifty fine plants—ten for a cent; one dollar will buy twenty different kinds. Only the poorest hovel need be without its flower garden, as well as vegetables. The only novelty we especially desire is the *Diadem Pink* of which you gave your readers such a tempting illustration. Fifty cents must be expended for that, at any rate.

If our plants have been carefully tended, well watered, stimulated and washed—*freed from all clogging dust*—this month tells the story to all passers-by. Their gorgeous blossoms fully repay all our cultivation. *Bedding-out geraniums* are now vying with tropical birds in the color and size of their clusters of flowers. Tom Thumb "*Lady Mary*," purely white with red anthers, turns its snowy flowers proudly to the sunlight. "*Gen. Grant*," the *ne plus ultra* of the Scarlets, rivals all its competitors. "*Herald of Spring*," with its trusses of cherry-red is worthily named. *Christine*, a bright rosy pink, vies with the color of June roses. *Bicolor*, with a salmon pink centre shading to white is very lovely. All the Tom Thumb varieties are desirable for house culture; they make such stocky plants, and are covered with such large clusters of flowers. We possess nineteen pots of different colored geraniums, and nearly all are budded, or will be soon. By the last of this month they will be in a blaze of glory, and when the summer is here they will fill a mound with their green leaves and bright flowers. There is no plant more adapted to amateur cultivation than these so-called bedding-out or *Zonale Geraniums*. No *aphides* approach them, even the detestable red spider keeps at a distance. The foliage of many of them is very ornamental, though the variegated-leaved geraniums do not produce beautiful flowers. They blossom, but the flowers are inferior. Still they are a decided addition to a "window garden;" some of the new varieties are very ornamental—nothing can exceed the beauty of these interesting "sports." *Mountain of Snow* has pure white

—A correspondent of the *New York Rural* recommends the following lotion for chilblains; 1 drachm tincture of opium; 2 drachms tincture arnica; 1 drachm best oil of peppermint.

margined leaves. *Queen of the Queens* possesses bright green foliage with a silvery white margin. *Mad. Pollock* maintains her prestige, and is much sought after. Its bright red zone shades into crimson, and is edged with golden yellow. *Golden Vase* has green and golden foliage. *Sunset* has tri-colored leaves. Space would fail us to enumerate all the "beauties" offered to us by the florists, and all of us must have some of them. The leaves are unrivalled for bouquets and vases, and the plants are of most easy growth.

In this month, we must give our "pets" all the fresh air that is possible. If the room is unoccupied, open the windows for two or three hours in the warmest part of the day. If our readers have used the fertilizers which we have recommended, their plants must be growing rapidly now. It requires but little skill to grow a plant fast,—stimulating liquids, good compost, and a warm room will always do this; but remember the faster a plant grows, the wider apart are the leaves, the more stem there is, the more distant the lateral branches, and the more gawky the plant! The skill of the gardener is shown in producing a plant of the best form that it can be grown. Beauty in foliage can never be attained when the leaves which should fill a foot in space, are stretched out to a yard, and the clusters of flowers that should grace a plant two feet in height, are scattered over two yards of half-naked stalks. Slower growth is obtained by lowering the temperature at night, when there is no danger of frost. Shut out the furnace heat entirely, or open the doors and cool off the room. By thus reducing the warmth, and giving all the fresh air which is possible,—and be careful not to water too much, allowing no water to remain in the saucers of any plants but *Calla lilies* and *Lobelias*,—a fine, compact habit can be obtained.

It is this peculiarity which makes the "*Tom Thumb*" class of plants so desirable. By careful hybridization they have been produced, and we have *Tom Thumb Geraniums*, *Asters*, *Tropæolums*, *Stocks*, etc., etc. As yet no florist has produced a *Tom Thumb Fuchsia*, but we yearly look for its advent. There is a *Fuchsia* so called, but it has small flowers. In selecting plants, be sure to choose all the *Tom Thumb* varieties, for they will never disappoint your expectations. They are novelties much to be desired; so when our readers inspect the seed catalogues, let them remember this word of advice.

We have given a variety of receipts for liquid stimulants, but have just heard of another, which those who dislike the odorous compounds, heretofore recommended, may like to try. It is sulphate of ammonia, and is thus prepared: Dissolve two ounces of carbonate of ammonia (common smelling salts) in a pint of water, and then drop in sulphuric acid (oil of vitriol) until all effervescence or bubbling ceases. A tablespoonful of the solu-

tion of sulphate of ammonia mixed with one gallon of warm water is a most efficacious liquid manure, and not at all disagreeable to use in any parlor or chamber. It should be applied, at first, once a week, then every four or five days.

We wish that we could inspire every woman and child with a love for flowers and their cultivation. It is the healthiest and purest of pleasures, and soon the amateur becomes intensely interested and entertained. In the country, this pursuit will while away many an hour, and confer great benefits upon the florist. Our daughters are suffering in mind and body for open air and exercise. The garden offers them all this and infinitely more. The English ladies have devoted their morning hours to gardening for many years. They are not afraid of the trowel or the rake, nor of soiling their dainty fingers, and their fine rosy complexions and robust figures attest the vigor and health these occupations have imparted. But these are not all the blessings conferred by gardening:—

"Not a tree,  
A plant, a leaf, a blossom, but contains  
A folio volume. We may read, and read.  
And read again; and still find something new,  
Something to please, and something to instruct,  
E'en in the humble weed."

S. O. J.

#### SCALDING MILK VESSELS.

It used to be the practice to scald milk pans and milk pails, and it is the practice yet.

Why is it done? There is no "science" about it; philosophy has not led to it. What is it then that induced people to engage in what they didn't understand, yet, which was and is a great good? It is experience. It has been found that scalding a vessel with hot water will have an effect that cannot otherwise be obtained.

What is that effect? Simply the destruction of little spores of fermentation, which propagate rapidly in dirt, and in the least dirt, so little that it cannot be seen (with the naked eye.) Experience led here, and philosophy followed to corroborate it.

You cannot cleanse a vessel, then, without hot water. And this water must not only be smacking hot, biting your hand, but it must be absolutely boiling hot, up to the point. Then you will kill all the live animalculæ; otherwise, you will not.

And when the vessel is thus treated—cleaned first, and scalded afterward—set it away to dry, and do not touch it again till it is wanted for milk. Milk, remember, is a powerful absorbent, like charcoal, or plaster, or earth; and it will hold what it gets, improving on the rankness. In winter this is less the case, yet it is the case; in summer it is all important to attend to it.

How necessary then to see that the hands having the handling of milk in charge, are to

be trusted. This is as necessary as anything, and is the first necessity—the necessity on which hang the rest.

The dirt being away, the air must be pure. This you cannot scald; you must therefore resort to other means—and these means are, not a confined bad air of the cellar or milk-rooms, especially foul with vegetable odors; nor the aroma of the dunghill; the rank, urinal steam of the stables; nor in the case of a cheese factory, the proximity to a pig pen; but an avoidance of all of them—for these things will as certainly effect the milk as the dirt left in the pan.

An absolute freedom from everything that is offensive in odor or flavor, is the requisite to prime cheese, or a first quality of butter. Who has not detected the common taint of the stables in milk and cream? Can this be endured?

Butter kept in the room over night with the family (in winter,) is not fit to use. It has absorbed so much of the odors that it has become foul. The taste of the bad air is plainly perceptible. But cover your butter plate (not an old one) with a tight dish—say a tin basin, and your butter will be found much the same as when placed there. It is, however, only perfect when kept—not occasionally put—in pure air. House-keepers take note. When once tainted it can never be cured, but tenaciously holds all it has, and gets all it can. Like charcoal, or gypsum, or earth, it is a powerful absorber. From the time it is gathered in the cow until it is eaten in the family, the greatest care must be given to the lacteal product. Not only that, it reaches still farther; the food, the water, must not possess the odor. But generally the worst is in the vessels and the atmosphere that comes in contact with it. These, at least if impure, impart their impurity, however pure the milk may have been before.—*Western Farmer.*

## EXTRACTS AND REPLIES.

### TEXEL SHEEP.

Do you know anything further than what was published sometime since in regard to the Texal sheep? Perhaps some of your correspondents have tried them; if so, will they please report in your paper. Some coarse woolled bucks of some breed are needed in this section, and if owners of such stock would advertise, stating price, it might prove a benefit all round. H.

*Martha's Vineyard, Mass., Feb., 1870.*

REMARKS.—Something over a year ago, R. H. Hughes, of Abington, Va., in a communication to the *Farmer's Gazette*, Richmond, says, "When I saw the Patent Office account of the Texel sheep, I thought I recognized the breed which we needed in South West Virginia, and ordered a pair of them. It was in 1866. In form they resemble the Southdown; in fleece, the Cotswold; in hardiness, the Merino. They are a large sheep, and should not run in flocks of more than a hundred. The

staple is not less than seven inches long; often much longer; and in the full-bloods is glossy and flowing. The ewes are capital nurses. The oldest mutton I have from them are yearling half-breed wethers. These have never had grain, but I am sure that their flesh will, in flavor and tenderness, compare with any mutton that is to be procured. My full-blood ram is now five years old; and the full-blood ewes four years. They continue to grow and improve at these ages. At two years old the average weight of the grass-fed mutton would exceed a hundred pounds net; the half-blood yearlings now weigh from sixty to seventy-five pounds net." Mr. Chauncey B. Thorn, of Skanateles, N. Y., in a letter to Mr. Chenery, says, "their wool is rather ahead of what I was led to expect. One of my ewes sheared eight and one-half pounds, weight of carcass eighty-six pounds, showing samples eleven inches in length, and its fineness and lustre comparing favorably with the best Cotswold samples which I have been able to procure at our State Sheep Exhibitions." Who, nearer home, has tried the Texels?

### MALFORMATION IN A HEIFER'S TEAT.

I have a heifer with an extra orifice half way up one of her teats. What can be done for it?  
*Braintree, Mass., Jan. 26, 1870.* O. H. A.

REMARKS.—The indication to be fulfilled in this case is to obliterate the extra orifice and the pipe which leads from it to the natural duct or pipe. This can be done only by exciting what surgeons call *adhesive inflammation* by the use of caustic or cantery. A strong solution of nitrate of silver, or of corrosive sublimate may be introduced into the unnatural opening, by means of a *tent* or a piece of cotton or linen cloth, made so small that when twisted hard it can be introduced the whole length of the abnormal pipe. This tent should be kept in until matter discharges from the opening, withdrawing and wetting it with the solution once or twice a day.

The quickest way, however, and perhaps the best one, will be to measure the length of the pipe, and then thrust into it a hot needle or wire. In either case, care must be taken that the natural duct or pipe be not injured.

### OVERFLOWING OF GALL AND LIVER COMPLAINT.

On reading the statement in relation to a sick cow by your Rhode Island correspondent in the *FARMER* of Nov. 27, I mistrusted that the disease was misunderstood, and thought that she died of overflowing of the gall and liver complaint. With this impression I wrote to Stephen Leavitt of Livermore, Me., a very skilful veterinarian, asking his opinion of the case and requesting him to give me the symptoms of overflowing of the gall and liver complaint, and also the proper treatment of that disease. His opinion corresponds with mine, and he wrote me as follows:—

"In the first stages the hair is rough on the sides and appears to have changed color. If you take up a handful of the hide near the back bone the creature will flinch as quick as if you had stuck a sharp pointed knife into its hide; its skin is also hard and stiff and sometimes it will crack. In

the morning you will notice a yellowish matter in the corner of the eye or just below on the face, and sometimes about the mouth. The movements of the cow are like those of an old person troubled with the rheumatism, and the appetite is poor, with dull eyes. If at pasture, the animal will be found alone in the woods, or near some wet place or water in the shade, and now for the first time many will begin to suspect that the animal is unwell, and in two or three days they will have a hide to sell. If examined after death, the gall will be found very much enlarged, and filled with a thick, dark colored matter and the liver increased in size, and so rotten that it will be difficult to take it out without breaking it.

As a remedy, in the first stages, I should give half a common saucerful of soot taken from a chimney with an open fire-place, powdered fine, and mixed with shorts or meal, if they will eat it; if not, mix it with water and pour it down; also one tablespoonful of sulphur. If a creature gets as far along as the one described in the FARMER, I should in the first place give one pint of hog's lard, then half a saucerful pulverized soot dissolved in warm water, then one half pint of New Rum or whiskey, and then a tablespoonful of cayenne pepper. Give the above medicines as fast as they can be prepared. Then take a few quarts of beef brine, and with a woollen cloth rub the animal smartly about the back, and loins, and legs. Some spirits and cayenne added to this will make it better. Put her feet under her and change sides frequently, for the convenience of rubbing her. Give from a gill to a half pint of spirits every half hour for two hours and rub smartly; do the work faithfully and get up a perspiration. Be ready, if the animal makes an effort to rise, to assist her. You might as well pour medicine into a hollow log, as to give it to a dumb beast that is down, limbs stiff and cold, circulation slow and morbid. If you are lucky enough to get the animal on her feet, follow up the soot at the rate of two or three tablespoonfuls, with one tablespoonful of sulphur a day, until the animal becomes well enough to eat; then powder up the soot and mix it with the sulphur in meal or shorts for a number of days."

This liver complaint comes on slowly; in some cases it exists for months, and the cure is proportionately slow. WM. SWETT.

South Paris, Me., Feb., 1870.

PREMIUM BUTTER.

The first and second premiums offered by the Orleans County, Vt., Agricultural Society were awarded to Thomas Baker, of Barton, of whose Dutch cattle and farm buildings some account was published in the FARMER in 1868. (Monthly, page 332.) The following is his statement of his method of making butter.

I milk twenty-four cows. This season they were turned into the mowing fields the 10.h of September, and their food was mostly clover. This butter was made the week ending September 18. The cream is skimmed when the milk has set thirty-six hours; we churn three times a week, but the cream is not churned the day it is taken off. When the butter comes it is washed until the water is not colored by milk; then the butter is taken out of the churn and put in a butter worker and the salt worked in—one ounce to a pound, using Ashton salt—then pack immediately in spruce tubs holding fifty pounds each, prepared for use by soaking them with warm water in which a spoonful of saleratus is dissolved for two hours; then the water is turned off and the inside surface sprinkled with salt, when the tub is ready to receive the butter, which is packed as solid as possible.

The tub that took the second premium was not packed immediately, but was set aside twenty-four hours, then worked again. This is our practice, if butter comes soft.

In summer the cows are milked as regularly as possible at 5 o'clock A. M., and 5 P. M. They are driven carefully to and from the pasture. They are fed salt every Monday and Friday.

Irasburg, Vt., Feb., 1870. Z. E. JAMESON.

PURE BRAHMAS AND MUSCOVY DUCKS.

Below, please find my yearly account of poultry. You will see that I can make it profitable without charging \$2 or \$3 per doz., as I see some of my townsmen advertise in your worthy paper.

Stock Jan. 1, 1869.	Dr.
38 Fowls at 75c, \$28.50; 13 Ducks at 75c, 9 75	\$39 25
4 Guinea Fowls, \$2.00; 20 Chickens, 6.00, 8.00	\$16.25
<i>Cost of Food.</i>	
42 bushels corn, \$46.60; 29 bushels oats, \$24.25	\$70 85
24 bush. meal, \$25 95; 24 bush. C. corn, \$25 95	51 90
38 bush. shorts, 14 45; 2 bush. barley, \$3.00	17.45
221 lbs scraps, \$3 66; squashes, \$2.50	6 16
C. pepper, 50c; sulphur, 74c, rat exterminator, 25c	1.49
34 doz. and 8 hens' eggs set, at 39c	13 51
18 doz. and 8 ducks' eggs set, at 49c	9.15
	\$170.61
<i>Other Expenses.</i>	
W. brush, 37c; nails 35c; labor on coop, 14.12	14 84
Painting and glazing windows, . . . . .	3 23
Dressing poultry, . . . . .	5 50
	\$24.33
<i>Stock Jan. 1, 1870.</i>	
32 fowls, at 75c, \$24 00; 12 ducks, at 75c \$9.00	\$33.00
118 chicks sold, \$71.24; 144 ducks \$96.43	167 67
171 doz and 2 hens eggs, \$67.45; 15 doz. and 3 ducks eggs, \$7.50	74.90
28 bbls. manure, \$29 75; feathers \$1.62 doz. and 3 hens' eggs used in the family at 39c	30.75
5 doz. and 7 duck eggs at 49c	24 23
	2 70
	\$333.30
Expenses, . . . . .	240.33
Profit . . . . .	\$92 97

Eggs and poultry used in the house I charge the same as those sold to be marketed. I have now two broods of chickens,—19—hatched February 12th and 15th inst. JOHN BUFFINGTON.  
Salem, Mass., Feb., 1870.

PATENT MANURES AND MEADOW MUCK.

While sitting by the stove reading the FARMER, I see that a man wrote very favorably of meadow muck. Sir, I have farmed for twenty years, and I have tried muck in every form without seeing any benefit from its use. I worked for a man one season that had "muck on the brain." He wanted me to try an experiment on corn with manure, and with muck. I did so. I planted half an acre with manure and half an acre with two-thirds muck and one-third manure. The result was that from the half acre that I manured I got my corn; while from the half acre with the muck I got nothing.

I think that all the patent manures are good for nothing. If a man who has no other income than his farm, buys these patent manures, he will soon run his farm and himself into the ground.

A neighbor of mine goes in for muck and gluc-

stock manure mixed. He used it last season and you should have seen his crops. Three or four years ago he ploughed up about four acres of land in the fall, and had a man drawing muck all winter, and covered his four acres all over. He planted it in the spring with corn, and took good care of it. In the fall he found his labor was in vain. His corn was from six to ten inches high, but without one ear of corn. Then he ploughed it up again and seeded it down to grass. The next season, to his surprise, there was a crop of Roman wormwood, and that land remains in the same state now; but he is going to try another medicine, called fish guano, in which I have as little faith as in the many other nostrums we hear of. In my opinion Professor Heywood's salt and plaster is worse than nothing. The only way to farm it that I know of, is to put under your crops the best stable manure, and take good care of them. By so doing you will get a good harvest. But I will not write any more at this time.

O. J. UPHAM.

Needham, Mass., Feb. 12, 1870.

REMARKS.—We like such square expressions of opinion and experience, whether they tally with the "authorities" or not. We think our correspondent must have experimented with poor muck, or rather bad muck, as it seems to have destroyed the virtue of the manure with which it was mixed.

PROFITABLE PIGS.

As the Norway oat and early potato fever has probably passed its height, may not farmers, while looking for the explosion of these and sundry other humbugs, consider the old subject of pork raising. Pork and pigs now command good prices, and I will give a statement from which you can see whether it will pay or not. A year ago last December, we bought a white Chester County pig for \$12. She weighed about one hundred pounds. She will now weigh more than three hundred pounds. Last spring she had a litter of pigs, of which I sold six at four weeks old for \$30, and had one left that I dressed when seven months old that weighed two hundred and fifty pounds. The last of October the old sow had another litter of seven. When they were five weeks old I sold two of them for \$10; the two weighing forty-eight and a half pounds. I sold one more at eight weeks old, for \$8 and one at nine weeks old for \$8.50, and we have now three left that are good for \$10 each. We shall keep the mother of these pigs another year. The amount of sales and value of pigs on hand stand as follows:—

6 pigs at four weeks old, . . . . .	\$30.00
2 " five " " . . . . .	10.00
1 " eight " " . . . . .	8.00
2 " nine " " . . . . .	8.50
1 dressed, seven months o.d., 250 pounds . . . . .	35.00
3 pigs on hand, . . . . .	30.00
	\$121.50

In the above statement I have not added anything for the gain of two hundred pounds on the old hog, nor the expense of keeping.

Hired Help.

In relation to hired help, much depends upon the farmer that hires, whether he will be about with his help or not. Most farmers want a man that knows how to do all kinds of work, and how to do it well; one that can take his axe and go into the woods and cut wood or mend a piece of fence, or take his scythe, pitch fork, or hoe and go into the field and do a good day's work; one who is always up in the morning before the sun is peeping into his windows, and is ever ready for

work. It doesn't make much difference whether he was born in this country or not.

Hartford, Vt., Jan. 17, 1870. AMOS FRENCH.

WHEAT CULTURE IN NEW ENGLAND.—DRILLING, PRESSING AND ROLLING, IN ENGLAND.

In 1861 I made a machine for my own use for drilling, having one fertilizing plough, and one seed plough, both on one beam, which did the work complete. The first plough deposited the fertilizer and covered the same; then the seed plough followed right in the same drill, dropping and covering the seed, all at the same operation, leaving a sufficient layer of earth between the seed and the fertilizer. I used for the fertilizer air-slacked lime. I drilled the wheat on land that I sowed onions on the year before. It was spring wheat. I drilled nearly an acre. The land was not very rich. I threshed and winnowed thirty-seven bushels of handsome wheat; some of it was as good as I ever saw in my life, but a part was on low springy land, and did not yield so well.

When the wheat was four to six inches high, I sowed grass seed and hoed the land at the same time, cutting up all the weeds, leaving the wheat free from weeds. The grass looked beautiful when I reaped the wheat, and was free from weeds. I drilled the rows of wheat about one foot apart. One man drilled it in one day.

In the previous articles on the cultivation of wheat, by our friend Hebb, mention was made of treading and pressing. Are there not lands that would be ruined by pressing and treading? I have seen lands in wet seasons in which wheat would never germinate if pressed and trodden, and I have seen other lands that would do well by pressing and treading.

Farming is an art that no man can compass fully. In the first place the farmer should make himself acquainted with the soil he has to cultivate, and this necessitates such analyses as will enable him to know how to treat the soil, and how to use different fertilizers. Some lands need one kind and some another, and some all kinds. Such knowledge will enable him to be more successful in the management of different soils and in the application of different manures. I have cultivated land for forty years, from four hundred acres to four thousand; so, Mr. Editor, you must think I have had some practice in farming. Still, I can learn something new every day and every year.

I should like to write more, but this article, the first I ever attempted to write on agriculture, is already, perhaps, too long. If I had had as much practice in writing as in farming, I might have done a little better. Hereafter I may offer some remarks on restoring lands to fertility by different fertilizers, and by different modes of cultivation.

Lowell, Mass., Feb., 1870. THOMAS WILSON.

REMARKS.—In Mr. Hebb's article on the use of the presser-roller, and on treading wheat fields, it was expressly said, "this mode of cultivation is applicable only in cases where the soil is too loose and pliable for the healthy and continued growth of the wheat plant, as in case of a heavy clover lea, &c."

—The wool clip last year amounted to about 150,000,000, or 52,000,000 more than in 1852, and was worth about \$62,000,000. The stocks on hand in Philadelphia, New York and Boston, at the beginning of the current year, were 15,900,000 pounds, against 24,500,000 a year previous—showing a deficiency of nearly 8,500,000 pounds.

### AGRICULTURAL ITEMS.

—The directors of the Sacramento Valley Beet Sugar Association, have determined to enter largely this year into the cultivation of sugar beets, and the manufacture of sugar therefrom.

—The trustees of the Maine State Agricultural Society are to meet at Bangor the last of this month to consider proposals for the location of the next Show, and to decide upon the same.

—The *Country Gentleman* makes a good point when it says, in answer to a request for the address of a stock-breeder, that, as he never advertises, it is fair to suppose he has nothing to sell.

—A distinguished poulterer says, that the occasional use of onions, mixed and fed to poultry with their other food, is one of the best ways of keeping a yard of poultry in health.

—In the Willamette Valley, Oregon, wheat is sown in the latter half of March or first half of April; oats and barley in April and May. Turnips should be sown in April. A correspondent of the *Willamette Farmer* says it is useless to sow field turnips there in June or July. The drought and bugs destroy the young plants.

—The Northwestern Flax Association held its first annual meeting at Cleveland, Ohio, Jan. 26. A memorial to Congress was prepared, stating that over 500,000 acres of flax are grown for the seed, in the States of Ohio, Indiana, Illinois, Wisconsin, Iowa and Minnesota; and praying for the continuance of the present duty on gunny cloth.

—L. F. Allen writes the American Institute Farmers' Club that while there is no uniformity of shape or growth in the horns of Short-horn cattle, they have one peculiar characteristic; an oval shape near the root, gradually assuming a roundness near the extremities, and a hazy or neutral appearance in color. They are also finer in grain and more delicate in appearance than the horns of common cattle.

—A correspondent of the New York Farmers' Club, from Maryland, recommends lime as a preventive of club-foot in cabbage. He says that fifty bushels of shell lime, per acre, every five or six years, or whenever cabbages begin to "club" will enable a man to grow cabbages on the same ground twenty years in succession. He raised cabbages last year on land which has been growing this vegetable thirty years in succession.

—To obviate the hurry and consequent imperfection of the entries of stock and other articles at County Shows, for making a record of which the secretaries often have but a few hours, the old Kennebec, Me., Society has decided to have in each town a special committee of one who shall receive all entries of stock and other articles to be exhibited from his town, and forward them to the Secretary of the Society by 8 o'clock, P. M., of the day preceding the fair.

—A correspondent of the *Prairie Farmer* says, "Take hog's lard, melt it and mix with it a little

sulphur and apply the mixture thoroughly to a space six inches wide on either side of the back bone from the head to the tail of the animal. Do this on a warm, sunshiny day, and if there is a living louse on the animal, twenty-four hours afterward, I won't say that I will eat it, but I will say that louse has a stronger constitution than any other specimen with which I have come in contact."

—J. C. Barnes of Fort Fairfield, Me., raised the past year about 5400 lbs. of pork, to produce which he used up 900 bushels of grain, mostly buckwheat. Some oats and peas were used, and are considered valuable as tending to harden pork. One of his hogs, seventeen months old, slaughtered a few days ago, weighed 553 lbs. The value of the feed is estimated to be \$370. Value of pork, at 12½ cts. per lb., \$675.

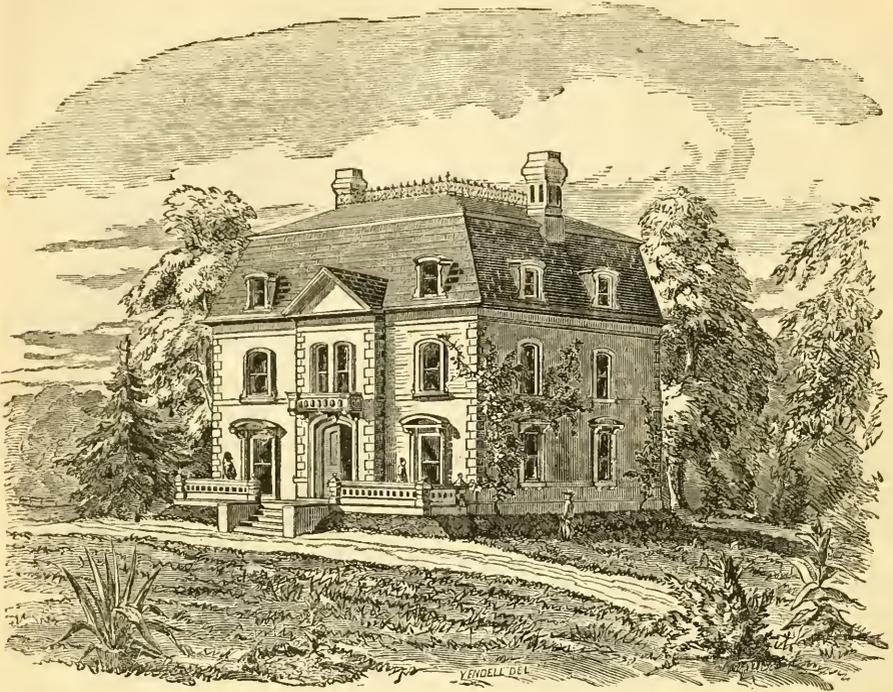
### SAMPLE OF WILTED HAY.

In the discussions at the late Farmer's Convention, at Lewiston, Maine, much was said in relation to the new manner of curing grass by *wilting it, only*, and then mowing it away as compactly as possible in large quantities. Several gentlemen of the highest respectability stated this to be their practice, and that the grass so cured was worth more than when made by two or three days' drying; one of whom, Capt. Taylor, of Winthrop, said it was worth twenty-five per cent. more than grass exposed to the sun a part of two days.

One of the agents of this paper, Mr. EDWARD P. FROST, has recently visited Houlton, in Aroostook county, Maine, and there called upon Capt. V. PUTNAM, formerly a Massachusetts man, who kindly showed Mr. Frost his stock and the hay upon which it fed. A sample of this hay is now before us, sent by Mr. Frost. This sample was taken from a bay of twenty tons, and was cured by wilting it merely, allowing it to remain in cock a day or two, and then packing it away in the bay. This hay was examined by the members of the *Concord Farmers' Club*, and pronounced excellent.

Mr. Frost states that Capt. Putnam has a fine stock of cattle, which give ample evidence of feeding plentifully upon the best of hay.

**BITING HARD!**—The next time Patrick cleans the horse, he will be more gentle in currying his legs. If he is not, there will probably be more photographs of the horse's teeth, on the place upon which he sits down! Never use the curry comb upon the legs of a horse below the knee. There is no flesh on that part of the leg, so that, in careless hands, the curry comb goes raking over the bones and causing severe pain. Even a good-natured horse will not always be quiet under such treatment. Use a wisp of straw, or, if the mud is plentiful, a smooth stick will take off most of it. Until Patrick can sit down comfortably again, he certainly will remember to be gentle when cleaning "old Jerry's" legs.



[Entered according to Act of Congress, in the year 1870, by R. P. EATON & CO., in the Clerk's Office of the District Court for the District of Massachusetts.]

## RURAL ARCHITECTURE.

BY GEO. E. HARNEY, *Cold Spring, N. Y.*

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

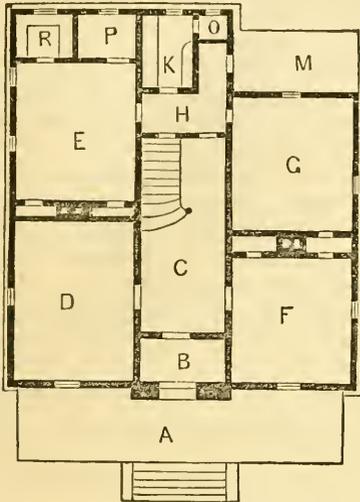
### No. 1.—A FRENCH ROOF SUBURBAN HOUSE.

In the year 1859,—eleven years ago,—we commenced a series of papers in the pages of the NEW ENGLAND FARMER upon Rural Architecture and the improvement of country places, which papers were continued through three or four years, during which time we presented to the readers thereof some twenty or more pictures and plans of rural cottages and farm houses, and whatever else came within the range of the subject.

The acquaintance was so very pleasant to us that, after seven years of intermission,—vacation we will call it, if you please,—we propose to renew it, and during this year shall present some new designs, and give some further hints about building suburban and village houses, and kindred matters.

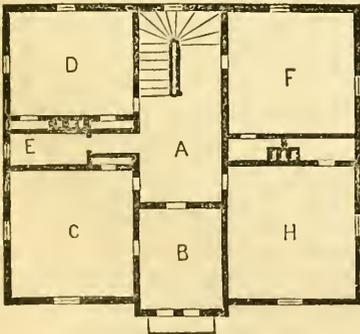
The design which we shall offer at this time has very much of the modern French character in its exterior, though in a modified form. It is nearly square in plan, measuring 40 feet in width and 38 in depth. A slight projection, surmounted by a pediment, gives strength to the front of the design and allows of a recess at the front entrance doors. An ornamental terrace, 10 feet wide, runs along the entire front, and from it we enter the vestibule, B. The house is placed so that the floor is about five feet above the ground, and the foundations are surrounded by a banking up to the bottom of a split stone underpinning. The building is of wood, boarded and clapboarded on the outside; the roof is French, the lower pitch very steep and the upper not

so steep, yet having slant enough to slate. There is a small deck or flat on top, ornamented by a cresting of cast iron. The vesti-



Ground Plan.

bule, B, is 4 feet deep, and opens directly into the hall, C. This hall is 8 feet wide. D is a parlor, 15x21, and directly back of it is the kitchen, E, 15x18. The chimney is between the two rooms, and on each side is a closet for shelves. H is a back entry, having a door opening out upon the veranda, M. K is a large store-closet, fitted with shelves and drawers, and O is a pot-closet, opening out of it. P is a sink-room, and R is another kitchen



Chamber Plan.

closet. A part of the kitchen and all these closets are in a one-story addition, with a lean-to roof. G is the dining room, 15x18, and F the library, 15x16.

In the second story, A is the hall; B a small

chamber, 8x11; C a chamber, 15 feet square; D a chamber, 15x13; E a bath room; F a chamber, 15x16 feet, and H a chamber 15x16.

The attics and cellar are left wholly unfinished at present; but there is room in the former for five good chambers, and in the latter for a laundry, store-rooms, furnace, coal-bins, &c., &c.

The interior finish is all to be plain, of pine; the walls lathed and plastered, and neatly finished with a skim coat. The first story is 10 feet high, and the second 9½. The cost would be about \$10,000.

REMARKS.—We present a rather high cost building, as the first of the series. This fault will be remedied in future plans, as the design of the architect is to give plans suited to every one's ability, and the majority of them will be quite moderate in cost. As combining originality and beauty of design the series will prove valuable for builders and carpenters, as well as pleasing in artistic execution.—[EDS.]

A SMALL BARN.—Mr. E. J. Carr, of West Hampstead, N. H., sends us plans of a barn 26 by 36 feet, which he thinks will better meet the wants of small farmers than those of the larger ones that we have published. But his arrangements are so nearly similar to that of the first floor of the plan on page 184 that it is hardly necessary to give his drawings. His bay occupies the whole of one side of the barn floor. On the other side the stable is divided by a passage-way across it, with outside door, into two unequal divisions, the large one for cows and the smaller one for horses.

A DAIRY TO BOAST OF.—The St. Albans Messenger says:—Mr. Nahum Brigham of Bakersfield, from fifteen cows, made during the dairy season just closed, sixty tubs, or 3000 lbs. of butter. He sold it for forty-five cents a pound, realizing \$1350. He also raised ten calves, now worth \$100, and 1000 pounds of pork, which he sold for \$130—making as the proper income of the dairy \$1580, besides supplying his family. He is now making butter at the rate of one tub a week.

Mr. Brigham is a correct farmer. He selects the best stock he can find and then keeps it in the best condition. He does not believe in pasturing all the cows the fence will hold, and in the winter, besides first quality of hay he is a liberal feeder of grain. It pays, as the above account shows. Besides, he is a neat farmer. Everything is kept in its place and his work is done in time. This is the great secret of happiness in farming, if not of success, and every farmer who drives his work and is not driven by it, will find it true.

## BUTTER-MAKING.



OMEWHERE I read a statement that the editor of the FARMER said in a recent meeting of farmers, that "not more than one tub of butter in ten sent to Boston market is really a choice article;" or in other words, nine tubs, on the average, out of every ten are of inferior quality. I have not the report at hand and do not quote the precise language. Now if this is true, I wish the editor, or some one who knows, would tell us the reason of this inferiority. Is the fault in the making, the packing, or the storing? Is it in the flavor, the color, or the salting? Is it in the milk, the place of setting, length of time it remains before skimming, in keeping the cream, time and manner of churning, mode of working after churning, or what? Tell us precisely, and in detail, the reasons. The butter interest is of too great magnitude to be neglected. The remedy should be sought out, made known and applied. I am satisfied that the readers of the FARMER, at least, are desirous of making not only good butter, but *the best* that can be made. Vermont farmers, with their sweet, fertile pastures, and favorable climate, *ought to beat the world* in their dairy products. Tell us how!

ENQUIRER.

Essex, Vt., Feb. 14, 1870.

REMARKS.—The "Editor of the FARMER," alluded to above, did make the statement, (at the late Farmers' Convention, in Manchester, N. H., when the subject of "the dairy" was under consideration) that he had called upon several of the leading butter merchants of Boston, and asked them the following question:

"What proportion of all the butter which comes to this market, should you call good table butter?" *Not more than one pound in ten*, was the usual reply! And, from looking over the butter which came to the stalls in the market, we judged that they were very near the truth.

We are inclined to think that fully one-half of all the butter coming into New England markets, is "made over," before it is retailed in small parcels. That is, it is taken from the tub, worked over by the aid of machinery, or otherwise, washed, and in some measure *purified*, by the use of alkalies or some other agents. It is then newly packed in a neat and tasteful form, and sold.

Large quantities go to confectioners, eating houses and pastry cooks, but even there cannot be used until it passes through a cleansing process. All this is sold at greatly reduced prices, and the farmer is the principal loser.

There is no need of this. The fault lies in all the points which you have enumerated. Want of cleanliness in milking; impure places for setting the milk; want of proper ventila-

tion; allowing the milk to stand too long, and the cream, also; too little care in observing the temperature of the cream and churn, in churning; exposure to the air; and added to these, and worse than all the rest, *leaving buttermilk in the butter!*

Over and over again, have we given rules in the FARMER for butter-making, from some of the best dairy people in New England; other agricultural papers have done the same, and yet there seems to be little improvement in the article itself. Farmers are losing immensely in this particular. Below are some general, and, if *good* butter is to be obtained, indispensable rules for making butter.

1. Perfect *cleanliness* in everything, from the milking of the cow, to packing the butter down.

2. A dry and well ventilated room in which to set the milk; at a temperature of from 60° to 63°.

3. Cream not to stand over thirty-six hours—twenty-four is frequently better—in winter, and in summer, twelve to eighteen hours, in most dairy rooms.

4. Stir the cream and add a little salt at each time of skimming the milk.

5. Churn often; twice or three times a week is better than only once.

6. One ounce of salt to a pound of butter will more nearly meet the average taste than a larger or smaller quantity.

By careful observation, it will be found that the *quality* of the butter, when properly made, will depend more upon the original butter making quality of the cow, than upon the character of the feed. The milk of every cow should be tested, and only that used for butter making which throws up a rich cream plentifully. We have had cows whose milk would not only give but very little cream, but would actually prevent, in some degree, the cream from rising on the milk of other cows.

An excellent dairy woman furnishes the following as her mode of proceeding: "The milk is set in a dark, cool cellar, the temperature by thermometer averaging 60° to 63°. I gather the cream into a stone pot, salt the week's cream, for one cow one teacupful of fine salt, and stir the cream every day to keep it sweet while accumulating; then it is strained into the churn; it is about thirty minutes coming to butter. I then drain off the buttermilk

and turn into the churn four quarts of cold well water, turn the crank three times to rinse off the buttermilk, then take it from the churn and salt it, allowing to every pound of butter two ounces of sifted salt. I put half the salt in when taken from the churn, set it into the cellar four hours, then work over by hand in a tray, working out the buttermilk, then put in the remainder of the salt and let it set three hours. I then work it over and beat with wooden butter-beaters until the butter is dry. Butter made in this way will always have a grain to it, and will keep perfectly sweet through the winter."

Butter made as above received a premium at an agricultural exhibition. The quantity of salt used, is unusually large, but some of it would, of course, be thrown out in working over the butter, the first time. In the best dairies, the butter is never salted at once, but a portion of the salt required is applied at the last working, just before it is to be packed.

*For the New England Farmer.*

#### NEW POTATOES.—A WINDOW FARM.

Sometime ago I sent you a few of my new varieties of potatoes which I raised from potato ball seeds. They were not fair specimens as to size. I am away from home much of the time, laying cement water pipe to bring water to the houses and barns of the farmers, during the spring, summer and fall; and in my absence, my folks got a taste of these varieties of potatoes and eat all of the best of them. We raise the best kinds of the old varieties of potatoes that we can get, but they preferred these to any we raise.

The potatoes I sent you which resemble the Jackson Whites in shape, but have a yellowish purple cast to the outside, are quite early. I call them the "Early Golden." Those with the pink streaks and eyes, that are shaped like the Oronos are late. I call them the Pink-eyed Queen of the Sod. They have the most hardy vine I ever saw, and are the most free from blight and rust. The balls which grow on them are the hardest and greenest I ever saw. I have a lot of balls from many varieties which I put into the cellar last fall; but while the balls of every other variety are dried and decayed, these remain green and hard. I think this potato will not be likely to rot.

#### My Window Farm.

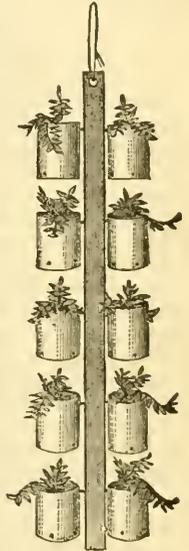
I have begun to raise seedling potatoes. I have about fifty plants which have been up for over a month. From these I hope to get potatoes in season to plant this spring. I have another lot planted.

I have a way of arranging the boxes in which I raise potatoes, tomatoes and other plants,

which I think the most convenient of any I have ever seen. It is not patented, so any of your readers, who choose, may use it.

To make the boxes I get a round stick of wood as large as I want the boxes. I saw off sections from this stick about one-half an inch thick. These I use for the bottom of the boxes. I then wind a piece of birch bark around and tack it to this bottom with small tacks, and take a thin stick and put on the inside where the bark comes together and drive a tack or two through the bark and stick, and the box is made.

I now tack these boxes on to sticks, say strips of lath, or the like, one above another, and attach a loop at the top of this stick to hang it up by. This figure represents a stick and boxes with plants in them. I think you will understand it, and see how readily it can be hung before the window on pleasant days, and taken down and removed and hung in a warm place on cold nights. To take care of a hundred boxes of plants arranged in this way is not one-tenth as much as it is to take care of as many separate boxes, and the liability of the boxes falling, and spilling the contents is much lessened. I tack about a dozen boxes on a stick, and seventy-five or one hundred boxes can be placed at a common window.



If any one has a better way of arranging plant boxes I would like to adopt it. I have begun another letter in which I give directions how to make a cistern. I think a common farmer by following these directions can make a good cistern. There are hundreds of the readers of your paper who are in need of cisterns, and are losing more, every few years, by doing without them, than their cost.

B. LIVERMORE.

*Hartland, Vt., Feb. 8, 1870.*

**SALT IN COOKING VEGETABLES.**—If one portion of a dish of vegetables be boiled in pure water, and the other in water to which a little salt has been added, a decided difference may be observed in the tenderness, flavor, and, if potatoes, mealiness of the two. Onions are probably more improved by being cooked in salt water, than any other vegetable. Much of their unpleasant smell is taken away, and a peculiar sweetness and improved aroma are decidedly apparent. Salt hinders the evaporation of the soluble and flavoring principles of vegetables.

## Ladies' Department.

### DOMESTIC ECONOMY;

OR,

### HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1866, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

#### CHAPTER XXI.

#### HOW TO COOK MEATS.

When good meat has been provided it should be the housekeeper's pride to present it at table in the most inviting manner. To this end it must be thoroughly and carefully cooked and neatly served. But she should not be ambitious of displaying her skill in the concoction of too great a variety of dishes—rather be content with a few that stand the test of healthy appetites.

In many families noted for the nicety of their table arrangements and for the excellent preparation of other viands, the cooking of meats is a miserable failure. I think that the cause of this is to be found in the many attempts that are made at elaborate and fanciful cookery, numberless receipts for which come fluttering daily on the wings of the press to every door, and those who have a propensity for experimenting are too often tempted to turn with disdain from simple and wholesome methods, or to use them carelessly, while willing to spend much time, and no small means, in trying to make these indigestible messes appear desirable and economical. Be honest enough to do all plain cooking well before you adopt a more pretentious style, and you will be spared the pain—which many have felt—of knowing that the unpalatable food that you have set before your family has driven any that are dear to you to seek better fare or a substitute for it at the restaurant or bar-room.

All meat—whether flesh, or fowl—*must be thoroughly cleansed in cool water* as the first step towards cooking. Many persons say that for broiling, frying, or roasting, this injures the appearance of the meat and wastes its juice. Better so, then, than to have the filth which it has contracted in passing from hand to hand and from place to place before it lay upon the kitchen table. But if the meat be briskly rubbed in the cool, clear water and immediately wiped dry with a clean towel such is not the case.

Pork that is cooked in its rind must have the rind cleared of all impurities by scraping and then thorough washing. Salted and pickled hams, and bacon should be soaked in cold water,—if very large, two days—before they are cooked; they are then tender and juicy. Hearts, livers, kidneys,

all harslets, must be trimmed free of all waste, and then soaked three or four hours before they are fit to cook. Brains should be washed and then soaked an hour in lukewarm water. Heads need five or six hours soaking after a careful washing. Calves' heads and feet, if not cleared of the hair, must be dipped in scalding water, sprinkled with a little fine resin, and scraped; then let the hoofs lie in the hot water till they can be pried off easily with the point of a knife. Then soak them five or six hours in cool water.

All utensils for cooking meat should also be perfectly clean—scalded with weak suds after using, and kept clean till needed again; especially is this necessary for the block or board on which the meat is laid to be cut and arranged previous to cooking.

If the meat contains large bones get the butcher to saw or chop them before you attempt to cut or prepare it. Always use a sharp knife, and cut with a sawing motion; a dull knife, by tearing the fibres, wastes the juice—as well as gives an unsightly appearance.

Have a clear fire, and keep it burning steadily till the meat is completely cooked; and always place the meat in a hot dish as soon as it is done, and keep it hot till served;—with mutton in hot weather, the plates should be heated also. From these few general directions let us pass on to particulars.

A steak is the easiest of all pieces to cook, and because it is so easy—merely to broil it—what might be a most delicious and nutritious dish is too often presented at table no more inviting in odor and appearance—and nearly as indigestible—as so much sole leather.

Beef, pork, veal, venison, or mutton,—whichever the steak may be—should not be more than half an inch in thickness—particularly pork and veal, which are better even much thinner. Don't neglect to wash and wipe it as soon as it comes into your possession, and then hang it in a cool place till time to cook it.

A glowing fire of wood coals, or of charcoal, is considered the best for broiling; but a red fire of anthracite is about as good.

Griddles,—two, which enclose the meat, thus obviating the necessity of turning it, the griddles being turned instead, are the best style of gridiron. Grease the bars and place near the fire to heat two or three minutes before the meat is ready. Then lay the steak on the meat-board and with a dull chopping-knife, or with the back of the meat-knife, chop it lightly across the grain and then along the grain of the flesh on both sides. For tender steaks two minutes chopping is enough, but tough meats requires more. Place the steak over the fire and give it your whole attention till it is done, standing steadfast as a martyr at your post, for it needs constant watching and almost incessant turning. At the first hint of the starting of the juices arrange the gridiron to pour it into the dish as it flows while you raise and turn it—the turning being as

frequent as the rise of the juice. When the fat that drips from it blazes shake salt upon it to put it out. Five minutes, sometimes three, will suffice to cook the steak. When you think it is done let it fall from the gridiron to the dish, and make two or three incisions in it, the juice should follow the knife, but the grain of the meat must have lost its raw appearance. (Tastes differ so much it is best to cut the meat into convenient pieces and broil some more than others, but never enough to dry up the juice). If you find it is cooked sufficiently, shake salt over it—and pepper if you choose—and then lay small thin pieces of good butter here and there on both sides, and if not immediately needed cover closely and keep the dish on the top of the vegetable boiler over hot water; the butter with the juice makes sufficient gravy. Birds and small game need only to be split in two for broiling; cut chickens for the same, or for frying, as they are carved.

Beef should never be fried—a steak nicely broiled and only salted is better than it can ever be fried.

Mutton and lamb chops and cutlets, as well as pork and veal, are very nice if fried slowly in as little fat as will allow them to be easily turned—which they should be frequently. Salt sets the juices free, so do not salt them till after they are taken from the frying-pan. Ten minutes over a steady but gentle fire will cook lamb and mutton, but pork and veal need fifteen at least; and veal to make it tender should be parboiled twenty minutes before it is fried.

Salt pork fat is best for frying veal; the other meats may be fried in their own, or in beef fat, or in lard. Thicken the gravy by stirring into it when boiling a little flour and water. (If you wish for dark gravy, brown the dry flour in the oven—some persons always keep scorched flour on hand for this purpose.) A teaspoonful of flour mixed smoothly with half a cup of cold water is sufficient for a pint of gravy. Continue the stirring while it boils three minutes, then salt it slightly and pour it over the meat. If you wish to cook the cutlets in a very superior manner beat an egg, dip them in it, and then cover them with bread crumbs or cracker before frying; or, dip the veal, after it is parboiled, into a batter made of beaten egg slightly thickened with flour and salted.

Livers, hearts, and kidneys, after they have been soaked, may be sliced one-third of an inch thick and broiled or fried in the same way as steak and chops; they are nicer if parboiled first, fifteen or twenty minutes; five minutes will then finish them.

Salt pork, previous to either broiling or frying, should be parboiled ten minutes. Cut the slices a quarter of an inch thick; pare off the rind and fry by itself, but place the slices in cold water and heat gradually to boiling. The pork is thus nicely freshened and the remainder of its cooking done more delicately. Set the water aside in which the pork is parboiled, and when it is cool remove the

fat that rises and add it to the dish after the broiling or frying, and, if you like, thicken it with a little flour and milk; if you do not wish for gravy save it to shorten pastry, for which it is very nice.

Sausages should also be parboiled in the same way before broiling or frying; if in skins prick them first very closely with a fork, or the skins will be likely to crack and the meat be scattered. Some persons parboil and partially fry them soon after they are made, then pack them in a stone jar and pour melted lard over them, keeping them thus free from taint some months. Bacon keeps very nice if it is sliced, the rind trimmed off, the lean separated from the fat, the fat slightly fried, and then both lean and fat packed in a jar and the liquid fat that has tried out poured over it. If not prepared in this way it should be sewed up in cloth or thick paper bags immediately after it is smoked, and laid down in clean shavings, sawdust or straw (dry oats are very good for this purpose) and kept in a cool, dark place. The lean of bacon requires much less broiling or frying than its fat, so it is always best to separate and cook each by itself, and when done arrange them together on the dish.

A slow, moderate fire is best for frying all sorts of meat; but fried meat is so hard to digest it should seldom be seen at table—that is, fried lean meat; it is more generally necessary to fry fat meat; but always broil, if possible, in preference.

To roast or rather to bake meat—as range or stove ovens are more generally used than roasters—first see that your oven is hot enough to hiss loudly at a sprinkle of cold water, then place the meat, the bony side downward, upon a griddle, in a sheet-iron pan. Use no skewers, or as few as possible. Pour into the pan boiling water to the depth of half an inch, and dissolve in this water a teaspoonful of salt for every five pounds of meat. Replenish the evaporation of this water every half hour with more of the same temperature.

In most ovens, with a brisk fire, twenty minutes is sufficient time to allow for roasting each pound of beef, mutton, lamb or venison; pork and veal require half an hour, a shoulder or leg of pork rather more. Look at the meat often during the first fifteen minutes. If it browns very soon lay over it a buttered paper or set a pan of cold water in the oven with it. When the upper side is nicely browned turn it, placing the bones upward; notice how long this has taken, and when the same time has elapsed shake salt over all, baste with the liquid in the pan, sprinkle with flour from the dredging-box, turn the bony side down again, and reverse the ends. And thus every twenty minutes turn, baste and flour the meat till you can penetrate it easily with a fork. If it is very fat, before it is half done, that which has dripped from it should be dipped or poured off; and, afterward, at every basting. This should be saved, clarified by boiling in water a short time, (if the meat was highly seasoned a few slices of raw potato fried in

it will remove the flavor) and used for making pastry or for frying cakes or meat while it is new. Thicken the gravy as for fried meats and serve in a separate dish. Cooked thus without skewers, frequently basted and floured, the meat retains its juices and is tender and well flavored.

Unless veal is quite fat slices of salt pork should be skewered or tied to it when it is about half done, and roasted with it; or else butter be melted in the gravy with which it is basted.

A leg of veal or of mutton is much improved by stuffing. For this make deep incisions in the meat and fill them with equal portions of fresh bread crumbed and of salt pork cut nearly as small as sausage-meat, seasoned with pepper, pulverized sage and sweet marjoram or thyme,—and sew up these with a strong thread—to be cut and taken out before carving. Thicken the gravy and serve as with other roast meats.

A fresh shoulder, or leg, or cheeks of pork to be roasted should have the rind cut through with a sharp knife in stripes half an inch in width. Pulverized sage and pepper should be rubbed into these cuts, and then the rind greased with butter or lard to prevent its blistering. The lean portions may be stuffed by making incisions and filling them with bread crumbs moistened with milk, or a beaten egg, and seasoned with sage or marjoram, pepper and salt to the taste. Be careful not to scorch the rind—turn it and baste it very frequently to prevent this.

A pig to be roasted should be killed when a month old. Wash it well, cut off the feet at the first joint, and sprinkle salt over it an hour before it is stuffed. The stuffing should be similar to that for a leg of pork; fill it full with this, rub the skin with butter to prevent blisters, and tie the legs to keep them in the proper place. Shake flour over it, and set it on a griddle in the baking pan, the pan being half full of hot water. Turn it and baste and flour it very often. If you like, add butter to the gravy when it is half baked. Boil the liver and the feet an hour, and then add the liquor in which they are boiled to that in the baking pan; cut open the feet and chop the liver, and after the gravy is thickened add them to it. Three hours will cook it.

Rabbits and woodchucks are highly esteemed by some persons; they need similar preparation and cooking to a young pig, but will be baked in two hours.

Soups and broths, as well as stews, are generally made of fresh meat. Beef and pork make the best soups; and for these the remnants of a roast, or cold steaks or cutlets, with their gravies, are always desirable. Three hours will cook a soup or stew, if of raw meat,—except when of a beef shin; for this five hours is none too long. Cooked meat may be made into a soup in two hours. Put the meat, the bones having been broken or chopped, into cold water—a quart for every half pound—and salt and pepper to taste. Heat it gradually and

boil it slowly and gently. When the water gets hot pour in half a pint of cold water to set the froth that rises, and then skim it off; it will continue to rise for fifteen or twenty minutes, and must be all skimmed off before the water boils. When the meat is ready to fall from the bones, skim off what fat floats on the liquor, (this, if clarified, makes excellent shortening,) and if you have gravy stir it in at this time. Then, if you like cloves, or savory, or thyme, for seasoning, mix a little with cold water and stir this in also; at the same time put in pared and sliced potatoes, carrots, turnips, onions or garlies;—six large potatoes, two carrots, two onions, and one turnip, are sufficient for a gallon of soup. When these boil add barley, rice, and vermicelli, if you like; and when the vegetables are boiled tender make dumplings,—taking for a dozen a pint and a half of flour, a pinch of salt, a teaspoonful of cream tartar, half a teaspoonful of soda or saleratus, and water enough to make dough that can be easily moulded. Steam these in the steamer that fits the brim of the dinner-boiler, and when they are done—ten minutes will cook them—mix a little flour with cold water and stir into the soup; let it boil three times, then add the dumplings and take up the soup and serve immediately. For variety the vegetables may be cut as small as dice, and when done strained from the soup by means of a hair sieve or a colander. Tomatoes—two or three to a gallon—are a great addition; skin and slice them, and boil as long as the other vegetables.—Stews require a third less water and more vegetables than soups.—Broths need the same vegetables as soups, but they are boiled without slicing, and the rice, or barley, is the same. Green parsley, or savory, and pepper-grass, and thyme, with the petals of the common marigold, are used as flavoring,—and no seasoning but salt.

For a meat-pie the meat should be parboiled half an hour; the pan, if the pie is to be baked, lined with a crust made of a quart of flour, a tablespoonful of lard, a pint of sour cream and saleratus to sweeten it, and a little salt or sweet milk or cold water with a teaspoonful of cream tartar and half a teaspoonful of soda may mix the flour. Lay the meat and place the bones, in such a way as to fill the pan; or arrange skewers, or set a bowl within for the same purpose. Thicken the gravy, and season with salt and pepper and pour in; it is a good plan to make gravy enough to reserve a pint or more to replenish what is evaporated in baking. The crust should be a quarter of an inch in thickness for the lining, and a little thicker for the covering. If there is any crust remaining after the cover is laid, cut it into strips and make knots and twists of it to ornament the cover. A pot-pie may be steamed or boiled—(using the same for crust as if it were baked)—on the back of a stove, if great care is used, and the fire covered with ashes to moderate the heat. An excellent soup or broth may be made from the liquor in which a leg of mutton—fresh—is boiled; or when a calf's head is

cooked; also from the gravy of turkey or other fowl, whether roasted or boiled.

Tough pieces of beef may be stuffed and stewed and thus form a very savory dish. Cut incisions in the meat, and then take slices of salt pork and cut them into pieces the size of dice; season the pork by mixing with it pulverized sage and pepper, and fill the incisions with this, and sew or skewer them together. Set it to boil in cold water—a pint for every pound,—or till the meat is ready to fall apart. Thicken the gravy as for roast meat, and pour over the beef in a deep dish, and serve hot, with baked potatoes. A heart, or meat from the upper part of a shin, is very nice cooked thus.

Corned beef should be put to boil in very warm—but not scalding water,—then the juices are retained in the meat. It should be boiled slowly—it will be tough if boiled fast,—allow half an hour for boiling each pound. If it is to be eaten cold, after it is boiled tie it with tape, or strips of cloth, wound around it as tightly as possible, and place it between two dishes beneath a heavy weight—a flat-iron will answer—till it is needed. It will then be as nice as tongue.

A beef's tongue that has been salted long needs soaking six hours. If but slightly salted it may be boiled directly from the brine,—there is no danger of boiling it too much—give it six hours, at least. A ham, if very large, should be boiled five or six hours. It is very nice boiled two or three hours and then baked the same length of time. Remove the rind before baking it, and sift over it powdered crackers or dried bread, or dredge it well with flour. It should be baked in a moderate oven.

A calf's head should be set to boil in cold water with a spoonful of salt, the liver and the heart to accompany it. Skim the liquor till no froth rises. Boil it till the flesh is loosened from the bones. The brains should be taken out when the head is soaked, washed and soaked by themselves and boiled—tied in a cloth—ten or fifteen minutes. Skin and trim the tongue, and remove the bones of the head. Take part of the heart and liver, also of the head meat, and the brains, and chop fine; boil two eggs till they are hard and chop those and mix. Add to this half as much of stale bread crumbed. Season with butter, pepper, salt, and sage; and stew with a little of the liquor in which it was boiled; and serve this hash in sauce for the meat. Make soup of the liquor. The next day chop all that is left and make into hash the same.

It is so much trouble to clean and cook tripe that it is usually boiled before it is sold by the butchers. The best way to prepare it then for the table is to steam it, adding a little salt, butter and pepper. Cut into pieces three inches square and dipped into batter made of a beaten egg and a little flour and then fried in butter or salt pork fat, it makes a rather more handsome dish—but is less digestible;—or it may be fried without batter.

The best way to cook a hog's head is to boil it, with the feet, and make all into brawn, or cheese,

as it is called. The head should be cut open, the nostrils cut off, and the eyes taken out. Then scrape and wash it well,—particularly the ears,—and cut these off before boiling. Boil it till the meat will fall from the bones; then chip it—not very fine—season it with salt, pepper, and sage, put it in a deep dish to cool, and cut in slices to fry, or eat it cold. Some persons thicken the liquor in which the head and feet are boiled with Indian meal—three tablespoonfuls to a gallon—scald it well, and then mix the chopped meat with it.—Pigs' feet scraped and soaked till perfectly clean, then corned slightly, and boiled, and then pickled a week in spiced vinegar, are much relished by some.

All housekeepers know that there are frequently remnants and bits of cooked meat—left from corned beef or mutton, or taken from soups and stews and broths,—which are not presentable at meals in their fragmentary state, and so they convert them into hash. This hash is too often so carelessly prepared as to be reluctantly eaten, if not absolutely detested; but it may be made a very enjoyable dish. The best way to make it is to boil the meat anew, and to chop it when cold as fine as if it were sausage meat. Then add to it half its measure of potatoes—chopped equally as fine—season it with salt, pepper and pulverized sage; and fry it either in small cakes moulded with cold water, or in one large cake that covers the bottom of the frying pan;—a little water must be added to mix the ingredients well, and it should be fried in just fat enough to allow it to be easily moved. Brown the cakes nicely on both sides, and if something extra is desired, stale bread crumbed fine may be substituted either partially or entirely for the potato. Made and cooked thus it is a very appetizing dish.

*For the New England Farmer.*

## DOMESTIC RECEIPTS.

### Potato Biscuit.

Boil two common sized potatoes with those you cook for dinner. Peel and mash very smooth and fine, add one quart of flour and a little salt to the hot potatoes, half a cup of good yeast, mix with milk-warm water and set in a pretty warm place. About an hour before tea time, mould up into biscuit, put into a baking pan and set on the stove hearth. When they begin to rise well, put into a quick oven and bake to a delicate brown. They will be found light, sweet and moist.

### Raw Potato Yeast.

Grate three large raw potatoes on a coarse grater, pour into the mass of pulp enough boiling water to make a clear thick starch; add one-half cup of sugar, one-quarter cup of salt. When lukewarm add one cup of yeast. Keep warm until it rises. One-half cup of this yeast will rise three large loaves of bread. By boiling a handful of hops in the water you pour over the potatoes, this yeast will keep two months in hot weather. S. B. S.

*For the New England Farmer.*

### USEFUL RECEIPTS.

#### Tooth Powder.

Half an ounce powdered orris root; two ounces, powdered charcoal; one ounce powdered Pervian bark; half an ounce prepared chalk; twenty drops of oil of lavender or neroli. These ingredients should be thoroughly mixed in a mortar. This tooth powder possesses three essential virtues; it sweetens the breath, cleanses and purifies the teeth, and preserves the enamel.

#### To Extinguish a Fire in a Chimney.

So many serious fires have been caused by chimneys taking fire, and not being quickly extinguished allowing the wood-work to become charred and then blaze, that we think the following method should be more generally known. Throw some powdered brimstone quickly on the flames in the grate or fire-place, and then hold up a screen of a board or an iron sheet, to prevent the fumes from descending into the room. The vapor of the brimstone ascends into the chimney and effectually extinguishes the burning soot. If brimstone is not at hand throw half a pint of fine salt on the flames.

S. O. J.

### DOMESTIC RECEIPTS.

**BUBBLE AND SQUEAK.**—Cut into pieces convenient for frying, cold roast or boiled beef; pepper, salt and fry them; when done, lay them on a hot drainer, and while the meat is draining from the fat used in frying them, have in readiness a cabbage already boiled in two waters; chop it small, and put it in the frying pan with some butter, add a little pepper and salt, keep stirring it, that it may all be equally done. When taken from the fire, sprinkle over the cabbage a very little vinegar, only enough to give it a slight acid taste. Place the cabbage in the centre of the dish; and arrange the slices of meat neatly around it.

**BAKED APPLE DUMPLINGS.**—Choose large russett or sour apples that cook tender; peel and quarter them, take out the cores, and use one apple to a dumpling. Pinch your pie-crust well, grease your pie pan, set your dumplings right side up; do not let them touch each other; set them in your oven, and bake a delicate brown. Eat hot with any sauce you prefer.

**A PIPPIN PUDDING.**—Boil six apples well; take out the cores, put in half a pint of milk

thickened with three eggs, a little lemon-peel, and sugar to the taste; put puff paste round your dish, bake it in a slow oven, grate sugar over it, and serve it hot.

**REMEDY FOR EAR ACHE.**—There is scarcely any ache to which children are subject, so bad to bear, and so difficult to cure, as earache. But there is a remedy never known to fail. Take a bit of cotton batting, put upon it a pinch of black pepper, gather it up and tie it, dip it in sweet oil, and insert it in the ear. Put a flannel bandage over the head to keep it warm. It will give immediate relief.

### AMERICAN GIRLS IN EUROPE.

I do not wish to undervalue English beauty, which is most satisfactory and enduring, and most of which will wash. But I confess that American beauty from New York to New Orleans has spoiled my eyes for any other; and when I am just getting accustomed to the solid English matrons and maidens, like Mr. Hawthorne, and beginning to like them—along comes a group of my fair country women on their travels, and they spoil it all again. Those dear Yankee girls—I fear you do not appreciate them at home. Here they admire and envy them—that is, the men admire and the women envy. On the continent they rave about them. Half a dozen American belles send a whole German town distracted. It is not only beauty and grace, but their wit, spirit and audacity. The continental customs favor their triumphs. No girl over there dares to say her soul is her own—let alone her body. She never goes anywhere without a *chaperone*; she never converses with a gentleman except to answer a question; she is of necessity insipid to the last degree. An American girl, on the contrary, asserts her freedom, goes where she likes, talks with every one she cares to talk with, says *du* to a German—just as she would do at home. He is overwhelmed, astonished, but all the more delighted. He tells his friends that the beautiful girl he waltzed with said *du* to him, and told him to bring her a glass of water, which sets them all crazy to be introduced, hear her say *du* to them, and be made water carriers likewise. Next day the whole town is talking about and staring at her—the women are in a rage—but the result is the conviction that America *must* be a great country, increased emigration, and the consequent progress of civilization.—*European Letter.*



# THE NEW ENGLAND FARMER

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

## PECULIAR TO MAY.

"Plant Flowers!  
Thickly now the flower seeds sprinkle,  
Let the carling earth-stars twinkle  
Everywhere!

By fountain's brim, where the rainbow glances,  
In garden walk, where your child's foot dances,  
Train them with care!"



laid up new stores of energy, which are budding or blossoming into a freshness and fragrance as delightful as though they met our senses for the first time.

The charming *May-Flower* has become a love-token. They are sought for far and near, and are not only sent as tokens of affection or kind remembrance, but have become articles of commerce, and may be found for sale in various places. Fathers carry them home to their children, and lovers to their affianced, or those whom they wish to have become so. Laughing girls deck their hair with them or wear them on the bosom.

THE merry, beautiful, month of MAY is here! Now fairly awakened from its long repose, all the vegetable kingdom shows that, in its winter nap, it has

But the great charm is to search for them in pairs, young men and maidens, in the pure air and glowing sunlight of a real May morning!—the maidens, perhaps, like Proserpine, themselves the fairest flowers! Sometimes they find them "beneath the edge of a snow-bank, where they may be seen rising, the fragrant, pearly, white or rose-colored, crowded flowers of this earliest harbinger of spring. It abounds in the edges of woods about Plymouth, in Massachusetts, as elsewhere, and must have been the first flower to salute the storm-beaten crew of the Mayflower on the conclusion of their first terrible winter. Their descendants have thence piously derived its name."

Each returning month of May seems to us a new creation; new sensations take possession of us; new hopes crowd the mind, at least as new as are the objects about us which excite the sensations and hopes. It is not vegetable matter alone that is quickened into life, but the animal kingdom, from insect to man, seems equally affected by the new phase of existence.

All these interesting changes of the seasons are only a part of the stupendous changes which are constantly going on. "Man himself is changing. Intellectual, refined, and living more by his ingenuity than by his strength, he is a different being from the savage, in whom passion and physical force are the chief traits. This change in man is also

now going on more rapidly than ever. Reason, humanity, and intellectual exertion are becoming more and more prominent. In the use of the physical forces, we are just learning what it is 'to have dominion over the earth and to subdue it.' Steam, electricity, the printing press, the paper-mill, and a thousand other new arts are changing human conditions, human employments, human habits, and human characteristics. Mind is becoming more and more the standard of man. The human mind is becoming one of the great forces of creation."

It is not only pleasant to observe these ever-recurring changes in the aspects and economy of nature, but delightful to contemplate them with reference to Him who rules and guides them all. Properly observed and studied, they greatly enlarge the mind and fill it with grateful and peaceful emotions. Let each "magnify his office" in this charming month, by a prompt and cheerful attention to duty, whatever that may be.

The earth, having cast off her wintry vestments, is now, by power of frost and snow and heat and chemical changes, ready for the hand of the husbandman. If he sows generously, he will be likely to reap abundantly. But May demands that her work shall be done at its appropriate time, when wind and sun and rain shall exert their proper influence upon the crops and bring them to perfection in due season.

THE EARLY GRAINS, not sowed in April, should receive attention in the first part of May.

EARLY POTATOES are more profitable for market than late ones. There are various ways of starting them; in a box or barrel by the kitchen stove, where it is moderately warm; in a sunny corner out of doors, covered with fresh horse manure; or in a box of fine, rich loam kept in the kitchen window, where the sun's rays will reach them.

INDIAN CORN, is an important crop. See that the soil for it is fine and mellow, and well manured. Select the seed with care, using only that which was perfectly ripened and reject the tops of the ears.

WHITE BEANS, pea beans, always command a remunerating price. Leave a space for this crop, and have eight or ten bushels more than

the family need, for sale. They are easily cultivated, harvested and marketed.

ROOTS FOR STOCK.—We should feel as though neglecting a duty if we omitted to urge the cultivation of roots. Try them in a small way, at least. Let the rows be nearly three feet apart, and the plants, if mangolds, beets, or ruta bagas, at least twelve inches apart in the rows. Mr. Gregory, in his excellent report, says even more than that.

WEEDS.—Do not allow these to get ahead of the crops. It will be an up-hill work if you do.

PRUNING.—Let this work go until the middle of June, or any time in October.

THE GARDEN.—Make it rich and stock with a variety of vegetables, such as peas, string beans, shelled beans, early potatoes, cabbage, beets, carrots, parsnips, cauliflower, onions, &c., &c., all of which, with your excellent salted pork, will make healthful and economical dinners and breakfasts, the succeeding mornings, fit for any one to feast upon. It will be found convenient and economical, and save cash which would otherwise be expended for fresh meat.

PLOUGH deep—pulverize thoroughly—manure generously—be death on weeds—tend the crops faithfully—keep up a calm and happy temperament, and with the blessing of Heaven upon your efforts, you will reap abundant and paying crops.

#### MANURE HEAPS IN THE FIELD, IN THE SPRING.

It is a common practice to haul manure from the barn to the fields, and leave it there in large heaps. Some persons do this in the winter by the use of the sled.

Manure left in this condition should have more care than it usually receives. It should be kept from exposure to rain and the sun, else more of its salts than ought to be spared will be washed out, and its gases evaporated.

It is common to overhaul these heaps and break up the lumps and mingle the whole. A large proportion of farmers do this but once; others twice, and some three times.

This is an important and greatly economical operation. When it has been thrown over and laid up lightly, it soon begins to heat, especially if the weather is moist and warm. Great care should now be observed not to let

it ferment too much, because an excess dissipates its most useful qualities. Indeed, all the warmth it ought to acquire, is just enough to make it drop apart when overhauled, so as to make it fine.

Mr. Coke, a distinguished English agriculturist, discontinued fermenting manure, and stated that the crops were as good as ever, while the manure went *twice as far*. The reference, we suppose, was to manure that had been highly fermented; this process we have always considered as decidedly injurious.

When placed under the soil and contiguous to the roots of plants, unfermented, the roots secure the benefit of the fertilizing fluids or gases which come from it in the course of fermentation, while the heat evolved renders the soil about the roots a sort of hot bed.

A *slight* fermentation previous to use is undoubtedly useful, as that commences the process necessary to make the manure impart its fertilizing properties, without at all impairing them.

The process of overhauling is an important one. It should be done as rapidly as is possible and do it well; that is, to make it fine. This may be done more thoroughly at the second overhauling. A third overhauling will be economical in manure fresh from the stalls.

When the heaps are finished up, thrust a stick or two, of an inch in diameter, into each heap, and after three or four days draw them out and feel of them to ascertain the degree of temperature attained. If quite sensibly warm to the hand, overhaul again, and make the heap a little more compact. In this way the heap will become so fine that it may be easily applied, spread evenly and thoroughly mingled with the soil, where the roots will be sure to find it.

When a heap is finished, cover it slightly with loam and little or no loss will occur by evaporation.

#### SUNRISE FARMING.

So much is said of farming at the West, that we have been interested in looking over some statistics of down East farming, collected by the Editor of the Presque Isle, Aroostook county, *Sunrise*, a newspaper printed but a little south of the 47th parallel of northern latitude. The *Sunrise* says, "the soil of Aroostook county lies upon a strata of argillaceous slate which is continually decomposing by the action of the elements, and forming the richest and most productive soil in the world.

Hence our farms do not 'run out,' but produce year after year the largest crops without any perceptible diminution in amount. The farms referred to below are not all of the largest, or their owners the most skilful cultivators. Others quite as skilful and successful might be added to the list. We have collected such statistics as we conveniently could." The statistics embrace the details of fourteen farms in the town of Presque Isle, twelve in Easton, sixteen in Maysville, seven in Dalton, five in Castle Hill, eight in Mapleton, six in Patton, four in Sherman, and four in Washburn,—76 farms in all, comprising 5337 acres of mowing, tillage and pasturing, the products of which were as follows;—

2,990 tons of hay, estimated at \$10 00 per ton, .	\$29 900
2,790 bus. wheat at 2 00 per bus. .	5 480
693 " corn 1 50 " " .	1 089
26 631 " oats .50 " " .	13,565
24 731 " buckwheat .50 " " .	12 075
573 " beans 3 00 " " .	1 6 9
20 260 " potatoes .25 " " .	5 000
28 531 lbs butter .40 per lb .	11 412
7,190 " cheese .15 " " .	1 078
13,500 " clover seed .25 " " .	4 380
6,536 " pork .15 " " .	9 839
	\$94 813
Less paid out for labor,	7,750
Leaving	\$87 064

to be divided among 76 owners of the farms for their own time and labor, which is equal to \$1,145 each, on an average. When it is remembered that there are other products from these farms than those enumerated, such as roots of all kinds, minor articles of the garden, dairy, &c., we think it doubtful whether a better showing can be made of the income of an equal number of farmers, and of an equal number of acres in the Sunset land of rolling prairies and oak openings.

#### NEW PUBLICATIONS.

**HOW CROPS FEED.** A Treatise on the Atmosphere and the Soil as related to the Nutrition of Plants. With Illustrations. By Samuel W. Johnson, M. A., Professor of Analytical and Agricultural Chemistry in the Sheffield Scientific School of Yale College; Chemist to the Connecticut State Agricultural Society; Member of the National Academy of Sciences. New York: O. Judd & Co. 1870.

This volume is the second of a series of four volumes,—of which *How Crops Feed* was the first,—that the author proposed to write; the third, to treat of Cultivation, or the Improvement of the Soil and the Crop, by Tillage and Manures; and the fourth of Stock Feeding and Dairy Produce. We are pleased to learn that our favorable opinion of the first volume is confirmed by a large sale in this country, by its republication in England, under the editorship of two of the professors of the Royal Agricultural College at Cirencester, and by its translation into German, on recommendation of Prof. Von Liebig.

The present volume is divided into two parts; the first discusses the relations of the atmosphere to vegetation, the second is a treatise on the soil. To most readers the principles and office of atmosphere and soil are abstruse subjects, and the au-

thor, while confessing that the collection and arrangement of the facts stated in the volume, and the development of their mutual bearings, have cost him much labor, honestly tells the reader that he must pay a similar price if he would apprehend them in their true significance. Still we know of no writer on the science of agriculture who has the ability to arrange and express these facts in so familiar and clear a manner as the author of this book.

**CABBAGES: How to Grow them.** A practical treatise on Cabbage Culture, giving full details on every point, including keeping and marketing the crop. By James J. H. Gregory, Introducer of the Marblehead Cabbages. Salem, Mass. 1870.

The great practical experience of Mr. Gregory in the subject to which this pamphlet of seventy-two pages is devoted, enables him to give details which will be of great value to the less experienced cultivator. He informs us that the object of this treatise is to answer the numerous inquiries which have been made by his customers about cabbage raising, and that he has aimed to tell them all about it in a plain, talkative manner.

**SALT AND ITS USES IN AGRICULTURE.** A Lecture before the State Board of Agriculture at Fitchfield, Mass., by Charles A. Goessmann, Ph. D., Professor of Chemistry in the Massachusetts Agricultural College, Dec. 7, 1869. Also Contributions to the Chemistry of Common Salt, with particular reference to our Home Resources, by the same author.

These two little pamphlets furnish a great amount of information in relation to salt and its uses. The conclusions of the author are not favorable to the use of salt as a promoter of vegetable growth. He says the safest and cheapest way of supplying salt to farm lands is to feed it to stock. The benefit reported from the use of refuse salt he thinks is often due to that refuse matter, rather than to the salt itself.

*For the New England Farmer.*

### THE GARDEN IN MAY.

Farmers may enjoy the luxury of a pretty, as well as a profitable garden, if they will only take a little pains. To secure this, the women of each household may do much by seeing to and planning for the ornamenting of the garden; and as but a small portion have separate plots for flowers, &c., good taste will soon suggest the way of uniting beauty with utility,—flowers with vegetables. How much it improves the appearance of the garden to have all crops arranged so that one may set off the other, and each may show to the best advantage. Let the bean poles be straight and of even length, and set in line; the pea brush be neatly pressed and set with the flat sides lengthways of the rows, their tops neatly woven together; and everything arranged in neat, regular order, economizing space, without crowding.

Many tender plants may be forwarded so as to gain several days or weeks, in time of maturing, by a little trouble in protecting with light frames covered with gauze or glass,

boxes, &c. If, after planting, a rain falls and the ground becomes crusted, it facilitates the appearance of the tender shoots to loosen and pulverize the crust gently above them, using care not to injure the plants. A mellow surface soil is most favorable to growth at all times, and the ground should be often stirred to admit air, warmth and moisture to the soil below. To obtain the greatest profit and good from a garden, we must plan to have a succession of crops on the same soil—lettuce between carrot and parsnip rows, radishes among melon and cucumber hills, cabbage between early potatoes, and late crops to follow early ones, in a similar way.

**ASPARAGUS.**—Cut every shoot as soon as it rises to sufficient height for the table, by which means the season of cutting may be prolonged. In cutting, use care not to injure the young shoots beneath the surface.

**BEANS**—Plant bush varieties early. Dwarf Indian Chief, Valentine and the Princess are good varieties. Pole beans are more tender and less easily protected, and should be planted later. Set the poles first, four feet apart each way, and plant the beans around the poles, three or four inches away, five or six seed to a hill. Leave the Limas till the last, as they are the tenderest and most difficult to start. In planting Limas, stick them eyes down, and cover only half an inch with fine, mellow soil. The soil around the poles and in the hills should be a little higher than the common level, to shed the water.

**BEETS.**—The early sown should now be up. Seed may still be sown for summer and fall. Early Bassano, earliest of all, early Blood Turnip, Crapandine and Long Blood, are good varieties.

**CABBAGE TRIBE.**—Borecole, Broccoli, Cauliflower, Kohl Rabi, Kale and Cabbage seed may be sown in rich, well prepared beds in the open ground for medium and late crops. Transplant from cold frames and hot-beds into rich, mellow soil, well prepared. Examine the roots for cutworms and see that the plants are free of insects and healthy.

**COLD FRAMES.**—Remove remaining plants as soon as safe from frosts, &c., and take the frames in and store for another season; good care and an occasional coat of paint will preserve them for many years.

**CORN.**—Plant the sweet varieties once in two weeks up to July, for a succession. Mexican Sweet, Crosby's Extra Early, Trimble's Improved Sweet, Farmer's Club, Evergreen, and Mammoth Sweet corn are the best varieties for general selection. Plant small varieties in rows, north and south,  $3\frac{1}{2}$  feet apart, three kernels to the foot.

**CUCUMBERS.**—Those started on sods in the hot-bed may be transplanted into the open ground. Plant seeds for a succeeding crop; make large hills, and put in two shovelful of fine, rich manure, and plant plenty of seed, and at intervals of a few days, for bugs,

&c. Superfluous plants can be removed as soon as strong enough to resist bugs. A good preventive of bugs is to bend two sticks over the hills, letting them cross each other, fastening them by inserting their ends in the ground and putting a part of a newspaper over them, confining by placing dirt on the edges; this will not only give protection from bugs, but will also tend to forward the plants.

**EGG PLANTS.**—Transplant into ground well enriched with warm, fermenting manure from the hot-bed, as soon as the weather is warm and settled.

**HOT BEDS.**—Remove all plants, paint, repair and put away sashes and frames for another season.

**INSECTS.**—Many are already on the alert, seeking what they may devour. Whale oil soap, guano water, and hen manure solutions are not only offensive to the insects, but give vigor to the plants to resist attacks; dusting with plaster or fine dust will often be sufficient. Covering as recommended for cucumbers, is almost certain protection.

**LETTUCE**—Transplant from hot-beds, and sow seed among hills of vines, along borders of beds, &c.

**MELONS.**—Nutmeg, Musk, Cantelope, &c. Sow seeds in large hills, as for cucumbers. Plant at distances corresponding to growth, from four to six feet.

**NASTURTIANS.**—Sow where they will be shaded from the mid-day sun. A rather moist soil is best.

**ONIONS** may still be sown, if they have very rich, mellow surface soil. They usually do best when grown on the same soil several years in succession.

**PEAS.**—To have a succession of this fine vegetable, sow once in two or three weeks. There are a goodly number of varieties from which to select early, medium and late.

**PEPPERS.**—Plant out from the hot-bed or boxes in the house, in rows two feet, and eighteen inches apart in the row; manure with hen manure.

**POTATOES.**—Plant early, the earlier the better; only early planted potatoes should be grown in the garden. Begin to hoe as soon as they break ground, top dress with ashes, salt and lime mixed, guano or superphosphate of lime.

**RADISHES.**—Sow in rich, warm soil in any vacant places, and among other vegetables, thin planted. Encourage rapid growth with liquid manure.

**SQUASH.**—Plant and treat like cucumbers and melons. Early Bush and Summer Crook-neck for summer; Hubbard are best for fall and winter.

**SWEET POTATOES.**—Plant out after the middle of the month in well enriched, sandy, warm soil, in high hills or ridges. Set the plants a little deeper than they stood in the bed.

**TOMATOES.**—Transplant into well enriched

hills, four feet apart each way. A rather sandy soil is preferable to a heavy loam or clay.

**SMALL FRUITS,** like blackberries, currants, raspberries, strawberries, grape vines and gooseberries may be moved or planted new, if done before the buds swell for leafing out. Neglected grape vines may be pruned after leafing out; other bushes and shrubs may be pruned, tied up to stakes or trellises, hoed, manured and mulched. W. H. WHITE.

*South Windsor, Conn., 1870.*

*For the New England Farmer.*

#### OUR CONDITION AND PROSPECT.

Shall we Extend or Contract our Operations?—A Falling Market—Supply and Wages of Farm Labor—Productions for Home and Foreign Markets—Effects of Decline in Gold—Present and Prospective Prices of various Articles.

The time for deciding upon what crops to raise and the amount of labor to be performed this year has arrived. Farmers, like the followers of every trade, are inclined to consult the past and look to the future in order to determine their work for the year. After carefully watching current events, farmers must determine whether to enlarge or to curtail their operations. Should the rapid decline in gold, or the present state of the market suggest the expediency of any essential change from their usual course? The fall of gold to merely a nominal premium, and the resumption of specie payments, have been anticipated with considerable anxiety; for it is believed a general breakdown in prices and a serious interruption of business would follow.

However this may be, in working with failing markets farmers have some advantages over manufacturers. They are not obliged to constantly expend large sums in cash for raw material wherewith to make their goods, and thus suffer losses two ways—on stock and the manufactured article. By far the heaviest item in the cost of farm produce is labor; only a part of which is cash out. Farmers, themselves, with their teams, perform the largest portion; and it is for the interest of the farmer to keep the home force employed whatever may be the condition of the markets.

The wages of help may not be less by the time spring contracts are made, but undoubtedly laborers will be more numerous, and better selections can be made and more efficient services will be rendered; for the supply is exceeding the demand in the cities. Notwithstanding the repeated strikes, secret leagues, co-operative movements, and all that is said and done about labor reform, wages have a decidedly downward tendency. In the majority of manufacturing establishments the help was cut down ten to twenty per cent. the first of the winter, and if their goods continue to depreciate as rapidly as they have for some time past, a further reduction may be

expected. The prospects for house mechanics are not as encouraging as last year. The demand for houses and stores has caused a remarkable activity in building for five years past, and employed a large number of able-bodied men in the erection of the buildings and in preparing the material throughout the country. A check to these branches of industry will be felt at once in the rural districts, as any depression in our manufactures will send labor back to the farm for employment.

The scarcity of farm help during the last decade can easily be accounted for when we consider the vast amount of labor that has been accomplished; the number of men required to fight the battles of our country; to prepare the implements and munitions of war; to extend and carry on the different branches of our varied industry in a full tide of unparalleled prosperity; to execute the public improvements, and erect mills, factories and houses at the rapid rate that has been done. Our country will be unlike others, if with the thousands of foreigners weekly landing upon our shores the cities and manufacturing villages can continue many years longer to draw so heavily upon the farming population. Manufactures are comparatively a new enterprise, and they are seeing their palmy days. Soon the resident population around these busy hives of industry will supply all the labor they require. The rush from the farms to the village and city will be checked, and there will be a superabundance of help in the rural districts, as there was before manufacturing interests assumed such gigantic proportions, and as now exist in the old world.

The fall of gold will affect those who raise only such crops as are exported more than New England farmers who grow other kinds and who do not supply their home markets. All that is raised here is wanted for home consumption, and the price of most articles depends on the supply rather than fluctuations at the gold board. The ruling price of vegetables was very low last year; cabbages and some other kinds brought to the producer no more than the average of prices before the war. If market gardeners made wages last season, they need not fear smaller profits this year from any direct influences of a decline of gold. Potatoes are selling at low figures. The retail price now would not have been considered high ten years ago. They have come down to old rates without much regard to the premium on gold. When the market is full of old potatoes, the new or early crop starts at low rates, and sell slowly. No man can afford to pay fancy prices for early sorts to raise them for table use. Early Rose are now quoted at one dollar and less per bushel in New York. Too many are trying to make money by raising early potatoes. The late crop may pay as well this year. Corn may fall considerably, and still a profit can be made by growing it, even in New England.

There will undoubtedly be a larger area planted this spring. Flour is selling lower than it was before the war, according to the rate of wages; that is, mechanics and laborers can earn a barrel quicker now than they could then. It is ascertained that less winter wheat has been sown than in 1868, though the prospects of a large foreign demand for American grain are unusually good. Barley, oats and rye will pay even at lower rates, if the raiser is near a market and sells the straw at an advantage.

Meat has not fallen with gold and the price of grain; beef sells this winter as high as it did when gold was 2.50. Our neat stock was diminished by the war. That loss is not yet made up. Nearly every State in the Union is laid under contribution to supply our markets. The demand for choice pieces of beef increases, and there is every prospect that beef will command good prices for some time to come. Owing to the decrease of sheep at the East, and to a more general use of mutton, we need not fear a material fall in this. Pork sells for about one hundred per cent. more than it did in 1860, while the cost of the material for producing it has not advanced in the same ratio. This profit, and the fact that swine can be multiplied so rapidly may cause a decline in pork before long.

Our markets, through the increase of population, are yearly calling for more and more, and there is little danger of an over supply in any of the staple crops. The prices of all our crops depend more, in fact, on the season than on an inflated currency, or on the resumption or no-resumption of specie payment. For the last seven years the products of the dairy have sold remarkably well; cheese manufacturers have been surprised at the results of their labors. The high prices of these articles have placed them among the luxuries of many families, and *should* there be a slight fall the producers will have no cause to complain. Eggs and poultry sell quickly, and farmers cannot say that consumers do not pay enough for them. The annual consumption of eggs is truly surprising. A few years ago New England supplied her own markets; now eggs are brought here from West of the Mississippi; but commission merchants may bring them from whatever distance they please, still, that which is produced nearest our markets, if carefully prepared, will command the highest price and quickest sale. The demand for well cured hay is increasing faster than our farmers are preparing to sell. Its price appears to be regulated solely by the amount produced and by the price of grain. N. S. T.

*Lawrence, Mass., March 10, 1870.*

—An English writer thinks the American early potatoes will come to an end ere long, for as each new variety is claimed to ripen about ten days earlier than any other, the time between planting and digging will soon be used up.

COAL ASHES.

Coal-beds were once peat-beds—such at least is the verdict of geological science. The ashes of coal, like those of peat, consist chiefly of the clay or soil which was mingled with the decaying mass of vegetation, rather than of the ash ingredients of the plants themselves.

Peat is so long soaked and leached with water that it usually contains very little alkalies, phosphates, or other matters that remain when it is burned, which have fertilizing value. The same is true of coal in a higher degree.

The ashes of coal, in general, have the composition of ordinary (burned) soil. They contain phosphoric acid, sulphuric acid, lime, magnesia, and potash, but commonly in small or very small proportion.

In the years 1849 and 1850, very complete analyses of three kinds of coal ashes were made in the Yale Analytical Laboratory, at the instigation of Professor J. P. Norton. The results are here given:—

SOLUBILITY.			
	Anthracite.		Bituminous.
	White ash.	Red-ash.	
Soluble in water . . . . .	3.74	3.35	3.41
“ “ hydrochloric acid 4	7.58	11.00	8.53
Insoluble in water a. d. acid	88.68	85.65	88.06
	100.00	100.00	100.00
COMPOSITION.			
Insoluble silicates . . . . .	88.63	85.65	88.06
Soluble silica . . . . .	0.69	1.24	1.08
Alumina . . . . .	3.31	4.24	1.96
Oxide of iron . . . . .	4.03	5.83	1.59
Lime . . . . .	2.11	0.16	4.46
Magnesia . . . . .	0.19	2.01	none.
Soda . . . . .	0.22	0.16	0.76
Potash . . . . .	0.16	0.10	0.52
Sulphuric acid . . . . .	0.87	0.43	1.10
Chlorine . . . . .	0.09	0.01	0.29
Phosphoric acid . . . . .	0.20	0.27	none.
	99.95	100.10	99.80

Coal ashes are occasionally richer in one or several valuable elements. Lime has been found as high as 19 per cent.; sulphuric acid, 10; chlorine, 9; magnesia, 5; potash, 2½; phosphoric acid, 1¼ per cent.

We see, then, that the soils which are naturally mixed with coal, and which remain, after burning, as ashes, are as variable in composition as the soils which are now in cultivation. Hence, some coal ashes are nearly worthless, while others are very good as a fertilizer. There is no necessary connection between the name of a coal or the locality where it is mined, and the fertilizing value of its ashes, as from two parts of the same lump of coal may be obtained, in one case, a red ash, and in the other a white ash; so one may give an ash rich in sulphate of lime, while the other may be destitute of that ingredient.

There is a reason, often overlooked, which may in part account for the varying opinions held by those who have used coal ashes.

It often happens, in kitchen ranges, that so much wood or charcoal is used for kindling the fire mornings and for aiding it during the day, that the ashes which collect contain

enough alkali, etc., to act efficiently and strikingly as a fertilizer. The reputation of coal ashes cannot properly rest on the use of such a mixture.

On soils whose texture is too open, on light sands which hold neither water nor manure, the use of coal ashes is a great benefit, mechanically, by occupying the cavities or spaces between the grains of sand with fine matter, and thus giving to the earth more retentive quality. Had I a farm of such hungry soil as the coarse sand of New Haven plain, I should be thankful to get it dressed two inches deep with coal ashes, even of the poorest fertilizing quality, in order, by ploughing them in, to puddle a soil which drinks up the rains in a trice, and, after a few hours of summer sun, is dry enough, if not usually fine enough, except where ground by travel, to rise in the wind and become floating capital rather than real estate.

The good effect of coal ashes in thus bettering the texture of hungry soils may often be greater than that of a tolerably good fertilizer. This is a fact of capital importance, which, though demonstrated by plenty of sound facts, is not sufficiently understood.

By coal ashes I mean *ashes*,—not slate, clinker, broken bottles, worn-out teapots, blacking-boxes, old shoes, and small coal, but the fine ashes, such as get in one's hair when we shake out the grate in the morning, or, at least, such as will pass a sieve of twenty meshes to the square inch.

When the farmer reports that coal ashes are good or otherwise, he should mention what kind of coal they are obtained from, and state whether or not they are mixed with matters which have a fertilizing action.—*Prof. S. W. Johnson, in Hearth and Home.*

HEALTHY CHICKENS.—A correspondent of the *Rural New Yorker* says:—The way I keep my fowls in health, I clean out the house once a week; put wood ashes under the roosts; have iron basins for them to drink from; whitewash inside of hen-house with hot lime; put a little kerosene oil on the roosts once a month. The main food is oats and cake of scraps to pick on. I never feed but once a day—at noon, or when I shut them up at four or five in the afternoon. When they run out then give them all they will eat. In my experience there is no easier way to get diseased fowls than to keep them stuffed; it makes them lazy, and they won't work as much as they ought to to keep in a healthy condition. I never had any gapes in chickens. When fowl begin to droop I give three large pills of common hard yellow soap; it is the best thing to cleanse a fowl I know of. I follow it for three days; give them nothing to eat, and plenty of pure water to drink. In desperate cases give a half teaspoonful of tincture of lobelia.

## EXTRACTS AND REPLIES.

## BARN ITCH—PEMPHIGUS, OR VESICULAR ERUPTION—SCRATCHES.

I would like to inquire, through your columns, the cause and remedy for the barn-itch? My stock is troubled with it more or less every year, commencing soon after stabling. It troubles my working cattle much more than those giving milk. Please tell me, also, a sure remedy for the scratches on horses? L. J. N.

Cheshire, Mass., 1870.

REMARKS.—The term, "Barn-Itch," is a common one among farmers, and the disease known by that name is not an unusual one. But we cannot find in any of the books which we usually consult as authority, the term "barn-itch" used. Even in Allen's late and excellent work, *American Cattle*, we find no allusion to "barn-itch," nor is any disease spoken of which would indicate it to be of that nature.

It has required considerable research and thought to come to any conclusions as to what the disease "barn-itch" is, and when found, how it ought to be treated.

What causes the itching is not easily determined. It may arise from an impure state of the blood, from contact with some poisonous substance, or, as in the case of common itch in human beings, by the entrance into the skin of minute parasitic insects.

The surface of the skin of the ox and cow is covered with small vesicles, or bladders, which vary considerably in size. From some cause these become enlarged, are filled with a watery fluid, and occasion a most annoying itching. There are other symptoms, also, which are quite marked, and are termed, "Pemphigus, or Vesicular Eruption," and this disease, it seems to us, from the investigations made, is very similar to or the same as barn-itch. Sometimes, when the disease has advanced, the vesicles, or bladders of which we have spoken, burst, and a serous or watery fluid dribbles from them and sticks the hair together, or takes it off and leaves bare patches of the skin.

In symptoms like these, Dr. Dadd, in his "Diseases of Cattle," recommends the application of the following mixture:—

Glycerine . . . . .	4 ounces.
Sublimed Sulphur . . . . .	1 ounce.
Lime Water . . . . .	8 ounces.
Linseed Oil . . . . .	2 ounces.

Two or three applications of the above, he says, on successive days, will soon change the morbid action of the skin, when what is left remaining upon it may be removed by a sponge and warm water.

A correspondent of the *Country Gentleman* has used the following with complete success:—Take hog's lard or any soft grease, and stir in sulphur until it is quite thick, with which anoint the parts affected—twice is generally sufficient.

We shall be glad to have our correspondent

send us the precise symptoms attending the itching of his cattle.

The late Paoli Lathrop, of South Hadley, Mass., who was a distinguished stock raiser, recommended the following as a positive remedy:—"Take a cob and rub the affected part until the surface is smooth, and then apply grease as an emolient."

The same remedy, he said, is always efficient for the scratches in horses, unless the disease proceeds from some general disorder in the system of the animal, in which case other and more efficient means must be used.

From personal experience, we know that this treatment will remove scratches; but the feet and legs must be kept dry and clean, while in the stable, and washed each day with warm water and castile soap.

## WORMS IN HORSES—THE CATTLE ITCH.

Can you inform me through the columns of the *NEW ENGLAND FARMER* a sure remedy for worms in horses? I have a valuable colt thus afflicted.

Some of my neighbors have cattle troubled with a kind of disease taking their hair off around their eyes. I don't know the name of this disease, but it seems to be a kind of an itch.

A DOWN EAST SUBSCRIBER.

Columbia, Me., 1870.

REMARKS.—A gill of clean wood ashes, mixed with wet oats or corn meal, every other day for ten days, has always been effectual in the treatment of our horses. If this does not succeed, give emetic tartar, with ginger, made into a ball with linseed meal and molasses, every morning for three or four mornings, and half an hour before the horse is fed. Or, this failing, give an injection of linseed oil, or of aloes dissolved in warm water, and you will be likely to start out some thousands of the small white pin worms.

We would also remind you of an article published last year, page 87 *Monthly FARMER*, in which Mr. Haserich recommends the use of lard. He says that the pin worm breeds, not in the intestinal cavities, but outside the folds of the sphincter muscle, where it lays its eggs, which hatch in five or six hours. If the exterior orifice is kept thoroughly greased with lard a few days the worms cannot fasten their eggs, and breeding stopped the worms disappear.

See article in another column, entitled, "Barn-Itch," for the unknown disease you speak of.

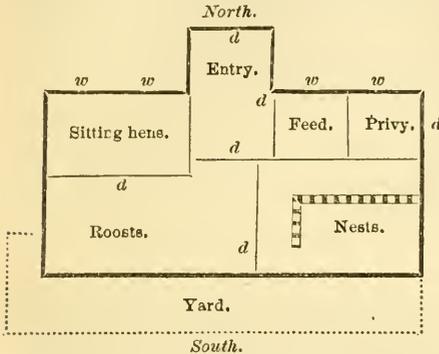
## PLAN OF HEN HOUSE.

I design building a hen house, and want it on the most approved plan. Will some of your correspondents, interested in keeping hens, give me some information or a plan for building, through your paper. ALBURGH SUBSCRIBER.

Alburch, Vt., Feb. 25, 1870.

REMARKS.—Last year,—see *Monthly FARMER*, page 85,—we published a perspective view and plan of a convenient but cheap poultry house designed, built and used by the Senior Editor of the *FARMER*. We now copy from the new work on

Barns, Outbuildings and Fences, by Geo. E. Harney, a notice of which appeared in our last paper, the outlines of a poultry house that Mr. Harney recently built for a gentleman near the village of Cold Spring, N. Y., where he resides. Our printer's rules fail to reproduce the beauty and completeness of the fine lithographic plan from which we copy, and we make no attempt to print the pretty picture in which the building itself is presented. This you will find in book referred to.



The following is an abridgement of Mr. Harney's description of this building. The southern front is nearly all glass. The entrance is on the north side, the door opening into an entry seven by nine feet. On the right is a room, seven by twelve, for sitting hens, and on the left a closet for feed, fitted up with rat-proof boxes or bins. The roosting-room is ten by nineteen, and has inclined roosts, placed about twenty inches apart, and room in front for feeding. The laying room is ten by twelve feet, and has thirty-two laying boxes placed on wide shelves in two tiers and has sheltered entrances on the side towards the glass front. There are doors at the rear of them for taking away the eggs. In one corner of the building is a privy belonging to the dwelling-house. This building is frame, battened, and has a slated roof. The walls are filled with bricks and mortar, and are lathed and plastered, as are also the ceilings. The floor is grouted-up and cemented. The yard embraces about an acre of land, and is surrounded by a picket fence eight feet high.

#### PINE SAWDUST FOR BEDDING—A SLEEPING HORSE.

Friend, please give through the columns of the FARMER, the best information with regard to pine sawdust as bedding for horses and cattle, and its effect on the manure and soil. It causes the manure to heat very quick, which I fear is a damage.

And whether anything can be done to a valuable horse, in his seventeenth year, that sleeps in the harness, whenever stopped. This sleepiness has come upon him mostly during the last year.

JAMES WEST.

Abington, Mass., 2d mo. 21st, 1870.

REMARKS.—We regard sawdust as a good bedding; but probably pine dust, aside from its power of absorption, is about the poorest of all the woods. Pine wood makes but little ashes, and what it does

make is worth but little for lye, as it contains only 15 per cent of potash, while elm contains 30 per cent, according to analysis. We are aware that it has been thought by some that manure containing sawdust is more infested by noxious insects than other manures, and some have even claimed that it was injurious to the soil, but we have seen little evidence of the correctness of such conclusions. Our correspondent is correct as to its causing the manure to heat. An old correspondent of the NEW ENGLAND FARMER, who used 100 cords in nine months, prevented fire-fang by turning water enough upon it to keep it moist and cool, and keeping it in as solid a body as possible until he drew it out, when it was put in flat heaps, two or three cords in a place, and a foot thick after being well trodden down. Mr. Moses H. Hussey, of North Berwick, whose potatoes and other crops we noticed a few weeks since, informs us that he has used the manure from a horse stable bedded with sawdust, on which about as many hogs are kept as there are horses in the stable. He says that he is well satisfied with this manure; preferring it to manure from horses bedded with straw, especially for heavy soils.

For your sleepy old horse we have a "fellow feeling." We, too, are growing old, and sometimes find ourselves "sleeping in the harness." Our sleepiness has come upon us, as upon your horse, recently. When younger we almost envied the ability of the older people to take a nap as we rested a bit after a luncheon in the shade of the old elm. But now, when we stop for a few moments after dinner, we often feel the presence of "tired nature's sweet restorer, balmy sleep." A little bite of something to eat, while stopping, may have a tendency to keep your horse awake. We hope some reader of the FARMER will give you a more satisfactory reply.

#### THE WEST THE PLACE FOR FARMING.

Some of the Eastern papers represent many of the farmers of the West as homesick. After farming it five years at Watertown, Mass., I came to Northwestern Iowa. I do not wish to go back, nor is there one in fifty of the farmers here who could be induced to return. The West is far ahead of the East for farming. I came here in 1866, dug a hole into the side of a bluff and put up a shelter. In two years' time I had as good a house as there is in Harrison county. I have 250 head of cattle, 80 sheep, 40 hogs, 8 good work horses, 5 colts, 4 oxen, 90 hens, carts, wagons, &c. Planted 50 acres to corn and 90 acres to wheat. Corn 60 to 70 bushels per acre; wheat 76, [?] though put back by the wet season last summer. Land can be bought at \$2 50 per acre; cultivate it two or three years and sell it for \$20 an acre. It costs little to raise stock here. Turn them out in the spring to run till fall, then put them to your haystacks or stalkfield. That's the way we make our money. We are only sixteen hundred miles from Boston—time four days, fare \$42 to Council Bluffs. I have three brothers here, who are doing well, though they came with nothing to start with. We have a good market for everything we raise. I can make much more money here than at the East with half the hard work.

Please put this in the NEW ENGLAND FARMER and let Eastern men who don't know whether farming pays, see that we have a great country to live in, and come out and learn how to farm it. We can show them. NATHAN S. CHASE.

*Magnolia, Iowa, Jan. 26, 1870.*

REMARKS.—That's a good hearty letter,—not a streak of the blues or fever and ague any where to be seen. We venerate the first settlers of all new countries. Men who erect buildings for others to live in; dig wells for others to draw cool water from; subdue fields for others to cultivate; make roads and bridges for others to ride over; drain marshes that others may breathe pure air, and generally prepare the way and lay the foundations of a prosperous community, are entitled to more credit and honor than they generally receive. We therefore very cheerfully comply with friend Chase's request to copy his letter.

SEEDING FOR PASTURE.

As I am about seeding some land into pasture, I would like some information through your paper. Some advise me to sow Redtop, others think it better to sow different kinds of seed. Will you inform me which would be the best kind of seed to use? A READER.

*Northboro, Mass., Feb., 1870.*

REMARKS.—Pastures require grasses that do not come forward at the same time. There should be early, medium and late grasses, so that the stock may always find that which is in a suitable state of growth for them. This cannot be secured by sowing one or two kinds of seed only. The June grass, for instance, would blossom and become dry, perhaps, before the Redtop would blossom in July. The Meadow Foxtail and Orchard grass would flower in May and June; the Redtop in June and July; the Timothy in June and July, and White Clover from May to September.

VALUE OF CORN COBS.

Can you inform me whether there is any nutritious matter in corn cobs to feed to stock, ground separate, or as is more usual, ground with the corn. A. COTTON.

*Woburn, Mass., Feb. 23, 1870.*

REMARKS.—There was quite a spicy controversy on the value of cobs ground separately and with the corn, in the FARMER for 1868. The Monthly edition ought to be in your town library. You will there find different views expressed—some believing the cob valuable, others that it is even worse than useless. One advocate of corn cob meal thought that those who realized no benefit from it did not feed it right. Sufficient hot water should be turned upon the meal to scald it the night before feeding. Thus treated, he considered it valuable. Another said it was too expensive to grind cobs, but that they were valuable when boiled, and that the water in which they were boiled was also very nutritious. But as farmers disagree among themselves, we will copy from Prof. Johnson's book on How Crops Grow the following results of analysis of the ash of corn, of

corn stalks, and of corn cobs, showing the per cent. of several of the constituents, as follows:—

	Corn.	Corn Stalks.	Corn Cobs.
Ash . . . . .	1.42	5.49	.56
Potash . . . . .	27.0	35.3	47.1
Soda . . . . .	1.5	1.2	1.2
Magnesia . . . . .	14.6	5.5	4.1
Lime . . . . .	2.7	10.5	3.4
Phosphoric Acid . . . . .	44.7	8.1	4.4
Sulphuric Acid . . . . .	1.1	5.2	1.9
Silica . . . . .	2.2	39.9	26.4

Another table gives the water, organic matter, ash, albuminoids, carbohydrates, crude fibre, fat, &c., in the corn and in the cobs. The term organic matter signifies the combustible parts of the plant; carbohydrates, &c., includes fat, starch, sugar, pectin, &c.

	Corn.	Cobs.
Water . . . . .	14.4	10.2
Organic matter . . . . .	83.5	83.2
Ash . . . . .	2.1	2.8
Albuminoids . . . . .	10.0	1.4
Carbohydrates, &c., . . . . .	63.0	44.0
Crude fibre . . . . .	5.5	37.8
Fat, &c., . . . . .	7.0	1.4

MANURING WITH CLOVER.

Can we get a suitable crop of clover to plough in on worn out land, without manure to start the clover? How much seed to the acre? Should it be ploughed under when in the blossom, and how deep? Is the spring the best time to sow the seed? *Craftsbury, Vt., Feb. 9, 1870.* G. N.

REMARKS.—On land pretty thoroughly impoverished, it is not probable that much of a crop of clover would be produced at once. If none can be had, however, plough the land twice at least, once in the fall and again in the spring, and work it over with some lifting implement, such as a horse-hoe, or cultivator, until the mass of the soil has been thoroughly mingled and made fine. Sow in the spring as soon as the soil is mellow, 12 or 15 pounds of clover and plough under the crop when the blossoms commence to dry.

The crop on exhausted soils will be small, of course, but it will be the foundation for another and larger one, and so on until the field will produce a ton or more to the acre. With good treatment the land will then be in condition to produce fair crops for a hundred years in succession. If four hundred pounds of the flour of bone, were added to the acre, a pretty fair crop of clover might be expected the first year, on sandy or clay loams.

CATTLE DISEASE IN SOUTHEASTERN MASS.

By the questions I see asked in the FARMER, I suppose it is thought that editors know almost everything. So I want to ask you what ails my cows. I bought a heifer that came from the country a year ago last fall. She did well all winter, and dropped her calf April 1st. She gave a good mess of milk,—some days twenty-five pounds. Along the last of July she began to dry away in milk. I fed her a variety of fodder, such as corn stalks, pumpkins, small potatoes, small corn, some barley and witchgrass, &c., the same as I did another old cow I was fattening. When I gave her anything new she would eat it as though she liked it for a week or ten days, then would not touch it. She appeared all the time as if she wanted something she could not get.

I never gave her more than four to six quarts of roots or one quart to three pints of oats or meal at one time. I gave her bone meal once or twice a week with the same result. I tried both English and salt hay. She would stand with her head down and back up. About four years ago I lost a cow with about the same symptoms. I don't keep but one cow. I am trying to raise the calf, but she seems to have the same trouble about eating.

Chatham, Mass., March 8, 1870. S. A.

REMARKS.—People ask questions in the FARMER not because it is thought that the editors know everything, but because the editors can put these questions before an immense number of readers, some of whom it is presumed can answer them. In another column you will find a statement in relation to a disease which we mistrust is the same as that of which you inquire. In some parts of Southeastern Massachusetts it prevails to an alarming extent, and should at once be examined into by men qualified for the task.

#### STORING VEGETABLES IN CELLARS UNDER THE DWELLING.

HON. SIMON BROWN:—*Dear Sir*,—It is still a practice with some farmers,—I hope with but few,—to store vegetables in cellars under the dwelling. To do something to put a stop to the practice by the few who still persist in it, I addressed a note to Dr. Bowditch, and received the enclosed reply, which needs no comment from me. I think you will do well to insert it in your most valuable paper.

Boston, Feb., 1870. D. B. FLINT.

Having been requested to give an opinion concerning the effects upon health caused by storing vegetables in the cellars of occupied dwellings, we would reply:—

1st. That while such vegetables are entirely free from decay, the practice is probably harmless.

2d. It is perfectly certain that decaying vegetable matter gives rise, in a way which science has not yet fully explained, to exhalations which are poisonous, that they taint the air with which they are in contact, that they seem to invite the attack of epidemics, that they diminish the power of the body to resist disease of every kind, and that they are especially favorable to the production of fevers.

3d. That the air of a cellar cannot be prevented from passing throughout the building under which it is placed.

For these reasons we are of opinion that the practice of storing the produce of the farm in the cellars of dwelling houses, is always attended with danger, and ought to be given up, since the utmost care is required in the course of our long winters, to prevent decomposition from taking place.

Signed

HENRY BOWDITCH, M. D.,	} <i>Members of the</i> <i>Mass. "State</i> <i>Board of Health."</i>
GEORGE DERBY, M. D.,	
R. T. DAVIS, M. D.,	

#### SWAPPING COWS.

I am an amateur farmer, and cultivate a "little place out of town," and one of the appurtenances thereto belonging is a three-year-old heifer, that I purchased when a yearling, and having made quite a pet of her, we hate to part with her. But one of my neighbors who has "farmed it for forty years" tells me she is not worth keeping. I desire to tell you just her offence, and then if you please, give me your opinion concerning her.

She gave birth last June to a nice heifer calf,

and through the summer gave nine quarts of milk per day, of excellent quality. In the fall she fell to six quarts, and through the winter, up to date, has given five quarts. She has one pint of meal twice a day, made into porridge, and given warm; hay cut and steamed, and three times a week one peck of carrots. Now my neighbor tells me that with the care she gets she should yield twice as much, and I desire to know whether I am making a mistake or not. She is now with calf and comes in July first.

Medford, Mass., March 6, 1870.

AMATEUR.

REMARKS.—Nine quarts of excellent milk, and only a three-year-old heifer. Keep your pet by all means, at least another year, and compare her yield and the quality of her milk with that produced by your neighbor's cow that is worth keeping. Lincoln's story about swapping horses in the middle of the stream, has a moral for you.

#### SOWING WHEAT—PREPARATION OF SEED—YIELD.

As the low price of flour may cause some Vermont farmers to neglect the wheat crop the coming spring, allow me to suggest some reasons for extending its cultivation. Wheat adds one crop in rotation; it increases the aggregate income from our farms; it saves paying out our money for flour; with clean wheat and good flouring mills we produce a better quality of flour than the average of that for sale; we get better grass in seeding with wheat, to say nothing of the pleasure one feels in eating bread of his own raising.

In raising wheat as well as all other grain, farmers begin to realize the necessity of sowing perfect seed; and many plans have been suggested for securing this result, such as selecting the best heads, &c. The plan I have pursued for four years with very good success is this:—I take out all the small and imperfect kernels of wheat with one of "Sanford Adams' wheat screens;" then wash in strong brine, and sift in as much air slaked lime as will adhere to the wheat. The result is no smut, a larger yield, larger berry, and an increase in quantity and improvement in quality of flour. I sow the variety known as the "Dodge Wheat." My largest crop was forty-five bushels per acre; average for four years thirty-five.

Cabot, Vt., March 4, 1870.

A. M. FOSTER.

#### SAP SPOUTS AND TAPPING.

As the sugar season approaches it is in order for us first to determine what we will use, then to get our fixtures in readiness. There are a great variety of spouts recommended. One says use round tin spouts driven into the bark. Many tap soft maples, more or less. With such spouts driven into the outer bark of that tree, the sap comes in contact with the coloring matter of the inner bark, and is so discolored as to injure both the flavor and appearance of the sugar.

Spouts that are driven sufficiently firm to hold a bucket of sap, require a larger hole than would otherwise be necessary; and most of them cover too much of the outer surface of the wood where the sap flows most freely. Another objection is that many of the improved, as well as the ill-shapen, old-fashioned spouts, require a deeper hole than we can afford, now that our trees have become valuable.

I prefer setting to hanging my buckets. The time and expense necessary to fit the buckets and spouts or spikes for hanging is sufficient to arrange blocks, or stones, for the buckets to stand on, which, with care, will last for years, or an age. It is common to see buckets small at the bottom, hanging "breast high," with the side next the tree

inclining outwards to such a degree that a bucket of fourteen quarts capacity will waste all over ten quarts. Other buckets small at the top, are seen in about the same condition, careened up by the wind in exposed positions, with the sap dropping rapidly on the top hoops and dripping from the bottom.

I do not tap a tree in the smaller dimensions of its body, but in the larger parts, near its base, where observation shows that less grains are cut, and experience fully proves that the wound will heal much quicker, and where, if necessary, I can insert two spouts, with less detriment apparently to the tree than one several feet higher.

I use Sumac or other wooden spouts. For the benefit of others, I will give my method of fitting them:—With a common plane and a hard wood stick three inches long, one inch thick and one and a quarter wide, I make a spout sharpener. In the first place I work a hole through one side of the stick of the size and taper I wish the end of the spout to be when finished. I then plane down one edge of this stick so as just to cut into the hole. It is then placed on to the face of the plane with the hole over the cutting iron, so as to work like a pencil sharpener, and screw it firmly to the plane. Now, by putting the end of an old spout into this hole and giving it two turns it is fitted perfectly. New spouts, after being roughly sharpened, are finished in the same way. An active man, or even a boy can finish from thirty to forty in a minute, in the most perfect manner imaginable. They are 75 per cent. cheaper than any so-called, "Improved Sap Spouts," require only half-inch hole by five-eighths deep, and when necessary one turn of the tapping bit (a tapering bit) will rim the entire surface, which give a fresh flow of sap.

We all have our preferences, but let us avoid hasty conclusions and not buy new things merely because they are new or novel, nor leave the "good old way" until we are sure of a better. If there is any way that is better in all respects, let us have it. O. C. WAIT.

*West Georgia, Vt., March 3, 1870.*

#### TOP DRESSING LOW LANDS.

I top dress low lands by carting dirt into the hogan under the barn in summer, and draw it on to the land in the winter, on snow. For this purpose I fix boards on the sled beams, between the caps, and some on the sides with cleats on the ends to put the head and tail boards in. I spread it from the sled. I find this much better than to draw it on when the ground is thawed.

#### LOADING LOGS ON SLEDS.

To load logs on the sled, I put bolt rings in the fore and hind beams of the sled, horizontally; the rings inside the caps, and hang down before the fore beam and behind the hind beam. Then on these beams pin bunks. Then I take and lay skids before and behind the bunks on the sled, hook chains in the rings, draw them over the ends of the skids, bring them together near the logs to be rolled on. To roll on the top logs, put the chains round the logs on the sled, hitch them tight in the rings, lay the skids on the logs and hitch chains into the chains that are round the logs on the sled, and roll on with the oxen as at first. This I find much better than a single chain.

*Groveland, Mass., Feb. 22, 1870. E. ROLLINS.*

#### BLOODY MILK CURED BY COPPERAS.

I had a cow which gave bloody milk every season for three or four years and could find no remedy that did any good until some one told me to give her a tablespoonful of copperas at a mess for three days in succession. I gave it, and she never has been troubled since. Her udder was so

swollen that it was almost impossible to get near her to handle it, but in one week it was entirely well. D. T. CLOUGH.

*Thetford, Vt., Feb. 22, 1870.*

REMARKS.—We should consider an ordinary tablespoonful of copperas a large dose to be given at once to a cow, but it seems to have operated well in this case.

#### BUTTER FROM ONE COW.

There is a Jersey cow in Wenham, Mass., owned by a widow lady, seventy-four years old, who takes all the care of the cow and her milk. This cow dropped her calf in February, 1869, and is to come in again in April, 1870. Besides furnishing the family with milk, 360 pounds of first rate butter have been made, up to this time, and now five pounds a week are made from the milk of this cow. Five quarts of her milk have made a pound of butter. She is fed two quarts of meal a day, with dry hay. L.

*Topsfield, Mass., March 7, 1870.*

#### CORN COBS.

I am of the opinion that they are not worth the cost of grinding, which is five or six cents per bushel. I have never tried any experiments myself, but have in my mind a farmer who having some doubts in regard to the use of cobs for stock, got five or six bushels of clean cobs ground and fed to his horse. He found that his horse would not eat the cob meal till he mixed one or two bushels of corn meal with the five or six bushels that his cobs made. L. T.

*Concord, Mass., March 9, 1870.*

#### PIG RAISING.

In May, 1868, I bought a sow pig for \$5. She was half blood White Chester County and half Mackay. April 15, 1869, she had a litter of pigs; raised six; sold four of them, when four weeks old, for \$26; kept two to fatten, the dressed weight of which at seven months old, was 516 pounds, and sold for 15 cents per pound—\$77.40. Sept 14, she had a second litter, raised twelve; sold nine for \$49.00, and kept three, now worth \$50. Commenced to fatten the sow December 1, dressed weight February 5, 1870, 506 pounds. Sold at 15 cents, amounting to \$75.90—making the total amount of income \$278.30. C. E. W.

*Bellows Falls, Vt., March 5, 1870.*

#### CHOKED CATTLE.

A year ago last fall, while driving a drove of cattle to Brighton, a heifer got choked with an apple, and was so far gone that she could hardly stand. I got a pint of soft soap at a house near by, which was rather thick, and I added a little water, and poured it down her throat. In five minutes she was well. I have never known this to fail of removing the obstruction either up or down in short time. WILLIAM W. CROSS.

*Bridgton, Me., Feb. 28, 1870.*

#### INFALLIBLE CURE FOR LICE.

Having read a great many remedies for the prevention and cure of lice on cattle, I wish to suggest for the benefit of the readers of the FARMER a receipt that is safe and infallible. In the first place before your stock comes to the barn for the winter, see to it that they are fat; then during the winter months take a little pains from day to day to keep the tallow gradually increasing around their kidneys, and you never will be troubled with lice. I am a young farmer and inexperienced in

many things, but I am *thankful* that I have found out that the above treatment is entirely efficacious, and that, though not patented, it will "knock" all internal and external concoctions higher than a "kite."

HEBARD, SECOND.  
Randolph, Vt., Feb. 14, 1870.

#### SCOURS IN COWS.

I once had a valuable cow that was troubled with scours, and I expected to lose her, till using this remedy she was saved:—One quart of wheat flour, tied tight in a cloth, put into a kettle of boiling water, and boiled three hours. After it was taken out and cooled, it was pounded fine, and given her to eat dry. By twice feeding with this she was cured, and never troubled with it again. It is said to have been equally effectual in cases of dysentery with persons.

J. B. S.  
Haverhill, Mass., Feb. 28, 1870.

#### RAISING TURKEYS.

Will some reader of the FARMER who has been successful in raising turkeys, give his manner of treatment while small. What should be fed to them, &c.

I. D.  
Enfield, N. H., March 1, 1870.

REMARKS.—In the Monthly FARMER for 1867, page 289, is an excellent article on this subject, by H. A. Sumner, of Brandon, Vt. Probably that article alone would be worth the cost of the whole volume to you. We shall be glad to publish another as good.

#### CORN STALK FODDER.

I must dissent *in toto* from the statement of Dr. Loring, that "Green corn stalks are the poorest and meanest fodder that was ever given to cattle." Both experience and observation have taught me that when the stalks are *properly grown and judiciously fed* to stock of all kinds, they are very valuable fodder. Such, also, is the opinion of my neighbors, several of whom are subscribers to your paper, which by myself and family is valued so highly that we would go without our dinners, were it necessary to do so, to raise the money to pay for it, as we find in every number something that interests, instructs and amuses us.

HENRY E. HITCHCOCK.  
Sturbridge, Mass., Feb. 7, 1870.

#### LICE ON POULTRY.

For the last five or six years I have been very successful in destroying lice in my hen coops, by giving the coop or house a thorough whitewashing in the spring, first adding about a gill of kerosene oil to a gallon of the whitewash, and about once a month sprinkle the oil about on the roosts, in the laying boxes, &c. Since I commenced the operation I have seen no vermin.

J. BUFFINGTON.  
Salem, Mass., Feb. 21, 1870.

#### THE HAY CROP A SPECIALTY.

At a recent meeting of the western division of the North Kennebec Farmers' Club, as reported in the Waterville, Me., *Mail*, Mr. Hall C. Burleigh, one of the leading farmers of the Kennebec valley and President of the North Kennebec Agricultural Society, remarked that he believed the best course for our farmers to pursue was to raise hay as a leading crop, and

consume it upon the farm. The *Mail* in reporting him says:—

Mr. Burleigh boldly proclaims that the true policy of the Maine farmer, great and small, is to make the hay crop a specialty, and feed it all on his own territory, keeping up the fertility of his field, not by ploughing often and seeding afresh, but by top-dressing. Of course his plan does not forbid the raising of a small crop of potatoes, or corn, or barley, or oats, &c., for his own use; and he would especially enjoin upon the farmer to have a good garden, and as large an orchard as he can keep in thrifty condition. And this would be his plan whether a man is to market butter and cheese, or beef, or wool.

He does not approve of the popular method of applying manure, with a rotation of crops; for by the time you get round to grass three-fourths of your dressing has been expended and you get about one-half or three-fourths of a ton of hay per acre, and this at first coarse and of a comparatively poor quality. Composts his manure in open air and applies it as top dressing, well rotted, in the fall; and in this way brings up the capacity of land from one-half a ton per acre, to all the grass you can conveniently make on the space. Applies ten or twelve loads per acre, and applies all he makes to his land. This method saves the expense of plowing and seeding; the work is done in the fall, when the farmer is not driven as in the spring; the quality of the grass is much improved, for it gets finer and better yearly; and in this way the grass roots are not only fertilized, but the manure acting as a mulch, they are protected from frost and drought. He thinks that manure applied in this way is more lasting in its effect, though of course different soils would vary in this. Never would plough grass land for the purpose of fertilizing the soil; does not believe that well composted manure loses much of its virtue by the escape of gasses into the atmosphere, and stated that there had been a great revolution of opinion on this point among experienced farmers and scientific agriculturists. He thinks that at the present prices of labor and products, corn and potatoes can only be raised at a loss in Maine; that hay has been \$15 a ton at some time in every year for ten years past, and that it is worth that or more to feed out upon the farm. He is very well satisfied thus far with his experiments in top dressing.

AN OLD BATCH OF BREAD.—A batch of bread consisting of eighty-one loaves, that was put into an oven at Pompeii nearly eighteen hundred years ago, has just been taken out, and is found to be *somewhat overdone*, which is certainly not surprising. These loaves, which were found in the course of recent excavations, are about nine inches in diameter, rather flat, and divided by eight lines radiating from the centre, into segments.

### PREPARING SOIL FOR A GRASS CROP.



IN making up a hurried report of the discussions at the late meeting of the *Maine State Board of Agriculture*, at Lewiston, we were compelled to omit a portion of the many excellent opinions stated and facts given. The discussion on the *grass crop*, on the last day of the session, was long and earnest, as that is one of the leading

crops of the State. Mr. Secretary GOODALE desired to hear more about the preparation of land for grass. The ordinary way involves a great amount of labor in planting to corn or other crops, and afterward sowing to grain and seeding down; he wished to know if there is a way to seed down directly, using the sod for enriching, as well as other manures?

Plaster and ashes are beneficial on many lands; on others, they are of little use. A crop of clover will leave the land in richer condition for grass. Clover hay is an excellent manurial crop, but if the liquid portion of the manure is not preserved a great part of its value is lost. Clover is not grass, though classed with it by farmers. It has the power of extracting from the ground and air many elements that grasses are not able to obtain though they need them, and thus using clover as a manure has an excellent effect upon the grass crop.

Clover ploughed in green, as a manure, has been successful in some instances; in others, when turned under in a green condition in hot weather it has been injurious to the land. Therefore it is best to plough clover in after it has somewhat ripened.

Dr. GARCELON, of Lewiston, is in full practice of his profession, but found opportunity to attend three or four sessions of the Convention, and took an active part in them. Born and brought up on a farm, and having had the care of one during all his manhood, his early partiality for it had found no abatement in the pursuit of his profession as a physician. On the contrary, he turned to the farm with renewed zeal and pleasure as the passing years went over him.

He had made many experiments in reclaim-

ing lands from the forest, from swamps and and barren sands, and believed that the most obstinate of them all could be profitably brought into a state of high fertility. He took a "run out" farm, but one that had sufficient vitality left to grow young pines and birches. These were cut off, and the stumps extracted. The farm was of a clay soil, as is most of the land in Lewiston.

After the land was cleared of the rubbish, it was ploughed, and liberally manured with twenty ox-cart loads of manure to the acre, which was spread broadcast, and worked in with Share's harrow. Then spread 100 bushels *leached* ashes per acre, and harrowed with Nishwitz's harrow. After this preparation, the land was planted with potatoes, and produced a crop answering admirably to the work which had been done upon the land, and the liberal dressing it had received.

After the potatoes were taken off, ploughed again; manured broadcast in the spring, ploughed again and sowed with barley, two bushels of seed to the acre, and twelve pounds of clover seed and one peck of herdsgrass. The crop of barley was fifty-four bushels per acre. The next year the first crop of grass cut was on the first of July, and gave two tons per acre; the second cutting was in the middle of August, and gave one and a half tons per acre. His lands were generally treated in this way, and the results, he said, were satisfactory. The object was to make a grass, or milk farm. By this thorough working, the fields were smooth enough to use any machine upon when the first crop of grass was ready to be cut. He admitted the importance of stable manure, but was of opinion that the farmers of Lewiston could do better than to pay \$4 or \$5 a cord for it, and haul it, as some do, six miles. A cheaper and better course is by the use of ashes, salt, leaves, muck, plaster, and the use of clover. We spend \$40 or \$50 for stable manure, when we can fertilize the soil more by turning under clover, and filling it with vegetable matter. He was satisfied that clover is one of our cheapest and best manures.

Dr. Garcelon stated that, under the treatment above described, he had a field of clover which was so heavy that it became suddenly lodged, and required the time of a good mower for several days to cut a single acre.

The Dr. said his land was rocky. Had fifty

to seventy-five acres of mowing land; his father had used tons of plaster upon the farm, and plaster, lime and leached ashes are still used; has a drain *three-fourths* of a mile long, which cost \$1000.

#### NEW MILCH COWS.

The spring is the time when a large portion of cows drop their calves, and the time, therefore, when especial attention should be paid to them. Even when kept with excellent care through the winter, when the time near parturition arrives, difficulties will occasionally arise that require both care and skill. Sometimes the udder becomes greatly enlarged by a superabundance of milk, which, if not taken away, is quite likely to break and destroy it, and greatly distress the cow. The popular belief is, that no milk should be taken away in such cases. But it is an erroneous one. At any rate, the danger must be less than that of a broken udder.

If the udder is hard and no milk can be drawn from it, it should be bathed in warm water, warm soapsuds, together with a great deal of gentle friction by the hand. If the milking, bathing and friction do not succeed, rub the udder with a liniment made of sweet oil and ammonia, or simple lard or fresh butter. In such cases, the condition of the bowels must be regarded, and Epsom salts given as a laxative. All cows should have *entire liberty* for a week or two previous to calving, such as an open dry shed, or a pen twelve feet square in the barn. After dropping the calf, the cow should have a drink of shorts and warm water, once each day, for two or three days, in addition to her usual food.

#### MAINE COLLEGE OF AGRICULTURE

In consequence of the refusal of the town of Orono, Maine, to execute such a deed of the land given to the State for a college farm as was required by the Legislature, an appropriation of \$40,000 for the college made at its last session was withheld.

At a town meeting in Orono, Maine, on the 21st ult., it was voted, with only one dissenting voice, that the town will give to the State College of Agriculture and Mechanic Arts an absolute conveyance of the premises heretofore conveyed, subject to these conditions: That in case the location of said College shall be changed from Orono, or be abandoned, or cease to be used for the purposes contemplated by the act establishing said

College, then the State refund to the inhabitants of Orono the sum originally paid for the lands, viz: eleven thousand dollars with interest from the date of said purchase; provided, as a condition precedent, that the State shall first appropriate and there shall be expended upon buildings, buildings now in course of construction, the grounds, and otherwise, substantially as asked for in the last report of the Trustees, the sum of fifty thousand dollars.

THE ENGLISH SPARROW AND CURCULIOS.—In reply to the opinion of a correspondent of the *Prairie Farmer* that these birds will destroy curculios, the horticultural editor states that he has examined the craws of many insect-eating birds, but never found any trace of a curculio therein, and does not believe that the sparrow or any other bird can catch the curculio. We once put a coop of chickens under a tree badly infested with curculios, and repeatedly jarred them on to the ground among the chickens, but were entirely unable to see a chick pick up or even notice a curculio, though we saw them fall just before the hungry chicks. Nor could we perceive that the number of curculios were at all reduced by the frequent jarrings which was given to the tree, or by the presence of the chickens under it.

ORCHARDS IN EXPOSED SITUATIONS.—From experience with an orchard set on an exposed prairie ridge, several miles from timber in all directions, a Missouri correspondent of the *Prairie Farmer* believes that such situation is better than a protected or sheltered one, because, 1. Not so liable to injury from sudden change to cold in the fall of the year. 2. Are not so likely to be damaged by alternate warm and cold weather in winter. 3. Put forth their blossoms later in spring and consequently are more certain to bear fruit. The locality in which the sap rises latest in spring is best for the safety of the tree, and for the production of fruit.

*For the New England Farmer,*

#### WINDOW GARDENING.—No. 5.

FOR MARCH.

Though March is the first of the Spring months, in New England, her foot prints are usually in snow and ice. The winter has been so remarkably mild that we may feel the force of the old proverb, "*As the days lengthen the cold strengthens,*" ere April greets us with her smiles and showers.

Our flowers show the effects of sunny skies and mild winds. Gay and bright are our windows now! The Fuschias are coming rapidly into bloom, and among all our household plants they rank supreme! The light and graceful habit of the plant renders it desirable in every "Window Garden," but when adorned with its pendant flowers of richest crimson and purple dyes, or an ex-

quisite rose shaded to crimson with its purely white corolla, it seems to us one of the most elegant and tasteful of all the flowers of the earth. The *Fuschia* possesses other qualities which increase its value—it grows with but little care—will strike root in water or sand with great facility. A child can raise a plant as easily as a gardener, and some kinds can be kept in bloom eight months out of the twelve. It blossoms in the summer—but careful culture will force its flowers in the winter. As we write, a lovely plant of the *Speciosa* stands before us covered with its pale waxy pink flowers, with crimson corolla, hanging like jeweled tassels from its numerous branches. The *Fuschia* is a native of South America. In Brazil it grows in tangled thickets, and the renowned naturalist Darwin in his “Voyage Around the World” speaks of breaking through its thick branches as he roamed in the woods of that country. The varieties we now cultivate have been successfully hybridized by the careful Florists of America, England and France. Specimens with a double corolla have been produced. *Elm City, Queen of Whites, Giant, Grand Duke and Emperor of the Fuschias* are the most desirable of these varieties.

It is nearly seventy-five years since these lovely plants were first brought into notice. Mr. Lee, a well known florist at Greenwich, near London, first cultivated them. A customer purchasing plants of him said: “I saw in a window at Wapping a prettier flower than any you can show. The flowers hung like tassels from the drooping branches, their color was the richest crimson, and in the centre were folded leaves of a Tyrian purple hue.” Mr. Lee enquired the exact locality where this rare “novelty” was seen, and hastened to behold it. At a glance he knew its worth. Entering the house, he told its mistress that he should like to purchase her window-pet. It was the gift of a sailor husband—who was then across the seas—and she could not part with it. Mr. Lee must have it—he emptied his pockets of gold, silver and coppers—amounting in all to more than eight guineas, saying:—“All this money is yours, the plant mine. I’ll give you one of the first of the cuttings I raise, and when your husband returns, the plant will be quite as handsome as this one.”

She gave a reluctant consent—the money had a potent force. Mr. Lee hastened away with his treasure. He cut it into “joints”—the smallest sprout quickly took root, they were forced in hot-beds. Every effort was employed to increase the stock, and in a few weeks three hundred plants were growing finely! Soon the blossoms were seen, and when the first two had expanded, the pot was exhibited in his window. A noble lady was his first visitor, she was charmed with the rare flower, and demanded its price. One guinea was asked and received. That night the Duchess entertained her friends, and the beautiful flower was much admired. Eager voices enquired whence it came, and the following day many visited Mr. Lee at Greenwich, but only two plants were in bloom. Others were

engaged, and before the summer closed three hundred guineas were raised from the original eight! The variety then propagated is rarely grown now; its leaves and flowers are so insignificant when seen by their cultivated sisters, but it is still a favorite with us, for its fragile flowers press beautifully, and are great acquisitions in a pressed boquet or wreath. Ten species of *Fuschias* are numbered in our “Window Garden,” and all flourish well. They bear stimulating—can be watered with guano water twice a week, without frown or fraction. *Geraniums, Heliotropes, Fuschias, and variegated leaved plants* will bear strong tonics—*require them, to flourish well.* Twice a week, they can now be thoroughly wet with warm guano water, one tablespoonful to one gallon of water; but *Verbenas* and *Roses* must be watered more sparingly. Their tender, fibrous roots will scorch more easily; if the manure water is too often applied, the rose leaves will grow yellow, curl, and drop, and the plant may wither away. We once killed twelve fine monthly roses in this way, hence this caution. *Roses* will be coming into full bud now, and care must be taken to give them water enough, yet not to drown them. Red spiders and *aphides* are their great enemies, and if they cannot be showered frequently they must be sponged. A dozen sulphur matches soaked in a teacup of warm water, or a bit of brimstone as large as a marrow-fat pea, dissolved in warm water and applied with a sponge to the leaves and branches, is often an antidote to their attacks. They do not like the smell of brimstone and it will kill them. In these proportions it will not injure the plants, but if used in larger quantities it will cause their leaves to fall.

At this season, all the plants in the cellar should be brought up, and the dead leaves and branches pruned off. The earth must be well stirred up with a hair-pin, and it is well after the soil is thoroughly wet to run a knife around the edge of the pot, and turn out the ball of earth. If there are any worms, they come to the surface, and can be easily removed. Angle-worms are not conducive to the growth of plants. *Roses* will soon put forth leaves and buds, and become a thing of joy and beauty. It is a rare treat to visit green-houses in this month—they are in a blaze of glory, and fully repay the visitor. Such rare coloring—such beauty of form is there exhibited, that the soul of a true lover of flowers bows down in adoration before them! They are more beautiful than a picture gallery, for the Divine pencil hath painted their hues—designed their graceful forms, and clothed them in the beauty of Heaven.

“There is a lesson in each flower,  
A story in each stream and bower;  
In ev’ry herb on which we tread  
Are written words which, rightly read,  
Will lead us from earth’s fragrant sod,  
To hope and holiness in God.”

March in her mildest mood often presents us with clusters of snowdrops—those heralds of the spring which hang their tiny bells amid the snow-

flakes, undaunted by the cold March winds! How joyfully we greet them—mute harbingers of the small sisterhoods of these peerless flowers! In England they are called "*Maids of February*" as they are often found in that month blooming in some sheltered dell. They are numbered among the wild flowers of that island, while we cultivate them as lawn plants, or in beds. Soon they will be followed by the gorgeous tulips, the sunny daffodils, the fragrant hyacinths, and all the various tribes of early spring flowers. All lovely and to be loved.

During this month we must not remit the attention paid to our "Window Gardens," we must water, wash, stimulate and stir up the soil with hair-pins, which are always handy. Those plants which are not budded may be forced into bloom if they receive proper care and culture. There is not a window plant which may not be filled with clusters of flowers if the gardener cultivates it *rightly*. We need have no barren plants—each must add its quota to the glorious beauty of the whole. But a few weeks more, and we shall turn our attention to summer gardening, to raising annuals and perennials, cuttings from "*Bedding out Plants*," and all the various duties therein contained.

S. O. J.

*For the New England Farmer.*

#### SINGULAR CATTLE DISEASE.

In a communication to the Weekly FARMER, June 20, 1868, (Monthly, of same year, page 361,) I gave a statement respecting a disease that prevailed among cattle in the region bordering on Buzzard's Bay and contiguous to it.

Recently I have learned that a much larger area of southeastern Massachusetts, one town in Rhode Island and one in Connecticut, are afflicted with the same calamity. As this article may meet the eye of some who either did not see the statement then given or have forgotten it I will restate some of the facts then referred to and add some others.

The first manifest trouble is loss of appetite for both food and drink, especially for the latter. The best of food gradually fails to tempt the appetite, and all water whether from the pond, brook, well or cistern, is alike unsatisfactory and almost unused. During all their decline the eye appears healthy, the nose moist and the horns warm. The hide is close, and the hair stiff to the touch as with *all poor animals*, but in no respect worse. What appears quite incomprehensible is the fact that stock receiving the best of care are more seriously troubled than those that are comparatively neglected.

On the farm of J. S. Fay, at Wood's Hole, the stock has had the very best of stabling and care the year through, and yet his cattle apparently suffer more than those of some of his neighbors that are not so well stabled and

fed. This may be accounted for in part by the fact that he has more or less blood stock in his herd, and not as much of the native as most of his neighbors. The *native* cattle appear to get on with less trouble than other stock. The Alderney seem to suffer most. Quite often a farmer that is exempt is surrounded by others with whom it prevails.

James L. Brown of Mattapoisett is situated in this manner. He told me that it was a common thing for him to take stock from his neighbors that were mere skeletons when taken, which would soon recover their health and condition. He has quite a large estate and deals in farm stock extensively.

A resident of Falmouth, named Cahoune, I am informed, has a place that is exempt, though envired by the disease. This man purchases the diseased stock when so reduced as to be scarcely alive, for a small price, getting it home as best he can, often using a team to move it. In a few weeks he has the cattle apparently well and ready for sale.

How to account satisfactorily for this state of things is beyond the wisdom of all who have given the disease an investigation. In a foot note to my previous writing on this subject, you conveyed the idea that the trouble grew out of a want of judgment and care in feeding, &c. So far as Mr. Fay's stock is concerned, this cannot be true. The pasturage is excellent, with plenty of good water, the hay is of the best quality of cultivated varieties, and there is no lack of corn, meal, shorts, and roots. The stables are ventilated, with large side windows which admit plenty of air and light at all times, when necessary.

The only known palliative so far as I have been able to learn is found in the use of coppers. The benefit derived from its use is only temporary. It soon fails to quicken the appetite in any appreciable measure. The only sure cure known is removal from the infected district, which I am now informed embraces all the towns on Cape Cod, with Marriion, Mattapoisett, Fairhaven, Dartmouth, Westport, and to some extent, Little Compton, R. I., which borders on Westport. A writer in some agricultural paper, I have recently seen, describes the same disease as prevailing among his cattle in Connecticut.

It seems surprising that a calamity so wide spread should have so long failed to attract attention. The reason for the apparent apathy is probably found in the fact that none of the affected cattle are kept in the infected districts until they die, as it is well known that by changing their locality they are restored to health again. All expectation of profit from stock kept under such disadvantages is hopeless. Milch cows dry up in a great measure, and their milk is of necessity poor in quality.

I saw Mr. Fay's stock two weeks since, and found nearly all of them suffering more or less. I assisted in giving coppers to eight of his

cows. In two or three days after taking the medicine they manifested a greater desire for food and water. I wrote to him in Boston, suggesting that it might be well for him to see Mr. Flint, the Secretary of the Board of Agriculture, and ascertain if he could give him some clue to the cause of the trouble and the remedy for it, or refer him to some one who could do so. Mr. Flint could give no information, but gave some references to parties he thought it would be well to consult. From the suggestion of the person in charge of his place, Mr. Fay has decided to defer having a veterinarian examine his stock until some one of them is so reduced by the disease as to preclude all hope of its recovery, then kill it and have an investigation, and if possible ascertain the seat of the trouble if its organs will disclose it.

I will also state that calves until a week or two old have an appetite for their food; after which it begins to fail, the hair in some instances comes off, and they eventually die. Mr. Fay lost some last spring, and gave away some. One was taken away by Mr. LeBaron to Mattapoisett. It was unable to travel much; would tumble down and required help to get up. He put it on one of his cows, and in the autumn it took a first class prize at the Plymouth County Fair.

Other like facts might be adduced, but the foregoing, it would seem, ought to arrest the attention of those who by reason of their position can influence the public mind; also of those familiar with the disease of animals.

March 7, 1870.

K. O.

*For the New England Farmer.*

#### SPRING WORK.

Our almanacs tell us spring has come, but in this latitude, seed-time, the up-shooting blade, the opening bud and flower, and the rapid springing into active life of the whole vegetable kingdom are still far in the future. Although wintry winds and frosts prevail for fully one-half of the season, the lengthening days and increasing warmth of the sun's rays remind us that the busy time for farmers has again arrived. A day's work of ten hours can now be made, and teams and men are actively employed in preparing for planting, or in pushing forward permanent improvements.

A thoughtful and careful preparation for planting is of vital importance in a climate like New England, where the season for growing a crop is so short. The farmer who is thoroughly prepared for all his planting at the right time of putting the seed into the ground can do it quickly and well; and if ready to grapple with the weeds he can make easy work of the after cultivation. When planting is begun without due preparation it is generally hastily and imperfectly done, and tedious and expensive cultivation is the usual result; indeed it is almost impossible to make

up by any after care for the neglect and deficiencies in planting.

Those who believe in being thoroughly prepared have a system in doing their work; they determine long beforehand what crops they will plant, and the amount of land they will give to each. They examine carefully their stock of seeds, and buy early such as they need. They believe in owning all the tools they use upon the farm, and in keeping them in perfect order; they cannot afford to borrow, even if their neighbors are willing to lend, for the time spent in going after and returning a borrowed implement, in busy seasons, is generally worth more than the interest upon the cost of the implement itself. Keeping tools in order means more with them than keeping them house-d; it means keeping them clean and bright, and repairing promptly when broken, and look ahead to prevent breakages. If harnesses have weak or worn parts, they are replaced by new; if chains have links which show indications of breaking, they are cut out and new ones put in. They always have on hand extra points for ploughs and teeth for cultivators and harrows, for they know if these break when work presses, the delay and time lost in sending for others is much greater than the cost of new. They have duplicates of those parts of the mower and reaper which are most liable to give out. A breakage of either, which requires sending to the agent or manufacturer, may occasion a delay a day or two for repair, the effects of which will in some seasons amount to many dollars. They do not think of commencing the busy season with old and rickety carts and wagons, for they are well aware that money is lost every hour that men and teams are working with poor tools. They are so well prepared that vexatious delays and losses from the want of any implement seldom occur.

Early spring is the time for preparing everything for a vigorous campaign. Every day something may be done to facilitate business. Commencing early is one secret of success, and those who do it are the ones who keep up with their work and drive it rather than being driven by it. Besides preparing for planting, fences may be repaired, the old walls laid up, new lines built, bushes beside walls cleared up, rocks dug, stones picked up, new land ploughed, something done at ditching and draining, and in short permanent improvements of all kinds can be pushed forward. Repairs on the roads can be done at this season better than later; gravel can be moved easier, and if the work is done early the public is benefited thereby. August is generally considered a good time for making permanent improvements, but after the exhausting labors of the hay and grain harvest, heavy work drags slowly and tediously along under the sweltering and enervating atmosphere of this month; moreover at that season, there is much to be done

in the orchards, and among the growing crops and in preparation for fall seeding and for early harvest. Cool weather is the more fitting time for heavy exhausting work; teams are strong, the men vigorous and come to their tasks with a will. As much can be accomplished now at some kinds of labor in eight hours as during ten in August. Hoeing follows planting, haying follows hoeing and the grain and fall harvest follows haying so closely that there is little opportunity for doing more than attending strictly to the growing crops.

The complaint is often made here that the winters are too long, and the season for growing crops too short, and that those States where ploughing can be begun in February or March are more desirable locations, but one difference between farming in New England and further South is simply a change in the order of work. We raise as large a variety of crops and we take one crop during the year from the land, they do no more; but here many things must be done before seed-time and after harvest, which are done there during planting and while crops are growing. Both may begin the work about the same time. Spring time is invaluable to those who have a fair proportion of their farms in tillage. Either under cover or in the fields there is work enough to be done. N. S. T.

*Lawrence, Mass., March 1, 1870.*

*For the New England Farmer.*

#### BROAD INSTEAD OF NARROW WHEELS.

During the past open winter our highways have been badly cut into deep ruts, and it will cost a good deal of money to repair them in the spring. How much of this expense is justly chargeable to the use of narrow wheels? I was long ago satisfied that it costs twice as much to keep our roads in repair with narrow wheels as it would were ordinary wagon wheels not less than four inches wide, and heavily loaded wagons six inches. When I was eleven years old I drove an ox team from Reading to Salem, generally loaded with wood. This was my general employment for some years. I am now eighty-one years old, and consequently have had seventy years experience on highways; perhaps as much as any man in the State.

In the month of April, 1835, I made an agreement with Patrick T. Jackson to move Pemberton hill in Boston. The work was to commence on the 5th day of May, and to be completed in six months from that day. In order to do this I found it needed one hundred and twenty-six working oxen. These I could buy in a very short time; but carts enough I could not get made to commence this business with at the time. This put me under the necessity of buying or hiring of every farmer that would sell or let a cart, until I could get new ones built.

In a very short time after commencing the work, all my teamsters who used the narrow wheeled carts, complained that they run harder than the wide wheeled ones did. I was not a little surprised at this, as it had never entered my mind that it made any difference, on hard pavements, whether the wheel was narrow or wide in drawing a load. But I was determined to know the real cause why it was so. For this purpose I walked beside a cart with narrow wheels several times, watching the movement of the wheels. I found that it was seldom that the wheel would run right straight over a paving stone, but would generally hit on one side or the other and slide off into the hollow. By these slides the load went down without helping the team any, which had to lift it out. As near as I could calculate the team had to draw the load up hill six inches to every rod they went ahead. I then walked alongside the cart with the wide wheels, watching them in the same way. I found that when the wide tire hit on the top of the stone it would roll off and not slide either way, and when the centre of the wheel came between two paving stones, the wide tire would strike both and pass over without sliding. Satisfied of the superiority of wide rims even on pavements, I got rid of all the narrow wheels on the work as soon as I could consistently.

Now Mr. Editor I think if no wheels were allowed to go on our highways less than four inches wide, and all those carrying heavy loads, six inches wide, that it would make a saving in Massachusetts of one-half of all the expense of repairing our highways.

The question may be asked by some, if wide wheels are best, why have the people not found it out before now? I will answer this question by saying I once knew a man of very close calculations, but a very selfish man, who was about getting up a very nice wagon to team wood on. He went to Dea. John Symmes to do the wood work, and to his brother, Marshall Symmes to do the iron work (allow me here to say that two better men never built a wagon.) This man took particular pains to find out how wide the tires were that run on roads with heavy loads. He found them generally from two to two and a quarter inches wide. He then said that he would have his only one and three-quarters inches. On being asked the reason for having such narrow wheels, he said he did not want his wheels to bind in the frozen ruts. Such being the reason for using narrow wheels which cut up our highways, and add largely to the expense of keeping them in repair, we can never expect to bring about the use of broad wheels without some act of the Legislature. I hope our present General Court will take the subject into consideration, and adopt such measures as in their wisdom may appear just and equitable, both to those who use and those who repair our highways.

I have said nothing at all about the broad wheels running the easiest on sandy or loamy

ground, for every man of common sense knows this to be the case.

A. G. SHELDON.

Wilmington, Mass., March 7, 1870.

### HORSE STABLES.

Mangers are better than racks for feeding any animals, and we are glad to know that the old and injurious plan of compelling animals to haul their feed down from racks—which is contrary to all laws of nature and reason—is being rapidly done away with.

The manger in a horse stable should be situated at a convenient height for the horse to eat comfortably. We are opposed to the plan adopted by many of leaving a space between the manger and floor for putting bedding, for the reason that the strongly scented ammoniacal gas which arises from straw soaked with urine, is unhealthy for the horse to inhale; and further, being directly beneath the feeding manger, the hay will be more or less injured by it. Another objection is, the bedding, when packed in that manner has no chance to dry.

The litter of the different stalls should be removed and spread upon the barn floor, or out of doors, if the weather will admit of it; but if there is no chance to do either of these, we should prefer to shake it up thoroughly and place it along the side of the stalls as far back as possible, so that it may have some chance to dry out.

After the bedding has been removed, and floor made clean, some absorbent should be put on, such as spent tan-bark, chaff or sawdust; never use lime or ashes, as they will be likely to injure the hair of the animal. Fresh, dry earth is one of the best material to use for purifying and drying up stable floors.

The stable should be so arranged, with regard to light, that a person on coming from without would experience no difficulty in observing objects within. It is not best to have a bright beam of light let in immediately upon the horse's eyes; but it should be a diffused and subdued light.

Ventilation should always have particular attention, and the conveniences for this purpose so arranged that a current of air coming directly upon the horse may at any time be shut off. A horse, coming heated from the road, put into a stall with the chilling wintry winds blowing in a strong current upon him, is very much in danger of taking cold and being stiffened up.—*Ohio Farmer.*

**ELDER OINTMENT.**—Take the inside bark of sweet elder, boil to a strong infusion; strain it, then add equal parts of beeswax and mutton tallow; say to one-half pint of the liquid a piece of mutton tallow and beeswax each the size of a hen's egg; simmer until the water is out. If a softer ointment is desired, use fresh butter instead of mutton tallow.

Here you have a recipe for an ointment which is invaluable as a healing remedy for erysipelas, sores, cuts, chilblains, and sores of all kinds, and especially excellent for burns.—*Rural New Yorker.*

### COUNTRY AND CITY SORROWS.

The following lines were written for the *Western Rural* by "Aunt Hetty," in reply to an article on the privations of a "Farmer's Girl":—

Read a little louder, Margrett, I would hear each spoken word;  
For the subject of thy reading every pulse has rudely stirred;  
I was once a farmer's daughter, and my path has longer been  
With the tiller of the soil, than with the wielder of the pen.  
I have seen the snows of seventy, whit'ning over hill and lea,  
Seventy years has budding Spring-time shed its fragrance o'er e;  
I would say, and say it boldly, all the sorrows farmers bear,  
All the woes of plain and hill-side, with the city's can't compare.

Margrett, write the words I've spoken, for my hand is palsied now,  
And the lines of time and grief are written deeply on my brow—  
Lines that had not found a resting if I had but sooner learned  
Life was not an idle pastime—not a birthright to be spurned.  
I have wandered from the homestead, Margrett, thee may learn by this,—  
Learn from one who fain would lead thee in the surest way to bliss,—  
That 'tis not within a palace—not in lofty classic hall—  
But where peace and love united follow after duty's call.

Truly, thee will find much sorrow in a shiftless farmer's cot;  
Scant, indeed, will be the harvest of the good mate's hapless lot;  
But reverse the order, Margrett; in the city thee can see  
Man with all his gifted nature prone to sin and misery;  
Not alone the rough, wild country shows deformity within,  
But the gilded halls of plenty breed both suffering and sin;  
Not alone the farmer's helpmeet sighs for rest and classic lore;  
City wives have craved such blessings, but their spirit's freedom more.

Thee would weary of my story if I should the truth relate  
Of the wives of truant husbands, who their tardy coming wait  
From the dens of vicious pleasures, where they wreck each hope at birth—  
Hopes they might have loved to cherish of a true and moral worth.

Think thee, Margrett, thee could gladden at the slow unsteady pace,  
Could thee lay thy hand in blessing on the senseless blotted face?  
Or, with kisses fond and tender, press corrupted lips that curse?  
Answer me this question, Margrett, can a farmer's wife find worse?  
Can it be thy mind is puzzled? is the problem, then, too deep?  
Wouldst thou leave earth's rugged pathway, and a flowery border keep?  
It were well, but act thou wisely; choose the man and not the trade,  
Or believe me, Margrett Merville, thee had better die a maid.

## HOT-BEDS FOR FARMERS' GARDENS.



MARKET gardeners, commercial florists and amateurs understand well the absolute necessity of hot-beds in the economy of their operations. But few farmers are willing to incur the expense which they *imagine* is necessary for their construction, or to afford the time required for their management.

Various plans have been suggested for the construction of a cheap and simple hot-bed, almost any of which will answer sufficiently well for a garden large enough to supply a common family with all the vegetables needed.

Every farmer may have at trifling cost a few square feet covered with glass, to bring forward at least some lettuce, tomatoes, cabbages, early cucumbers, and a few flowers for his wife and daughters.

October is the best time, perhaps, to prepare a hot-bed, but if not done then, it may be done successfully in March, or as early as the frost will permit removing the soil.

Sashes three feet wide, by five or six feet in length are the most convenient. Three such sashes will cover a bed sufficient for most families.

A frame nine feet long, and of a width corresponding to the length of the sash, may be made of plank or inch boards. It should be eighteen inches deep at the front and two feet in the rear, and should be located on the southern side of a wall, board fence, or some building. Dig out a space as large as the frame, eighteen inches deep. Fill this with the strongest and best horse manure. Place it in even layers and tread it down as you proceed. This should be extended a distance of one foot on the outside of the frame in order to keep up a larger amount of heat. After a day or two, cover the whole, inside and out, with three or four inches of the best garden mould, mixed with a little ashes and plaster. The frame should be set about on a level with the ground, and the filling come up within eight or ten inches of the glass. Put on the glass and let it remain until the bed has become warm

by fermentation. The glass should be covered at night to prevent the radiation of the heat. When the soil is in a proper state, sow the seed in rows, at suitable distances. A portion of the bed may be reserved for pots, which should be imbedded in the soil to their rims. When the seeds begin to sprout, sprinkle the surface occasionally from the watering pot. and in the middle of pleasant days, slide off the glass so as to give the plants air.

It is important to attend to this, as growing plants need a plentiful supply of fresh air. After the plants have got well above the surface, the sash should be lifted whenever the sun is shining clear and warm, lest they be scorched. Sometimes a few hours' neglect of this precaution will greatly injure or entirely ruin the tender plants. The fermenting manure will keep the soil warm at the bottom, and the sun will warm the surface, and thus the germinating seeds will find a warm soil, and a warm air, which will bring them forward two or three weeks earlier than they would come in the open air. In this way, strong and vigorous plants may be plentifully supplied, which will be fit to transplant about the time seeds are usually sown in garden beds.

When they have been transplanted, use some slight cover to protect them from the cold night air, and the wind, and if needful, from the black flies and other insects, and you will have nice tomatoes, cucumbers and cabbages that you will enjoy very much.

This may seem a small matter to many farmers, and not worth the trouble, but if tried, will be found one of those little things that contribute to the pleasure of life, and that keep us in a happy frame of mind. We shall watch the growth of the plants, green and vigorous, before anything around them shows itself above the ground, with great interest. They tell us of what is coming. They strengthen our faith in the certainty of Nature's arrangements, and encourage our hopes in the future.

There is a satisfaction in getting our early mess of peas, radishes or lettuce, that well repays all the trouble it costs. Ten or fourteen days may be gained even without use of glass, by making a bed of fine, rich soil well filled with warm compost, under the shade of a wall, and covering it at night and on cold days with boards or matting, and when the plants have been transferred to the garden, by covering

them nights with inverted boxes, screens, or even by by shingles inserted on the north side of the hills and inclined over the plants in the form of a roof.

Every farmer must be governed in this matter by circumstances, and guided by his own ingenuity. Only market gardeners, flower-dealers and amateurs, need incur much expense. But every one will find pleasure and advantage by some simple arrangement for bringing forward early vegetables and flowers.

There is no class but may do something in this direction if they possess but a few square rods of garden soil. Some of the simplest, and most successful modes, are, by sowing seeds early in any rough boxes, and placing them in the kitchen window, where they usually get the best care. Another is to start them in cheap earthen pots, broken tumblers, pitchers, &c., and another excellent way is, to roll up pieces of birch bark, fill with rich garden soil, water occasionally with weak soap suds, and set bark and plant into the ground at the proper time. A single plant, only, in a pot, will grow stocky and strong. It is a good plan, however, to transplant two or three times before setting out finally; but in doing this, the roots should not be injured in the slightest degree. Always have soil enough about them to keep them out of sight.

#### PLOUGHING---APPLYING MANURE.

Our correspondent whose inquiry appears in another column will thank us for copying from the *Maine Farmer* the following report of the discussion by the Corinth, Me., Farmers' Club of the subject of "shoal or deep ploughing—and best mode of applying dressing."

Hon. John Thiselle, who had been ploughing fifty years, advocated good ploughing at medium depth. For grain crops he had found it best to spread dressing on the furrow and harrow in with the grain; the dressing to be prepared the year previous. In this way he got much better grass after seeding down than from any other mode of application.—M. Chandler's universal method is to break up his grass land in July, or as soon as the grass is taken off, plough shoal and harrow down, cross plough in October, deeper, and again harrow down. Plough again in the spring, use compost dressing, in the hill for hoed crops, and top dressing for grain. By this method land may be kept entirely clear of weeds, making what is called clean cultivation.—Chauncey Cochran, one of our best farmers, spreads green dressing on grass land and ploughs shoal. He is very particular to have the ploughing well done.—John Morrison, a large farmer, adopts the same course with dressing, as Mr. Cochran, but ploughs deep (from eight to ten inches) and gets three hundred bushels of potatoes to the acre.

East Corinth.

MOSES CHANDLER, Sec'y.

The fear of being called on to "make a speech" undoubtedly keeps many farmers who would be really glad to have a good talk with their neighbors about their business, from attending the meetings of the neighborhood club, if one already exists, or from taking an active part in getting up a club where there is none. The "spouting" of a debating school is just as much out of place in a farmers' club, as dancing pumps would be in treading down a load of manure. The Secretary of the Corinth Farmers' Club furnishes a model report of true farmer-club "eloquence." Nearly two columns of the last *Maine Farmer* are filled with similar reports of the talks at the meetings of some of the various farmers' clubs that have recently been formed in that State.

THE EASTERN SHORE DISEASE.—Since publishing the statement of our correspondent, "K. O.," in relation to the disease prevailing among the cattle at Wood's Hole and other localities, we have received a letter from him informing us that Mr. Fay has lost a valuable Alderney cow, and a neighbor of his a cow, also that a number of calves have died.

He well asks, is it not time that more attention should be given to this disease, and that our authorities should institute an investigation of the facts relating to it. Our correspondent further says that if Mr. Fay has a post-mortem examination of the animals he will forward us the results of the investigation.

Why should not the legislature at once appoint a commission to inquire into the character of this most singular disease?

#### MEDAL OF THE N. H. AGRICULTURAL SOCIETY.

The medal designed by Mr. Herrick for this society, and which is to be struck in silver for last fall's awards, is thus described by the *Mirror and Farmer*:—"On one side, in a circle on the margin, is the name of the Society; within is Ceres, with her crown ready to fall on the result of labor, while at her feet are implements of husbandry, and the fruits of rural toil. The obverse is margined by a wreath, with the hand of the mechanic grasping the hammer, while fruits and flowers are gathered in abundance beneath."

For the *New England Farmer*.

#### RAISING CALVES.

At this season of the year the farmer looks for an increase in the number of his cattle; and what is of more importance his cows begin again to yield him a profit. The profit from the cows in butter and cheese is often considered the chief thing, and the calves are killed when four or five days old, or as soon as their stomachs have become accustomed to food and its digestion, and are in condition to be used as rennet. The skin of a calf is

worth about \$1.25, and the stomach or rennet twenty-five cents.

Some farmers allow the calves new milk for from one to four weeks, and then sell them for veal at from six to ten cents per pound live weight, and the money thus obtained is sometimes enough to buy a calf in the fall six months old.

Others have not pigs enough to eat all the milk, or they want a few heifers, or have a choice breed of cattle, so they raise the calves.

I need not say that new milk as drawn from the cow by the calf is its natural food, and will cause a thrifty growth; but when calves are fed on new milk it is well to learn the calf to drink, and not allow it to suck. A calf so managed will be more easily taught to eat other food, and may do better at weaning.

But new milk is not necessary after the first few days. I have now three calves that after they were three days old were fed with milk skimmed after it had set thirty-six hours. The quality of this milk is improved by adding a pint of scalded India wheat flour. I prefer this flour to corn or oat meal. Whatever kind is used it should be scalded. First, wet the meal with warm water, then pour upon it boiling water. In this way the meal is in a liquid state instead of in chunks, as it would be if scalding water was poured upon dry meal.

Upon about eight quarts of such feed, morning and night, a calf will thrive if it is not troubled with a looseness of the bowels, called "scours." This is brought on by having the milk too cold, or too hot, or too rich with meal, or too great quantity at one feed, so as to overload the stomach of the calf. These four things must be regarded. The feed should be near the temperature of new milk, or "blood heat." I test the temperature by feeling it with the hand. It is not safe to trust a disinterested person to feed the calves. Much has been written in regard to the manipulations of milk to make butter and cheese; but as much care is necessary in raising calves as in making cheese or butter. After calves are well started I prefer that the milk should be sour, and if it is coagulated no matter. I know many instances of fine calves being so fed.

If a calf begins to scour it should be stopped as soon as possible by diminishing the quality or quantity of feed, or by adding a solution of rennet, or a decoction of hemlock or oak bark, or of the plant called "snake's-head," "hog's-tooth," or "belladonna," a very bitter plant that grows in lowlands, and has a white blossom, from the shape of which it has received its first name. Chalk put within their reach is a preventative, if eaten. Dry earth is also used.

It is a common saying among dairymen that if a calf will not do well upon skimmed milk, it is not worth raising. My experience and observation leads me to believe there is much

difference in calves. Some will not do well; their digestive organs seem weak, and this weakness is, I judge, sometimes inherited. Calves from cows that are very hardy, and have been well fed, are likely to do better than from a cow with poor constitution and a straw or starvation diet.

Grade calves from a thoroughbred bull often excel the native stock in thrift. In 1868 I raised two half blood Dutch calves. They were very superior animals, and one had a calf when 22½ months old. I milk from her from fifteen to twenty pounds of milk a day. In 1869, I had two half-blood Short-horns, and one half-blood Dutch. This year I have some grades of the same kind that are doing well.

Calves should be kept separate, each in a pen or tied by itself, as they injure each other by bunting and sucking. If any one doubts it, let him stand among half a dozen calves about two months old after they have been fed. They should also be kept where there is plenty of light, and have bedding enough so as to be dry and comfortable.

Those who keep cows to sell milk, may be benefited by a word in regard to the practice of a gentleman in Springfield, Vt., a practical as well as book farmer, who sells milk and still raises calves from his thoroughbred Durham cows. He gives them milk four weeks, when their diet is changed to oil meal gruel, made by putting at the rate of one pound of oil meal to fifteen of water, and boiling half an hour, giving about this quantity to each calf twice a day. His calves do well, and as milk is six cents per quart, sixteen quarts would be ninety-six cents; oil meal at 3¼ cents per pound, costs 6½ cents per day. If, however, milk was fed it probably would be skimmed milk, which would reduce the expense. I could fill this sheet with names of men who have raised good large calves upon a mixed diet of skimmed milk, hay tea, or gruel of different kinds of meal. z e. j.

*Irasburg, Vt., March, 1870.*

*For the New England Farmer.*

**DAIRY, DUTCH CATTLE, SHEEP, &c,  
Of Thomas Baker, Barton, Vt.**

Some time since I sent you a statement of the method by which the butter was made that drew the first and second premium at the fair in 1869 in Orleans County, Vt.

I recently called at Mr. Baker's to see his Dutch cattle and learned from him that 150 pounds of butter and 100 pounds of cheese were made to each cow in 1869, besides raising eight half blood Dutch calves, and fattening several for the butcher, and fattening hogs with sour milk. For twelve years Mr. Baker has sent his butter to C. Jarvis, 21 Leverett St., Boston, where it has been retailed to customers at a better price generally than has been paid by dealers for country butter.

I would like to hear from other dairymen who keep twenty-five cows or more, in regard to their average products in pounds,—the price may vary according to the style of marketing.

Since the purchase of Mr. Carlos Pierce's herd of Dutch cattle, Mr. Baker has had fifteen head of full bloods, four of which are bulls. He has also twenty half bloods, all black or black and white. These will be one and two years old this spring—they are fine thrifty animals, superior in size to the average cattle of the county. They eat coarse fodder and bear common keeping well.

Dutch cows are usually considered best for a cheese dairy, but on this farm they will be tried quite thoroughly for butter. It will be several years before all the cattle on this 700-acre farm are of this kind, and of sufficient maturity to show fully their merits.

One of his cows, Lady Bellows, has a half blood Jersey calf, and gave thirty-five pounds of milk a day in January. Lady Bellows, 2d, was tested while at Mr. Pierce's, and made fifteen pounds of butter in a week. Lady Bellows, 3d, calved November 17, 1869 and gives a fine mess of milk. These cows are all larger than the best dairy cows average. All are black and white; the white color in some forming a belt around the middle of the body.

#### Mr. Baker's Sheep.

After Mr. B. sends off a lot of fat wethers, he will still have about 200 Merino sheep well bred and good shearers, but alas, their glory is departed! no one boasts of Merino sheep now. At the Vermont Dairymen's Association, an old wool grower mourned that since there was less tariff on coarse wool it has become fashionable for gentlemen to have suits of coarse cloth. Even Gen. Burnside, when he last saw him, was dressed thus fashionably. He expressed the hope that the fashion to wear fine cloth would soon return again. Mr. Baker has this year used with part of his flock a well bred Southdown buck. Very good mutton lambs are sometimes the result of such a cross.

#### The Buildings.

The fine new residence recently erected on this farm is worthy of description, especially the dairy department, including rooms for setting milk, making butter and cheese and curing cheese; all of which are large and well adapted to the purposes for which they were designed.

The cellar extends, on the same level, under the house, sheds, carriage and horse barns. The part under the barns is finished off into six pens for hogs, each pen being 9x30 feet with a walk in front, five feet wide. From the walk in front of the pens a door opens to the cooking room, where a boiler in a brick arch is in use. A bushel of potatoes, a bushel of cut turnips and half a bushel of ears of corn are cooked together. A pipe from the cover of the

boiler to the chimney conveys thither all the steam and odor that arises in cooking.

Here are seven store hogs, five White Chesters and two Berkshires. This stock of White Chesters are regarded with much favor by the farmers, and several have attained a dressed weight of 600 pounds. I believe the prejudice against the black Berkshires is breaking away, as they prove a thrifty breed and crossed upon common hogs give grades that fatten easily and early.

Z. E. JAMESON.

*Irasburg, Vt., March, 1870.*

REMARKS.—Our cattle market reporter requests us to say that he saw at the Medford market a few weeks since a fine Dutch calf from Mr. Baker's herd on its way to some gentleman in Rhode Island, whose name has escaped his memory. A carload of Mr. Baker's sheep were marketed the same week, but he did not learn the particulars of the sale.

#### PREPARING RENNET.

In preparing rennet for use, the vells or skins may be either soaked in water or whey. Sour whey is best, and it should be properly purified before using. This is done by taking a quantity of sweet whey and heating it to near boiling heat, when the butter and albuminous matters in the whey will rise on the surface and should be removed with a skimmer. The whey may then be set aside to sour, and when it has acquired a sharp acid taste it is fit for use. Rennet should be steeped in stone jars. Wooden vessels are liable to become tainted, and therefore should never be used. To do the work in the best manner, two jars, say of fifteen to twenty gallons each, should be required. The old rule is to use one rennet to the gallon of liquid, but for fifteen gallons we should add two or three rennets more.

Select, then, say eighteen good sweet rennets and put them to soak in fifteen gallons of the prepared whey. A small quantity of salt may be added. In order to keep the vells from rising on the top, a large stone crock-cover may be immersed in the liquid covering the vells, which will hold them under the surface. After the vells have been in soak for a day or so, they should be thoroughly rubbed up in the whey, in order to extract their strength. They may then be allowed to soak for a day or two longer, when they should be rubbed out again, and the soaking and rubbing continued from time to time for several days.

At the end of a week's time the strength of the vells will be pretty well exhausted, when the liquid should be strained through a cloth and placed in the second jar, and is ready for use. More whey may now be added to the vells in the first jar, where they may be soaked

for a week or more with an occasional rubbing, which will probably extract all their strength, and they may then be taken out and thrown away. The liquor should be kept in a cool, sweet place and occasionally stirred, and if good, sweet rennets have been used, it will have no unpleasant tainted smell.

When water is used to soak the rennets, enough salt must be used to make it a strong brine.

As the sour whey assists the rennet in the process of coagulating the milk, rennets soaked in whey will go further than when soaked in water, and at the same time the liquid prepared in the jar is not so liable to taint.—*X. A. Willard, in Rural New Yorker.*

#### IMPORTANCE OF GOOD SEED.

To illustrate the importance of high culture and thoroughbred seed, I will mention an instance that has come under my notice the present season. Mr. David Wentzell, of Salem, has two acres of onions, to which he applied fifteen cords of muscle mud of the first quality, and twenty-five cords of well rotted stable manure, measured as thrown lightly into the cart without treading, and probably equal to eighteen cords trodden. He sowed the very best quality of known thoroughbred seed on an acre and three-quarters, then sowed seed grown by a neighbor, of as good quality as the average used; not having quite enough, he bought more at a seed store to finish the field. All came up equally well. On the part sown with thoroughbred seed there is scarcely an imperfect onion, and the crop is the largest in the vicinity. On the part sown with good seed, the onions are ten days later, of inferior quality, and less quantity, and valued at twenty-five per cent. less than the first. On the part sown with seed from the store, (which probably was of about the quality usually in the market,) the onions were still later, of much worse quality, and less quantity, and valued at fifty per cent. less than the first. Any one walking across the field could tell at a glance, and to a row, where the different qualities of seed were sown.

Here, then, is an instance where a field of onions, under very high cultivation, was treated every part exactly alike, except in the quality of seed sown. The thoroughbred seed yielded the value of one hundred and fifty bushels per acre, more than the average quality of seed generally used by farmers who grow their own, and three hundred bushels per acre more than the average quality of seed sold in the market. This estimate is made while the crop is yet in the field, and six hundred bushels of onions, of the first quality, is not an over estimate of the product per acre from the thoroughbred seed.

I have no doubt that the careful selection for seed, year after year, is just as important and profitable in all other vegetable and grain

crops as it has been shown to be in the case of the onion crop just cited. The raising of seed may be made profitable, provided the grower conscientiously offers none for sale that is not true to description, and of the best thoroughbred quality, grown from selected stock, year in succession. A few years of such business would secure a reputation worth a fortune, for such seed will always sell at very high prices.—*Mr. Ware's Address at Essex Co. Fair.*

#### BREAKING STEERS.

If I have a pair of wild steers, (which is not the case when I raise them) I put them into the stable and commence introducing myself to them as their particular friend, feeding them good bits, such as sweet apples, small ears of corn, or sliced potatoes. When in the yard, I secure their friendship by doing the same from my frock. They will soon follow me about. I then attempt to yoke them, and it does not take three or four boys and a dog to help do it. I never leave them to ramble about the fields (as is the custom of some) to turn their yoke and haul each other about. I next give each a name, and when speaking, I apply it. This is more important than many persons imagine. Suppose a man has two sons, and he calls them both *John*. It will be difficult when the boys are together, and a command is given them, to ascertain to which of them it belongs. It is so with steers.

I take them into the road and learn them to travel, that is, walk evenly and quick—stopping often, and suiting my action to the word by stopping myself. I then give something from the *old frock*. I practice in this way a while, and instead of their running from me, they rather *relish* my visits. Sometimes I attach a rope to the bow (never to the horn or nose) as a kind of safeguard in case of fright, and to illustrate the command to stop.

When they will stop uniformly at the word, I put them on a light sled—give them a good path, sometimes let them take the lead of me; stop quite often, and give something to encourage the stopping. When I have nothing else to give, I talk to them of the prospect before them of sometime becoming oxen; of drawing premiums at fairs, and lastly of seeing Brighton market; all of which they seem to understand when explained by a pat or two of the hand.

I soon begin to draw something, loading *light*. One trouble with teamsters of young cattle is, they too soon think they have become oxen, and load too heavy.

Never feed in the yoke; the practice creates a dislike to wear it. Never whip for running away. If you do, you will probably have to run twice as far next time. Never let your cattle draw unless in good position.

Feed well, and be careful of your whips. I will mention an incident in my driving experience, to let the reader know how much whipping and beating my team get from me. When I commenced driving my two-year-old steers, I cut a beech sprout about half an inch in diameter at the butt end, tapering to one-fourth inch, and tied on a small lash. Two years and a half after, when I sold them, I had that same stick in my hand, safe and sound. It was all the stick I used while I owned them. It lasted about six months after that time, when it was accidentally trodden on and broken in two, making in all about three year's service.

It pays to have oxen "handy," so that one can drive at any kind of work. I think Dr. Franklin has written:—

"He that by the plough would thrive,  
Himself should either hold or drive."

But my steers when they are large enough to draw the plough need no other driver than the one who holds. Therefore I think I can alter that couplet a bit—thus:—

"He that by the plough would thrive,  
To save expense, should hold *and* drive."

—J. M. D., in *Vermont State Journal*.

#### PRESERVATION OF LEATHER.

The following valuable hints in regard to the preservation of leather we copy from the *Shoe and Leather Reporter*:—

The extreme heat in which most men and women expose boots and shoes during winter deprives leather of its vitality, rendering it liable to break and crack. When leather becomes so warm as to give off the smell of leather, it is singed. Close rubber shoes also destroy the life of leather. All varnishes and all blacking containing the properties of varnishing should be avoided.

Shoe leather is greatly abused. Persons know nothing or care less about the kind of material used than they do about the polish produced. Vitriol blacking is used until every particle of oil in the leather is destroyed. To remedy this abuse, the leather should be washed once a month with warm water; and when about half dry, a coat of oil and tallow should be applied, and the boots set aside for a day or two. This will renew the elasticity and life in the leather, and when thus used, upper leather will seldom crack or break.

Don't wash harness in water and with soap. No harness is ever so soiled that a damp sponge will not remove the dirt. When harness loses its lustre and turns brown, which almost any leather will do after long exposure to the air, the harness should be given a new coat of grain-black. Before using this grain-black, the grain surface should be thoroughly washed with potash water until all the grease is killed, and after the application of the grain-black, oil and tallow should be applied

to the surface. This will not only "fasten the color," but make the leather flexible. Harness which is grained can be cleaned with kerosene or spirits of turpentine, and no harm will result if the parts affected are varnished and oiled immediately afterward.

#### EXTRACTS AND REPLIES.

##### FOOT ROT IN COWS.

I saw in the *FARMER*, a short time ago, an article in regard to foot rot in cows, and as I have a remedy that I never knew to fail, I will give it to you for publication, hoping that every one that sees it, who has this serious trouble with cattle will try it.

I take one strand of an inch rope, make it as pliable as possible, saturate it with spirits of turpentine and draw it back and forth between the claws of the foot, pulling the rope at the same time, at each end towards the leg. Then apply more spirits of turpentine to the foot. One or two applications has always effected a cure for me.

##### HORN-AIL.

Take two quarts of leaves and stems of worm wood, pour in enough boiling water to cover it, and let it steep until the strength is extracted. Strain and boil down to half a pint; then add one-third of a pound of fresh butter or sweet cream enough to make that amount of butter, and let it simmer until no steam will arise; then strain, and when so cool that it will not burn, tip the cows head so that one ear will be up, and turn one tablespoonful into the ear; then let her have her head to shake, after which do the same with the other ear, and then cut off the tail until it bleeds well. One or two such applications will effect a cure if taken in season. If this medicine is put in a bottle and corked up tight it will keep any length of time, and I would advise every one that keeps cows to have it on hand. Another sure remedy is to bore the horns with a gimlet and put a half tablespoonful of pulverized saltpetre in each horn. Sometimes I have effected a cure when I saw the cow as soon as taken, by cutting off the tail and putting spirits of turpentine just back of of the horns.

Now a few words in regard to the symptoms of horn-ail. Animals most always have cold horns, with ears inclined to lop down. Sometimes they will shiver continually, with respiration increased sometimes to such an extent that their breathing can be heard several rods. Sometimes they will be so costive that all the purgatives you can give will not cure; but give them medicine for horn-ail, and they are soon all right. At other times they will be taken scouring, and nothing will stop it permanently until you treat them for horn-ail. If the horn-ail is the cause of the scouring or stoppage, you cure it, and the bowels will regulate themselves. I do not wish to be understood that all cases of stoppage or scouring arise from horn-ail, but very many of them do.

I have had a good deal of experience with this disease, and am confident that there are more cases of it than cattle owners think, and that many cattle are treated for something else, when horn-ail is the main disease.

Try the remedies above, if any have occasion, and let us hear of the result. C. A. C.

*West Acton, Mass., Feb. 14, 1870.*

REMARKS.—Dr. Dadd was very severe on what he called the barbarities to which animals were subjected in treatment for "horn-ail" and "tail-ail." He says that so far as he knows there is no allu-



to six inches deep, is a common one. But we prefer the mode which you adopted in applying the manure to the furrow and working it under a little, say two to four inches. In this way, there is little or no loss by evaporation from the manure; for as soon as fermentation takes place, and gases are given off, they are taken up at once by the fine soil, and held there to act upon other matter in the soil, and eventually feed the plants.

It is quite doubtful whether manure ploughed under seven inches imparts to the first crop any thing like its full power. If the land were ploughed eight inches deep the succeeding year, and thoroughly mingled with the soil nearer the surface, it would undoubtedly be of considerable service to the crops growing upon it.

The best way of applying manure to the soil is to plough it under in its fresh state, even before it cools, if that were practicable.

#### NON-BEARING GOOSEBERRIES.

Can you or any of your correspondents tell me why my gooseberries don't bear? They were taken from a pasture five or six years ago, and set in a moist, rich soil, just as I see recommended by Mr. Fuller in the last FARMER; but mine have not borne a single berry since they were transplanted, although they have grown very thrifflily and blossomed profusely every year. The blossoms all blight and fall off before the fruit sets.

Alexandria, N. H., March, 1870. I. L. F.

REMARKS.—No, we cannot tell. Did the bushes bear in the pasture, where you found them? We can recommend one that will bear,—the *Mountain Seedling*. It grows uprightly five or six feet, is a great bearer, does not mildew, and the fruit is excellent. We have raised it for a dozen years, and get a good crop every year. Smith's Seedling, Houghton's Seedling, and Downing's Seedling are said to be good varieties. They are cheap, and may be had of any leading nurseryman.

It is important to observe some particular points in the cultivation of the gooseberry.

1. It must have a moist, rich soil.
2. Cultivate it in open ground, or at least, not under trees.
3. Prune it regularly and liberally in November. Allow no suckers to grow.
4. Thin out the berries when they get to the size of small peas, if you mean to get excellent fruit.
5. Cultivate carefully, keeping all weeds and grass away from the bushes.

#### APPLE-TREE LICE.

Can any reader of the FARMER tell me how to drive lice from apple-trees? Last season fruit and forest trees were infested by worms' nests. These I destroyed as well as I could, but this spring those trees are literally covered with lice.

Lee, Mass., March 7, 1870.

REMARKS.—We are not sure what insects are alluded to by our correspondent. By worms' nests, we presume he means the tent caterpillar, and by lice, the apple-bark louse. These two in-

sects have no connection, and must be met with different weapons. If it is the bark-louse that covers the twigs of your trees, you have a hard customer. If the trees are not too large the lice may be thinned off by washing the limbs with a composition made by boiling tobacco in lye and then stirring in soft soap that was made cold till it will work like paint. Other substances have also been used. These little scales, which are the dried remains of the mother insect, cover eggs which will hatch out, in May or June, little white atoms, almost invisible to the eye, which will diffuse themselves over the tree, suck its sap, multiply and perpetuate their species until the tree is ruined.

#### ROOFING.—POTASH TO 100 BUSHELS OF ASHES? SAL-SODA, TO KILL LICE ON CATTLE.

In your extract from the *Country Gentleman*, I find Mr. Neal's roofing consisted of coal tar and road dust. What kind of soil produced that dust? Would common sand answer that purpose?

How many pounds of potash will a hundred bushels of ashes make?

I find sal-soda will kill lice on cattle, applied in the proportion of two quarts of water to one pound of the sal-soda, and it is harmless.

Winchendon, Mass., Feb., 1870. L.

REMARKS.—The article from the *Country Gentleman*, in relation to roofing, was copied as a suggestion, none of the facts in the case being known by us. A fine sand might answer all purposes. All experiments of this nature should be made in a limited and inexpensive, but faithful manner, as far as we go.

The number of pounds of potash in one hundred bushels of ashes would vary with the kind of wood, the nature of the soil upon which the plants grew, with the size of the trees and season when they were cut, and especially in regard to the manner in which the wood was burnt. If burnt in a common fireplace, there would be a larger amount of potash in the ashes than if the wood were burned in the fierce heat under the boiler of a locomotive.

As a general rule and one sufficiently near, perhaps, for agricultural purposes—we can allow from five to seven pounds of potash for every 100 pounds of clean wood ashes.

#### WHEAT.—KIND—AMOUNT OF SEED—WHEN TO SOW—PREPARATION OF SOIL AND SEED.

I am about to sow a piece of ground to wheat, but being a novice in the business, I write to you for information. My ground is a clay loam, well drained, naturally, and would produce fifty bushels of corn to the acre. What kind of wheat shall I sow to make nice flour? How much per acre, and when? And how prepare the ground and seed? The land was planted last year to potatoes.

THEO. G. LINCOLN.

Taunton, Mass., March, 1870.

REMARKS.—There are several kinds of spring wheat, the Turkey, Italian, Black Sea and others. Which is best we are not able to say. The amount used by good farmers is from four pecks to eight or nine pecks per acre. About a bushel and a half is pretty near the average.

Make the ground mellow by ploughing and mixing as much as possible, and sow as early in April as the soil will permit. Much depends on early sowing. Soak the seed over night in brine of moderate strength.

#### OLD HOUSE PLASTER—PITCH PINE PINS.

Please inform me if old house plaster is of any use as a manure for fruit trees or grass lands; also if pitch pine pins are of any use for a manure?  
*Littleton, N. H., Feb. 20, 1870. SUBSCRIBER.*

REMARKS.—Old house plaster is quite valuable. Make it fine by pounding, and try some experiments with it on grass land, and about fruit trees.

The leaves of pine trees are valuable as manure, when they are completely decomposed. Used in moderate quantities as a bedding for stock, they would subserve two or three useful purposes. The cattle would lie easier; the leaves would act as an absorbent, and when rotted would be useful as manure.

#### FEEDING BEES.—WINDOW FARM.—POTATO BALL SEED.

There are many bees kept in this section, and nearly all that have not been fed are dead. I think ours do as well fed on sugar as honey. To feed them on top of a hive, put a box on without top or bottom in it, about as large square as the hive and six inches deep; over this put a wire screen the bees cannot get through. Put sugar in an earthen bowl (never use a tin dish) and pour hot water to it, making a thick syrup; let it stand till cool and the undissolved sugar has settled. Fill a piece of comb with the syrup and place it in the box,—putting a little rye meal in the box.

This wire screen allows you to see when the bees need feed, and also allows the vapor from the bees to escape. A tight box on the top of the hive confines the vapor and it condenses on the feed and renders it poisonous. I dislike glass in a hive on account of the vapors condensing upon it.

The late warm, sunny days have given my window potato field a start. The earth begins to crack open, and I can peak into the hills, and see potatoes about the size of large peas. I have lately heard of new varieties of potatoes being sold for forty and fifty dollars for one potato. Wonder if any of these will prove of a stamp to bring these prices? All who see my new arrangement for plant boxes want them, and since writing my former letter I have concluded to apply for a patent on them, and am making arrangements to manufacture them to sell.

I saved quite a lot of potato ball seeds, and will sell them for twenty cents a paper. I have lately been in Grafton County, N. H., and find potatoes badly affected by the dry rot. People who have raised the Early Rose here speak very highly of them. He who originates a superior variety benefits the country. B. LIVERMORE.

*Hartland, Vt., March 14, 1870.*

#### CORN GROWING IN ILLINOIS.

Your promise of "open ears," induces me to go much more fully into details than I had intended.

After securing proof seed corn, the next important consideration to obtain a large yield of Indian corn is to thoroughly prepare the ground—pulverizing it three or four inches deep. It has been found when both soil and subsoil are quite clayey, that deep fall ploughing is decidedly better for the corn crop than spring ploughing.

The desirable quantity of compost manure having been ploughed under in the autumn, or distributed on the ploughed ground, during the winter, move the cultivator about the first of May,—set to run four or more inches deep—and with a rightly constructed implement, a yoke of good oxen, led by a span of good horses or mules, can well cultivate twenty acres a day. If many clods or lumps remain, a heavy roller is the next desirable implement, to be followed by the many-toothed harrows. Such a team can well drag over the ground harrows twelve or fifteen feet wide. In about a week further pulverize the ground with similar implements. But if clods are no longer visible, it may be expedient to dispense with other implements than the harrow. Let the ground be well stirred weekly, till past the middle of May, in latitude 42°.

Experiments have been made that show that seed corn will rot in the ground, rather than germinate and grow, when the temperature, where it is deposited, is below 58° of Fahrenheit thermometer. But many weed seeds will sprout and grow luxuriantly below 50°. No advantage can be derived by having corn planted more than six days before the plants appear—even when covered three or four inches deep. Yet, one of the well-to-do farmers of our county told me that in the spring of 1867, his seed corn lay in the ground five weeks before it came up. It is not a very uncommon sight in Illinois to see weeds in the corn hills higher than the ears of corn. In proof of bad management, many growers of corn here do not harvest some seasons one-fourth as much sound corn per acre, as do some of their neighbors, from lands originally of like quality.

Most Western farmers think it does not pay to hoe corn. For myself, I would not give the best hand I ever had in my employ, his board to hoe corn for me,—provided I have had the management of the field two years. Yet, the weeds in some good degree must be subdued.

*Rockford, Ill., Feb., 1870.*

J. WELDON.

#### DESTROYING HARDHACK—RECLAIMING A SWAMP.

I wish to inquire if there is any other way to destroy this bush than by grubbing them up? Here in western Berkshire county there are hundreds of acres of land overrun with it. The bushes get so thick that they run out the grass.

Much of our land would make good meadow if it was drained. The muck would pay for digging to put in the yard and mix with yard manure. I think there is too little attention paid to reclaiming land. I had about sixty acres swamp pasture. I drained it, dug the stumps out, and have got the most of it seeded so as to mow well with the mowing machine. One crop of the hay now will pay for all I expended upon it. J. McALLISTER.

*Lee, Mass., March 7, 1870.*

#### HENS FULL WOOL TO GET THE TICKS.

Having had some experience in raising sheep and hens, I would say to Mr. N. Granger, of Randolph, Vt., that his hens were after the ticks on his sheep instead of the wool. One day I noticed that my hens were apparently busy in pulling the wool from my sheep. On closer examination, I was satisfied that it was not wool, but the ticks that crawled out near the surface of the fleece, that they wanted. Finding that there were many ticks on my sheep, I steeped one pound of tobacco leaves to one pail of water, and dipped my lambs in this solution, and let them run with the flock to rub the lye on the other sheep, and in a few days not a tick could be seen. As wool is in such active demand, we ought to save it all, and I think

if friend Granger will try the above remedy, he will save his wool without destroying his hens.

Massachusetts, March 7, 1870.

A. B.

#### ANTHRACITE COAL ASHES.

Do you consider anthracite coal ashes of any value on any kind of land? From my experience last year and year before, I am of the opinion that there is much more value in it than most people give it credit for.

Peabody, Mass., Feb., 1870.

G. C. P.

REMARKS.—This question makes its appearance in agricultural papers about as regularly as the seasons revolve. We have known coal ashes to be put around fruit trees to prevent the growth of grass, and we have known of its being put upon the ground to make grass grow. We know of a grape grower on light soil who regards it as a most valuable article, and we have seen a practical farmer who was loading manure from a yard refuse to accept a pile of coal ashes that laid close by, on condition of carrying it off. Our answer to your question, which we are glad is not more specific and particular, is in the affirmative. We “do consider coal ashes of some value on some kinds of land.” And now, may we in turn, ask you for a statement of that experience which has convinced you that “there is much more value in it than most people give it credit for?” And in the meantime we publish on another page an article upon the subject by Prof. S. W. Johnson, author of *How Plants Grow, How Plants Feed, &c.*, which you will thank us for copying.

#### PRICE OF BEEF.

In the comments of your cattle market reporter last week on the failure of certain Brighton butchers, the fact that they paid too much for cattle was suggested as one cause for their losses. Now will you allow me to ask why should they pay present prices? The weekly reports show that there is no scarcity of cattle, for the number increases from month to month and from year to year. When gold was 250 that was assigned as a reason for high prices. Gold is down, flour, wool, butter, &c., &c., are lower, and why should beef be kept at war prices? It is nothing less than extortion, and ought not to be sustained. If butchers would make up their minds to settle back on prices, drovers would buy for less or not at all, and though farmers might groan for awhile, why should not they, as well as others, share in the loss consequent on peace prices? The people justly demand beef at lower prices, and if any body knows of any good reasons why they should not have it, I should be much pleased to see a statement of them.

C. L. S.

Montpelier, Vt., March 17, 1870.

REMARKS.—Our correspondent assumes that butchers are now paying “war prices” for cattle. Do facts justify this assumption? For a time during the war the best cattle were sold at Brighton market for 20 cents per pound on dressed weight; last week the highest figures reached for the choicest animals from the River feeders were 13½c per pound,—and but very few over 13 cents. Really, therefore, present prices are equal to only about two-thirds of the highest war prices!

As to the abundance of supply. A few years ago—say thirty-five or forty—the farmers of New England, besides supplying their own home market, raised large numbers of cattle which were sold to the “packers,” and when barreled up constituted one of the staple articles of New England “export.” The prices obtained by the farmers were low—gloriously low, perhaps “C. L. S.” and his friends “the people” would say. But what was the result? The boys who helped raise these cattle—probably “C. L. S.” was one of them—left their fathers’ flocks on the “Grampian” and all other hills, for more lucrative employments. And drovers have been obliged to follow the star of empire westward to meet the cattle raisers, until the “long horns” from Texas and from the hunting grounds of the Cherokees fill the sale pens of Brighton market, and their beef is eaten in Maine, New Hampshire and Vermont! According to the statistics of the Agricultural Department, while the population of the Northern and Southern States increased 33 per cent., in ten years, cattle decreased 20 per cent. Last year over two-thirds of all the cattle at Cambridge and Brighton were Western, and we may safely say that more cattle were shipped East from Albany for butchers in the Western part of Massachusetts and in Connecticut and Rhode Island, which did not come to Brighton, than there were New England cattle at market.

In these facts our correspondent may be unable to see any good reason why the demand for cheap beef should not be granted; but in view of all the circumstances of the beef trade—to only a few of which we have alluded,—we would recommend butchers to adopt some other course than that of “settling back on prices,” if they would avoid the “extortion” to which they are now subjected.

Our first suggestion to the abused butchers and consumers would be to “settle back on” some farm and, though they “might groan for a while,” raise their own rumps and sirloins.

This failing, why not adopt some substitute for beef? The *Utica Herald*, long the organ of the dairymen, recommends cheese as a substitute for beef, and hints at the use of horse-flesh. It says:

If beef continues to remain as high as it ever was in the days when the cow jumped over the moon, and if the supply continues to fall far short of the demand, we must of necessity be on the look-out for a substitute. We are not of those hideously under-delicate people who advocate hippophagy. We would starve first! But there is no necessity for any such extreme measure. Doubtless one cause of the extraordinary decrease in beef cattle is owing to the rapid extension of dairy farming. The manufacture and consumption of cheese is increasing far more rapidly than the decrease in the raising and consumption of beef. As an article of food it is gaining popularity with equal rapidity. Will it ever become a substitute for beef? It is healthy, it is more nutritious, and there is every reason to believe that in the future it will be vastly cheaper. *Nolens volens* we may yet eat cheese instead of beef; but whether that be so or not, cheese is undoubtedly to considerable extent a satisfactory substitute.

With a suggestion from an English paper of good repute among farmers—the *Mark Lane Express*,—we leave “C. L. S.,” and all who suffer from the extortionate prices of beef, to “settle back” on whichever dilemma they may choose:—

We do not eat the flesh of rats, but we do of pigs, and yet pigs are among the dirtiest feeding animals of the whole creation. Most people are fond of ham, roast pork, sausages, &c., the flesh of a well-fed pig. And why should not the flesh of a good fat, corn fed rat be palatable and good meat? Who has ever seen a fresh skinned rat without remarking on the delicate looking nature of the flesh? We certainly have never tasted it—indeed should require some very strong testimony as to its flavor before doing so; and yet one cannot help thinking that a nice, plump young rat, fried or roasted, and served up with good gravy and other condiments, would make a very delicious dish.

#### LAMPAS—HORSE DISTEMPER.

As one of the readers of the *FARMER*, I wish to inquire, 1. The best way to treat colts that are troubled with lampas? Should burning ever be resorted to? 2. The best way to treat horse distemper or horse ail?

JASON POWERS.

*West Burke, Vt., March, 1870.*

REMARKS.—*Lampas* is a term used to signify a tumefaction or swelling of some of the lowest ridges or bars of the palate, in the vicinity of the upper nippers. It may arise from a variety of causes. In colts it is caused by *congestion*, or an excess of blood in the part, in consequence of local irritation from *teething*.

Sponge the parts affected three or four times a day with a weak solution of alum, or an infusion of witch hazel, bayberry bark, or some other astringent; and if the swelling does not subside speedily, make a few slight incisions across the bars with a sharp knife. Burning should never be resorted to.

If by *horse distemper*, friend Powers means the febrile disease of horses associated with the formation of matter between the jaws and about the throat, and which by some writers is called *epidemic catarrh* or *influenza*, and by others *strangles*, the best treatment consists in applying large, soft and warm poultices to the swellings beneath the jaws, and steaming the nostrils two or three times a day with vapor from boiling water. As soon as the swellings become soft by the accumulation of matter, they should be freely opened with a knife or lancet. Laxative or loosening medicines may be given if need be, but nothing should be done to reduce the animal's strength. The food should be boiled oats or barley, or soft mashes of wheaten bread, brown bread, &c. If there is reason to fear that the disease has been communicated by contagion, separate the healthy from the diseased animals, secure cleanliness and good ventilation, and wash the mangers and parts contiguous with a solution of carbolic acid, or carbolic soap.

#### FILM ON THE EYE.

I would like to inquire through the columns of the *FARMER* for a remedy that will remove a film

from a creature's eye. Have used tobacco juice and fine salt with no good effect. The injury is recent and supposed to have been done by a blow of some kind.

A SUBSCRIBER.

*Waitsfield, Vt., Feb. 8, 1870.*

REMARKS.—Pound and rub alum into a powder, making it as fine as flour. Fill a common goose quill partly full with it, and from that blow it into the eye. But if the eye is bruised by a blow, that is another matter, and the alum would probably do no good.

#### BUNCHES ON THE NECK AND BACK OF AN OX.

Last spring one of my oxen that had been tied next to a farrow cow, in the stable, and kept near her much of the time when they were in the yard, was troubled with hard bunches and scales all over his neck and back, which itched badly. I gave him saltpetre, &c., but nothing helped him till he was bled, when he apparently got well and did well through the whole season. This spring his skin is in the same condition again. As it is too early to bleed him, can you suggest some other remedy that can be applied now?

Do you consider it hurtful to a horse to eat meadow hay,—not living upon it entirely, but picking over the orts left by the cattle? J. B. B.

*Tuftonboro', N. H., March, 1870.*

REMARKS.—If it will be a good thing to bleed your ox at all, we cannot see any good reason why he may not have his blood *shed* at one season of the year as well as at another. But we believe there is a better way; and would advise you to feed him plenty of carrots, turnips, or potatoes,—carrots are the best; wash him all over with warm soapsuds once a day; card him well twice a day; and give him, once a day, a tablespoonful of a powder composed of sulphur two parts, cream of tartar two parts, and saltpetre one part; or, if you prefer, give him a tablespoonful of epsom salts every day, instead of the powder.

We should not suppose it would hurt a horse to eat what he would of meadow hay or orts, if he was not starved to it.

#### BLIND STAGGERS IN HOGS.

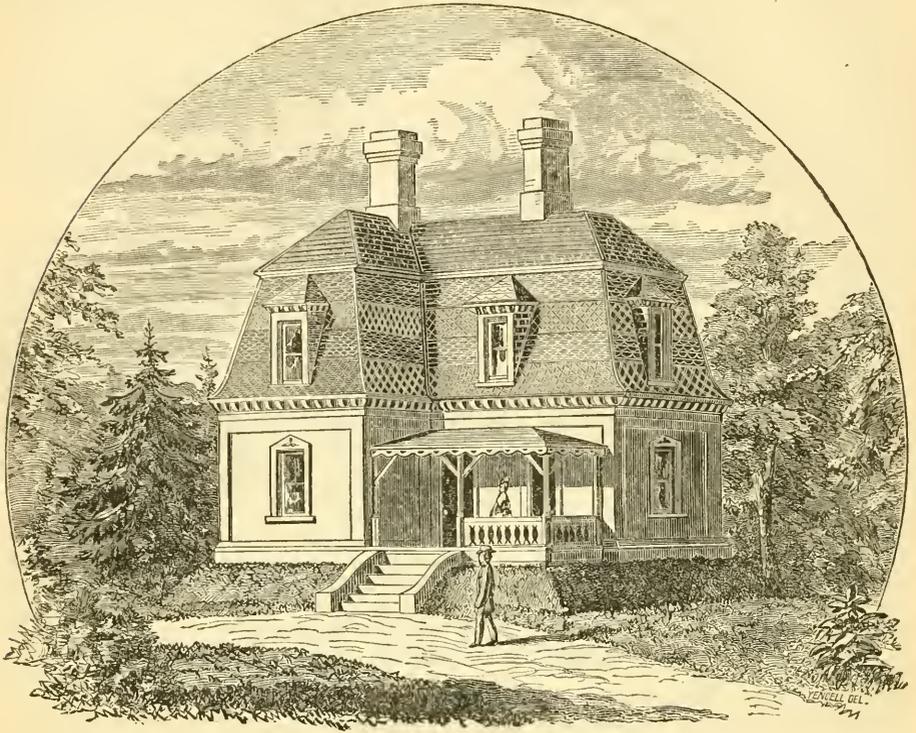
I would like to know what will cure the blind staggers in hogs, and what is the cause?

*Becket, Mass., March, 1870.*

P. WILSON.

REMARKS.—To know what will cure *blind staggers* in hogs, we should first know something of the cause that has produced the affection; for that disease, like many others, is not always the effect of one and the same cause.

If the animal is constipated, physic him with sulphur, or with sulphur and cream of tartar. If the pores of the skin are closed by an accumulation of dirt, wash him with warm soap suds and keep him clean. If the natural issues on the fore legs are closed, open them by washing and rubbing. If he is too fat and plethoric, like some men and women, physic him and give him less food. Very fat men and women, are diseased men and women, and are very liable to have *vertigo*, which is but another name for “blind staggers;” and vertigo is a premonitory symptom of *apoplexy*. As with men and women, so with hogs.



[Entered according to Act of Congress, in the year 1870, by R. P. EATON & CO., in the Clerk's Office of the District Court for the District of Massachusetts.]

## RURAL ARCHITECTURE.

BY GEO. E. HARNEY, *Cold Spring, N. Y.*

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

### No. 2.—DESIGN FOR A FRENCH ROOF COTTAGE.

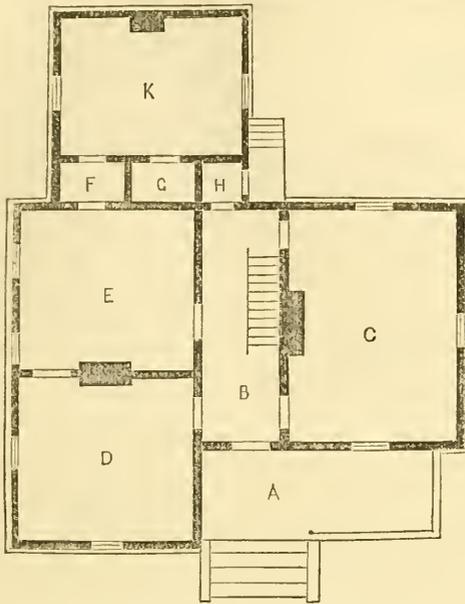
This design represents an economical cottage, simple in character and compact in plan, and suitable for a moderate sized suburban lot. It is in the modern French style, designed to be constructed of wood, raised on a banking or terrace and having a split granite underpinning all around it, about eighteen or twenty inches high. The frame rests upon the underpinning, and is covered on the outside with matched boards and clapboards. The roof is covered with the same and shingled—both upper and lower pitch.

The eaves are slightly curved where they project beyond the walls and are ornamented

with a row of small blocks or brackets placed close together, as shown in the picture.

The plan is as follows:—

A is a veranda seven feet wide, extending along a part of the front of the house. B is the hall, which measures seven feet by nineteen, and contains the staircase to the second story, under which is the flight to the cellar. C is the parlor, fourteen by nineteen, having two doors opening into the hall, and three windows—one of which—that at the rear, may be omitted to give place for a piano if thought desirable, as two windows will amply light the room. D is a sitting-room or library, four-



Ground Plan.

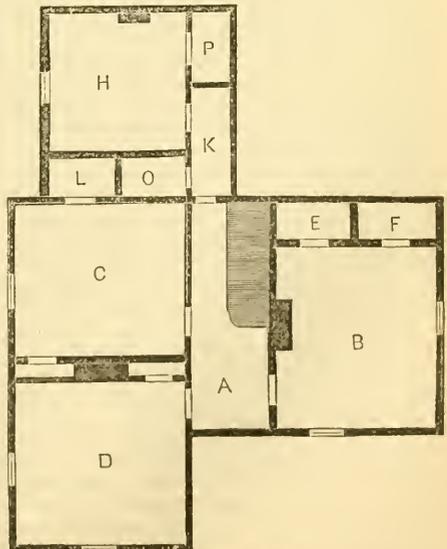
teen by fifteen, and E is a dining-room of the same dimensions. Both of these rooms open from the hall on the left. F is a small pantry or passage to the kitchen. It is fitted up with shelves for china on either side. The kitchen is twelve by fifteen, and has a store room marked G, and an entry H, leading to the yard, which entry also communicates with the front hall.

The cellar extends under the main house, but not under the kitchen wing, and has an entrance directly from the yard, under the back steps.

The second story has four pleasant chambers, B, C, D and H, and seven closets, five of which are very large. A is the main hall and K is the passage to the chamber over the kitchen. Both stories finish nine and a half feet high in the clear. The interior walls and ceilings are lathed and plastered and the wood finish is all of pine oiled. There are three chimney stacks, so that every room has means of heating. In truth, every room should have an open fireplace, and in houses which we design for the part of the country where we now write, we always provide them, being considered absolute necessities both for

comfort and health, and particularly in the sleeping rooms, which at night are usually kept shut almost airtight in every other respect.

This house would cost about \$3500.



Chamber Plan.

For the New England Farmer.

### THE FLOWER GARDEN FOR APRIL.

April, the second spring month, is now with us, —

"The month of showers,  
The month of flowers,  
The month that cheers,  
The month of tears,"

As the old rhyme runs. March was true to her proverbs, and gave us a taste of December and January combined, but we hope for better things in this month. New England is so far "left out in the cold," that we cannot do much gardening in the open air at this season; but we can purchase our seeds and plant many of them in boxes, in-doors.

An upper chamber, where the sun lies warm most of the day, can be improvised into a miniature green house. If it has a dormer window in the roof, so much the better; place an old table directly under it, and set your boxes upon it.

The soil for these boxes can be dug up from the richest parts of the garden, and baked in old pans or boxes in the oven till it is thoroughly heated through. This process kills all the minute worms and larvæ, renders the soil friable and loose, and makes it desirable for seed planting. One-third of scouring sand, to two-thirds of garden loam is a good mixture for such purposes. We listen yearly to complaints that the seedsmen "Do not sell fresh seeds; their seeds will not grow, etc., etc." You must learn how to plant before you indulge in murmurings and complaints. When your soil is prepared,—and it is an excellent plan to sift the earth, for then there are no lumps to stifle the young life of the seed,—fill the boxes. Old raisin and cigar boxes are the easiest to handle; but starch and soap boxes will hold the most seeds. Fill them up to the top with the baked earth; press down the soil firmly with a trowel or the fingers; and sprinkle the seeds *sparsely* over the place thus made ready. If the seeds are very small like *Petunias*, *Lobelias* and *Portulaca*, pressing them into the soil with the hand will cover them sufficiently. More than half the failures to germinate these seeds, arise from too deep planting. Tiny, little mites, they cannot grow if covered half an inch deep with soil. *Sweet Peas*, *Tropæolums* and seeds similarly sized, should be planted an inch deep,—the former flourish better if sown three inches in depth; and they can be planted as soon as the frost admits of a bed being dug for them. If planted early in this month they will bloom early in June. Eight weeks from the time the seeds are sown, will often be time enough to produce the sweetest of sweet flowers. They make a beautiful hedge to a garden and will protect more tender flowers from the cold winds. Frost does not often injure them. The new varieties are exquisite. The scarlet and white are great

additions to every garden. None of us can have too many *Sweet Peas*.

But to our planting. Sand is a great *desideratum* in seed planting. It is the lightest covering we can procure; it attracts the sun; stimulates the growth, and no one can raise either cuttings or seeds in perfection without its aid. A pan of it well warmed, must be placed beside us, and be used to cover all the seeds we plant. *Asters*, *Balsams*, *Zinnias*, and all our pets must be planted under sand. The three flowers named above should be planted a quarter of an inch deep. When all our desirable seeds are stowed away, reserving from each paper about one-third of its contents to plant in the open ground, for a succession of flowers, we must sprinkle the surface *thoroughly*. If there is not a fine nose watering pot at hand, we can improvise a summer shower with the aid of a small hand broom, dipped in *quite warm* water. The warm water must be daily used; one watering with cold water from pump or aqueduct might kill the life of young seedlings. When the boxes are all watered, old pieces of flannel or cotton flannel dipped in hot water should be tightly pressed over the surface of them, and water the seeds through the cloths until they begin to germinate. If the seeds are very rare, cut holes for each tiny leaflet, and keep the flannels on until all are started. By this process the most difficult seeds can be forced. It is nearly equal to a hot bed, and little fault will be found with the seedsmen, if our readers adhere strictly to our directions.

Now our seeds are planted, and many of them sprouted they will require daily care. They must not be kept so warm that when the seeds sprout they look as though grown on stilts; they must have fresh air daily; an hour between twelve and one o'clock, if the sun shines fairly upon them, will be none too much, and when the plants have put forth the second and third row of leaves, they can be safely stimulated with very weak guano water; one teaspoonful to three quarts of warm water will hasten their growth, if it seems to require it.

All annuals excepting the tap-rooted varieties, like *Mignonette*, *Larkspur*, &c., require transplanting, and produce much finer flowers by such treatment. As soon as they show the second leaves well developed, they should be transplanted into small pots; four plants can be placed around the outer edge, and one or two in the middle. By transplanting, a greater growth of fibrous roots is produced, and if the operation is performed at night, the plants do not seem to be aware of their change of base. Last year we transplanted from necessity a large number of plants after six o'clock, P. M.; not one withered.

We would advise our readers to plant biennials and perennials, as well as annuals. To be sure, the first named flowers will not bloom until another year, but their beauty well re-

pays us for the lapse of time. *Canterbury Bells*, *Sweet Williams*, *Foxgloves*, and many other varieties are all indispensable in our borders and *parterres*. The new varieties are exceedingly improved and very desirable.

Perennials will bloom the first season, if planted very early, and if hardly enough to survive our wintry winds will blossom early the ensuing season. *Perennial Larkspur*, and *Lupin*, *Pentstemon*, *Scarlet Lychnis*, *Columbine*, &c., are all very ornamental and desirable, besides hosts of others too numerous to mention.

Our old favorites and stand-bys, *Asters*, *Balsams*, and *Pinks* in all their varieties are indispensable. *Asters* are nearly unequalled. Among all the annuals of the day, they rank supreme! Their coloring is so diverse, their petals so perfect! The *Rose Aster* is well named; it is as perfect as its namesake; but alas! it lacks its fragrance. It is earlier than the large flowering *Imbrique Pomponne*, and *Paeony Perfection* of Truffaut. It grows two feet in height. the flowers are double to the centre, the outer petals are perfectly placed, and of great substance. A plant in full flower is a marvel of beauty. These *Asters* are produced in every color, from a brilliant red to a perfect peach-blossom, and the purest white. A packet of these seeds sowed and cultivated in a large box, are a garden by themselves, and could be kept during the summer on the roof of a piazza, if there is no garden attached to the house. Twenty-five cents would be the only outlay for the seeds; and the earth can be procured at any greenhouse.

To grow *Asters perfectly*, the soil should be very rich. Superphosphate of lime dug around the roots of the plants in June greatly enhances their beauty. Guano water should be given them at least twice a week. The plants must be set at least a foot apart, so as to allow the fullest growth of leaf and branch. Each plant should be tied to a small stick, for a heavy wind or rain may break it down. They should always be mulched in July and August with coarse manure, dry leaves or tan bark. The plant delights in a rich, moist situation.

The *Dwarf Asters* are one of the prettiest of the Tom thumb plants. They are only six inches in height, and one mass of flowers.

*Zinnias* have reached a great state of perfection. The flowers are far more beautiful than dahlias, and of every hue of red, crimson, pink and orange. It is claimed that a pure white, fully double *Zinnia* has been produced by the French florists. Such a flower would be a great acquisition!

There are many flowers which are common in old country gardens and endeared to many of us from the earliest associations of childhood, which are so disguised by the nomenclature of science that we fail to recognize them. Who would look for a *Lady's Delight* in a *Cyams*? yet that is the name set down for

it in the catalogues. *Tagetes Signata Pumila* is a very high sounding name for *Marigold*! It would seem as if the florists vied with each other in prefixing the longest possible names to the smallest flowers.

*Salpiglossis* and *Schizanthus* are both most desirable annuals, yet their names do not proclaim their attractions. Would it not be better for the purchasers of these beauties of the garden if more attractive yet simple names could be given to the lovely flowers of the seasons?

S. O. J.

For the New England Farmer.

#### CHAPTER ON OATS.

To him whose desire is for new kinds of Oats.

Perhaps the result of experience during about twenty years may not be uninteresting to you, and as failure has been the result in a majority of trials, I will not withhold the acknowledgment thereof. The faithful report of bad luck and ill success in any similar experiment, I deem not only a duty to the public but a great advantage in these—our times. Therefore, brother farmers, send in the account of failures as well as successes, whether with the Norways, the Early Rose, or any other new variety of farm crop.

In 1852 I purchased at one dollar per bushel some new seed oats of a man in Townsend, Mass., weighing over forty pounds per bushel. They were called *Kentucky Oats*. The price was very high for those times. They were brought to this place and produced a fair crop in bushels, and a good crop in pounds, weighing about forty-two pounds. The crop of 1853 from the seed of 1852 was sold in Boston to Nourse, Mason & Co., who sold them at about three dollars per bag of two bushels. The crops of 1854 went to the same market. These oats I continued to raise until the war, when being away from my farm, the occupant lost the seed.

I have now the same kind of oats from seed distributed through the Agricultural Department, and which I regard as a profitable crop. They may be "Surprise" to some, but to me they are not; and it is probable many will discard them because the threshers do not make as many bushels by measure as of the common oat. Their weight, and general exemption from rust, however, I think more than an offset.

In 1857 while canvassing for the New ENGLAND FARMER in Franklin County, Vt., I purchased a bag of *Tree Oats* said to have been introduced into that region from remote Canada, and to produce a wonderful crop. These were sown but one year and were a total failure by reason of blight and had no superiority over the horse-mane oats.

In 1868, the members of our Farmers' Club, made an arrangement for the Norway Oat. We could not buy for less than ten dollars per

bushel, but we could get *seventy-six quarts* for a bushel and a liberal bonus to the one who would guarantee the pay. They were recommended to weigh forty and more pounds per bushel. The result of the crop raised from this original seed proved to us that *seventy-six quarts* might produce the forty pounds, but in some cases it would not. Our seed was from the great originator of this kind of—"trade mark," as you justly term it in your last issue.

Sowing according to directions, one-half bushel on one-half acre of ground which produced excellent corn in 1867. I raised about *seven and one-half bushels* of Norway oats by weight, of thirty-two pounds. This field was never excelled in lodging, though not from heavy growth. The crop was a failure.

In 1869, a piece of one and a half acres of ground was ploughed and well manured and stocked. One acre was sowed with the Dodge or Rio Grande wheat, the last day of April. The half acre was sowed a week later with Norway oats, and was the best part of the field. The wheat grew very large, stood up well and gave me twenty-seven and a half bushels of extra heavy wheat, while the half acre of Norways began to rust and wilt over about the time they began to head out, and before the few single heads that filled were ripe the whole field was a mass of rusty straw, the worst field I ever saw. The result at threshing was *twelve bushels of hulls* that would not equal so many pounds of good hay in value—less than twenty pounds per bushel by weight.

This piece of ground is on a high hill, facing the south, and was very thoroughly harrowed and leveled, and could not be in better condition for a crop. The entire piece, though very sideling, was cut with a Wood's hand-rake reaper with success, and in a little more than an hour's time. There were six hundred bundles of wheat, nice and straight, but the oats lay in shapeless bunches as large as could be carried on the apron of the reaper—ready for the fork.

Two other fields on farms adjoining were but little, if any, better.

The verdict is almost unanimous among all our farmers that the common oat is very much better than the Norway, and while the former can be grown with ordinary success, the latter is a very uncertain crop, and is not worthy our cultivation.

And now I will give you one more trial which has been a fair success. Last spring a barrel of black oats from Prince Edward's Island, was ordered of an egg dealer in Boston. The oats were plump, black and heavy, and were in the original barrel in which they came with the eggs from the Gulf of St. Lawrence. Their weight was about forty pounds per measured bushel.

The crop from this trial was between sixty and seventy bushels of fine, heavy oats. I am

feeding them to my team and see no difference between them and the common white oats. I shall continue to raise these and the oats from the Agricultural Department, but no more Norways.

Any one can thus change his seed and get oats from an extreme northern climate by purchasing of an egg dealer in Boston annually, or less frequently, and thus keep a fresh change of seed, which often proves advantageous.

GEO. F. NUTTING.

*Randolph, Vt., March 2, 1870.*

#### VEGETABLES.

The following extracts are from the Report of JAMES J. H. GREGORY, of Marblehead. They will afford many good suggestions to the farmer and gardener in his spring sowing of seeds. Mr. Gregory has large experience in his profession, which, being aided by an extended and careful observation, qualifies him to become a safe adviser in matters pertaining to the subjects of which he speaks. The report was made to the Essex Agricultural Society last fall.

The report is not only valuable as a guide in our present spring sowing, but as showing the inconsistency of awarding premiums at our autumnal shows to vegetables of mammoth size, but utterly unfit for table purposes:—

Any thrifty housewife who was compelled by untoward circumstances to drop into the dinner pot an onion weighing one pound, or a turnip beet weighing six pounds, would consider herself unfortunate, and when "boiled dinner" came to the table John would not be expected to go into raptures over the thick, coarse sloughing layers of the onion; or the stringy, flavorless beet.

An onion is grown for table use only, and as a rule turnip beets are grown for table use only; why then should a false standard be encouraged on our exhibition tables by awarding premiums to specimens of these two vegetables, whose size would render them utterly worthless for the table,—the only use no\* made of them!

THE CARROT has a double use, being cultivated for the table, and for stock; for our tables we want the sweetest, the finest grained, and the richest flavored of all the numerous varieties. This we have in the *Early Scarlet Horn*, the earliest of all. \* \* \* \* The *White Belgian* will yield a quarter more than any other variety, and growing partly out of the ground, a large part of the crop can be pulled by hand.

THE PARSNIP. This root is at present grown almost entirely for the table. \* \* \* Shallow, dry, or anything but the richest of

soil is unpropitious for a good growth of the parsnip; but *peat meadows are most excellent* for growing the parsnip, and all other roots to the largest size. When the best result is sought in our Jersey cows, in the condition of the stock, and quality of butter and milk, then the rich, sweet parsnip will have its day. For family use, Abbott's and the Student's, are preferable, while for shallow soil the little turnip rooter, is a gem.

**THE BEET.** I believe of beets, as of parsnips, that a day will come when the condition of quality will so far enter into our consideration, that we shall grow the turnip and long blood beet to feed to stock. By planting early in the season in rich soil and *thinning to a foot apart*, a growth of from 10 to 12 lbs. can be attained, and I have had isolated specimens weigh over 20 pounds!

**THE MANGOLD WURZEL,** to be excellent, ought to be planted on high ground; if for increasing the *quantity* of milk, on low ground. Sow not earlier than the first of June for the Long Red. The Yellow Globe is a good sort for sandy soils. If our farmers would be brave enough to have their rows 30 inches, and thin their plants to 15 inches apart in the row, when young, they would find that they could do about all their tillage with the cultivator and hoe, while they would have *just as much weight of crop*, and the pleasure of handling mangolds as big as their thigh, instead of as big as their arm.

**THE TURNIP.** As turnips are grown both for family use and for stock, we need to encourage good specimens of all sizes. Of the Ruta Baga or Swede class, the best for family use is the white variety known as "Sweet German." Of the Yellow variety, Laing's, London and Shamrock Swedes are now preferred. Of the flat turnip, the White and Purple Strap-leaf are the earliest, but Yellow Finland, Improved Yellow Globe, and Cowhorn, are less subject to attack by the worm.

**THE ONION.** The standard for the table is found among those not over three inches in diameter, with a fine, close skin, thin, compact layers, a small neck, with the whole bulb feeling about as hard as a stone. The Early Red Globe, and Early "Cracker" are good varieties, but the Early Danvers rules the market in Essex county. The Potato onion is the earliest of all varieties. I would advise all farmers to plant a quart or two of the potato onion sets to be used in the family before those raised from seeds get sizable.

**THE CABBAGE.** The Marblehead Mammoth is the standard cabbage in Essex county. For distant markets the Stone, Mason and Fottler become standard sorts. For family use the Savoy family are decidedly the best. The early Uim Savoy is early, and as reliable for heading as any cabbage grown.

**THE SQUASH.** The Boston Marrow is, of all others, the pic squash. The American Turban for a fall squash, and the Hubbard

for winter use, are, perhaps, the best we have.

These brief extracts from Mr. Gregory's capital report, we think will be valuable to every cultivator of vegetables. They may rely on his authority as to what is best among the many varieties cultivated. We suffer continually by using, not only poor seeds, but poor varieties, and there seems to be no way of protecting ourselves, but by purchasing of upright men who understand their business.

#### RAILROAD TRANSPORTATION.

During the war the price of railroad freights were greatly increased, particularly at the West, but as the price of produce was also high, farmers had little cause to complain. But since the close of the war and the consequent decline in prices for farm products, there has been a good deal of complaint on the part of Western farmers that the cost of transportation is kept at war prices. In some cases there it is said that one-half or two-thirds of the price of a crop is expended getting it to market, and that more is paid to the railroad for transporting a crop across the State than the farmer receives for raising it. The *Prairie Farmer* says, "there is no question of the fact that the present tariff on farm products is doing much to discourage persons from engaging in agriculture. Thousands of acres of land are laying idle, for the reason that persons hesitate to improve it, for fear that railroad charges on the crop will eat up all the profits that would arise from cultivating it. It is the study of farmers now to ascertain what crops can be produced that will involve the least cost of transportation, and to devote their attention to them. As high rates of fare discourage railway travelling, so does a high tariff on farm commodities prevent their being transported, or even produced. Our land is far less valuable, and much poorer cultivated than it would be, if the cost of transportation was reduced."

The same paper publishes a call for a convention of "those opposed to the present tendency to monopoly and extortionate charges by our transportation companies, to meet at Bloomington, Illinois, on the 20th day of April next, for the consideration of the present charges for the transportation of freight by chartered companies and the devising of means that shall have the effect to reduce them."

We presume that this convention will also take into consideration the importance of a home market. Without this, even low charges for transportation to either side of the Atlantic will afford but a temporary or partial relief.

—Careless feed, irregular drink, and rough usage after hard service, cause most of the complaints from which horse-flesh suffers.

## CULTIVATION WITHOUT MANURE.



WHEN land is once in good condition, much may be done towards keeping it in that condition, by the use of other means than the application of manures. These means may not always be cheaper than manures, but they are within the reach of the cultivator, when it may not be possible for him to obtain manure. We will specify several of the means which may be resorted to.

First. A judicious rotation of crops. This will not *add* much to the fertility of the soil, but it will *prolong* it. Some plants draw their nourishment more largely from the atmosphere than do others. Thus clover and turnips derive their nourishment from the atmosphere much more largely than do cereals. Of course they exhaust the soil less, and should therefore be followed by cereals. Potatoes appropriate a large amount of potash, and may properly be followed by some crop into whose composition lime enters more largely.

Second. Mixing soils. Meadow soil which yields only sour grasses, when once thoroughly drained may be greatly improved by mixing with it sand or gravel. These change its texture, and let in the air. They furnish silex to the stems of grasses and oats, and improve their quality. So the mixing meadow soil or muck with sandy loam, furnishes the humus which is wanting in such soil, and serves to retain moisture and ammonia. When such soils are thoroughly mixed, the compound soil thus produced is entirely different from either soil before the mixture was effected, and may be used to raise crops that could be raised profitably upon neither.

A similar result follows from the mixture of clay and sand. The mechanical condition of both is improved, and a soil is produced which will yield fine crops of grasses and clover. A mixture of clay, sand and muck will produce a fine soil for most garden purposes. If such a compound soil is thoroughly mixed and made fine, and quickened by the wash of the house,

a good crop of garden vegetables may be annually produced. Fresh muck or clay or both should be added from time to time. Many a village family might in this way continue to have a profitable garden, where manure cannot be obtained.

In all cases where attempts are made to cultivate in this way, thorough mixing and pulverizing of the soil is indispensable, as is frequent stirring of the soil in the after cultivation. The nitrogen is not in the soil. It has not been put in with the manure, but must be drawn from the atmosphere, and this can be done only by frequently presenting new surfaces of the soil to the action of the air. Hence the less manure the greater the necessity for frequent ploughing or stirring of the soil.

Third. Turf, upon a tolerably moist soil that has been occasionally top-dressed with manure, or treated with plaster, becomes a solid mat of roots. This may be made the means of yielding good crops of potatoes, corn or other cereals.

The quantity of vegetable matter capable of being converted into plant food, in an acre of turf, is much greater than most persons imagine. An acre contains 43,560 feet of surface. At one foot deep, this would be 43,560 cubic feet, or 348 cords. Turf eight inches deep would yield 226 cords. Suppose this to be half vegetable matter there would be 113 cords. If this had not been ploughed for eight or ten years it would be more than half vegetable—dead or living. In many old meadows or mowing fields, the roots become so thick, that the culms of grass they produce are both fine and short. The turf upon such lands is worth more as a manure for other crops than for the grass it yields. The 113 cords of vegetable matter it contains will make a generous dressing for corn, hoed crops or grains. If after it is broken up, a small quantity of ashes, of lime, of plaster, or of all three be added, what more can be needed? Let such a turf be ploughed deeply, and worked fine with a Shares' harrow, and roller, and furrowed for the rows, and ashes or lime, or superphosphate be put in the furrows, and we may reasonably expect a good crop of corn. But this vegetable matter will not all be rotted down into plant food in one year, and another thorough ploughing and working will give a good crop of wheat or oats—and then it will

be in a condition to seed down to clover, red-top and Timothy. Of course the addition of plaster or bone will increase its fertility. It is now prepared to go on and yield good crops of grass until another good turf is formed. The process of forming thick and strong turf is greatly facilitated by allowing the second crop to decay on the ground. It protects the roots during the winter, and its decay in the spring furnishes them the very nutriment they need.

The process of reducing such a turf into a condition to be converted immediately into plant food requires much labor. But many men can command the labor who have not the manure, and even if they can purchase the manure it may be better for them to substitute the labor for the manure, especially if they do it with their own hands and their own teams.

There are several other methods of improving the fertility of land which deserve attention, such as green crops, irrigation, &c. ; but these are entitled to a separate consideration.

*For the New England Farmer.*

#### EXPERIMENTS WITH MUCK.

I noticed in the FARMER of March 5, a communication signed by O. J. Upham, condemning meadow muck. Now I think if more of our farmers had less fog and more muck on the brain, that many of our farms would pay larger dividends. For the past fifteen years I have been a close observer in the use of meadow muck, and the different modes of its application to the soil.

On all soils of newly cleared land, or those receiving the wash of high lands, and land of a swampy nature, or that which is rich in vegetable matter, the application of clear muck will have no visible benefit. But use the muck as an absorbent in barnyards, pig styes, for slops and suds, and you have an article that will make any land laugh and grow fat. The greatest benefits, however, are seen from its use on sandy soils, or soils that have been worn by long use in tillage or grass growing, without returning an equivalent in the shape of manure of some kind.

Four years ago, other parties and myself purchased a peat or muck swamp and commenced ditching. We have since been using the muck taken from the ditches, in composting and in various ways, to test its value as a fertilizing agent. The first year one used it thrown under cattle in stables and in his pig styes to the amount of one-half muck and one-half manure, doubling the amount of manure. The result of all crops raised on land manured with the same was a better show through

the season than the same crops on the same soil with clear stable manure. In fact, on one field of corn, a part of which was planted with the muck compost, and a part with an equal quantity of clear barn manure in each hill, a difference in favor of the muck could be seen as far off as you could see the field while growing, and on harvesting the corn or the muck made much the best show.

Another one of the company composted in the field; the proportions being about one load of manure to two of muck, shoveling it over four or five times before using, during the fall and spring. In the spring, when he was throwing it from the cart into the hill, his father-in-law came out and asked him, "Do you expect to get any corn this year from that stuff? If you do, I will own up that the meadow is all manure!" The result was as good a stand of corn as had been on the farm for fifteen years, and all other crops planted on it did equally well.

My own experience has been the same. Having tested it in various ways, I prefer muck and manure, well composted, in equal parts, to clear manure. Two years since I drew and left in a pile under a stable window, where manure was thrown upon it in the winter, two loads of muck which laid in that state till I drew out my manure in the spring, which I put in the hill on corn, using the clear manure until I came to the muck. This was then used the same as the manure. I marked the part of the field on which the pure muck was applied, and the result was, that on the clear muck the corn came up with a nice dark green color, which it kept through the summer, making a rank growth of stalk, and earing and ripening well. On the clear manure it came up well, got about one inch high, turned yellow, stood about still a week or ten days, when it began to grow and turn green, and made a fair crop; but it never overtook that on the muck, and I should say there was a difference of nearly one-fourth in favor of the muck in the crop.

The soil on which I experimented, is light and loamy, and that of other parties a sandy loam.

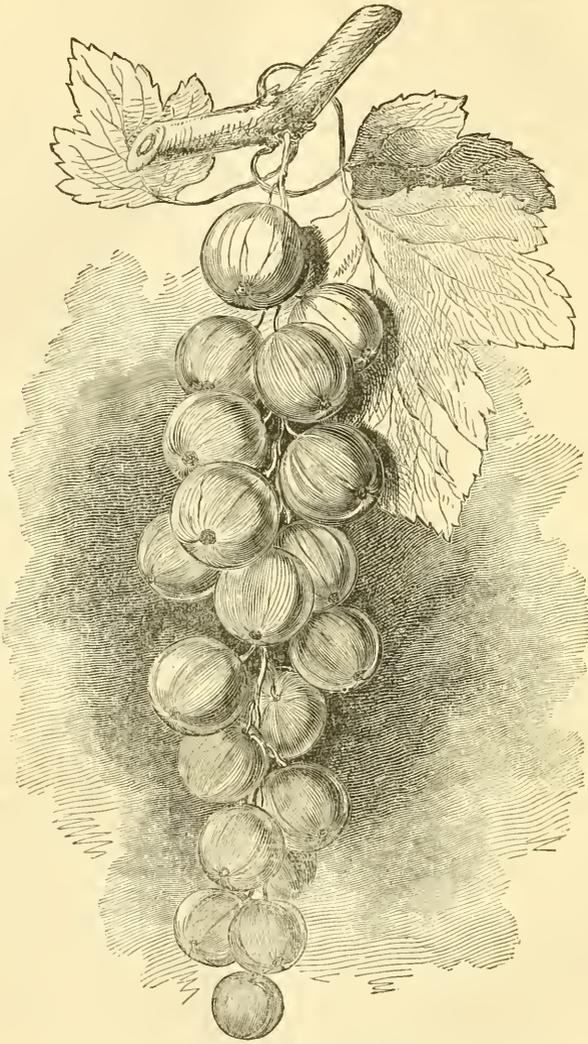
The above has been my experience in its use for four years, and I am living near where it is sold for one dollar per load, in large quantities, and applied in its natural state directly to poor sandy soils, with nearly as good results as from clear manure.

I will say no more on the subject this time, except to add that I am glad to have the subject aired, as I believe it to be one of vast importance.

LORIN BARRUS.

*Goshen, Mass., March, 1870.*

—The Vermont State Journal says, the Canadian exodus has already commenced this spring. About five car loads pass through St. Albans daily, for the south and east.



DANA'S TRANSPARENT WHITE CURRANT.

Mr. Fuller, in his *Small Fruit Culturist* says that the currant was probably a native of Northern Europe, as it is not mentioned by any of the Greek or Roman writers, who were generally particular to name every fruit known in their day. The English name of currant, or corrans, as they were formerly called, is supposed to have originated in their resemblance to a small grape largely imported from Corinth. Though they have been grown in this country from its first settlement, it is not until recently that they have been culti-

ivated to any considerable extent for market, as the price has not been remunerative, but the growth of the cities and manufacturing villages of New England has of late been so rapid, and so great improvements have been made in the modes of preserving and working them into jellies, &c., that the demand at present is ahead of the supply, and prices in many places justify their more extended cultivation.

In most of the old gardens of New England the currant will be found in some neglected

corner, where it is left to fight its way with grass and weeds, without care or cultivation; but few plants enjoy good soil, heavy manuring and clean culture better than the currant, and where a fair price can be obtained, few will better repay extra attention. The currant succeeds better in a heavy loam than in a light sandy soil. Mr. Fuller recommends four feet each way—2722 plants to an acre,—as the proper distance for the plants, which, when grown, will yield at two pounds per plant, 5,444 pounds.—all of which looks well on paper, and here we leave it, the currant worms and all.

The above cut was drawn and engraved for the NEW ENGLAND FARMER from a bunch of white currants, of a variety originated by Mr. Francis Dana, of Roxbury, Mass., and is a fair representation of the berry and cluster, which is the largest of the whites, nearly equal to the Cherry currant in size, less acid, and of excellent flavor. Mr. Fuller says that he has been exceedingly unfortunate in procuring this variety, having purchased from what he supposed to be a reliable source, five distinct varieties, under the name of Dana's White.

#### CRUELTY TO ANIMALS.

The Boston Society for the Prevention of Cruelty to Animals is doing a good work. We wish its influence might be felt in the country sometimes, as well as in the city. Its first duty, however, it seems to us, is to visit the Superintendent of Streets, or whatever officer has charge of the horses belonging to the city of Boston, and explain the slow and protracted *torture* occasioned by the use of the "check-rein," and insist upon its disuse.

The wicked genius of a Nero could scarcely have devised anything more painful than is the use of the check-rein. He tortured by fire and sword, but the pangs were soon over. With the horse, they are constant. Ten hours in a day, and some 300 days in the year, certain of his muscles are drawn out of their natural position and kept there by pulleys and strips until the pain becomes almost intolerable. The poor animal throws his head first on one side and then on the other, throws his nose into the air, and tries in every way to drop his head, in order to gain momentary relief. This whole arrangement is unnatural and cruel. The animal is constrained by it. It induces loss of strength, disturbs the vital force, and causes painful action in the muscles of the neck, head, shoulders and mouth. When the check-rein is loosened the horse *always* stretches out his neck and hangs down his head.

How would a man look wheeling a dead horse

up a hill, with his own head tied back by a strap passed over his shoulders and fastened to the ends of the wheelbarrow handles! This is the position in which he places the horse, instead of allowing him the free use of his own weight to force along the load!

The use of the check-rein is a foolish and unscientific fashion handed down to us from our British ancestors. The French, Spaniards, Germans and Turks, do not use it. The Indians and Spaniards of South America, who literally live on horseback and are perfect horsemen, do not use it.

Let us discard this cruel torture of one of our most useful and faithful of domestic animals, and let the *Boston Society* take the initiative, and see that the worse than "thumb-screws" are taken away from the noble animals employed in the service of the city.

We have plead with them in vain, now we hope to see what associated effort will accomplish.

It is the opinion of those of great experience, that a pair of horses when freed from this useless tackle, and left to step in freedom, would plough nearly a fourth more land in a day, and with greater ease to themselves, and less fatigue when the day's work was over, than where confined in their action by bearing-reins.

The overpowering idea is, that a horse looks better ewe-necked and his head thrown into the air. In order to gratify this foolish whim, we are constantly compelling him to overstrain and over-exert those very muscles which should be kept in reserve for extra difficulties. It is a mistake to think that the check-rein improves a horse's appearance, or that it even prevents a horse from falling down. In regard to the latter, it has directly the contrary effect, by preventing many a one from recovering from a stumble.

The check-rein should be abolished. "It wastes motive power. Its use is unhealthy, for it disturbs the otherwise naturally and equally distributed vital forces. It shortens the life of the horse. It diminishes his speed and lessens the free and quick action, so essential to the animal's safety and that of the driver." It is of no use except to prevent rubbing off the bridle or attempting to feed when stopping on the road.

At another time, we intend to say something of the use of "winkers," and of allowing the foretop to flow over the eyes of the horse, with some comments on the torturing of cats and minor animals.

STOCK OF WOOL IN NEW YORK.—The amount of foreign and of domestic wool in New York, Jan. 1, 1870, and at the same time for the five previous years, is stated by James Lynch, of that city, to be as follows, in pounds:—

	Domestic.	Foreign.	Total.
1870 . . . . .	8 667,000	3,397 300	11,961,300
1869 . . . . .	11 135 000	5,694 200	16,829 200
1868 . . . . .	6 511,000	8,313,800	14 824,800
1867 . . . . .	7 330,000	14,902 500	22 232 500
1866 . . . . .	4 500,000	7,800,000	12 300 000
1865 . . . . .	4,700,000	13,000,000	17,700,000

## EXTRACTS AND REPLIES.

## AMOUNT OF MILK FOR A POUND OF BUTTER.

I wish to learn what is the common average for 100 quarts of milk in pounds of butter? And also which is the most profitable to send the milk on the train to New York, or make a good article of butter? The distance I would have to carry my milk is two and a half miles.

Pittsfield, Mass., March 7, 1870.

A. C.

REMARKS.—“A pint's a pound, the world around.” But what's a quart of milk? We must settle this question before we can decide how much butter 100 quarts of milk will make. There are two measures—the wine and the beer. Four quarts of the one weigh nearly as much as five quarts of the other. The legal *gallon* of the United States, which is the wine measure, contains 231 cubic inches, and weighs, of distilled water, 8.3389 pounds; the beer measure contains 282 inches, and weighs 10 pounds. Hence a beer quart weighs 2½ pounds and a wine quart 2 pounds 1½ ounces. We suppose that in this country the beer measure is generally used for milk, and in England the wine measure. Uniformity in this as in all other weights and measures is very desirable, and as the wine measure has been legalized by our General Government, and by the legislature of Massachusetts, we hope it will be generally adopted throughout the country, by dairymen as well as others.

From our own experience in butter making, we are inclined to the opinion that “book farmers,” or those who base their opinion on published statements, generally over-estimate the amount of butter obtained from one hundred quarts, or any other given quantity of milk. People are much more willing to report successes than failures; large crops and large yields, than small ones. Mr. Buckminster, of Framingham, Mass., who raised the Devon stock for sale, asserted some years ago that four quarts of milk from one of his cows had made a pound of butter. Great products from Alderney or Jersey cows have also been reported by owners who wished to sell them at fancy prices. But such butter making is seldom realized by “out-back” farmers.

Mr. Horsfall, an English gentleman, who experimented in the use of cooked food and high feeding, and who kept his cows beef-fat, selling a part of his milk and making butter from a part, tested the matter of butter making pretty thoroughly. He repeatedly tried the experiment with sixteen “quarts”—wine measure we suppose—and the amount of butter from the 16 quarts varied from 24 to 27½ ounces on the various trials with the milk from his high-fed cows. Allowing 26 ounces as the average, 10 quarts or 20 pounds 13 ounces of milk were required for a pound of butter. On inquiry among his neighbors who kept their cows poorer, he found that a quart at a milking was allowed for a pound of butter a week—or fourteen (small) quarts for a pound of butter. A very careful statement was made some years since by a Pennsylvania dairyman, who said that milk varied

so much that it was very difficult to say how much milk would make a pound of butter, on an average, but from “common cows,” he calculated on from nine to eleven quarts, or from eighteen to twenty-two pounds of milk for one of butter. This corresponds very nearly with the statement of Mr. G. C. Bidwell, one of our subscribers in Rockingham, Vt., to whom we put your inquiry, who said that his rule was eight large quarts, or twenty pounds, but that it would vary considerably with the season, &c. Now if we allow 20 pounds of milk to one of butter, 100 quarts large measure would make 12½ pounds of butter, and 100 quarts of small measure nearly 10½ pounds.

Of the profit on milk sent to New York you must judge from the price paid and other circumstances, with which you must be better informed than ourselves.

## WITCH GRASS.

I have read the FARMER for a few years, but have not yet seen anything on destroying barn or witch grass. I am not a farmer, but till a small garden, in which I have been much troubled to keep down said grass. Any hints on the subject will be gratefully received.

SETH EDSON.

North Bridgewater, Mass., March 20, 1870.

REMARKS.—Barn and witch grass are very different things. Witch grass in cultivated land is a troublesome weed. If a garden patch was well stocked with it, we should prefer to plant with corn or potatoes one year, manuring in the hill, and covering if possible with earth in which there were few or no witch grass roots, and then *as often as the grass shows its head*—we mark this in italics, because every word means all it says—cut it off or pull it up, no matter how often a sharp hoe and the thumb and fingers have to be used,—remembering that the roots will extend several times as far as the leaf is allowed to project above the surface. If the land and the season is tolerably dry, witch grass *may* be hoed to death in a single summer. We do not say *you* will do it, because we do not know anything about the size of your bump of perseverance.

But if you must have garden stuff this year, fork—not spade—the ground finely and throw out the roots as carefully as though they were particles of gold, collect them in a heap, and when partly dry burn them, coalpit fashion, covering with sods and rubbish, and if no unburned roots remain, you may use the ashes with advantage. Either mode, merely *tried*, will fail; either, thoroughly *done* will succeed. Don't you ever say again that the FARMER never told you how to destroy witch grass in a garden.

## CEMENT FLOORS FOR HORSE STALLS.

Will some one inform me the best way of making a horse stable floor of stone and cement, so that all the liquid manure may be saved? E. T.

Orleans 4-Corners, N. Y., 1870.

REMARKS.—The importance of saving all the manure, the desirableness of a good bed for the horse, the readiness with which ammonia is

developed by his urine, and other considerations that will occur to those who keep horses, make the question of the proper construction of the floors of stables a very important one, and we hope the inquiry of E. T. will call out the experience of horsemen. To save the urine, the floor should be so contrived that it will pass off readily, but at the same time it should not slant so as to inconvenience the horse that stands upon it. The fact that horses so frequently stand across a floor that pitches, shows that they do not like to have their toes much higher than their heels.

#### IMPROVEMENT OF SANDY SOIL.

I have a piece of land that in all probability was once the bed of a lake, as the sub-soil is pond sand. Last season planted to corn with a good coat of manure ploughed under, and I had *yellow* corn the whole season, but no ears in the fall. Can any one tell me how to improve the now worthless bed of gray sand? GAIUS HOLMES.

*Kingston, Mass., March 4, 1870.*

REMARKS.—Sell it for what it will fetch, and buy better land, is the first answer that comes to our mind. But if there is a clay bed near by and you have faith and works enough to put a good dressing of it on a small piece, to begin with, say in the fall, to be mellowed by the frosts of winter, we should be glad to know how it works. But here we will stop, and ask “any one” who is acquainted with a better mode to make a soil out of hungry sand, to speak out, lest we repeat our first advice.

#### LAME SWINE.

I have a sow which has lost all power in her hind legs. She can set upon her haunches, yet is unable to stand up. Do you know of a remedy? READER.

*Hudson, N. H., March 2, 1870.*

REMARKS.—This singular disease seems to be quite common, particularly with “shots.” Its cause does not appear to be understood. In most cases the pigs recover, if left to themselves, particularly if they can be turned out on to fresh earth, and not fed. Let the animal go without food till it has a good appetite, and then put into a mess of swill a teacupful of powdered charcoal, the same quantity of ashes, and two or three spoonfuls of sulphur, also throw ashes and coal into the pen, for it to eat. In extreme cases a tablespoonful of copperas may be given in daily doses for a week.

#### FOOT ROT IN SHEEP.

I am aware that there has been enough said upon this subject, at least for the present. Still an explanation may be allowed in reply to Dr. Boynton's communication in your issue of February 19.

It was not my intention to criticise his mode of treating foot rot, any further than as it would apply to about nineteen men out of twenty. He assumes that if a dozen sheep can be cured by specific treatment, four hundred may be,—that he has in fact done it. I do not doubt it, and I suppose that about one man in twenty is possessed of a sufficient amount of energy, patience and perseverance to pursue the matter to the bitter end, and accomplish what he has done. But, of the

other nineteen, I am fearful that when they get to about the three hundred and ninety-ninth sheep, they will begin to slight their work, and will leave enough of virus, as the doctor says, to contaminate the whole flock; that their patience and perseverance will about that time begin to flag out, and that their “eternal vigilance” would in fact come to an untimely end, and they would eventually have all their work to do over again.

Now it was for the special benefit of those nineteen men that I recommended a mode as described in your issue of January 22, which you recollect was merely placing a trough partially filled with a composition at the entrance of the salt yard, where the sheep would be obliged to pass through it, and thus in a measure doctor themselves, and also obviate the difficulty of doctoring with the thoroughness necessary to effect a permanent cure by the plan recommended by him.

As to the curative qualities of tobacco, or either of the other ingredients I named, I have nothing to say—there may be something better. It was not so much my purpose to prescribe a specific and infallible cure for foot rot, as to describe the manner of applying that cure, and any one may fix up nostrum or a combination of nostrums to suit his taste.

The appellation of “Wool Grower” does not *now* properly belong to me, for although a farmer, I have not kept sheep for many years. I wrote of my treatment of foot rot a long time ago.

A. G. NOYES.

*Lancaster, N. H., March 24, 1870.*

#### SUPERPHOSPHATE ON CORN.—WHEAT CROP.

While sending my fourth year's subscription for NEW ENGLAND FARMER, I wish to say that I used Bradley's phosphate last year on corn with good success. I spread about ten cartloads of manure to the acre, ploughed light, harrowed well and put one spoonful in a hill, all but three rows. In each hill of one of these rows I put a shovelful of green manure from the horse stable, and a handful of plaster and ashes was put in each hill. The other two rows were planted without anything. The fertilizers were all covered with earth before planting the corn. During the fore part of the season the corn on the manure looked the best; but later the phosphated came forward rapidly, and was the heaviest at harvest. Several persons while contrasting the three rows with the rest of the piece remarked, that the fodder on the other part was enough better to pay for the phosphate.

The season was very cold in this section, and corn was very light generally; but with the agents used, we gathered one hundred and seventy bushels of ears of sound, and twenty of soft corn from two acres.

I raised twenty bushels of wheat on one acre last year, and shall sow two acres this.

*Shelburne, N. H., 1870.* H. T. CUMMINGS.

#### FLORICULTURE.

This is the *gem* of the “cultures,” and one eminently worthy our appreciation. Agriculture, horticulture, arboriculture are all admirable in their places, and we might say, without them we should cease to live; so without floriculture we should cease to enjoy—at least much which gives to earth its beauty, and goes to make life pleasant and home attractive.

What a change has been wrought in the minds and tastes of the people in regard to the care and culture of flowers within the last half—yes, quarter of a century! Then the privileged few had their flower gardens, with now and then an arbor and greenhouse. Now, where is the home destitute of flowers? and how many have their cultivated flower plots of greater or less pretensions,

and delight in the joys they afford! for "a thing of beauty is a joy forever."

Then we had scarcely a journal in the country devoted to the science. Now such magazines as the *Gardener's Monthly*, *Horticulturist* and the *Journal of Horticulture* reach all classes, and do much to elevate rural taste and create in the minds of the masses a love for the beautiful.

Then again, where there was one professional florist twenty-five years ago, there are ten to-day. For proof of this fact let reference be had to the advertising columns of the Agricultural Press then and now. Now "Floral Guides" and "Seed Catalogues" everywhere abound; while then such beautifully illustrated Annuals as those published by James Vick, of Rochester, and Messrs. Washburn, Breck, or Hovey, of Boston, would be looked upon by the masses with no little curiosity.

And my advice to the boys and girls, especially the farmers' sons and daughters, who read this article, is, procure some one of these illustrated catalogues, which you will find advertised in this and other agricultural journals. They are worth twice their cost as works of art—to say nothing of the lessons of instruction and profit you may receive by their perusal.

I. W. SANBORN.

*Lyndonville, Vt., March, 1870.*

#### BLUE-BIRDS IN AN OLD BOOT.

Last spring a pair of blue-birds found an old boot in one of my apple trees near the house, in which they built a nest and hatched two broods of young birds. Would it not be a good plan to lay the boots where the birds can have access to them?

#### SNAKES EATING BIRD'S EGGS.

While walking out one morning, last summer, I saw the birds flying round a dry willow tree in much alarm and confusion, making a very great noise. On turning aside, I saw a large black snake with his tail coiled round a limb and his head in a woodpecker's hole. I killed the snake, and the egg-shells that came out of his mouth told what he had been about.

#### A DOG'S EXPERIENCE AWAY FROM HOME.

A farmer's dog went with his master to the depot, and on seeing the cars coming in thought there was a good chance for a little fun, by racing with and barking at them. But as their speed was a little beyond the vehicles to which he had been accustomed, he slipped under a wheel, losing one toe and a part of his tail. I will not trouble you with a moral, nor do I know whether he has been round to tell the other dogs, as did the fox in the fable, how much lighter and better they would be if dressed in his fashion, but I hardly think he will care to repeat his experiment on the railroad.

EDWARD CARLTON.

*Westford, Mass., Feb. 18, 1870.*

#### NOVA SCOTIA BEANS.

I have a remarkably prolific and excellent small white bean, which originated in this section from four beans brought here in the vest pocket of a gentleman from Nova Scotia, four years ago, where they are regarded as a very superior variety. From these four beans two-thirds of a cupful were raised the first year, and three pecks the next year. From one pint of these beans my father raised two bushels and a half. I send a part of two stalks, just to show you how they pod off. Some of the stalks have twice as many beans as are on both that I send you.

LEWIS BEAL.

*North Fairfield, Me., March 23, 1870.*

REMARKS.—Very handsome specimens of beans are those received, and undoubtedly a most pro-

lific variety. Mr. Beal, as will be seen by an advertisement in last week's FARMER, offers to furnish seed to those who wish to try the Nova Scotia bean. We shall plant those we received.

#### MUCK, SALT AND LIME.

For the benefit of my neighbors and farmers, I will give my experience in making manures from muck, salt and lime. I now own the Col. James Jaques farm in Wilmington, Mass. I have owned a part of it for the last ten years. I could not get all at once, as portions of it was held by the heirs, and I have been obliged to purchase a piece at a time. I now own about seventy-five acres. The first lot of eleven acres, was called by Mr. A. G. Sheldon the best lot of land in Wilmington. I have owned this lot five years. The first year I cut about ten hundred pounds poor redtop hay. I now cut on five acres of this land about eight tons. On this lot there is muck to the depth of from four to eight feet deep, and of the very best quality. I take out the muck the last of August, and put enough in my barn cellar to absorb the urine from the cows overhead; also, fill my piggery about half full.

The salt and brine from my grocery store, amounting to about twenty barrels a year is saved as carefully as I would gold dust, and is turned down the scuttle and over the muck in the barn cellar from time to time, as it is made. Outside of the stable, I make large heaps of muck, say five cords in a place, and add to each four barrels of salt and brine, and four casks air slacked lime, and overhaul twice. In the spring cart this on to land that was ploughed in the fall, say thirty cart loads, or seven cords to the acre and plough it in. Plant one year; lay down to grass the next spring and cut grass for five years without much deterioration in quantity or quality. Now I would say to my brother farmers, get out your muck in the fall, before fall rains begin, and go to the village or city and engage all the salt and brine they make from pork and fish, which most grocers throw into the streets, even if you have to pay something for it. You will find it the cheapest and strongest of all manures that can be got up fifteen miles from Boston.

J. A. AMES.

*Wilmington, Mass., March 19, 1870.*

#### GRAIN FOR EWES IN MILK.

Having noticed an inquiry in the FARMER, a few weeks since, in relation to the best kinds of grain to feed sheep, with especial reference to the production of milk, I give herewith the results of my own experience:—

If for any reason it is desirable to have lambs dropped the last of February or the first of March, I know of no kind of grain which, with hay alone, will maintain an adequate flow of milk until sheep can be turned to pasture. The man who would raise winter lambs successfully must have in store a liberal supply of roots,—beets and turnips are best,—and should feed them two or three weeks at least before the sheep begin to drop their lambs. In connection with roots, feed liberally with *early cut hay*, and equal proportions of corn meal and oats as long as the sheep are at the barn, and the flow of milk can be sustained. Without this liberal feed he will have in May a poor sheep, and poorer lamb. The prevailing practice in this section is to have lambs dropped from the first to the tenth or fifteenth of April, and from this time till the feed has started in the pastures, sheep can be sustained with much less cost and labor. For this length of time roots can be dispensed with. But as a grain feed, barley meal and oats in equal proportions, though some might wish to add a

sprinkling of corn, would leave little to be desired in the way of grain. The earliest cut hay of the year should be carefully saved for this season. This feed with intelligent care and oversight, will send both ewe and lamb to pasture in thrifty condition. E. R. S.

Cornish, N. H., March 14, 1870.

#### HUMOR IN A COLT.

An eruption commenced on the neck of my colt, near the roots of the mane. It spreads pretty fast. It appears to be a pimply or vesicular eruption. At first while the vesicles break, the hair and outer skin comes off, leaving a bare spot covered with scurf, while a fluid oozes from beneath and forms a scab, which likewise soon peels off, leaving a wider spot. It is attended by itching and tenderness. The colt was fat when the trouble was first noticed, but has since lost flesh. Is there any danger of my taking the disease in handling it? Is it the manger? Any directions for curing the colt will greatly oblige P.

Bethel, Me., March, 1870.

REMARKS.—Give your colt, once or twice a day, a tablespoonful of the following powder:—Sulphur and cream of tartar, each, two parts; saltpetre and crude antimony, each, one part. Mix. At the same time bathe the parts affected twice a day, with Nichols', or Squibb's solution of carbolic acid, in the proportions of one part of the solution to three or four parts of soft water. If this does not cure, dissolve three to six grains of corrosive sublimate in one ounce of soft water, and wash the parts affected.

#### GARGET IN A HEIFER.

I have a heifer that has the garget badly. She is not in milk yet, but is to be in a few days. There is not one particle of milk in her bag, but it is one solid cake and very sore. What can be done for it? A. C.

Pittsfield, Mass., March, 1870.

REMARKS.—Paint the heifer's bag twice a day with tincture of iodine, or, if you prefer, bathe the affected part three times a day with a solution made of iodine, half an ounce; iodide of potassium, two ounces; soft water, one pint. At the same time, give the animal a tablespoonful of the above mentioned solution twice a day, in a bran mash. If you can manage to steam, ferment, or poultice the diseased organ, it will be serviceable to do so.

#### SOAP MAKING.

I notice directions in your paper occasionally about soap making; how to prepare the ashes, lye, grease and all the other numerous *et ceteras*. Now I wish to give your readers a better receipt, and show them how to avoid at least two-thirds of the labor required by the process above mentioned; and this we all know is the great desideratum in these times of scarce and poor help.

Firstly, use your ashes to the very best advantage on your farm, as it is taken for granted you own one; if not, apply them judiciously on your garden plot. Secondly, purchase the prepared lye, or concentrated potash, which comes sealed up in sheet iron cans in pound packages, and which retails with us for twenty-five cents per pound.

Prepare your grease by cleansing, and follow strictly the directions which come with the cans for the purpose of making both hard and soft soap. Two cans or pounds of the potash, will make—I

will not say how many pounds of hard soap—but certainly enough to last a small family for months, at an outlay (provided you have your own grease) of fifty cents, and also a saving of much labor. And a decided improvement it is we think, over the old-fashioned leach and the risk of having good luck. Try it *Mrs.* Farmers and report result. N. B.—Not in the potash business.

Salisbury, Conn., March 24, 1870. W. J. P.

#### PREVENTION OF DISEASE IN COWS.

I saw in your valuable paper, not long since, an inquiry as to the best way to treat a cow that had cast her withers. I adopt the principle that an ounce of prevention is better than a pound of cure. I keep my cows well through the winter, and then some three weeks prior to yearning time, I begin to feed extra, so as to have them in good thriving condition, and in a dry warm place, so that they shall not take cold. This has been my practice for twenty-five years, with more or less cows, without seeing even a symptom of the disease.

Atkinson, Me., April, 1870. A SUBSCRIBER.

#### CURE FOR SCOURING.

I will give "Subscriber," who is troubled with his animals scouring, a very simple remedy that has never failed me nor my neighbors, as far as I can learn. Take two quarts of the best wheat flour that can be found, and wet it to the thickness of common cream with luke warm water, and give to the animals; but if it will not be taken, put it in a long-necked bottle and turn it down. Repeat the dose once in four hours, until a change is produced. I never have had to give it the fourth time. E. J. BUTTOLPH.

Buffalo, N. Y., March 17, 1870.

#### A CURE FOR CATTLE SCOURING.

Take for a cow a piece of rennet one inch and a half square; cut it in fine bits and put it in some meal or other mess that the cow will eat. The rennet should be well dried. If the first dose does not stop it, give once a day until cured. I have tried this at different times, but never had to give more than three doses. T. L. T.

Antwerp, N. Y., March, 1870.

#### MILK FEVER—OVERFLOWING OF THE GALL, &c.

Some time during the last fall, (November I think,) I gave you an account of the sickness and death of two or three cows, which you thought was milk fever, from the description I sent. In the FARMER of March 5th, I find a communication from Mr. Wm. Swett, of South Paris, Me., headed, "Overflowing of the Gall and Liver Complaint," in which he says he thinks we did not understand the disease. We admit that we did not—wish we did. He then goes on to give the symptoms of, and the remedies for overflowing of the gall, &c. The cows that I spoke of in November did not have the symptoms he describes as indicating that disease; but on the very day that the FARMER came, that contained his communication, we had a case that answered exactly to what he describes, and I found his prescription just the medicine for the case. SENEX.

Cumberland, R. I., March 28, 1870.

—A correspondent of the *American Agriculturist*, in Montana, states that stock fatten and thrive on the wild bunch grass of that section all the year round, preferring it even in January to well-cured hay, and that cattle and horses keep sleek and fat on it all the year round.



THE VERBENA.

This beautiful flower, well represented in the above engraving from *Washburn's Amateur Cultivator's Guide*, is deservedly a favorite both for house and garden culture, Mr. Breck gives the following description in his "*Book of Flowers*." After mentioning its first introduction of the white, crimson and pink varieties into this country from Buenos Ayres, by Mr. Robert Buist, of Philadelphia, about the year 1835, Mr. Breck says:—

From these have sprung all the numerous varieties, many hundred in number, now in our collections. In these varieties may be found every color except yellow, and even this color in its lightest shades, is sometimes seen in the eyes of some of the sorts. We now have

crimson, scarlet, rose, white, lilac, bluish purple in all their shades, with eyes of purple, crimson, rose, white, or straw color, and also a number of striped or spotted sorts. No plants are more more generally cultivated, or more eagerly sought after, than this beautiful family. I sometimes wonder how a flower-garden could be considered passable without the Verbena. The habits of all are similar, naturally prostrate creeping plants, taking root freely wherever the stems come in contact with the ground, and sending forth innumerable clusters of their many hued, brilliant flowers, from June to November.

The Verbena is kept with difficulty through the winter, except in the green-house or in warm rooms; unless kept growing, it will perish. It cannot, therefore, be kept even in a dry cellar, and it is not hardy enough to stand the

winter. Most of the varieties are easily raised from cuttings, and can be purchased at so small a price from florists, that it is by far the more economical to buy a few dozen in the spring than to attempt to keep them through the winter. Small plants turned out from the pots in June soon make large plants, and by October will be two or three feet across. They continue to flower after severe frosts, and are among the last lingering flowers of autumn.

The seed, sown in May, in the open ground, will begin to show flowers in August; but, when the seed is sown in January, in the green-house, and afterwards potted and placed in a hot-bed in March or April, will begin to flower in June.

Seedling plants produce seed in abundance, but those plants which have been a long time propagated from cuttings, lose that power in a great measure, and produce none or very sparingly. It is easy enough to raise seedlings, but the chance of getting an improved variety, may not be one to twenty or one in fifty.

No plant equals the *Verbena* for masses, particularly when grown in fanciful beds and on lawns, as the brilliancy of the flowers contrasts finely with the green grass.

*For the New England Farmer.*

#### MAKING, HOUSING AND APPLYING MANURE.

As the farmers of the New England States must have manure in order to raise crops profitably, I thought I would write a little of my experience in relation to its management. I have tried many experiments with manures and crops, but I am afraid I shall make poor work in getting an intelligible account of them on paper.

In the first place I make all I can and keep it housed as much as I can until wanted for use. In fact it is all under cover, except what the cattle drop in the yard in warm pleasant days. My horse manure goes under the stable where the hogs root it over and keep it from heating. Then I endeavor to save the liquids. In the summer I keep muck in the pig pen, and make large quantities of good manure there. My cow stable has a trench, with a walk behind it, in which I keep sawdust, dry muck or anything that will save the liquid. This is thrown under a shed, as I have no cellar,—the land on which my barn stands being very level. I keep muck in the yard and sheds to mix with the manure, and to put at the back door and under the privy, where all the slops and suds are thrown, to keep it from smelling bad. I clean these places out twice a year. It is surprising to see how much manure one can make with but little cost when we go to work in earnest.

But my experience has taught me that the great secret lies in keeping manure well

housed until wanted for use. I think one load from my shed is as good as three from my yard, and equal to two loads from a heap that has been exposed to the snows and rains through the winter and spring.

And here, Mr. Editor, I beg leave to differ a trifle from your remarks on Work for February, in regard to drawing out manure from a cellar to be exposed to the storms till used. It may be necessary in some cases, if there is not room, or if it is to be drawn up hill where the ground is soft in the spring. I think the less manure is handled over and exposed to the atmosphere and storms the more valuable it is. If manure could be mingled with the soil as soon as dropped, would it not be more lasting in the soil? I think heavy rains on manure heaps in the field washes a great deal of the strength of it below the reach of plant roots, on sandy or gravelly soil; on clay or hard-pan bottom, it might not do so. I have heard it said the soil will so retain the fertilizing matter in water while passing through it that none will go below the reach of roots, but my experience hardly agrees with this.

I have one of the patent pipe wells in my barnyard near the barn, where there is no chance for water or manure to get near it, as it is in a small yard by itself. It was sunk twelve feet. During a heavy rain storm in March, 1867, the eave spout between two buildings over my manure heap got stopped up and the water run on to the heap. This manure heap was twenty-six feet from the well, on land that was nearly level, but a little higher than that around the well. In a day or two the water from the well began to look red, and to taste bad, and the stock refused to drink it until compelled by thirst. The water remained bad for about a week. I have no doubt it was caused by the water from the heap of manure, which passed through the soil, which is gravelly.

I have drawn out manure from my sheep in the winter when the shed got too full, and have found that those spots on which it was piled absorb so much of the strength of the manure that no crop would grow on them the first year.

I once lived on a dry, sandy farm where I could use my stable manure to a very good advantage in the hill for corn; but concluding I was losing too much by exposing my manure to the weather, I built a shed over my manure heaps, and the result was that the first year my housed manure was so much stronger than that exposed to the weather, which I had previously used, that I got no corn, as it was too powerful to be put in the hill.

There is no way I can get so much benefit from manure as to plough it in four or five inches deep, mostly on green sward, say about thirty loads to the acre; putting a little old manure or superphosphate in the hill. In this way I get good corn and potatoes. The past year my potatoes yielded at the rate of 450

bushels to the acre; corn, 65; oats, 70. After my crops are off in the fall I plough again, running two or three inches deeper. In the spring sow to oats, from one and a half to two bushels to the acre, and get a good catch of grass.

I have top-dressed mowing lands with thirty loads to the acre, on both wet and dry land, but do not receive as much benefit as when ploughed in. Ashes, I think, are best harrowed in for hoed crops. I usually cut two crops of grass a year for two or three years, then one crop a year or two longer.

I think manure that has not been leached lasts much longer in the soil. I have doubled the productiveness of my farm in the twelve years I have been on it, with but very little manure except what I have made.

It may be interesting to some of your readers to know how much stock I keep on what grows on the twenty-eight acres that have been cultivated, on an average, during the past fourteen years, besides selling some corn, oats and potatoes. I have 135 sheep, eight head of cattle, mostly grown, three horses, and, excepting flour, as I do not raise wheat, I may say a family of eight persons. Now, brother farmers, house your manure, cut your hay earlier, cultivate your land better, for a few years, and note the result. C. F. LINCOLN.

*Woodstock, Vt., March, 1870.*

REMARKS.—In connection with this valuable statement of the writer's mode of making, housing and applying manure, and of his general farm management, it may not be improper for us to say that the first premium on farms was awarded to him last fall by the agricultural society of Windsor County, and that in making their award the Committee said, "Mr. Lincoln has doubled the productive capacity of his farm in about ten years, and that without the aid of imported fertilizers, except to a very limited degree. This has been accomplished by a judicious rotation of crops, and by utilizing every available source of manure, and keeping it well housed till applied to the land."

#### CELLAR WALLS.

A correspondent of the *New England Homestead* adopted the following method of constructing the cellar walls of two houses with perfect success:—

A trench fifteen inches wide and two feet deep was dug, to receive a trench wall on which the underpinning was to be laid. The trench was filled to a level with the ground with rough or cobble stones, packed in as close as might be. After this, the cellar was dug, leaving a space inside the trench of four inches wide on the top. This space or shelf was filled up in a slanting direction, until it reached the underpinning. It should be done with moist earth, just before pointing, and made compact with the back of a shovel. If the cellar is seven feet deep, the wall should slant inwards about two and a half feet from the underpinning, and should be made smooth and true with a shovel or trowel; at least this is my method.

As I wished to use an ox shovel, I left one end open and stoned it up, as there was no chance for making a trench then. After the houses were built, the cellar was lined throughout, sides and bottom, with hydraulic cement. I used but one coat, though, for the bottom, perhaps two would be better.

The advantage of this method, are: 1st In building an ordinary sized house, in the Connecticut River Valley, where stones are costly, it saves at least a hundred dollars; 2d, it is proof against rats; 3d, it is clean, warm and dry; 4th, there is no heaving of the walls. The builder of my first house was somewhat sceptical on this point, and after it had stood one winter, he examined carefully every foot of the foundation, and not finding a single crack in the whole, he frankly acknowledge its excellence. I presume that very coarse gravel would answer the same purpose as small stones, in filling the trench.

I ought perhaps, to add that in order to take advantage of this method, the site for the house should be tolerably level, and the ground sandy or sandy loam. I think it would not answer when the soil is clay or when there are springs.

T. G. H.



THE

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

### THE FARMER'S HOME IN JUNE

And then behold *the farmer* at his hearth,  
Planning the duties of the coming morn;  
How one shall wield the axe or spade the earth,  
Another's task to till the tender corn:  
Around him sit the peaceful household train;  
And he, by Nature's right, their guide and head,  
Than this, what juster power, what higher reign!  
The lads mark'd well whate'er the father said,  
By his experience taught, and by his wisdom led.

THOMAS C. UPHAM, in *American Cottage Life*.



JOYOUS, fresh,  
inspiring Month  
of June! No  
days in the year  
display more  
manifestations  
of Divine wis-  
dom and pow-  
er. None pre-  
sent more evi-  
dence that the  
country and the  
farm are the  
places where

health, usefulness, and  
happiness may be  
found. With the poet quoted  
above, we agree, that there  
is no place where one can ex-  
ercise a juster power, or en-  
joy a higher reign. Some of  
the most instructive and in-  
spiring scenes of life, we have witnessed in the  
family and surroundings of the farmer's home;

where industry and frugality, coupled with an undoubting trust and faith, blunted the sharp

edge of life's trials, and brought all into har-  
mony with the peaceful and lovely aspects of  
external nature.

In his charming book, the "Mirror of the  
Months," the author says: "Summer is come—  
come, but not to stay; at least not at the com-  
mencement of the month.

"Spring may now be considered as em-  
ployed in completing her toilet, and for the  
first weeks of this month, putting on those last  
finishing touches which an accomplished beauty  
never trusts to any hand but her own. In the  
woods and groves also, she is still clothing  
some of her noblest and proudest attendants  
with their new annual attire. The oak until  
now has been nearly bare; and, of whatever  
age, has been looking old all the winter and  
spring, on account of its crumpled branches  
and wrinkled rind. Now, of whatever age, it  
looks young, in virtue of its new green, lighter  
than all the rest of the grove."

Nature's book, in June, should be our con-  
stant companion. It is one that can make  
"every man his own poet" for the time being;  
and there is, after all, no poetry like that  
which we create for ourselves.

But we must not pause now to give more  
than a passing moment to sentiment. What  
has already been done in the spring work will  
be in vain, unless the springing crops are  
faithfully attended to. The soil must be kept  
light, weeds destroyed, and all superfluous  
plants carefully taken away. Very much de-

pend upon this in nearly all the crops. The Indian corn will produce more grain with three stalks to a hill, than with six, at the common distances at which hills are placed. The small grains—especially on rich ground—will yield a larger crop of the seed when thinly sowed, than where a thick seeding has been given. Carrots, beets, and indeed all the root crops, yield more abundantly when they have ample room, than if crowded. In a crop of Swedes or mangolds, twelve inches apart will give a better return than six or eight inches will; there will be more pounds of roots to the acre.

This holds true in fruits as well as grains and roots. Especially is this the case with grapes, pears and peaches. In raising grapes under glass, no success would attend the effort, unless the most severe thinning out were resorted to. To take away *three* from every five grapes in the Black Hamburg variety is scarcely enough. Crops frequently fail to be profitable from a want of proper attention to thinning them.

The most important business of the farm through much of the month of June, is that of cultivating the crops which have been committed to the soil, so that they shall attain the greatest possible vigor and perfection.

Prompt and thorough *hoeing* is the key to these results. Stop the hoe and the profits cease. Nature, kind as she is, will no more carry on the plant to perfection after it has been started, without care, than she will drive the printing press or the factory wheel, after they have been constructed by the mechanic. If there were no weeds, and the earth alone were to sustain the plants, the hoe might rust in idleness; but so long as weeds invade, and the leaves of plants spread themselves to the sun and air for a considerable portion of their food, the hoe and cultivator cannot be dispensed with.

Give the vegetable garden more attention than heretofore. No part of the farm, we think, is more profitable than that which yields all the fresh fruits and vegetables which the family require. Few farmers are aware how much of a bill it would cost to supply the table bountifully with a variety of the fruits and vegetables which ought to be in use through the year. Not only is health promoted by such use, but there is direct and unmistakable happiness enjoyed in planting and rearing, as well

as in eating them. By sowing seeds of lettuce, radishes, cabbage, &c., these vegetables may be had until late in autumn.

**HAYING.**—We must urge upon the reader once more the importance of commencing haying early. Proofs enough of the importance of this have been given in these columns heretofore, so that we need not dwell upon them now. Our observation has convinced us that, so far as *weather* is concerned, the most favorable time for making hay is the last ten days in June, and the first ten in July. As a general thing, also, the grass cut during this period is worth much more than most of that cut later. The evidence, too, is clear that grass cut while in the blossom and cured without much exposure to the sun, is very much more valuable than that cut later, and exposed a part of two or three days to sun and air. Grass cut early and made mostly in the cock, retains more fully the *grass qualities*, and this all stock like better than any other feed.

**PRUNING.**—From the middle to the last of this month is the *best* time to prune apple or most other trees.

IN JUNE—

“The farmer in his field,  
Draws the rich mould around the tender maize,  
White hope, bright pinioned, points to coming days,  
When all his toils shall yield  
An ample harvest, and around his hearth  
There shall be laughing eyes and tones of mirth.”

#### HOUSING MANURES.

In a late article in the *Boston Journal of Chemistry*, Dr. Nichols says, the fertilizing elements in excrement are mostly soluble in water, and when the barnyards are drenched with it, they usually overflow, and the valuable portions are carried away. This is what every farmer sees and knows, but there is much difference in opinion as to the amount of such loss; many believing it is not great, and perhaps it is not under some circumstances. To test the question, however, one parcel of manure taken from a water-soaked heap and another from a parcel preserved in barn cellar were analyzed, with the following result:—

	<i>Exposed.</i>	<i>Sheltered.</i>
Nitrogen . . . . .	1.36 per cent.	1.34 per cent.
Soluble organic matters . . . . .	1.73 “	6.22 “
Soluble inorganic matters . . . . .	2.67 “	3.98 “
Phosphoric Acid . . . . .	0.20 “	0.29 “
Potash and soda . . . . .	0.79 “	2.00 “

On this the Dr. remarks:—“It will be noticed that in the nitrogen (ammonia forming constituent,) the soluble organic and inorganic

bodies, and potash and soda salts, there is a loss in the exposed manure, which renders it of less than half the money value of the other. The quality and the preservation of manures supply topics which should be presented to farmers very often, that they may be led clearly to understand the whole subject, and provide against losses, which are of a most serious nature. We shall refer to this important matter again."

*For the New England Farmer.*

#### THE GARDEN IN JUNE.

The success and profit of the garden depends more on the attention given to it in June, than in any succeeding month of the season; for upon the rapidity of healthy growth, depends, in a great measure, the excellence of most garden vegetables for the table. How to promote and maintain this growth is an important question. Thorough tillage is more essential than is generally supposed, and this must be the great work of the month. Jethro Tull's theory of tillage was founded on true scientific principles. If one doubts the effects of tillage, it is very easy to determine the question, on his soil, by a little experiment tried side by side. Take two similar parcels of ground; cultivate one in the most thorough manner, comminuting and stirring the soil deep and frequently, while the other receives only ordinary attention, and observe the difference. Still, some varieties of plants should not be forced too rapidly, as their growth may be in a wrong direction, developing the less, instead of the more valuable parts; but generally there is little danger in this direction, providing the seed be thoroughbred. Little good, however, from stirring the soil in wet weather, though hand weeding may be advantageously done at this time, as the plants are less injured than if the weeds are pulled in a dry time. The drier the weather the more beneficial is it to stir the soil, provided the rootlets of the plants be not touched. Liquid manure is most advantageously applied in showery times, just previous to rain or during a moderate shower. Watering once commenced, must be kept up; watering the *plant* effects but little—it is the *soil* that needs moistening, not the surface alone, but that which lies below; if applied to the surface, it compacts and makes a crust; if below, it softens and loosens.

**ASPARAGUS.**—Too long cutting close may injure the strength of the roots. It is better to cease cutting near the close of the month. As green peas and string beans come, there is less need of asparagus. Give it a dressing of good superphosphate and let it grow.

**BEANS.**—There is yet time for planting both pole and dwarf; if done at once, small Limas will mature by diligent careful culture. Give

those already planted frequent hoeing when dry.

**BEETS.**—Long blood and blood turnip may be sown in good deep, rich, mellow soil, any time before the middle of the month, for fall and winter use. Hoe, thin and carefully cultivate early sown. A handy tool, in the absence of a seed sower, for planting beet and like seed is to make a wheel of one or two inch stuff, insert short pins on the outer edge, six inches apart, mount it on a shaft with handle; with this mark out the rows with inch-deep holes for the seed; into each hole drop a seed and cover with hoe.

**CABBAGE,** and all this family of plants, may be transplanted any time during the month for autumn use. Remember the cabbage loves a rich, not over dry and frequently stirred soil. Set the roots deep, half or more the length of the stem down.

**CARROTS** sown the first of the month will make a crop, if the seed be soaked and dried in plaster.

**CELERY.**—Seed may be sowed for the winter crop. Prick out young plants to have a good supply of stocky, well grown ones for transplanting in July. Transplant about the middle of the month, for the fall crop, into well manured drills, four feet apart, trenches a foot deep, putting in three to six inches of manure and mellow the bed well.

**CORN.**—Continue to plant Crosby's early and Trimbles, for a succession, until the middle of July. Frequent hoeing and encouragement with top dressing or liquid manure is good to induce rapid growth and early maturity.

**CUCUMBERS, MELONS AND SQUASHES.**—Cucumbers for succession and for pickling may be put in any time during the month. Frames, &c., for protection from insects, should be removed before the plants crowd them. A little encouragement with liquid manure, ashes, plaster, &c., will forward the plants rapidly and often serve to keep off the striped bugs; but a few moments in hand-picking in the morning, while the dew is on, will generally prove successful in keeping them off. Look to the under side of squash leaves for eggs of the squash bug.

**EGG PLANTS.**—These require a *rich*, well pulverized soil that is neither wet or dry. Horse manure seems to agree best with the egg plant. Hoe and water frequently.

**INSECTS.**—June is the month when insects are abundant and do the garden the most damage. They are as fond of young tender vegetation as their superiors are of good vegetables, and are bound to have their share unless closely watched and destroyed. Whale oil soap, in weak solution, as well as successive flocks of young chickens and turkeys are the best preventives.

**LETTUCE.**—Few varieties do well after hot, dry weather comes on; but late sown may be transplanted into well prepared soil, and with

suitable watering, &c., will form large, nice heads. Seed may be sown in shady, rather moist soil, and yet do well, under good care.

ONIONS complete their growth early; therefore it is important to force growth by thinning and frequent culture. Potato onions, (best of all for the table,) may be planted as late as the first week in June, six to ten inches apart, in rich, fine surface soil.

PARSNIPS.—Seed should have been sown earlier, but may be yet done at once, in deep, rich, mellow soil; hoe and keep the surface mellow, and water with liquid manure.

PEAS.—Sow for late summer use and for seed. Those who would avoid buggy peas, should grow their seed from late planted peas, as the bugs do not trouble if sowed after mid-summer.

RADISHES.—Sow the Long Scarlet, in generously rich soil, among other crops, where they will be partially shaded. They will repay watering with liquid manure. Save some of the earliest and best, to grow seed from for future use.

RHUBARB.—Present facilities for canning and preserving, enable us to have a supply of this excellent pie material, the year through. Cut up and dry, bottle or can a good supply for winter, when such a change will be acceptable, and leave no seed stalks to grow.

TOMATOES.—Transplant for main crop. Hoe frequently and pinch in side shoots. Trained to a single stem, tied to a pole or stake, they seem to do best.

TRANSPLANTING.—During June the larger part of transplanting of garden and field plants is done. It is necessary, in order to develop certain plants, that this operation should be performed, and to do it successfully with the least trouble and greatest certainty, the ground should be well prepared as to tilth, fertility, &c., and the transplanting be done during a moist, cloudy spell. It is said that plants removed after sundown and during the night time will not show that they have been disturbed, by wilting, &c., but will retain their freshness.

WEEDS are easiest destroyed by taking them as soon as they appear above ground in a clear, warm day. Those which grow from subterranean roots are more difficult of extermination; but if the stems and roots are persistently cut, dug and pulled off, time will complete their destruction.

VACANT SPOTS.—A good gardener has none; he always finds some plant to occupy all his space profitably.

W. H. WHITE.

South Windsor, Conn., 1870.

GOOD FEED FOR GOOD BUTTER.—I once bought a dairy of twenty tubs of butter, all made from the same cows the same season and by the same person. Some eight tubs were good, sound, yellow butter; some eight more of it was very light colored and soft

with a disagreeable flavor; some four tubs shaded down from yellow to white, and the color the index of quality. Careful investigation developed the fact, that the good butter was made from good grass feed; and the poor, later in the season, when the grass had failed from drought, and the cows lived upon briars and leaves. A man changed the feed of his cows from corn meal and hay to potatoes and hay; it lessened the quantity of butter, and the color was lighter. Hence the importance of good feed. It is profitable to feed corn meal at all times excepting when grass is new and plenty, and it is not lost then. A piece of land five rods by two, to each cow, sowed with southern corn will supply the deficiency of the pastures in the last of the season for two or three months, and save the mowings more than the cost.—David Goodale, in *St. Johnsbury, Vt., Times*.

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### MY ROW.

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How well I mind when I was young,  
With hair as brown as tow;  
My father took me out with him,  
And taught me how to hoe.

That I might not be overtaxed,  
And well fulfil his plan—  
I hoed one hill and skipped the next,  
And so made half a man.

I then was small, just in my teens,  
And full of hope and joy;  
Knew little of what labor means,  
A happy, farmer's boy.

Ambition seized my youthful breast,  
I would not lag behind;  
I hoed each row just like the rest,  
Until the sun declined.

How glad was I when sunset came,  
The hour when labors close;  
The joy I felt, it has no name,  
As well each workman knows.

Ye sons of toil who wield the hoe,  
Or daily speed the plough,  
Or elsewhere hoe life's painful row,  
With sweat upon the brow,

Toil on I say, there's one grand thought,  
Which should encourage you;  
Good health and strength cannot be bought,  
So let us hoe it through.

—H. K. Fisher, in *American Farmer*.

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AYRSHIRES FOR THE SOUTHWEST.—A lady of great intelligence, and of much experience with improved cattle, writes to a friend of the *South Land*, as follows: After an experience of twenty years, the *Ayrshires* have proved to be the only cows able to stand the severity of a Southern summer. The Durham and Devon stock are both liable to fevers, and consequently to a great decrease of milk; but the *Ayrshire* thrive perfectly even upon the common pasturage of the country. The Devon when mixed with the *Ayrshire*, make very fine oxen. But for milking purposes, the *Ayrshire* exceed all others, becoming as hardy as the Creole cows.

**BONE MANURE.**



ONG as bones have been used as a fertilizer, their effect and operation are not well understood by farmers. It has been supposed that the nutritive properties of bones, when applied to the soil, are rapidly exhausted. This, however, appears not to be the fact.

In England, where the actual value of manures is estimated on the basis of experiments, and where exactness is observed in analyses, it has been ascertained that the mineral constituents of the bone—particularly the phosphates—are discoverable in the soil for years after bone manure has been applied, even when the ground has been cropped with vegetables supposed, or rather *known*, to appropriate this manure in what may be termed excessive quantities.

As there are still many who are not willing to grant much efficacy to bone manure, and as it has been sharply criticised on several recent occasions, it is well to present something on the other side of the question, and we, therefore, give below the chief points of a paper on the analysis of the soils of a farm in England, the property of, and occupied by, C. H. T. Hawkins, Esq. Its object was to test the durability of bone dust as a manure, for a period of ten years.

It appears that a piece of waste ground was broken from a common and tilled in turnips, the larger part of which was manured with bone-dust, at the rate of twenty-four bushels to the acre. In the two following years it was successively cropped with oats, and with the last crop laid down to permanent pasture, in which state it has remained ever since.

Ten years after the application the effect of the bone-dust could be plainly distinguished—the grass, as far as the eye could reach, having a rich sward; while the adjoining part, where no bone-dust had been applied, had a coarse, sterile appearance; the difference being as great as if a line had been drawn between rich pasture, and scanty, coarse herbage.

Samples of these two divisions of soil were sent to Mr. HUNT, then curator of the Museum of Economic Geology, to be analyzed, in order to ascertain if the bone could be detected after the lapse of *ten years*. Mr. Hunt, it should be here observed, was altogether ignorant of the object of the analysis. The result, however, was perfectly satisfactory, inasmuch as he readily detected the bone in that portion of the field on which it had been applied ten years before.

The following are the analyses:—

Substances	No. 1.	No. 2.
Water evaporated by stove, . . . . .	14 06	14 18
Vegetable and animal matters burnt off, . . . . .	12 01	12 05
Silica and Silicious grit, . . . . .	49 54	49 50
Oxide of iron, . . . . .	7 03	7 00
Carbonate of lime, . . . . .	1 05	1 06
Carbonate of magnesia, . . . . .	0 25	0 35
Sulphate of lime, . . . . .	1 05	1 04
Muriates, . . . . .	0 54	0 54
Alumina, . . . . .	7 10	6 04
Phosphate of lime, . . . . .	0 10	0 75
Phosphate of magnesia, . . . . .	0 09	0 05
Potash, . . . . .	1 00	1 27
Humus and soluble alkalis, . . . . .	6 00	6 17

It was deduced from these experiments, that the principal manuring properties of the bone existed in the earthy matters, which constitute about two-thirds of the bone, and not in the oily and gelatinous parts, constituting the remaining third.

The bones of animals are derived originally from the hay, straw, and other products of the soil which the animals consume as food. More than one-half the weight of bones consists of the phosphate of lime and magnesia, "Upon every acre of land appropriated to the growth of wheat, clover, potatoes or turnips, forty pounds of bone-dust will be found sufficient to furnish an adequate supply of phosphates for three successive crops."

It is hardly a fair experiment to use bones once or twice, and form an opinion upon their merits, whether the experiment succeeds or is a failure. There are certain atmospheric, or other conditions always affecting the manures applied. We have known persons use *guano* from the same bag, one of whom found decided advantages from it, while the other declared he "would not team it twenty miles for it." The same results have occurred in the use of bones, superphosphate of lime and other fertilizers. In order to form intelligent opinions with regard to special manures, we must apply them on *different* soils, cultivate the crops where they are applied precisely as those are where manure is used, and then carefully compare results.

The compounds put off upon the farmer as fertilizers have proved of so little value that hundreds are discouraged from using anything in the form of compact manure. Many of these special articles are a compound of "villainous smells," too disgusting to become common on the farm; they ought to be two feet under it. The article called superphosphate of lime is usually nauseous to a high degree. It ought not to be so, and probably would not, if it did not contain rotting animal matter in some form. This odor affords olfactory evidence that the article is not a pure one; that it contains matter that is not worth one-quarter part the price demanded for it. We hold in our left hand, now, while writing, a ball of nearly pure superphosphate of lime. It is as harmless as a ball of wax, and instead of being disgusting, its odor is pleasant.

*For the New England Farmer.*

#### THE FLOOD IN NEW HAMPSHIRE.

House and Barn Cellars full—Liquid Manuring—Farm Implements and Sitting Hens take a Bath—Freaks of Brahmas—Hints on Irrigation.

This rainy morning, I catch up my pen to say, that after an absence of nearly three years from the farm, my hand is again at the plough, or will be as soon as the weather and season permit. But the rain, how it has come! And the melted snow, how that has come down from the hills and woodlands, and filled the streams with mighty rushing waters, which have poured down rivulet and ravine, and flooded everything, higher up than any old high-water mark. Wells are full to overflowing, house cellars have become cisterns, and the barn cellars—what a plight they are in. A system of bailing and draining has been going on never before experienced. We shall see what effect liquid manure has upon the crop with which it may come in contact, as it has been poured out from the drenched manure heap, by ladle and drain. Perhaps we may get an experience that will lead us on after Alderman Mechi, and cause us to adopt his plan of liquid manuring. We shall see. We are driven, sometimes, by the force of circumstances, into a "corner," and thereby make important discoveries.

It would have been amusing, no doubt, could you have seen the plight many of us farmers were in at the height of the late flood. Pigs were wallowing in the poached manure pile; carts and wagons stored in the cellar as a safe and dry place, were axle deep in water; ploughs, harrows and cultivators were in water deep enough to swim them, had they not been too heavy; and the poor hens that were so unfortunate as to be sitting in what was

supposed to be a safe and dry place, were gradually reminded that they must leave or be submerged, together with their hopes of a future brood of little chicks, in the rising flood. There was a hurrying to and fro in hot haste, in attempts to save next autumn dinners from being cheated of the boiled or roast chicken. But with the fancy or whim that hens have of late, most of their labor must be in vain, for they set, or *wont set*, just as they please. Two of my nice, clever, social, agreeable, companionable Brahma young ladies were each indulged with a nest full of eggs, brought from a distant farm-yard, because it is thought best to change eggs for hatching, with our neighbors, even if we get the same breed. They behaved very lady-like, and appeared very motherly for nearly two weeks, and then without applying for leave of absence, they walked off and forgot to return till the two nestfuls of eggs were cold as snow balls. But they soon showed a disposition to reset, and they are in full blast again, but so encompassed with barriers that they can't get out of remembering distance of their nests. We shall see what will come of them. But I find they are so careless they have broken some of their eggs. Hens don't do now as they used to, when they would lay, set and hatch without tending. As things now appear, there must be professional chicken doctors and nurses, so far have we wandered from the old track. This is all right, perhaps, for the more our circumstances force us to study and labor, the more perfect is the character, on the principle that idleness begets moral disease.

But letting alone morals and philosophy, and going to facts, the results of this spring flood should induce many farmers to pay more attention to irrigation. Let the results of flooding be noticed the coming season. If not mistaken in my own experience, many will be the extra tons of hay grown from the overflowing of meadows. To secure the advantage in future, let dams be so arranged in the brooks that at high water the grounds shall be flooded, and then the water gradually run off.

Excuse this hasty line, for I must here put in the (.) and haste to the station.

Yours for the farm,  
Z. BREED.  
Weare, N. H., April 25, 1870.

*For the New England Farmer.*

#### MEDICAL TOPICS.

BY A MEDICAL MAN.

#### Health and Disease.

The human body is composed of solids and fluids, and when the former perform their functions properly, and the latter retain their normal purity, the body is in a state of absolute health. But this perfection of health is ideal; it never actually exists. An examination of the bodies of the healthiest persons would, doubtless, reveal derangements of some

kind. In short, health and disease are so imperceptibly merged into each other that the line of demarcation cannot be drawn with precision. The same is true of other departments of knowledge. It is not easy, for example, to settle the boundaries of the animal and vegetable kingdoms, and yet there is rarely any practical embarrassment in distinguishing an animal from a vegetable. So with regard to health, if an important disease of any kind exists, the fact of its existence is, in most cases, sufficiently obvious.

A disease is called *organic* when some change of structure or of composition has taken place in one or more of the organs, and *functional* when only the function or action of an organ or of organs is deranged or suspended. The same disease may be either *acute*, *subacute* or *chronic*. A disease is acute when it has a certain degree of intensity, and runs a rapid career. As a general rule, persons suffering from acute disease are confined to their beds. A subacute disease has less intensity, does not compel the patient to keep his bed, and does not always prevent him from being about, or even pursuing his usual occupation. A chronic disease is one which is subacute in its character, slow in its progress, and protracted in its continuance.

Again, diseases are either *constitutional* or *local*. A constitutional disease is one in which several or all of the organs are affected, and in which the fluids of the body are more or less depraved. A local disease is one which is seated in a particular organ, and does not necessarily affect the general system.

Another division of diseases is one which has reference to the manner of their occurrence. Thus, diseases which affect many persons at the same time are called *epidemic* diseases; those which are peculiar to the inhabitants of particular countries or sections of country are called *endemic* diseases; and those which arise from occasional causes, as cold, heat, fatigue, &c., are called *sporadic* diseases. Diseases which are propagated by the miasm or effluvia emitted from the bodies of persons affected with the same disease are called *infectious*, and those which are communicated from one person to another, by contact, are called *contagious*. Some diseases are both infectious and contagious. *Whooping cough*, *measles*, &c., are infectious; *itch*, *syphilis*, &c., are contagious, and *small pox* is both infectious and contagious.

There was formerly much discussion among medical men relative to the seat or starting point of disease. Some held that in all general or constitutional diseases, the primary affection is in the *solids* of the body,—these were termed *solidists*. Others contended that in such diseases the *fluids* are primarily affected, and such were called *humoralists*, or advocates of the *humoral pathology*. The modern and, doubtless, the true doctrine is

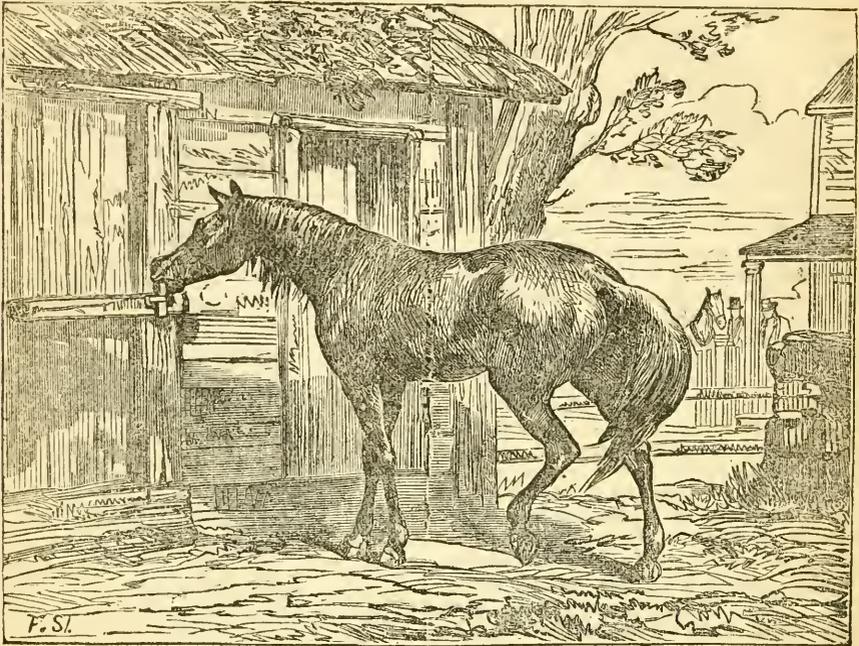
that in all constitutional diseases, both solids and fluids are affected, and that either may be the seat of the first morbid action.

The causes of disease will be the subject of our next article.

AN EXPERIMENT IN CURING HAY.—Last summer I took four men and went into a piece of good herdsgrass and clover, when it was about fit to cut, and just after the dew was off. I mowed about four tons. In three and a half hours it was stowed away in a space of twelve by twenty-four feet, on scaffold. On two sides it was double boarded, on one end was a mow of hay, on the front or floor side, it was exposed to the air; on the bottom and top was put about one foot of swale hay that was worth about two-thirds of the value of good hay. The result was I lost all the good hay, and it would have been worth sixty dollars. The swale hay was to take up the moisture, as I supposed. It steamed from internal heat for about four months, and when I took it out it was a mass of white useless stuff, completely burnt up. The ashes filled the barn every time that I pitched it over. Neither cattle nor sheep would eat it, except a little that was around the sides next to the barn, and on the floor side. The mow end was just as bad as that in the middle. This satisfies me that it is an impossibility to have good hay without first making it in the sun and air.—*P. Dinsmore, in Maine Farmer.*

CLUB ROOT IN CABBAGE.—In a letter to the New York Farmers' Club, G. Pitts, Honeoye, N. Y., attributes the disease to "a small white maggot that eats off the rootlets of the plant, thus preventing nourishment." He destroyed the maggot by removing the surface earth and sprinkling on a little dry copperas and replacing the loose soil. The plant soon revived, the heads developed as usual, and he has been troubled no more with the club-rooted cabbage. Philemon Farrell, Greenfield, N. Y., also writes that he destroys the maggot by the use of strong pork or fish brine. When he discovers the cabbage affected he makes a saucer-shaped hill about the plant and turns from a gill to a half pint of brine upon the roots, and rarely has to make a second application.

ABOUT MANURES.—Manure is never so valuable as when it is fresh. It then holds in association not only all the fixed soluble substances natural to the solid excrement, but much that is of great value, found only in the liquid. It is in a condition to quickly undergo chemical change, and the gaseous, ammoniacal products secured are double those resulting from that which has been *weathered* in a heap, out of doors for several months.—*Boston Journal of Chemistry.*



#### MEMORY AND SAGACITY OF A HORSE.

The fact that the horse has memory and sagacity in a wonderful degree, is proven in the incident which the above engraving illustrates. A gentleman returning from a journey on horseback, to Oxford, Pa., last fall, met a stranger travelling in like mode, with whom he engaged in a desultory conversation. Thinking the stranger's horse looked familiar, he remarked that the animal was probably one which had been stolen from him six years ago. To settle the matter, he made the following proposition:—"When we arrive at my house, your horse shall be tied to the east post in front of my door—the horse I am on, to the west post. After standing a short time, the bridle of your horse shall be taken off, and if he does not go to a pair of bars on the west side of the house, pass over and go round to the east side of the barn and pull out a pin, open the middle stable door and enter, I will not claim him. If he does, I will furnish you conclusive evidence that he was bred by me, but never sold—that he was stolen from me about the very time you say you purchased him." The traveler assented to the trial. The horse was hitched to the post proposed—stood a few minutes—the saddle and bridle were taken off—he raised his head, pricked up his ears, looked up the street, then down the street, several times, then deliberately and slowly walked past the

house and over the bars and to the stable door, as described, and with teeth and lip drew out the pin and opened the door, and entered into his own stall. We hardly need to add, he was recognized by the neighbors of his rightful owner, who fully attested to the facts stated by the claimant, and that the traveller lost his title to the horse.—*Rural New Yorker*.

**REMEDY FOR RUST IN WHEAT.**—The following, from a distinguished German Agriculturist, is taken from a Bremen paper:—For thirty years I have found this method successful in preventing rust in wheat:—Some hours, at the longest six or eight, before sowing, prepare a steep of three measures of powdered quick-lime and ten measures of cattle urine. Pour two quarts of this upon a peck of wheat, stir with a spade until every kernel is covered white with it. By using wheat so prepared, rust of every kind will be avoided. I have often noticed while in the neighboring fields, a great part of the crop is affected by rust, in mine, lying close by it, not a single ear so affected could be found. The same writer says he takes the sheaves and beats off the ripest kernels with a stick, and uses the grain thus obtained for seed.

## DAIRY FARMING---ROOT CULTURE.



VERMONT, Massachusetts and New York dairymen held conventions about the middle of last January. Notices of these meetings, held respectively at St. Albans, Vt., Hardwick, Mass., and Utica, N. Y., so completely occupied our columns at that time, as to prevent us from calling attention to several points of special interest in them.

In the Vermont meeting, the address of Hon. E. D. MASON was appropriate and highly attractive. His remarks upon the benefits which spring from *associated effort* were very encouraging, being full of practical suggestions in regard to the subject before them. He said, in closing, "Let us strive to place our dairy products as high in the markets as Merino sheep and Morgan horses. Then will plenty and comfort reign throughout our borders; then will be that time we have so often read about, 'The good time coming.'"

## Selection of Cows.

The Hon. HENRY LANE, of Cornwall, read an essay on the Dairy, in which he said the first and most important question for dairymen to consider is the selection of his cows. The great secret of success, after obtaining proper animals, is to keep them well fed. Cows will give more milk on fresh grass than on any other kind of feed. But grass in our pastures begins to fail early, and something must be substituted in its stead. *Corn will supply this want for one or two months in autumn.*

## Root Crops.

Dairymen should turn their attention to the cultivation of root crops. Cows require a change of food in order to assist the digestive process; and thereby will keep in better health and eat coarse fodder cleaner.

But what is the best root crop? The market value of the potato is too great to make its use for feeding stock profitable. The turnip and carrot are perhaps best for young stock, but they cannot be raised at the present time with profit. The sugar beet has taken the place of the carrot in Addison county. No root, Mr. Lane thought, will produce so much and so rich milk as the sugar beet. The best crop he had ever seen was grown on clay soil, containing twenty per cent. of sand.

The land for the sugar beet should be rich, and it may be grown on such land for thirty years in succession. The "*American Improved Sugar Beet*," is far superior to any other sort. Early sowing is the best, as a difference of ten days in sowing may make a difference of ten tons in the product. He said twenty-eight to thirty-two tons per acre is a common crop in Vermont, but by high culture may be made to yield fifty to seventy tons per acre. Its feeding value is in the ratio of 100 pounds to one hundred and fifty pounds of hay. Its great value as food for swine as well as cattle, makes the subject one which may well engage the attention of all dairymen.

Mr. Lane stated that the cost of raising the sugar beet is about *eight cents* per bushel; that the product of an acre will feed twenty-five cows eight weeks. Four pounds of seed to the acre is required. Sow in rows two and a half feet apart, and the plants eighteen inches apart in the rows. The labor has been the great bugbear in root culture. If rightly sown, the principal labor is in the thinning. The horse cultivator will do the rest and should be used often. The seed should be sown just as early as the soil can be well prepared in May. Store hogs winter well upon sugar beets.

Having visited Mr. Lane's farm, and noticed the evidences of skilful and intelligent cultivation in all that we saw, we find pleasure in commending his opinions and practices to the readers of these columns.

The President, Mr. MASON, thought beets were excellent for hogs and better still for cows. A bushel a day and one ton of hay for the winter are better for a cow than two tons of hay without the roots. They are as easily cultivated as corn, if proper care be taken at the outset. They are more profitable for a milch cow than any other crop, unless it be *green corn in August*.

Messrs. O. S. Bliss, Col. J. B. Mead, of Randolph, Edward Clark, of St. Albans, A. R. Bailey of Elmore, and H. E. Seymour of St. Albans all approved of root culture.

—The *Gardener's Magazine* (London,) mentions that in the department of Vauvois (France,) out of 60,000 acres of vines, 20,000 acres have been utterly ruined by what is called the "vine disease," and that the loss in some districts has been even greater than this, so that many entire plantations have been grubbed up and planted with other crops.

### WASHING SHEEP.

The subject of washing sheep and putting up wool for market was recently discussed by the Westminster, Vt., Farmers' Club, and a report published in the *Bellows Falls Times*.

A. Atcherson, G. W. Newcomb, Henry Page, favored washing sheep, and thought by doing so they obtained more money for their wool.

F. Arnold, J. B. Morse, N. Fisher D. C. Wright, J. V. Farr, J. Phelps, recommended the abandonment of the practice.

Henry Page washes his sheep, and shears in four to six days afterwards. He knew nothing of shearing in the dirt. He thought the question of washing or not washing depends mainly upon the breed of the sheep one keeps. He would wash as early as possible, and as the sheep come from the water, would squeeze as much of the water from the wool as possible, to lighten their burden, and to enable them to dry sooner.

Mr. N. G. Pierce, who did not express a positive opinion either way, thought there was no doubt that more money would be realized for the wool if washed, as it is now sold, but he was inclined to agree with those who estimated the damage to sheep at half a dollar a head. He had made up his mind either to shear early in dirt, or late and wash well. Sheep with oily wool should not be washed. Others were less injured by washing.

J. B. Morse said he did not believe it is natural for sheep to be put into the water. They hate the sight of it. It injures them, and if sheared late, they come up not looking as well in the fall, and don't winter as well. He spoke of the trouble of getting up and washing sheep in a busy time in the season, and thought it would be better for *all* to not wash; less expense—more healthy—better sheep—better wool.

Nathan Fisher, for many years, washed his wool well, but the buyers would pay him no more than they did others who washed poorly. But for several years past he had sheared his wool in the dirt. Shears some three weeks before turning away from barn in spring. Their wool in that time starts, and their bodies become felted over, shedding the rain, and standing the storms almost as well as those with wool upon them. One of his neighbors sheared part of his flock in April and part in June. The former stood spring rains best, and came to the barn in the fall in much the best condition. Sometimes he loses a few in spring, but seldom. He understood that the manufacturers like the unwashed wool quite as well. It is true that sheep after they are sheared in spring will consume considerable more hay. But he thought it much the best way to shear in April, and in the dirt. The buyers do not make the discount which they used to, which was one-third, now in this section thirty-three cents to forty. He believed he gets more wool from unwashed sheep, for some will be lost in the pasture. Wool will appear better when protected from storms, and I think if all were in

the habit of shearing in the dirt we should realize more money.

D. C. Wright thought it best to shear in April, unwashed. He knew of an instance where two flocks of sheep were out in a spring storm. One flock was sheared about three weeks before, and the other was with the wool on. The former stood the storm best. The unshorn remained wet so long they could not recover readily, and the early sheared came to the barn in the fall in far the best condition. Manufacturers had told him that they preferred unwashed wool at one-fourth discount in weight.

In this discussion several members spoke of the injurious effects of washing, on the health of sheep; but no one alluded to its effects on the health of those who perform the operation. To our own mind this is by far the most important consideration. We believe that more colds, fevers, consumptions, rheumatisms, &c., result from this than from any other exposure to which farmers are subjected, notwithstanding the free use of the bottle of grog which, in our day, was always provided for the occasion. We do hope that the annual ducking of men and sheep in the cold water of our mountain streams in the spring of the year will not be continued much longer. We believe the wool can be cleansed at the mills much more advantageously.

### AGRICULTURAL ITEMS.

—America consumes nearly one-third of the coffee production of the world, and nearly seven times as much as the inhabitants of Great Britain.

—In one of the packing houses in Illinois, recently, 480 hogs were slaughtered in one hour and 2680 in nine hours and ten minutes.

—A correspondent of the *Mirror and Farmer* mentions late cut hay as a cause of cattle gnawing boards and bones.

—H. T. Gates, at New Worcester, has a turkey that carries a feathered crest on its head, and when it "gobble, gobble, gobbles," opens and sports it like a peacock. It is a rare bird.

—A correspondent of the *NEW ENGLAND FARMER*, at Fishville, R. I., writes that wens on cattle may be cured by washing them twice a day for a few weeks with strong soft soap.

—The Executive Committee of the Massachusetts Agricultural College have employed Mr. John C. Dillon, of Weston, as Superintendent of the Farm.

—Brick-dust, obtained by rubbing two soft bricks together, is the best remedy for lice on stock, says a correspondent of the *Western Rural*, that he ever tried. Sift the dust evenly over the animal and work it well into and among the hair.

—The *Alta Californian* says that many grape vines in that State grow to a great size. One at Montecito, Santa Barbara county, now 74 years

old, and 19 inches thick in the trunk, yields from 6000 to 8000 pounds of grapes annually.

—The *Hearth and Home* in reply to a correspondent who asks, shall I buy a Jersey cow? replies by saying there is little risk in buying a healthy young Jersey cow, if her cost does not range much above \$250.

—There are 12,000 windmills in constant use in Holland at the present day, for the simple purpose of drainage. They are almost of colossal size, each lifting from 10,000,000 to 50,000,000 gallons of water every twenty-four hours.

—Brazil is the greatest producer of coffee, furnishing the article known in the market as the Rio coffee to the amount of 400,000,000 pounds yearly, or more than one-half of what is supplied by the whole world, viz: 713,000,000.

—The people in the northern part of Dupage county, Ill., are putting their farms in their pockets. The *Wheaton Illinoian* reports sales of nearly \$30,000 worth of real estate in a week. In Jasper county, Illinois, during the year 1869, over 80,000 acres have changed hands.

—Mr. John T. Alexander, of Illinois, who grazed last season, 7000 head of Texas cattle, informs the *Springfield Journal*, that he has found it a losing business, and that hereafter he will give the Texas long-horns the go-by, and graze and feed none but native cattle.

—At a recent term of the Criminal Court of Chester Co., Pennsylvania, a man "charged with having obnoxious weeds on his farm, and allowing them to grow, to the great damage of his neighbors," was found guilty and sentenced to pay a fine of \$10 and costs of prosecution.

—Last summer was so unfavorable for the production of honey that the bees in Berkshire county could not gather enough to carry them through the winter. Peregrine Drew of Pittsfield, has lost all but one out of 19 swarms. John Barnard all but three out of twenty-five swarms.

—At the West where timothy raised for seed is stacked up as soon as cut there is a dust or some emanation from the hay while threshing which causes severe headache, loss of appetite, nausea, and feverishness, while that which is weather-beaten before it is stacked does not produce these results.

—The rise of sap in trees and plants has been explained on the principle of capillary attraction, but M. Becquerel considers that electricity is an acting cause. A capillary tube that will not allow water to pass through it, does so at once on being electrified, and he considers that electrocapillarity is the efficient cause of sap travelling in vegetable life.

—Those who think our cultivated lands must grow poor as they grow old, will find food for reflection in the fact that not many years back, the average yield of wheat per acre in England was

about ten bushels—it is now over thirty bushels. The result of better economy of home-made manure and the extensive use of imported fertilizers.

—What stupid fellows farmers must be in the eyes of the *American Stock Journal*, which says, "we can go into a dairying neighborhood, and point to farmers who are losing from two to three thousand dollars by keeping cows yielding two hundred pounds of butter per year, instead of those that would yield from five to six hundred pounds in the same time."

—The Lee, Mass., *Gleaner* says that the dairy-men of New Lenox have decided to establish a cheese factory in that town and the stock for this purpose is pretty much raised. It is proposed to put up a building with fixtures costing \$2500, and the shares are put at \$100 each. In Lenox village also the money for a cheese factory is subscribed; the shares in the latter factory are \$250 each.

—A correspondent of the *Mirror and Farmer*, says that the ice of frozen sap is not worth saving; that as some trees give much more sap than others, it is a good plan to have tubs of different sizes; that sugar stirred dry is the most profitable; that the sooner sap is boiled the better; that a damper in the chimney of the arch saves much heat; that trees should be tapped on the south or westerly side; that tubs and holders should be perfectly sweet, &c.

—An agricultural paper printed in a New England city can see but one cure for the high prices of beef, butter, flour, pork, fruit, &c., and that is "The people must form strong combinations of their own in opposition," as "the consumers have something to do with the laws of trade." Such a movement will require a leader and an organ; but notwithstanding the apparent earnestness of our contemporary, we must hope that a "leading agricultural paper" will not volunteer its services in either capacity.

—The cheese factory at Rochdale, Chenango county, N. Y., has been rented by a company who propose to make both butter and cheese and to adopt the plan of buying the milk of farmers, instead of manufacturing it on the usual co-operative system. The *Utica Herald* says, if the manufacturers discriminate in the purchase of milk between the rich and the poor grades, the system would be an improvement in point of justice upon the present one; but the question would still remain as to the satisfaction such a method would give, and consequently as to its success.

—C. Hills, of Delaware, Ohio, writing to the *Western Farmer*, says:—"The long wools, Leicesters, are being rapidly introduced into our State, and are largely used now for crossing upon merinos. They cross well upon good sized fine wools; the produce being of good mutton carcass, maturing early, and producing a sort of wool usually called DeLaine; fleece of about six pounds, and commanding as much in market as the best XX

merino. Many of the second and third cross would be taken for pure breed by casual observers."

—Whether hogs require sulphur as an essential to their health, or whether it is sought by them as a condiment, may not be known for certainty. But one thing is sure, they devour it with greed whenever it is to be found. It is for this purpose, probably, that they eat large quantities of soft coal, which contains a large amount of sulphur. Perhaps this is the economical method of supplying hogs with sulphur during the winter, when they require a good deal of carbon. But in the summer it is better to feed it to them in substances which contain less carbon, on account of their producing less heat.

*For the New England Farmer.*

#### FLOWER GARDENING FOR APRIL.

Perennials and bedding out plants, sunny skies, and warm showers are inviting forth the lovely flowers. There is much work at this season for the amateur florists.

All perennials which were not transplanted last year, should be attended to now, before they have made much growth. There are few more desirable flowers than what are found in this class; yet one hears frequent complaints of their dying out. "They do not grow as they did when we and they were young." Why is it? The reason is obvious, *they are starved*; they require new quarters; transplant them; dig a copious supply of manure into their new bed; or sprinkle three or four table spoonfuls of superphosphate about their roots and you may be sure that they will fully repay your care. Many a perennial stands at this time where it was placed twenty or more years ago. Is it to be wondered at that it dies out; dwindles away?

We are the happy possessors of a large bed of perennials—these are *Dicentra Spectabilis*, *Lychnis*, *Phlox*, *Pinks*, *Achillea*, *Campanula* and many others. Every spring as soon as the ground is entirely freed from frost, every root is dug up and placed under a shade, with a good large body of earth around it. (A white *Paony* and the *Dicentra* are not molested; their roots will not flourish as well if disturbed in the spring.) A liberal supply of barn yard stimulants is then thoroughly mixed into the soil. The bed is raked over smoothly, the roots all put back, and soon they experience the good effects of the newly prepared soil, and are "a thing of joy and beauty." No plant life can be sustained without food suitable for its wants. We find that superphosphate makes an excellent fertilizer for all our out-door pets; it invigorates them as finely as a decoction of guano does our "window gardens." But alas, it is terrific to the sense of smell; sickening, horrid. Yet last year we dug it into the ground at a great rate, until a neighbor hard by thought we ought to be indicted as a nuisance. We carried it in old six quart tin pans, and dug it in with a three

pronged iron fork, taking great care not to touch stem or leaf of shrub or plant. It does seem as if it might be manufactured of a less obnoxious odor. Guano is not half as disagreeable to handle; but we must use it and endure it. *Moss roses* grow superbly under its beneficent influence. *Geraniums*, *Heliotropes*, *Verbenas*—all, will thank you by exceeding growth and beauty for the desired fertilizer.

At this season of the year many plants can be raised from cuttings with but little trouble. All the varieties of *Pelargoniums*, *Zonale Geraniums*, *Double Geraniums*, *Heliotropes*, *Verbenas*, and many other kinds too numerous to mention, will strike root quickly and grow rapidly. All of us possess friends who are willing to give us cuttings and roots; so that money is not essential to the attainment of a glorious garden. A cutting will be more apt to grow if cut from a portion of the plant which has both old and new growth of stem and leaves. *Heliotropes* and *Verbenas*, &c., which have fresh, new leaves just starting forth, will rarely fail to grow. *Geraniums* strike root so quickly that no one can fail to make them grow if they are properly planted. It is said that these plants are of such a quick growth that if a branch is half cut through in summer time, it will send forth tiny fresh rootlets, the cutting being supported by the sap which runs through the undivided half of the branch. We intend to try the experiment this coming summer.

It has been ascertained that a cutting will develop roots much sooner in moist sand than in rich soil, but the sand cannot maintain its growth for any length of time. To prepare pots for raising cuttings they should be filled nearly to the brim with rich, garden loam—dark and porous, not clayey and soggy; then pour in one inch in depth of scouring sand—sea sand will do as well as the yellow sand. Wet this thoroughly, and place the cuttings, from which all but the three or four upper leaves have been removed, close to the side of the pot; the contact of the ware against the stem of the cutting promotes its growth. Press the wet sand *firmly* around the tiny stem. A great deal of your chance for success in raising slips or cuttings depends upon this. Plant as many cuttings as the pot will hold, from six to a dozen according to the size of your pot; when they are firmly set in the sand two or three can be inserted in the middle of the pot. Set them away in a dark warm place for twenty-four or thirty-six hours. If you can put a glass shade over them to concentrate the moisture, you will greatly expedite their growth. Thus cuttings will grow very quickly in a hot bed, because the temperature is not dry. Their growth depends a great deal upon light, heat and moisture. If a bud is close at the base of a cutting it will strike root more easily—is not so apt to decay. The roots all shoot from a bud, and the lower down it is the surer your success. When the leaves drop the plant is commencing to grow; if they wither on the stem it

has begun to decay. By following these directions no one can fail to grow all kinds of house plants. Roses, and all the rarest flowers of the green houses are propagated in this manner. No tree, shrub or plant but can be increased by this simple process.

The *variegated leaved plants* are most easily propagated; they are all soft-wooded and will grow as quickly as a potato. They are gaining in popularity every year; their lovely leaves are such excellent imitations of gorgeous flowers, and are really indispensable for bouquets and vases. A *variegated Rose-scented Geranium* — Lady Plymouth is one of the rarities of the season. Its leaves are distinctly marked with white; and there is a new Sweet-scented Geranium, *Dr. Livingstone*, which possess exquisite foliage for bouquets. The *Ivy-leaved Geraniums* are rapidly coming into favor. They are well adapted for rustic baskets and vases, also for rock-work. The *Holly Wreath* has deep green leaves with a creamy margin and snowy white flowers. *L'Elegante* is beautifully and purely margined with white, gradually assuming a pinkish tinge. Twenty-five cents currency is all that some of our florists ask for these lovely "novelties," and if one dollar's worth is ordered, they will send them free by mail, thus bringing them as it were to one's garden for but little cost.

The new gold and crimson colors are rarely beautiful. They are of the richest tints of bronzy crimson; brilliant as a shot silk, and every leaf is margined with yellow. *Queen Victoria* has a golden beaded edging, bright crimson centre. *Princess Royal* a rosy crimson centre, with narrow margin of yellow. *Albert Victor*, a bronzy red centre, shot with a purplish red and a broad golden edge.

Description fails to do justice to these rare gems; they must be seen to be appreciated. They are all of English culture, and are offered this season at the Innisfallen Greenhouses for 30 cents currency, or \$1 for five different varieties. Of themselves they would form a glorious garden, and certainly a cheap one. There is a good deal of confusion in the minds of some amateur gardeners with respect to what are *Geraniums* and what are *Pelargoniums*. The *Geranium* was so named by Linnæus from *geranos*, a crane, on account of the termination of the carpels, bearing some fancied resemblance to the bill of that bird. Several species of *Geranium* grow wild in England, and there is a purplish pink wild *Geranium* familiar to all lovers of wild flowers in New England; but the rarer kinds have been brought from other countries and naturalized in our green houses and windows. The florists have hybridized them, and produced all the exquisitely beautiful varieties we now cultivate. To their untiring assiduity we are greatly indebted.

The *Pelargoniums* are all strictly exotic; they are named from a supposed semblance of their capsules to the bill and head of a stork, the Latin

of which is *pelargos*. They are placed in the same class of the Linnæan system as the *Geranium*; but it belongs to the fourth order, while the *Geranium* is of the sixth. These species have been frequently hybridized, but the flowers are distinctly different, the *Pelargoniums* being much larger and handsomer than the *Geraniums*. These plants are much benefited by close pruning, they are by this process made to grow in a bushy compact shape. After they have bloomed freely in the winter and spring cut off the outer branches, and thin out artistically to improve the shape. A florist thinks as much of a finely formed plant as of its gorgeous flowers. Amateur gardeners do not pay attention enough to this point, and many scraggy ugly plants are seen growing in *parterre* and window.

There is a good deal to be considered in purchasing plants at this season, for however gratifying it may be to have them in full bloom when first bought, it is much more satisfactory to possess those which will last the longest in perfection, especially those which have a succession of bloom. It is never desirable to buy a plant which is offered for sale in its height of bloom. Such plants have been prematurely forced, and after a few weeks their vigor is all gone.

It will take more skill than most amateurs possess to bring them up to their original status. Far better to purchase a plant which is fairly budded, and promises much more beauty than it possesses when purchased. Then you will feel compensated for both the price of the plant and the care you have bestowed upon it. We hope that our farmers' wives and daughters will sweeten their surroundings with a few flowers. The love of them seems a naturally implanted passion without one grain of alloy mingling with its pure metal. The early flowers of spring always bring with them a great amount of pleasure; they are cherished as private friendships. The tiniest child loves the buttercup and the dandelion. We wish that every farm house had its *Pinks*, *Roses*, *Geraniums* and *Verbenas*. They are within the reach of every woman, and will afford her the purest delights. Many of our good housewives raise sage, camomile and colt's foot. Enlarge your beds, dear friends, and plant therein their lovelier and more fragile sisters, which we have described, and you will not regret the extra labor which they will impose upon you.

S. O. J.

For the New England Farmer.

#### ROOTS vs. CORN.

My attention was recently called to this subject by reading an extract from a letter in the *Country Gentleman* written by the venerable John Johnston of New York, in which he says roots can never be raised to a large extent in this country unless wages were as low as in Germany or Denmark.

I was somewhat surprised to learn that such was the opinion of one who for years has been

regarded as authority, in this country, as to the best method of raising, feeding and fattening cattle and sheep for market. His long life, good judgment, and success in that profession to which he has devoted his best talents for more than half a century, has resulted in acquiring a very large amount of practical information, much of which has been given to the public through the agricultural press. But if we demur occasionally to his opinion, it is only assuming a prerogative to which we have a right, especially if we have sufficient evidence to sustain our objection. If we adopt the opinions of others as conclusive without examining the evidence that we can bring to bear upon the subject matter, we are not discharging our duty to our fellowmen nor to the age in which we live. Progress and change are the order of the day, and farming at the present time, especially in New England, requires perhaps more thought, energy, industry and perseverance than any other profession. The great West is pouring in upon us her cereals, her pork and her beef at much lower prices than we can produce them; South America, Australia and other foreign countries, and some of our Southern sister States have flooded our market with wool, and so depressed prices that for the last four years we have received about twenty-seven cents *in gold*, for what brought us forty during the last twenty years preceding the war. With these facts staring us in the face, with high taxes and high prices of labor, it stands us in hand to look about and make the inquiry what shall we do to save ourselves? Availability is the lever by which the politician secures his purposes. Let us try it, and avail ourselves of the circumstances of our situation.

Let us improve every opportunity to enlarge our compost heap, which is the great fulcrum for the lever of availability to pry over successfully. Let us avail ourselves of every profitable means to enrich our lands and to fit them for the production of early roots and vegetables, and such other crops as will not come in competition with those from the West, the South and elsewhere. Our cities and villages furnish us the only channels through which remunerative profits for our products can be realized—early beef, early mutton, early veal, early lambs, early pork, early poultry, early potatoes; early roots, such as beets, carrots, turnips, onions, squashes, pumpkins, cucumbers, &c. To produce these, let us improve every rod of land, clean up every corner. After the first cutting of grass on the dry knolls, turn over the sod and sow with turnips, sifting the scrapings from your barnyard into the drills. The subsequent labor is sowing and trimming, as hoeing is seldom necessary on sward ground. Thus planted the first of July, turnips may be raised at an expense of five cents per bushel and they are less spongy and keep late into the next season. Such roots are now worth from one and a half

to two and a half dollars per barrel in our city markets.

But some will say I live too far off from market to sell turnips. Then feed them to your cattle and sheep. They operate wonderfully to give appetite and extend the stomach when feeding corn fodder. Observe the wonderful change that has taken place in the form and size of our cattle and sheep during the last half century. How has it been brought about? By commencing with our calves and lambs, and giving them better feed, with roots, &c., by which their stomachs are properly distended, and a noble form secured.

The raising of roots need not interfere with our common farm operations. Sow English turnips after the last hoeing of corn, and scratch in the seed with a light hand harrow with spikes for teeth. It is fun for children to draw them. On good corn ground you will get from two to five hundred bushels per acre, costing less than four cents a bushel. Hogs can be kept in good condition during the winter on Ruta Baga turnips boiled. Leached ashes, lime, superphosphate, as well as many other fertilizers, are excellent for turnips. There is no crop, in my opinion, so easily and cheaply raised as the root crop. After having made it a study for quite a number of years to ascertain the best and cheapest method of feeding stock, I have come to the conclusion that the table of R. S. Fay, of Massachusetts, is about as near correct as any I have met with, though many of the English and German authors have more fully illustrated in what manner the nutritive parts of certain ordinary vegetable products enter into the composition of different animal products.

Thus 100 pounds of hay equal to—	
374 lbs Wheat Straw.	276 lbs Carrot.
442 " Rye Straw.	50 " Indian corn.
195 " Oat Straw.	54 " Barley.
113 " Bean Straw.	45 " Wheat.
339 " Mangold Wurzel.	45 " Peas.
104 " Common Turnip.	45 " Beans.
308 " Swedes Turnip.	

Potatoes are not mentioned in this table, but they are more valuable, in my opinion, than any root raised for feeding purposes. Now, for instance, if 308 pounds of Swedes turnips are equal to 50 pounds of corn, the point is which can we raise the easiest, four hundred bushels of Swedes or one hundred bushels of corn? D. P. STOWELL.

Canton, Me., 1870.

For the New England Farmer.

#### COMMERCIAL FERTILIZERS AND HOME-MADE MANURES

DISCUSSION BY THE RANDOLPH, VT., FARMERS' CLUB.

W. W. Walbridge.—Fertilizers are simply *plant food*. When, where and how shall we obtain this plant food, are questions of great importance. A supply of material is at hand in our muck swamps and in our wood lots, where an accumulation of leaves and mulch

has been increasing for centuries. If we make diligent use of the means at our disposal, we shall have no occasion to buy commercial manures.

Col. J. B. Mead.—We don't get around to haul in our muck piles, because we do not like to hire help for that purpose when other work drives, but it would be better to pay money for help to draw muck and work it over, than to expend it for commercial manures. I have, however, expended considerable for ashes, and find it pays handsomely. My stocking was never better than after ashes mixed with lime.

Mr. Howe inquired if new stocking should be fed off or left to rot on the ground.

Geo. Tilson.—I cut a heavy crop of rowen after taking off wheat, and then fed it all the fall; next season cut a heavy crop on the same ground early, and after feeding with horses six weeks, cut from one and a quarter acres 136 cocks of rowen. I think superphosphate does not pay; and I know of but one man in this town, where over \$10,000 worth has been sold, who thinks it does.

J. J. Washburn.—The reason why we don't make and save the manures, is because there is work in it. Mr. Howard often tells us to save all the liquids, &c.; but he don't do it himself. I have offered him a liberal chance to get muck, but he don't touch the first load. I should run but little risk in offering this village the free use of my muck swamp, only one mile away.

R. Nutting.—Any animal will sufficiently fertilize soil enough to produce food for itself, without deteriorating the soil, if its excrements are all saved, and if no grain, hay or roots are sold. I prefer ashes to any commercial manure, and next to ashes, salt. Make an outlay of money for a single crop to give the manure heap an impetus, and from that crop go ahead increasing.

Geo. Tilson referred to the trial of clover as a fertilizer by Col. Cushman, of Rochester, Vt. Mr. C. bought a worn out farm at a very low price, and in three years raised its value five or six times, simply by the use of clover.

G. F. Nutting.—Muck should be thrown up in summer and covered with boards or slabs, that it may get dry, and then be hauled in winter. No labor can pay us better. By the use of common soil as an absorbent, we simply save what otherwise would be lost; by using muck, we add a positive element of value.

A question, shall I haul out a pile of horse manure by sledding and save time in spring, or put the hogs upon it until I wish to use it? was answered by a majority of the club in favor of letting the hogs work it. C. H. Rowell would say, however, that if used for corn in the hill on moist land, it is better used as it is, and in that way is superior to any other manure.

J. J. W.

Randolph, Vt., March 30, 1870.

For the *New England Farmer*.

#### MY VIEWS ON CORN RAISING, &c.

The corn crop is, or should be, *the* crop of Massachusetts; if it should be, it may be. The reason why it is so, is its worth in dollars and cents. With one or two exceptions it is the most profitable of all crops. It can be produced for one dollar per bushel. At the same time it is worth thirty-three per cent. above this figure. Strip book-farming of its gaudy trimmings, and let the cultivator exercise his better judgment, and corn raising in our own good State may take high rank among its many profitable callings. From the first landing of the Pilgrims to the present time, it has stood as a beacon light, inviting the sons and daughters of the soil to a happy, pleasant and profitable occupation. The farmer should avoid following the deceitful Jack-o'-lanterns which meet us at every turn, and beckon into the quagmire of speculation, and which if followed lead us on and on till our feet settle in the mire of utter discouragement.

The process by which this crop is grown is naturally simple, and should be so practically. A farmer's outfit to commence business half a century ago, did not necessarily cost more than twenty-five per cent. of what it does at present. The laborers on the farm were familiar with all its duties from childhood. Crops were apportioned and varied as the different soils required; and the inmates of house and stable were sustained principally by the farm. Plenteous variety was enjoyed. Body and mind maintained a steady increasing growth. Fruitful seasons followed in regular succession. Happy families were reared among the hills and vales, vieing with each other in honest emulation; catching from one and another an idea of progress which was practically improved upon, until men and means were sent abroad who have built our large cities, and made those improvements of which we may well be proud.

From our cities a flood of literature has been sent out bearing the name of agriculture, which in reality is about the same as if the farmer should take the seeds of all his different grains and sow them broadcast, without any reference to varieties of seed or difference in soil. This has had the effect to encourage attempts to grow corn and other grains on soil fit only for roots and grass, and *vice versa*. Then the farmers of to-day must have a kit of patented tools of the latest make fresh from the city, whilst his stock of cattle must have the latest pedigree mark upon them; and if purchased from the stock of some speculative breeder and at a fancy price, so much the better, the buyer thinks. His horses must be counted on for speed, so that of necessity the cost is well up in the hundreds or thousands; and as though the evil one was determined to show them all the kingdoms of this deceptive world, ten or even

eight hours is to suffice for a day's work; the leisure time of the son or grandson is spent with some "Columbus" or other ungainly looking specimen of the horse tribe hitched to a skeleton vehicle in going the rounds of the village race course.

In view of this variegated picture, what shall we do? Like the busy bee let us seek honey from every flower. Let the farmer from practice build up a theory. Let him experiment for himself. Economize his time and means. Say unto the evil one, "get behind me." Use his "time which is money," in honest labor and useful recreation, associating with his neighbors for mutual improvement, and so fulfil the whole law of "loving your neighbor as yourself." As the city is made up of various characters and equally various occupations, so let our farms present in harvest time a variegated hue, from the maturing of numerous crops, instead of the more modern notion of a single crop, or at most two or three. Let rotation, so much talked of and so poorly practiced, become a principle in our farm management. And now turn back to the commencement of this article, and decide what portion of the farm shall be devoted to that noble crop, Indian corn.

If by the above I shall induce some to write up their views of farming, and thereby keep up a lively discussion, the effort will not be in vain.

R. MANSFIELD.

Wellesley, Mass., March 29, 1870.

*For the New England Farmer.*

#### THE FRUIT GARDEN.

"Now Winter's reign is over,  
Bilthe Spring once more  
Will joy restore."

Yes, the long looked for season, the time for enjoyment and for disappointment to the amateur gardener, has come.

Very few things afford more innocent and useful enjoyment than the study of the laws by which nature sustains and controls her productions, and gives to man whatever is both pleasant and profitable to look upon and to enjoy; and particularly is this the case when pleasure and profit is sought in the garden by conforming to the requirements of each plant cultivated in order to their perfection in beauty, productiveness and utility.

As a rest from the intensity of application to business by village mechanics, merchants and professional men who can afford suburban residences, what can be more interesting and profitable than a fruit garden? To consider the appearances and uses of fruits—the plants that bear them, the culture necessary to produce them in perfection,—and to partake of them as food for the body, cannot fail to improve the mind, calm painful or passionate feelings, or nervous irritability, and recruit bodily strength.

The pleasures of conviviality which are resorted to by so many of the above-named persons may have some good influence when moderately indulged in, but they are generally had at the expense of health and happiness, because they easily lead to extravagant expenditure and involve body and estate in ruin; and at best, they fail to improve the mind and increase good taste and love of natural beauty. They seldom, if ever, soothe the feverish and excited system, nor do they give that preparation for healthy repose and sleep which the over-taxed body and mind require, and which is sure to follow the innocent and pleasurable employment of the faculties in observation and gentle labor in planting, cultivating and harvesting the productions of nature in the garden.

Men differ in their taste and in their capacity to enjoy any one of the many things by which innocent pleasure may be secured, and all have a moral right to choose for themselves. What we want to impress on the mind of the reader is the idea that individual or family employment in the fruit garden is soon found to invigorate the nervous system, charm and soothe the mind, increase good taste and love of beauty, and to prepare the body for that repose which is necessary for those who are active and persistent in their business.

It may not be generally known, yet is none the less true, that to professional men, worn out by close application of their minds, we are indebted for discoveries and improvements in horticulture. They sought health in caring for the growth, perfection and fruiting of some plants or trees; they became interested, and being men of improved minds, they were observing; they sought a knowledge of the conditions or requirements necessary to the perfection of some plant or its fruit, and when found, they adapted their labor and care to the end desired. Improvements followed, and we have the benefit of enjoying what their labors have contributed to our advantage, and may profit by their example.

Information necessary to begin gardening and to continue it successfully is so plenty that "he who runs may read." What should we read? you ask. If you have time, read a book on fruit culture; before you buy one consult some reading, yet practical gardener. By so doing, you will be spared the disappointment that is sure to follow labor performed in ignorance of varieties of fruit, suitable soil, proper planting and cultivation, the influence of climate on the plants and fruit, and the times and manner of harvesting and securing in the best condition for future use the results of your healthful and gratifying employment.

If you plant for pecuniary profit, be very careful what you plant. Many fruits truthfully called the best in one State of the Union, may not be so in another, and a fruit of medium

quality, fully ripe, is much more pleasant to the taste and more profitable for sale than one of the highest quality, when not perfected. Thus, the Iona grape is very much superior to the Concord; but if the Concord can be ripened in our climate and the Iona cannot, the Concord is the best for our section. In an experience of years it will be found that Concord and Hartford Prolific are the only varieties that are uniformly reliable, or that will pay the poor man to grow.

If pears are planted on sandy or gravelly soil, they will cost more for manure than they are worth, and many kinds will fail to grow—that is, if the land is dry. On such land I have had some success with Flemish Beauty, Bartlett, Louise Bonne de Jersey and Beurre Giffard, but I cannot say my success would satisfy a market gardener.

We have currants of many varieties. I have many hundreds in my garden and nursery, but when hardness and beauty of the bush, and quantity and quality of the fruit are considered, no red variety will be equal to the Victoria, and no white one to the Dutch White. These are symmetrical in form, will bear manuring, and the fruit is of good size and very sweet. Those varieties called Red Cherry and White Grape sell well, but their fruit is not so sweet, nor are the bushes comparable with the first mentioned,—the Cherry being not so vigorous and the Grape not uniform in growth.

Of gooseberries, I have never had any or seen any that an Englishman considers worth growing, in our State. The sun is too warm in summer, and some days too dry to allow a good gooseberry to escape blight and grow its fruit to perfection. The best I have is called Williams' Red.

Of strawberries I have succeeded with but two varieties, Jenny Lind and Triomphe de Gand. The first is early and sweet and of good color and size, and prolific; on good loamy soil, with good culture, pays well. The last is later, larger and of good flavor, and is prolific; it will require a good, rather damp soil and high culture. I consider all strawberries as uncertain as to crop in our climate, be the variety or culture ever so good, and whoever grows them largely must reckon on several years for profit, as if a crop is secured two years in five, to grow them pays better than common crops.

Raspberries are refreshing and healthful, and by some are considered profitable. I have taken in one season from 48 plants, 52 quarts of fruit. The variety was Red Antwerp. This variety needs protection in winter, but of all varieties it is, for home use, the most profitable, if crop, quality and beauty are considered. Of all the black varieties, I have found no one any better than our own thimbleberry. They are nothing else than the thimbleberry of other States. It is on such plants, highly cultivated and recommended by

those who stand high in esteem as horticulturists, that nurserymen make, and purchasers loose money.

What I have said is intended for those who have had no experience in the fruit garden, and my object is to induce such to seek pleasure and profit in growing fruit, if only for their own use and health. If the editors think the above worth publishing, I hope it may do some good.

J. FLEMING.

*Sherborn, Mass., 1870.*

#### BUTTER MAKING.

The following extracts are from an article in the St. Johnsbury, Vt., *Times*, written by David Goodall. After speaking of the importance of good cows, good feed, and careful workmanlike milking, he says:—

The next requisite is a cool, sweet, clean cellar for summer, and a clean, sweet milk-room for the rest of the season. Here the milk should be kept at about sixty degrees, and when colder than fifty, the milk should be scalded, as it will keep the butter yellow and save labor in churning. Both cellar and milk room must be light and well ventilated, and all the utensils kept sweet and clean. Strain and set the milk immediately after drawn from the cows. At sixty, it will be usually ready to skim in twenty-four hours. Milk not scalded and set in a cold, dark place may be a week in rising the cream, but it had better be given to the pigs without skimming, as butter made from it is hardly fit for human beings.

No invariable rule can be given as to the time of skimming, yet it is very important that the cream be taken off in all cases before the milk becomes thick, because the microscope shows us that at the very time the milk begins to coagulate, decomposition and decay commences in the cream, and that an apparently great and thick growth of mould and fungus rapidly springs up and covers the cream and spoils it. The butter made from it may be barely eatable when new, but it soon acquires a dirty, smoky, bitter taste, and is unfit for table use.

After the cream is put into the pot or can, it should be thoroughly stirred every twelve hours and be sprinkled over the top with fine salt. Bring the cream to about sixty degrees when ready to churn.

When the butter has come and is gathered, draw off the buttermilk, then put into the churn ice-water or cold water and wash and work the butter thoroughly, changing the water until entirely free from the buttermilk; then draw off the water and work it out of the butter, and take it out of the churn. If too much water remains in the butter, so that it is crumbly and spongy, work it over by hand and spat it out. The butter being weighed, add three-fourths to one ounce, as you please,

to each pound of butter of good fine salt. Some add to the salt the same quantity of granulated white sugar, and thoroughly mix with the butter. In spitting and working and salting the butter, great care and judgment must be used, as there is danger of heating the butter and injuring the grain and rendering it greasy; on the other hand if not sufficiently worked the butter will be crumbly. The sugar is no aid in preserving the butter, but is used to improve the flavor, some preferring and some disapproving.

While the butter is warm, and as soon as salted, put it into the tub and pound it down solid, and if it does not fill the tub, cover it with a cloth and put on it a pint of brine. Fill the tub within one inch of the top, cut a cloth one inch larger than the butter and spread it on the top of it; then cut another cloth one inch larger than the last and fit it on the top, spreading evenly and turning up each edge on the inside of the staves, but it must not hang over as it would draw brine out. Cut a bar of sweet wood, two inches by half an inch, and fit it on the butter; bore through the stave into each end of the bar and put in a wooden pin tight to keep the bar in place, fill the tub with fine salt, and fill again with brine and keep it full. Some put in one-fourth inch of fine salt at the bottom of the tub and cover with a cloth. I think the cloth without the salt sufficient.

Butter made and packed in this way will keep sweet and perfect wherever salt pork can be kept, and as long. When the butter is sold a small saving could be made in removing the salt and part of the brine; but I would advise, instead, to put the makers' name and residence on each tub and let it go, salt and all, and make the buyer promise to keep it all on, and the tub full of brine; because if exposed to warm air this butter will depreciate rapidly, yet it would not change if kept frozen.

Such butter as this would be cheap at forty cents per pound, while our good dairies would be comparatively dear at thirty-five cents; and such butter is always wanted and sells quickly, while ordinary butter cannot be sold. The difference in market between really good and common butter is two hundred dollars per ton, and the difference in the cost of making and keeping would not exceed five dollars per ton.

Ice is not, perhaps, an indispensable requisite in making butter, but it is a great convenience and aid, and but little expense required to get up an ice house. If ponds and rivers are distant, take an old barrel or box when the weather is cold, and dash on water and snow and it is soon water tight; then fill with water and freeze up. Or a box of boards and stakes like a mortar bed may be cheaply made in the ice house or out of it, and water or new ice thrown in, which could be carried up to any thickness desired.

## EXTRACTS AND REPLIES.

### SUPERPHOSPHATE OF LIME AS A TOP-DRESSING.

I wish to inquire through the FARMER, whether you or any of your readers have made use of superphosphate of lime as a top-dressing on mowing lands? If so, what month in the year should it be applied? How large a quantity to the acre? Will it pay when hay sells for twenty dollars a ton? Does it work equally well on wet and dry soil? Should it be applied clear, or is it best to mix it with loam or plaster? A SUBSCRIBER.

Hudson, N. H., April, 1870.

REMARKS.—We have no doubt that *pure* superphosphate of lime would be a good top-dressing for grass land, but we have decided doubts as to its being the most *economical* material you can use.

If there is a muck bed on your farm, or in your neighborhood, and you can get it conveniently, haul it out, dry it, pulverize and mingle with it pure bone dust, manure, ashes, plaster, if the land is clayey a little lime, and you will have a top-dressing which will be exceedingly valuable.

It may be a duty which we owe the farmer, to give some decided opinions with regard to the use of what are called superphosphates of lime. Personally, we have gained very little from their use; not a fourth part enough to pay their cost. On the contrary, some excellent farmers state that they derive great benefit from them. We do not feel free to recommend them, mainly on account of their *impurity*,—but urge upon the farmer a more constant resort to the materials which the Author of Nature has placed more immediately within his reach.

When used as a top dressing, superphosphate of lime is usually sown broadcast, from 300 to 600 pounds per acre, without mixing with loam, or if with loam, so much the better. The land should be moist of course.

### COMMERCIAL MANURES—TOP-DRESSING.

I am a subscriber to a paper that I consider very valuable to a man that is trying to be a farmer. When I receive it I first search for the Extracts and Replies, and always wish there were more of them, and have been on the point of asking that a larger space be devoted to them, but have feared you would ask me to contribute as well as read, and so have held my peace. But as I shall be short for grass the coming summer, and I have some good warm land that cuts but a light crop, I wish to ask if it will pay to buy foreign manures of any kind to spread on to it. If so, which is the best? A. FRANKLIN.

Shelburne Falls, Mass., March 21, 1870.

REMARKS.—We are sorry to say that we do not know of any "foreign manures" that we can conscientiously recommend you to buy for this purpose; but we can with full confidence commend to you the practice of such farmers as C. F. Lincoln, of Woodstock, detailed in last week's FARMER, of "B.," Oak Hill, N. Y., in the number for February 12, and by other practical farmers who favor the public with their experience in farming that pays. We have been well paid by top-dressing

such land as you describe with yellow loam, from a newly dug cellar, &c. Have you a bank of loam or muck near by with which you can make an experiment in a small way? Try some clear, and some composted in the cattle yard or with a few ashes, or any other material in which you have faith, and watch its effects. Mr. Davis, of Framingham, Mass., a successful farmer,—see Monthly FARMER for 1867, page 226,—expressed great faith in the *shovel* in improving poor meadows. He says that he averages about 20 ox-cart loads of compost to each cow and hog that he keeps! But he had a bank of good loam.

#### REMEDY FOR CERTAIN DISEASES.

I notice in your last issue, communications in regard to a disease in cattle in some portions of Massachusetts, Connecticut and Rhode Island, particularly in Mr. Fay's herd. I send you a remedy which I think an excellent and almost sure one, for all diseases of cattle and horses where the symptoms are such as are there described. Get the body of the common tag alder, as large a growth as can be conveniently obtained. Bore a hole lengthwise with an inch or inch and a quarter auger, according to size of stick, sawing it off so as to leave one end solid. Put in common salt and tamp it down hard, leaving room at the top to plug tight with same timber. Place this in a moderate fire until the wood is all consumed. The salt will be left in a hard roll, which may be fed to the stock from one to three times a day, a large spoonful at a time. This will be found beneficial to all stock at times, especially to horses when the hair becomes dry and hard to the touch.

J. L. BAXTER.

East Bethel, Vt., March 24, 1870.

REMARKS.—This is entirely a new remedy to us. It would seem to be innocent, and, therefore, worthy of trial. We are not certain what the "Tag Alder" is.

#### VALUE OF SAW DUST.

FRIEND BROWN:—I don't like to trouble thee again, but what I want to know is, whether there is a sufficient value in pine sawdust to pay for the labor necessary to prevent its heating the manure to hurt? The wisdom of using or not using, depends very much on its manurial value; its heating so quickly appears to me to indicate considerable value.

Please, somebody, give poor farmers the light, and make us thankful once more.

Abington, Mass., 3d mo, 1870. JAMES WEST.

REMARKS.—Pure sawdust, from any wood, does not heat readily, but will remain for many years, in heaps, in the open air, without much change taking place in it. When it has been used as bedding for stock, and received their droppings, it will ferment; but unless highly charged with such droppings, we have supposed it would not rapidly pass into a state of fermentation. The sawdust is not the chief agent in producing fermentation, but the manure itself.

Mere woody fibre, in all cases, seems to require fermentation or charring to render it nutritious to plants. Sawdust requires as much dung as dust to bring it into a state of fermentation.

Where sawdust can be cheaply procured in large

quantities, we think it would be profitable to collect it, dry it by spreading in thin layers on the ground. When dry, form it into conical heaps of any convenient size, cover with sods, loam or clay, and leave holes at the bottom on the windward side for lighting the fire, and some still smaller ones at the top, to allow the smoke to escape.

Kindle the fire at the bottom holes, and allow combustion slowly to proceed until the volatile matter is driven off, when the air-holes should be stopped with earth in order to arrest the further burning of the piles. The operation will be much like that of charring wood for charcoal.

This charred dust will be very valuable as a bedding for stock and for mingling with any manures, as it becomes a powerful absorbent. In some localities, sawdust is accumulated to the amount of hundreds, if not thousands of cords, and may be had for the cost of carting away.

#### RAISING CALVES.

In your last issue, March 26, I saw an article on raising calves that interested me. As I raise a few each year, I will state how I feed them. For the first week I give them about six quarts of milk per day right from the cow. Then I take about one teacupful each of corn meal and cotton seed meal in a pail, after mixing it with the hand I add two quarts of *boiling* water and about the same quantity of milk, (skimmed, if I have it;) let it cool to a blood warm and feed them twice a day for six or eight weeks, then turn them out, if grass is forward enough; if not, give them good hay with the same quantity of meal mixed up thin with water.

#### FEEDING COTTON SEED MEAL TO COWS.

In this connection I wish to say a few words in favor of cotton seed meal as a feed for milch cows. I have used it for three years, and must say that for producing milk, butter or flesh, it is the *best* and cheapest feed I can get. I have never known a case of swelled udder or garget from its use.

My method of feeding is to put two quarts of the meal into tubs I use for feeding, and add a pail of water to each tub, stir it up well and let it soak for half an hour; then add the same amount of corn meal, mix it thoroughly and feed. This quantity I give to my cows twice each day, after milking, and have given it (during the winter or rather when the pastures get short,) for three years, with the most gratifying results.

I have known milkmen to give six quarts of cotton seed per day with four quarts of corn meal to some of their cows, for three months at a time. And one man has fed one particular cow with from four to six quarts of cotton seed per day for *five years*, and the cow is *all right*, and giving this winter twenty-four quarts of good milk per day. I have tried corn fodder cut and fed green, and have wilted it and fed it, but could never see any increase in the flow of milk. Still I believe when the pastures get short in August it is a very good thing to feed,—that is, it helps fill them up.

Cumberland, R. I., March 23, 1870. SENEX.

#### A MARE THAT SUFFERS.

Your columns of "Extracts and Replies" contain so much good advice in answer to so many puzzling questions, that I am induced to make another in the list of inquirers.

I have a fine English mare that appears frequently to suffer pain in discharging from the bowels. She lifts a fore foot, trembles and

crouches slightly, with sometimes a sort of groan. The excrement is not hard, as in constipation, but rather the reverse. She appears otherwise well, is in good order, not too fat; has six quarts ground oats daily (the same wet, as she refuses dry meal), and sliced potatoes once a week; is fed and watered regularly. Used for light driving only. The above symptoms are more noticeable after a harder drive than usual, but have appeared more or less for some months. What is the matter, and what is the remedy?  
S. E. J.  
Vermont, March 29, 1870.

REMARKS.—Perhaps some person has had a horse suffering in a similar manner, and will be able to state the cause and remedy.

#### EARLY ROSE POTATOES.

I bought one peck of Early Rose Potatoes in the fall of 1868. From them I raised last year a little over 33 bushels of nice potatoes when dug. But, alas, the tubers turned on me instanter, for in less than three weeks 30 bushels of them were rotten, and I had to dump them into the barnyard.

#### RELIEVING CHOKED CATTLE.

We have a very simple instrument here in my neighborhood for relieving choked cattle. It is simply a tarred rope one and a half inches in diameter, and five or six feet long. The end that is intended to go down the throat is trimmed off and wound with a piece of cotton cloth and smeared with soft grease before using. With this I have relieved five within two years. Tie the creature up, let one man hold the left horn with his right hand, and take the creature's tongue out with his left, while another man runs the rope down. It is limber enough to follow the passage, yet stiff enough to remove all obstructions. There should be one or more in every neighborhood.

#### CABBAGES.

I raised and sold cabbages to the amount of \$75 58 from eleven square rods of ground, besides saving enough for my family, and giving away some five hundred pounds. They were the Stone Mason variety. I never have written anything for a paper before, and probably shall not undertake to again. So please excuse me this time.

LEWIS BEAL.

North Fairfield, Me., March, 1870.

#### A LAME HORSE.

Will you inform me what I can do for a lame horse, that has a sore on the bottom of his foot, caused by pricking when shoeing, or it may be a corn.

R. I. SUBSCRIBER.

Woonsocket, R. I., April, 1870.

REMARKS.—Corns are often the result of bad shoeing, and unless the animal can be turned out to run barefoot they must be cured by judicious shoeing, by which pressure on the corn shall be avoided, in connection with proper medical treatment. The corn in the horse's foot is different from the hard corn of the human subject; it presents a reddish appearance, is very sensitive, and more spongy and softer than other parts, but originates in a similar cause. We must advise you to consult a horse doctor or an experienced horse-shoer.

#### CROPS IN JERSEY COUNTY, ILL.

In remitting the enclosed payment for the FARMER, I will say that in this section there was not over one-half the usual amount of wheat sown

last fall, and this spring what was sown does not promise over half a crop. Farmers are now busy putting in oats, of which more will be sown than usual. A large amount of corn will also be planted which I think is our best paying and surest crop. There is some little excitement here about the Norway oats, but I am inclined to the opinion that its superiority, if any, is owing to change of seed and care in cultivation. A change of seed is beneficial to all our small grains, particularly wheat.  
J. B. REYNOLDS.

Delhi, Jersey Co., Ill., March 26, 1870.

REMARKS.—As the exchange of ideas between the farmers of the East and the West, as well as the change of seeds, is desirable, we hope you will occasionally communicate with your Eastern friends through our columns. Farmers, East and West, ought to be more sociable.

#### HORSE DISTEMPER.

I have an eight-year-old mare that runs at the nose, and has all winter. It looks like the horse distemper. What shall I do for her?

A. FRANKLIN.

Shelburne Falls, Mass., March 21, 1870.

REMARKS.—Probably it is nothing more than catarrh or cold, caused by a chill in the stable or out. Has your horse had a warm, dry, clean and light stable, and good bedding all winter? The trouble, whatever it is, ought to be attended to. In ordinary cases, Dr. McClure recommends a bran-mash with from six drachms to one ounce of powdered nitre in it, at night, for two or three days, withholding grain, and if the bowels are confined a mild dose of physic.

#### HOW SHALL I BUILD MY BARN?

As I am intending to build a barn the coming season, I would like the advice of some of your subscribers. The barn that I tore down was a common long barn, with doors at both ends, bay on one side, and stanchions on the other. The land where I am about to build falls at the north enough to have a cellar. I want the yard on the south side, and the barn large enough to accommodate twelve head of cattle, three horses, twenty-five sheep and fifty tons of hay. I don't want a steam engine in the barn.  
A SUBSCRIBER.

Concord, N. H., April 4, 1870.

#### APPRENTICESHIP WITH FARMERS.

Young men who would be farmers, but who have not been brought up to the business, have been advised often to let themselves for a few seasons to some farmers who wants help, and to look upon such service as an apprenticeship, before going into business for themselves.

I would offer an amendment to that advice, to the effect that no one who would become a successful farmer should work with or apprentice himself to one who cannot make farming pay, but when they hire are obliged to do some job in the winter off the farm, to pay their hired help.

Any young man of intelligence can judge for himself as to the income and expenses of a farmer after he has been employed by him twelve months. It would be poor encouragement for him to give his best energies to a business that would not pay the interest of the capital invested. Were he to do so, his time would be worse than lost,—unprofitable to his employer, and entirely unsatisfactory to himself. Should he stick to the farm under such a tutor, he would learn nothing he

should, but much that he should not. Many farmers think their hired help have no business to inquire why or how they do their work. If they desire intelligent, reliable laborers, they must pay more money, or make the farm a school where the knowledge acquired shall be an equivalent for part of the services performed. I would send a boy to any respectable work, rather than to a farmer who says "farming does not pay." P.

*Mast Yard, N. H., 1870.*

#### HORN AIL.

I have read your valuable paper for some time, and as I have been much benefited by the suggestions of others, I will give a little of my own experience in a few things, hoping that, though the first time I ever wrote anything with the idea of having it read by the public, I may thereby in some measure do to others as they have done to me.

And first, for horn ail. Take a good handful of of tazy stalks, dry thoroughly, strip the leaves and blows off, pulverize fine, one tablespoonful of cayenne pepper, one pint of rye meal. Mix the three ingredients together, and wet with vinegar. Then make the same into nine pills. Give one a day for three days, then omit three days; and thus alternate until all are used, if necessary. I have known this to save a cow that was so weak that she could not get up.

#### FILM ON A CREATURE'S EYE.

Melt a tablespoonful of lard and turn it in the opposite ear. I have repeatedly effected a cure in this way.

#### CHOKED CATTLE.

A potato or turnip in a creature's throat can, in most cases, be removed by turning the animal on to a rough piece of land or where there is a ditch, and make it run or jump. If this fails, take a stick about three-eighths of an inch in diameter and four feet long, with a bunch about the size of of a hen's egg on one end, over which put a piece of pork rind, and fasten firmly, with which the potato may be carefully pushed down.

#### YELLOW WATER IN HORSES.

Take one ounce of Antimony; one tablespoonful of Aloes, and same of Sniplur and Peruvian Bark; put them into a bottle with a gill of rum, and after shaking well add one and a half pint of water, shake well again and turn down. My mode of giving such a dose is to put on a bridle, throw the lines over a joist, so as to bring the horse's head pretty well up, then insert the neck of the bottle into one side of the mouth, (never pull out the tongue) and turn it in as fast as the horse can swallow.

#### HOW VERMONT BOYS MAKE SUGAR.

First, they want good clean sweet buckets. Then tap with a five-eighths pod-bit, from three-fourths to two inches deep, according to size of the tree. There are various kinds of spouts, but the one I prefer is in shape like the nose of a tunnel with one side shorter than the other, drive it into the bark of the tree so as to cover the hole, then drive a nail under it to hang the bucket on. The sap is gathered mostly by a team. Pans from six to eight inches deep are used to boil the sap and to sugar off in. After boiling all day, it is syruiped down, then strained through a flannel strainer. The syrup after standing in tubs over night to settle, is ready to be made into sugar. The pan which is used for sugaring off in, is thoroughly cleansed. The syrup is carefully turned into the pan as long as it will run clear. Some use about one quart of milk for two hundred pounds of sugar to raise a scum to cleanse the sugar, others

use the white of eggs, and some use cold sap. A man that understands the business can sugar off two hundred pounds in from two to three hours.

*Groton, Mass., April, 1870. G. T. WILLIAMS.*

#### SUGAR FOR FILM ON EYE.

I notice in your issue of the 26th, an inquiry for a remedy for a film on the eye. I have used successfully common granulated sugar, and have known it to remove the film in many cases where alum and other remedies have failed.

A SUBSCRIBER.

*East Dover, Me., March 28, 1870.*

#### TO REMOVE FILM FROM THE EYE.

Please publish the following for the benefit of "A Subscriber" and the rest of mankind: To remove a film from a creature's eye, put a lump of fresh butter, about the size of a walnut, into the ear on the opposite side from the eye with the film.

L. N. WILLOBY.

*Winchendon, Mass., April, 1870.*

REMARKS.—Mr. Willoby must be responsible for this prescription; we know nothing of it.

In relation to putting medicine into the ear of animals, an organ furnished with such sensitive nerves that a slight vibration of the air is transmitted by them to the brain; or into the nose which is so delicately lined that the least odor affects the sensibilities of that organ, a correspondent in Vermont informs us that a "cattle doctor" ordered some spirits of turpentine to be poured into the ears and rubbed in back of the horns of a heifer supposed to have the horn ail, which threw her into such terrible convulsions that her owner, a neighbor of his, ordered her to be killed to put her out of misery. Another man was advised to put a little of the same medicine into the nose of a sheep to cure grubs in the head. He tried it on one, but as the patient dropped stone dead from his hands, he gave up the "practice." A little butter in the ear might not be as fatal; but if we had a film on our eye we should require good authority for a dose of butter in the ear.

#### THE USE OF MUCK.

I see that Mr. Loring Barrus says that the farmers had better have muck on the brain than so much fog. I think he had better have muck on the brain than on the ground. I see that this man lives in Goshen. If he has lived there five years, and used muck as a fertilizer, I imagine that his farm must be in rather a poor condition, and if he supports a large family on its productions, I think his farm must be a remarkable one. He draws his muck to the barn and throws his manure on to it, and in that way has all the juices of the manure in the muck, and that is what gives it its value. But let him try the muck alone, just as it comes from the swamp, and see how he will come out. If he will go to his swamp and get a load of muck and not mix it with anything, and spread it on or plough it in to his land, I think he will sing a different song. I tell you, sir, in my opinion there is no goodness in it. It is of a cold, sour nature. If you have to mix manure with muck to make it good for anything, what is gained? Why not use the stable manure by itself? And then when you seed down your land you will be able to cut two or three tons of hay to the acre, while if you use composted muck you will not

get more than five hundred pounds of hay to the acre. Now let me tell you, if a man is poor he will continue so as long as he uses muck on his farm. A man would be better off to work for fifty cents a day and board himself, than to farm it on meadow muck.

O. J. UPHAM.

*Needham, Mass., April, 1870.*

#### DEATH OF COARSE-WOOL LAMB.

Fine wool sheep have been kept on our farm for many years, but about a year ago a part of the flock was changed to coarse wools. After an absence from home, I have just returned to find the lambs from our coarse woolled sheep dying about as fast as they come. Out of twenty-two only seven are left. At first they appear smart and well, but after a few days, or in some cases a few weeks, they are taken with a diarrhoea that oak bark will not check, and die in great distress.

I at once went to work to find the cause. I opened one, and found his lungs somewhat affected, but not enough to cause death. On examining his stomach, I found in the passage out of the honey-comb stomach a wad of wool about as large as a bullet, entirely stopping the passage. I opened another and found all of the organs healthy; but just beyond the last stomach a wad of wool stopping the passage there. In another I found the passage stopped just beyond the stomachs with something resembling cheese, but as it was beginning to be dark I did not examine closely. Next morning found in one several weeks old, a large wad of wool about an inch beyond the last stomach, and the intestine inflamed and distended by the wool.

So I am satisfied that eating wool was the cause of the death of the lambs. Is this a trick of long woolled sheep? Old fine woolled sheep raisers here never heard of the like. Our fine wool sheep have not as yet produced any lambs.

We set the man who has the care of the sheep to tag all the ewes nicely, so that all scattering locks of wool would be out of the way of the lambs. A little knowledge might have saved all these lambs. I should like to hear the opinion of those better acquainted with coarse wool sheep.

*Hartland, Vt., April 10, 1870. B. LIVERMORE.*

#### POTATO DINNER.

About a dozen farmers from Sudbury and Framingham were invited to a dinner at Col. Hemmingsway's, in Framingham, on the 5th of April, to talk over the potato crop, and test the qualities of several varieties. After eating as much potato as they could with the bountiful supply of other provisions, the question naturally arose, What kinds is it best to plant this season?

Two or three varieties were spoken of favorably by all; among which the Early Rose was considered the best as an eating potato, up to that date and considerably later. The Burns and Worcester Seedling were thought very fine as later varieties. Bresee's Prolific was also spoken of as very good. About one-fourth of those present thought the Harrison ought not to be given up, as the yield is large and it is liked as an eating potato by many.

Two plates of potatoes, one called Late Rose, the other Royal Pitt, were thought to be the same kind. Both are very productive, and are liked as a table potato by some.

King of the Earlies, Early Prince, Willard and Climax were also among the kinds represented, but they are scarce, and the company decided not to recommend them for planting the present year.

One gentleman recommended sprouting potatoes to get them very early, by spreading horse manure two or three inches deep upon any convenient spot of ground, covering it with a little loam,

then dropping the potatoes just far enough apart so that they can be easily separated after they have sprouted; covering the potatoes with sand, keeping them moist by sprinkling with water from a watering pot, and covering them with a sail cloth cool nights. When ready for transplanting take them up into boxes with a fork and separating them, plant in rows, pressing the dirt around them.

ONE OF THE COMPANY.

#### STRETCHES IN SHEEP.

I wish to inquire what to do for my sheep that has the stretches. She lays down and stretches, and gets up and does the same. She has a lamo three weeks old. She was troubled the same before she dropped the lamb, as now. She appears well one day and is sick the next.

L. H. GAYLORD.

*North Prescott, Mass., April 4, 1870.*

REMARKS.—This disease is generally ascribed to constipation of the bowels, resulting from long confinement to dry feed. Sheep do not have it when at pasture. It can generally be prevented by some kind of green feed given once or twice a week—browse is better than nothing. Salt kept in a trough constantly in reach of the sheep, in which sulphur is mixed at the rate of a pound to half a bushel of salt has been recommended by Mr. B. F. Chamberlin of Washington, Vt., as a preventive.

As a cure, some kind of physic, if given in season, affords relief. If neglected until inflammation sets in, all remedies may fail. A piece of lard of the size of a butternut, mixed with mustard seed; a dose of Epsom salts; a decoction of thoroughwort, or boneset; castor oil, &c., are each recommended; and in the FARMER for 1868, (Monthly, page 240) Mr. G. H. Brown of Mason, Maine, stated he had been successful in a great many cases in giving the sick sheep a bit of plug tobacco as large as the thumb to the first joint, by putting it into the mouth and holding up the nose of the animal until it "chewed" and swallowed the weed. Whatever is used, the object is to move the bowels. Relief is sometimes effected by merely chasing the stretching sheep about the yard, on the first appearance of the trouble.

#### HOGS OR SHEEP TO IMPROVE A FARM.

I wish to inquire through your valuable paper which are best, sheep or hogs to improve a small farm which is badly run down, and which will be most profitable in addition to their assistance in improving the farm?

A.  
*Avon, Conn., April, 1870.*

REMARKS.—There are many circumstances having a bearing upon either of these propositions, such as locality, price of labor and grain, skill in tending, &c., which must be considered in deciding which to choose. These circumstances are not known to us. Briefly, our opinion is, that keeping hogs will enable you to enrich your cultivated lands much quicker than by the use of sheep. To secure this, the hogs must be kept growing rapidly, and plenty of materials supplied to them to travel over, lie upon, and enrich by their droppings.

#### DRY MUCK FOR BEDDING.

In the *FARMER* for February 12, I saw an article headed, "Value and Use of Muck," and I should like very much to inquire of the writer of that article how he dries his muck so that it will not freeze in the winter? B. B. SMITH.

*East Dover, Me., 1870.*

REMARKS.—Muck thrown out of the bed in the winter, or even in July or August, when the water is usually low in swamps, will become sufficiently dry to be carted into some place for winter use before the fall rains. Throw it into heaps on dry land, and on the morning of some hot day spread it a little, and get it in before rain falls on it. In this condition it will not freeze so as to prevent using it, if put in a cellar, or anywhere in the barn. Many farmers in this section pile it up in a large heap near the barn, out doors, and cover with boards, and though the surface becomes frozen, it may be broken readily, and the unfrozen part used as litter or otherwise, as desired. Our practice is to place it in the cellar, and mix it with the droppings, once or twice a week.

The foregoing remarks are not intended as a substitute for a reply by "B." of Oak Hill, N. Y., the writer of the article alluded to, who confesses to "muck on the brain" and to great faith in muck on the land, and who is able from his long practical use of the material to answer the question of Mr. Smith.

#### PRICES AND COST OF BEEF.

Your Montpelier correspondent is doleful over the high price of beef, and sighs for the good time to come, when "extortion" shall cease, and steaks and sirloins shall be sold at starvation prices to the farmer. Your remarks were to the point, and a substantial answer to his inquiry.

But there are many like C. L. S., who think that not only beef, but all farm crops are too high. That farmers, whom they regard as "mud sills," are getting very rich by "extortion," and should almost give away their produce to their grateful customers and deliver it, to boot. And if they "groan for awhile" they will soon be used to it as "eels are to being flayed."

It is now pretty well understood by farmers that twenty pounds of milk can be made from the feed that will produce one pound of beef. This at five cents per quart would bring fifty cents. Or that two pounds of cheese can be made from that quantity of milk, which will retail at twenty or twenty-five cents per pound. The dairyman can keep two hogs to every three cows, and by using a little grain with the sour milk and whey, turn them fat in the fall, at a clear profit, giving quick sales and ready money.

It is a long way from the calf to the ox that will dress 1000 pounds net, and it is a costly operation to grow him. But few farmers, even, are aware of the cost, who have not kept an exact account of what he consumes. It will cost no more to raise a colt to four years old, than a steer to the same age. The colt, if well bred, will sell for \$200, with a chance for higher figures. The steer must be a good one to bring \$100.

There is more profit in raising mutton than beef, at the present price of wool. Mutton is wholesome, nutritious and toothsome flesh, with nothing of the taint of "extortion" in it at the present time. If beef eaters who complain of present prices, do not, as you suggest, see fit to raise their

own beef, they might with becoming dignity "settle back on mutton" until the over-reaching farmers cease to "groan," and offer their bullocks at lower figures.

J. R. W.

*Springfield, Vt., April 9, 1870.*

#### BEST PEARS.—FRUIT BOOKS.

Can you inform me where I can procure a copy of a book entitled *The Fruit Garden*? Also, the best eight varieties of pear trees, suitably divided between summer, autumn and winter, best suited for Southeastern Massachusetts, and where I can procure them? R. T. L.

*Taunton, April, 1870.*

REMARKS.—There is a great variety of opinion as to what pears are the best. The same pear does not grow the same on different soils. Some will crack on one soil and grow fair on another. We can recommend the following with some confidence:—

- 1 The Rostiezer ripens from middle of August to September.
2. The Bartlett, Bloodgood, Buffam, and Seckel, for summer and early autumn.
3. The Duchesse de Angouleme, Beurre 'd Anjou for autumn.
4. The Lawrence, Winter Nelis and Easter Beurre for winter.

"The Fruit Garden," by P. Barry, can be obtained through any bookseller. Downing's *Fruit and Fruit Trees of America*, *The American Fruit Culturist*, by Mr. Thomas, and other works may be found at most of the bookstores.

#### PERUVIAN GUANO.

Will you give us through the *FARMER* the effects of the use of Peruvian Guano in the culture of early cabbage and beets for market; and what you think of using 1000 pounds per acre, whether it would be too much for land that would produce 40 bushels corn per acre; also what would be its effect on the future grass crop? S. G.

*Sterling, Conn., 1870.*

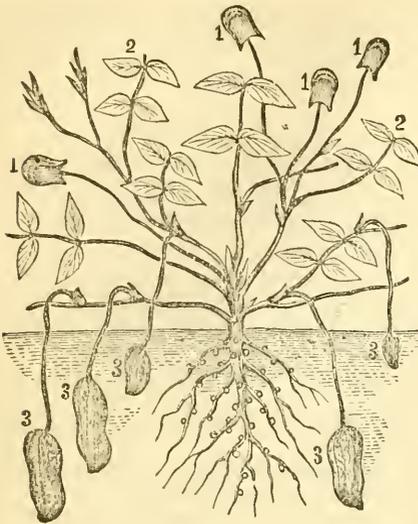
REMARKS.—We have always supposed that the effect of guano was more of a temporary than of a permanent nature. A thousand pounds of Peruvian guano applied to one acre of fair soil would probably give a size to the cabbage and beets which would render them unfit for market—especially the beets. Apply one half as much guano to the present crop, and the money's worth of the other half in good stable manure for the acre, and your husbandry will probably prove more permanent and profitable.

#### IS THERE DANGER OF MOWING TOO CLOSELY.

I wish to inquire through the *FARMER* if a mowing machine is a damage to a mowing field? Is there any danger of mowing it close enough to damage the roots of the grass? G. N.

*Craftsbury, Vt., Feb., 1870.*

REMARKS.—At the late Farmer's Convention, in Lewiston, Me., the subject of injuring the grass crop by cutting it too near the ground, was discussed, and the opinion of most of the speakers was, that if the spears of grass were cut off *below the first joint*, it would greatly injure it.



1. Flowers. 2. Leaves. 3. Peanuts.

#### PEANUTS—THEIR CULTIVATION AND USE.

Being a reader of your valuable paper, I take the liberty to ask you where I can get the seed of the peanut, and how much is required for the acre, and for such other information as you may be able to give in relation to the cultivation of this plant.

Lenox, Mass., March 31, 1870.

P. H. CASEY.

Information in regard to raising peanuts, would be gratefully received through the FARMER.

J. R. GURNEY.

South Hanover, Mass., April 6, 1870.

REMARKS.—As we have never raised the peanut, we must rely on the books and papers for our answers to the above inquiries.

The first fact to be stated is that the plant grows naturally only in considerably warmer climates than that of New England. So do tobacco, tomatoes, and sweet potatoes,—all of which are more or less cultivated here. We presume it is possible to raise peanuts here; but whether it can be done profitably we are unable to say. Our city dealers buy the nuts uncooked, and employ bakers to roast them. Of them we suppose there would be no trouble in procuring the seed, which in our climate must be started in hot beds or otherwise, as tobacco, sweet potatoes and tomatoes are. We understand that specimens of the plant have been found growing near Walden Pond in Concord, Mass., a location much frequented by picnic and other parties, by whom the seed was dropped on the ground.

We copy, by permission, from the *Country Gentleman*, a cut of the plant which illustrates its peculiarities of growth. From an article in the same paper, and from one in the last Report of the Agricultural Department, we condense the following description of the plant and of its cultivation.

The peanut—*Arachis hypogæa*—is a leguminous annual plant. It has a hairy stem; the leaves are

alternate and paired, of a deep green; the flowers of a deep yellow, axillary and solitary. As soon as these flowers have shed their corollas, or have faded, the pedicels, or stalks, on which they are borne, lengthen and turn downwards to the earth, as seen in the cut, and bury themselves in it until a firm bed is reached, giving the plant the singular appearance of being fastened to the ground by as many strings as there are seed pods ripening under ground.

Any soil that can be put and kept in a friable condition, with a sufficient quantity of lime and moderate fertility, will produce the peanut, *if the season is long enough to mature them*. It will not fruit except on a calcareous soil; but without lime vines grow, but little fruit is produced. As the color of the pods partake of the color of the soil, and as the brightest pods always bring the most money, gray land is preferred, and red or chocolate-colored avoided. The following directions are applicable to the south, where it is not necessary to start the plants in a hot bed, as it is here. The land should be well ploughed and pulverized in winter. It should be harrowed early in spring, checked off both ways (just previous to planting,) the rows two and a-half feet apart. It is very important that the rows should be at regular distances, otherwise the after culture will be very imperfect. Plant at least two kernels to the hill, at the intersection of the rows. Make a hole with a pointed stick, drop the kernels and cover about two to three inches. The planting should be done as soon as the frosts for the season are over.

Clean culture is absolutely necessary. The "sweep" or cultivator should be run about every eight days, and kept up until about the middle of July. After the tendons—or stems on which the nuts forms—begin to shoot down, if the grass has not been removed before, it must be removed with the hand and hoe.

In October and November, or just before a frost, they are harvested. Furrows are run on each side of the plants, which are then lifted with a fork or pronged hoe, and after wilting two or three days are carefully stacked around stakes, with the nuts innermost, much as beans are with us, capped with straw or other material, as it is very important to keep the hulls from becoming discolored. When dry the nuts are picked off from the vines by hand; about five bushels being a day's work, from 16½ to 18 cents per bushel being a common price for this work. There are two kinds of vines the "running" and the "hill."

It is estimated that each successive peanut crop in Virginia since the war has been three-fold greater than that of the year preceding, owing to the demand consequent on the knowledge of the fruit acquired by Northern soldiers in their Southern campaigns. And very likely the above inquiries owe their origin to the same cause. It is a very profitable crop at the South. The average crop is estimated at 50 bushels per acre, and the

price at \$2.50. The vines, if harvested before frost, are valuable as cattle fodder.

The peanut is successfully raised in the tide water district of Maryland, also in Delaware and the southern part of New Jersey and Illinois, but how far north its culture may be extended to advantage is a question that must be determined by trial.

#### LENTILS.

Are there any lentils in America? I have sent for two seed catalogues, and to Washington twice, without learning anything. Who, this side of the Atlantic Ocean, has any? NEWTON WRIGHT.

*Lyndonville, Vt., March 17, 1870.*

REMARKS.—Do not know. Those who do will be kind enough to enlighten our interested inquirer. Darlington, in his "Weeds and Useful Plants," thinks the lentil is cultivated in the old world chiefly as food for stock—both herbage and seeds serving that purpose. The plant is sometimes seen in gardens here. When lentils are properly cooked, they are a tolerable substitute for beans, are much prized as food by the Mexicans, and form the basis of the "Linsen soup" of the Germans.

#### GROUND FLOOR FOR A HORSE.

I have a horse that is sometimes troubled with tender feet. I lately removed him from his plank floor stall to one where he stands on the ground. Is not the ground the best floor for the health of the feet and legs of horses? JOHN.

*Franklin, Mass., April, 1870.*

REMARKS.—Undoubtedly it is. It is more labor to keep horses clean that stand on the ground, but their feet will keep in better condition if the ground is kept in order, which you will probably find it some trouble to do.

#### BLIND STAGGERS OR BLACK TOOTH.

In answer to P. Wilson of Becket, Mass., I would say that in the fall of 1868 I had four shotes which became entirely blind, and could not walk without frequently falling down. They continued to grow worse for several days, and got so bad that they could not stand. Up to this time nothing had been done for them. I then took a common pair of pinchers and pulled two black teeth from each mouth. They all got well and made fine hogs. E. R.

*Fitchburg, April 11, 1870.*

#### COWS SUCKING THEMSELVES.

A correspondent inquires for a remedy to prevent a cow from sucking herself. If he will take a pair of bridle bits, put them in the cow's mouth just the same as though she were a horse, and let her wear them there, it will not prevent her from eating, but will entirely stop her from drawing her milk. Splitting the tongue is barbarous, and will do no good. T. L. HART.

*West Cornwall, Conn., April, 1870.*

—The Directors of the Sacramento Valley Beet Sugar Association have determined to enter largely this year into the manufacture of sugar therefrom.

#### PRESIDENT W. S. CLARK.

The Massachusetts Agricultural College, of which this gentleman is President, proposes to educate farmers' boys. It is, then, no idle curiosity that prompts inquiries as to the qualifications and fitness of him to whom the instruction of the students and the management of the institution have been entrusted. The influence of the head man in all associations is a well acknowledged fact. Under the leadership of one man, a campaign fails; when commanded by another officer a campaign, by the same soldiers, is crowned with success. The same is true of commercial, manufacturing, financial and educational movements. We believe, therefore, that the following abstract of a biographical sketch of Mr. Clark, published in the *Amherst Record*, will prove interesting to many of our readers in Massachusetts and elsewhere:—

Mr. Clark was born in Ashfield, Mass., in 1826; graduated at Amherst College in 1848, \$700 in debt, which he paid, with interest, by teaching in East Hampton Seminary. He adopted the science of geology as a specialty; worked two years on the cabinets connected with Amherst College; and was appointed mineralogist to the geological survey of Vermont. To "finish his education" he went to Europe and after pursuing a two years' course at the University of Göttingen, and graduating at that institution, he swung his knapsack and made a tour through Switzerland, France, &c., mostly on foot, visiting the Universities on his way, and having interviews with Humboldt, Liebig, and other men of scientific note; paying his respects, also, to Vesuvius, in 1857, when that volcano was in an unusually excited state, and ascending the mountain when it was considered so dangerous that it was with difficulty that he could induce a professional guide to accompany him. After returning home, he was appointed Professor of Chemistry in Amherst College.

When the war broke out he drilled the students at Amherst, and in August, 1861, went to Annapolis as Major of the 21st Massachusetts Regiment. Thence he went to North Carolina with Burnside's expedition. In 1862 his regiment participated in eight battles—Roanoke Island, Newbern, Camden, Bull Run, Chantilly, South Mountain, Antietam, and Fredericksburg. After the battle of Roanoke Island he was appointed Lieut. Col. At the battle of Newbern he made a gallant charge upon a battery of six guns, one of which, an eight-pound brass piece, they captured, he being the first one to mount the gun. As a compliment to this bravery, Gen. Burnside made him a present of the piece. It was sent to Amherst College, and is now to be seen in the library building, with the names of the men who fell, engraved upon it. He was now appointed the Colonel of the regiment. During this eventful period, his men disappeared on the battle field like magic, and on the second day of the battle of Antietam, only seventy-five effective men remained of the regiment. Soon after they

were assigned to another regiment. Col. Clark now took command of some eastern troops, crossed the Alleghany, and for a time was stationed at Mount Sterling, Kentucky.

Col. Clark was a member of the legislature of Massachusetts in 1864, '65 and '67, the latter year receiving all but seven votes out of 772. In 1866 he was appointed Professor of Botany in the Agricultural College, retaining at the same time his professorship in the old college.

In 1866 he was appointed President of the institution, and on the second of October of that year the first class met to receive his instruction in the first term of that institution.

In 1853 he was married to the adopted daughter of Samuel Williston, East Hampton, Mass., and has seven children now living.

#### "THE SOUTH LAND."

Since the close of the war a large number of agricultural papers have been started at the South, and we have watched their progress with much interest, believing they were the natural result of a resolute purpose to begin at the foundation of real improvement of the interests and prosperity of the people of that section. Having a practical knowledge of the "creeping before we can go," which nearly all agricultural papers experience in their infancy, and which is well illustrated by the fact that for several of its first years the weekly circulation of the NEW ENGLAND FARMER was short of five hundred copies, we have sympathized with the publishers of these new papers at the South. Some of them, it is true, appear to have started off at once in the full vigor and strength of manhood, while others have had a longer "day of small things." The latter we judge has been the experience of the *Southern Ruralist*, which has shown a wonderful tenacity for life, and after many changes and migrations, now appears, together with the *Gulf States*, as *The South Land*, published at New Orleans, weekly at \$4, and monthly at \$2 per year; D. Redmond, Editor; "The South-Land Company" publishers.

The following extract from the salutatory of the *South Land* will indicate better than any words of ours the ability and spirit of our new contemporary. After a brief review of the past history of the South, the editor says:—

In the Southern culture to which we advert, the distinguishing and decisive factors were the planter, the political leader, the forensic orator, the punctilious cavalier. These would have done well enough in co-operation with other elements; but by themselves they proved woefully inadequate to fill the circle of a consummate development. In those days, the artist or the artisan, of Southern origin and education, was rare to such a degree as to be phenomenal. In those days, the applied sciences, outside of what are called the learned professions, could boast of few Southerners among their votaries. In those days, literature was scarcely known in the South, except as an elegant pastime. In those days, the press of the South was for the most part rather an incident in the plans of politicians, than a political power in

itself; and the rising politician was supposed to have his editor, as the knight of old was supposed to have his esquire. Few Southern papers could then afford to be independent, because few were then self-sustaining. Had literature taken a firmer root there, had the press been a more powerful and fruitful institution there, had industry been more diversified there, had culture been more comprehensive and manifold there, it is not conceivable that, for the South of ten years ago, such a catastrophe, as actually befel her in the intervening period, could have impended.

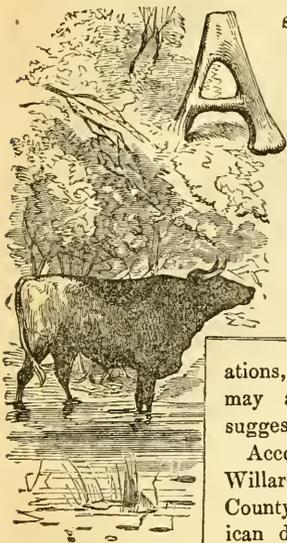
But we feel persuaded that in respect to all the requisites of a complete and symmetrical development the South is to grow hereafter as she never grew before. Nothing less than the assurance that the future of the South is to be widely different from her past, and infinitely more satisfying than her present, could have prompted, or would have justified, the enterprise to which the founders of this publication have deliberately and unreservedly committed themselves.

#### THE RAPE PLANT.

In Fond du Lac and Calumet counties, Wisconsin, some of the German farmers have introduced the cultivation of this oil-producing plant, so generally cultivated in Europe. The quantity marketed at Fond du Lac in 1869 was 4000 bushels, and in 1866 over 20,000 bushels. About two gallons of oil are made from a bushel of seed. The *Prairie Farmer* says, the average yield of rape seed by good farmers has been from ten to eighteen bushels per acre; though some have raised as high as thirty-five bushels. The price for a series of years has ranged from \$2 to \$2.50 per bushel. So far from impoverishing the soil, it is found that the ground, the year after a crop of rape is taken off, will yield from five to eight bushels more of wheat than it will if any other grain has been sown. The soil is also in excellent condition for almost any other crop. The chaff is relished by cattle, and when it is mixed with roots it makes an excellent food. The straw may be used for bedding purposes. The rape seed cake—the portion that remains after the oil is expressed—is a most valuable food for cattle. As a food for dairy cows it has long been celebrated in Europe. The ground cake has sold this year at from \$16 to \$20 per ton.

HOW TO KILL LICE ON CATTLE.—A correspondent, "R. N.," of the *Country Gentleman*, "dissolved about a pint of strong soft soap in a pail of warm, soft water, and saturated the whole surface of a lousy cow's body with it; after about thirty minutes, repeated the operation, and in thirty minutes longer took a pail of clean warm water and quickly and thoroughly washed out all the soap water and dead lice in large quantities, put her in a warm stable and covered her with a dry blanket. The next day, after being thoroughly dried, she looked, and seemed to feel, like a new animal; more than doubled her quantity of milk within twenty-four hours and immediately commenced gaining flesh and general thriftiness.

## MILK, BUTTER, CHEESE.



As the season for dairy operations is at hand, we gather up and give below some of the most important facts stated during the late winter meetings. Some of them will tend to encourage these operations, while others may afford valuable suggestions.

According to Mr. Willard, of Herkimer County, N. Y., American dairying now involves a capital of more

than \$700,000,000. The cheese product sold last year for more than \$30,000,000, and the butter product for at least \$150,000,000! In 1865, the butter product of New York alone was estimated at \$60,000,000. That year there were thirty millions of gallons of milk sold in the State, which, at four cents per quart, amounts to nearly \$5,000,000. The cheese product of 1869, 240,000,000 pounds, and the butter, 700,000,000 pounds, both together, representing a value of \$215,000,000.

These totals will be greatly increased, when one-half of the butter made is fit to eat, and our people have learned that cheese is a cheap and healthful article of diet; cheaper than meat, and decidedly better as food in warm weather.

The American system of butter-making, the same writer states, is based upon five main principles:—

1. Obtaining rich, pure milk.
2. Setting the milk aside for the cream to rise.
3. Proper management in churning.
4. Expelling the buttermilk.
5. Thoroughly salting and packing the butter in oaken tubs, tight and clean.

What really distinguishes the American system is in the manner of setting the milk so as to secure an even temperature.

A successful Pennsylvania dairyman gave as

the rules by which he manufactured his well-known butter, these three:—

1. Attention to the food of his cows.
2. The temperature.
3. Neatness and refinement at every step of the process.

The remarks of Dr. MIDDLETON GOLDSMITH, at the Dairymen's Association at St. Albans, in January last, evinced much research, and abounded with valuable statements and suggestions. He regarded the cow as a factor, a mere machine, whose proper function is to convert food into butter and cheese, and in her perfect development she is adapted to one and not to both. Cows differ. Some are butter cows, some cheese. Which ever product the farmer desires to make, he should inquire carefully and scientifically which breed [or, which cow of any breed—ED.] is best adapted to the purpose.

Other things being equal, cattle consume food in exact proportion to their live weight. He detailed a method of testing the product of cows by a glass tube which, we believe, is a common practice in New England. These tubes may be procured in Boston for a few cents each.

Having decided what breeds are the best for certain purposes, the next vital question is that of food. The real question is not the nutritive value of the different kinds, but the money value of the product. This, however, is complicated with varying values in different localities and with climate. He believed the question of

#### Feeding Roots,

the most vital at the present time in the State of Vermont, and in settling it the cost of production and their market value should be considered. He would have it tested practically, by feeding hay alone for a time and then hay and roots conjointly, carefully testing the product of each experiment. The next question of importance is,

#### How to Preserve Butter.

It can be preserved. There is no doubt of this. In 1839, the Doctor said he ate good butter in Canton, China, that was made in Ireland two years before. Hassal says that the best butter has three per cent. of curd, and bad butter much more, and that rancidity is owing to changes in the curd.

The leading point in the Doctor's remarks

were, that the Association they were then inaugurating should investigate these questions and disseminate their knowledge, and it must secure the means of indemnifying able committees who make the investigations. "We have," he said, "no great institutions as they have in France and Germany, where they can be tested at public expense. \* \* \* Whatever its intent, the Agricultural College grant has done little or no good to agriculture, and he questioned if it ever will till it passes from the control of literature into the hands of farmers."

An address was made by the Hon. THOMAS G. ALFRED, of Syracuse, N. Y., upon "Salt and its uses in the Dairy," and an interesting discussion was held upon "Breeding of Dairy Stock."

The whole proceedings of the Convention should be published in pamphlet form, and made available to all.

**DISSOLVING BONES WITHOUT VITRIOL.**—The value of bones for manurial purposes is well understood by farmers; but mills for grinding them are expensive, and vitriol for dissolving them is dangerous stuff to handle, as well as expensive also. C. T. Alvord, Esq., of Wilmington, Vt., announces, in the *Rural American* a discovery that may be valuable to many farmers. He has found that a hen's gizzard is a good bone-mill, and their gastric juice a practical substitute for the burning acid. Then with a little of that patented material known as "Dry Earth," placed under the roosts, a domestic guano is produced which proves to be one of the most valuable manures that are made on the farm or that can be bought in the market. As the bones are collected they are carried to a flat stone under his shed and pounded with an old axe or hammer just fine enough for the hopper of his hen-power mill; and this is all the time or labor required to secure most a valuable superphosphate. As hens in winter are unable to obtain insects, worms, bugs, &c., on which they feed in summer, they eat the pounded bone greedily, and pay for it not only by the manure produced, but by an increased quantity of fresh eggs, always acceptable and always valuable during the winter months.

—A correspondent of the *Rural New Yorker* says, a mare should not be used for breeding until five years old. Old age does not make any difference, if the animal is sound, and of a good constitution. By all means use your best mares. I have a colt foaled June 2d, 1868, that was awarded three first premiums last fall. The dam is twenty-two years old, and now, at the age of twenty-four, is with foal."

For the New England Farmer.

POTATOES.

Manure and Cost of Cultivation—Different Varieties—Facts and Theories in relation to the Rot—Preventives, &c.

As seed time is upon us again, I propose to give you a few notes upon the potato, taken from my farm journal.

I take issue with those gentlemen who believe that the Orono, as a variety, is running out. I have raised them the past ten years, and I never had better or handsomer potatoes than I harvested last fall. Their quality is not excelled by the Excelsior or Early Rose, grown on the same piece. The ground is a ridge of dry land; no manure was used except a compost prepared as follows:—four bushels leached ashes; one peck lime, slacked with brine as salt as salt would make it, and one peck gypsum. A handful of this mixture was put in each hill. The account stands as follows, which I take from my farm accounts:—

1869.	Potato Crop Account, 1¼ Acres.	DR.
To breaking up last fall, . . . . .	\$7 50	
May 12, to harrowing, . . . . .	2 75	
" 20, " planting, . . . . .	7 75	
" " " compost, estimated, . . . . .	2 25	
" " " 8½ bushels seed, . . . . .	4 25	
June 14, " cultivating, . . . . .	1 50	
" 24, " hoeing, 3 hands 9 hours, . . . . .	4 05	
" 25, " " 4 " 6 " . . . . .	3 60	
Oct. 6 to 18, " digging potatoes, . . . . .	14 00	
" " " interest on land, . . . . .	8 00	
Total, . . . . .	\$55 45	
Profit on crop, to balance, . . . . .	34 55	
		\$90 00

CR.

By 200 bushels potatoes, at 45c. . . . . \$90 00

It will be seen that the whole cost of cultivation was \$55.45, making the cost of the potatoes twenty-six and one-half cents per bushel. The 200 bushels include 15 bushels Early Rose, 12 of Early Goodrich, and 4 of Excelsior, which, if sold at market prices for these varieties, will increase the item "Profit on Crop."

In keeping this account I have charged fifteen cents per hour for labor, the same as we pay for good hands who board themselves.

I doubt the practicability of the theory of bringing potatoes from the mountains of Peru, in order to obtain varieties that will be free from disease after they have been cultivated and improved so that they will be fit for human food. In my opinion it is forcing, feed, and manipulating which renders the plant so much more susceptible to disease than in the wild state. I believe the disease is caused by a species of fungus, similar to the rust plant that attacks wheat and other grains. Microscopists tell us that this fungus, when put under a powerful microscope is found to be a perfect plant, to grow and ripen seeds. These minute seeds or spores are floating through the air, and at certain seasons and under certain circumstances attach themselves to the leaves and stalks of the plant, and use the sap that was to go to the development of

the plant itself, thereby causing it to wither and die before it had arrived at maturity. Before the circulation between the plant and tuber ceases, the disease may be transmitted from the former to the latter through the pores, or the minute seeds may be washed from the plant through the soil directly upon the tuber, where it soon germinates, causing the tuber to turn black and decay. I am confirmed in these views by the following observations, which were noticed at the time:—

The 10th of September was cloudy and misty. There was moisture enough to render the potato plant soft and flabby. Four or five hot days followed. Up to this time the tops of the Orono, Excelsior and Harrison were flourishing. The Early Rose were ripe and in the cellar.

The 16th I noticed many of the leaves had turned black, and gave off a rank and disagreeable smell.

The 17th was also cloudy and misty, and cleared off warm and muggy. I soon noticed that the black leaves increased, and in some localities the plants began to die. The attack, however, was not very severe on my field, for the reason that I used no rank, unfermented, nitrogenous manures to cause a vigorous growth of tops; and this, I believe, is the whole secret. The ranker the tops, the more capable they are of receiving the rust plant, the cause of the disease.

Sept. 25th, dug twelve bushels of Oronos; tops green, with the exception of these black leaves, and an occasional dead stalk. Not the first sign of disease was observable on the tubers. We selected one bushel from this lot and exhibited them at our State Fair, and they were awarded a premium.

Sept. 28 had a hard frost, the first of the season of any account, which killed the vines.

My time being taken up at the fair, and by the great freshet of Oct. 4, I had no opportunity to dig again until the 7th. Then I found that the disease had commenced on the tubers, some of them showing black spots around the eyes. It seemed to increase up to the 18th, when I finished digging. We were very careful to throw out all that were infected; yet the disease prevails to some extent at the present time. In picking out some for market, a few days since, we found about one bushel in ten infected.

Now, in my opinion, the potatoes that commenced to decay after they were put into the cellar, were contaminated before the circulation ceased between the top and the tuber. These very minute rust seeds might have been conducted through the pores by the circulation of the sap, the same as the smut is conveyed to the newly-formed grains of wheat when they grow and perfect themselves on the tender, milky substance of the new kernel; or they might have been washed down by the heavy rains between the 4th and 13th, and

after the potatoes were carried into the cellar the spores commenced growing.

The only way to guard against this scourge is for farmers to be more observing,—try more experiments, by planting at different times and with different varieties, and using different fertilizers; making a note of the result, and not trust to memory, and then compare results with others. When a variety is found that is hardy and of good quality, procure it. When a method of manuring, seeding and cultivating is found that gives better results than others, practice it. If you applied 10 or 12 cords of manure to your acre last year and lost three-fourths of your crop by rot, is it not sufficient reason for you to adopt a different course this year?

My Early Rose were put into the cellar the last of August and the first of September. I have not seen a diseased tuber in the lot, and the quality is unexcelled. The Excelsiors rot the worst of any. The Harrisons are free, but the quality is very poor.

This year I shall discard all kinds but the Early Rose and Orono. The last named is the only one we can sell here for the Boston market.

S. C. PATTEE.

*Warner, N. H., April 4, 1870.*

REMARKS.—In connection with the publication of the foregoing interesting and valuable article, we wish to ask our correspondent and other potato raisers if they have ever experimented with lime as a destroyer of the germs of the disease which may attach to apparently sound tubers when put in the cellar. A statement that a sprinkling of lime on the potatoes as they are packed away will prevent subsequent rotting has been copied into many agricultural papers.

*For the New England Farmer.*

#### WHAT SHALL WE DO WITH OUR CORN?

The advocates of a larger production of corn in New Hampshire who met in mass meeting in Manchester and Concord did not tell us how to use corn. One correspondent of the FARMER says "we need a large amount of corn or some kind of grain to make beef."

The foundation of our beef is milk. There is nothing better in summer than good grass to produce milk; next to grass is corn fodder, grown purposely for food. No corn meal is needed. It cannot be fed profitably, even at seventy-two cents per bushel, with grass or green corn, plenty, when milk alone is the object.

For milk in winter, there is nothing better or cheaper than early cut and well cured grass. We have a cow seven years old, which dropped her calf Jan. 17. Her milk of Fri-

day, Jan. 28, with that of Saturday and Sunday morning weighed seventy pounds, and yielded seventy-seven ounces of pure butter, free from buttermilk or salt. She ate nothing but early cut hay; no grain of any kind or roots. Another week the same cow averaged thirty-three pounds of milk per day; the increase was caused by the addition of a quantity of grain.

We may be sure of a rich and abundant flow of milk both in summer and winter without grain. With plenty of milk we can keep our calves through the first winter in a thrifty condition. After that, good pastures in summer and good hay in winter will produce beef without grain.

Col. Clough, the king of corn growers in Merrimac County, remarked at the meeting in Concord that his principal income was from beef sold from his pastures. Grain is not needed for the production of such beef.

It was said that 1,500,000 bushels of corn were produced in New Hampshire, and that we purchased 1,000,000 bushels more. What is done with the corn purchased? More than 700,000 tons of hay are annually produced in New Hampshire. It will require more than 1,000,000 bushels of corn to make up the loss on the hay crop, occasioned by cutting late, and improperly curing it. But at that meeting not one word was said of the loss the State sustained in its hay crop, through ignorance and carelessness; while much eloquence was wasted in urging the production of more corn, to the exhausting of our fields—for it is an exhaustive crop,—to supply the want of hay.

To me this seemed like an effort to save at the spigot while wasting at the bung. We can buy corn at the West at prices which will pay to make it into beef and pork here, to be sold in competition with beef and pork from that section. What argument, then, can be brought against buying corn? Well fattened Eastern pork will sell for more money than the same pounds of Western pork. While the Western farmers are pushing their corn and wheat through our ports to find a European market, why should we not stop as much of it as possible upon our State hills to enrich them, so that when the time comes, seen by your correspondent, at no distant day, we may be better able to produce the corn the West will refuse to sell us, or railroads refuse to transport at living rates?

"Where neat stock is kept, the advantage of having the fodder ought to decide in favor of raising our own corn." We would urge all Eastern farmers to raise corn for fodder. We believe an acre of corn grown for fodder alone, to be worth as much to feed to stock, if cut and cured at the proper time, as the product of the same acre in ripened corn, though produced, as the former may be, with much less labor, and at a season that will not interfere with haying, and with the advantage in the former crop of immediately preceding

grass, the most profitable of all our crops. We would never sell hay to purchase with the proceeds corn as a substitute. The farmer should make and sell flesh, rather than sell the flesh-forming products of his farm.

At the meeting in Concord corn was valued at \$1.50 per bushel, and that by farmers who consumed the corn they raised. It was at these figures that they found their profits to be 100 per cent. At the same time corn could be purchased for \$1.25 per bushel.

If there was a profit of twenty-five cents per bushel in feeding, the State might have gained \$250,000 by purchasing 1,000,000 bushels, as it did last year. The purchasing of that corn need not in any way interfere with raising all we otherwise could. F.

*Mass Yard, N. H., April, 1870.*

*For the New England Farmer.*

#### LETTER FROM VERMONT.

Dairying—Cheese, how to Cut and Keep; Price and Scarcity—Oats—Arnautka Wheat—Barly—Preserved Fruits—Crab Apples—Apple Orchards—Black Naples Currant—Apple Tree Nurseries.

While attending a meeting of the Glover, Vt., Farmers' Club, and assisting in the discussion of Dairying, I had the pleasure of tasting a piece of the cheese that drew the first premium at our fair in 1869. The process of making, as furnished by Mrs. Brewster, was published a few weeks ago. I send you a piece. Although it is about twenty-one months' old, it is free from mould. It was cut in October by its owner, Benjamin Hancock, of Glover. When a slice is taken out, the cut surface of the remainder of the cheese is spread over with butter, and a piece of paper stuck on to keep out the air. The cheese is covered to protect it from air and cold weather. Where a whole cheese, of fifty pounds weight, is bought by a small family, some such device is necessary to prevent mould and drying. Cheese retails here at 23 cents per pound. There is little in our market now, and sometimes there is none.

#### Cereal Grains.

I send you some packages of grain raised from seed received from the Department of Agriculture, and also of the Norway oats—Ramsdell's.

The *Somerset oats* are a very early variety of English oats. I sowed them May 5, headed out July 15, ripened August 5; straw, large and stiff; yield fair, but sowed only one quart.

*White Schonen Oats*, from Germany; sowed two quarts; yielded over two bushels; ripened August 15; grain plump; several stalks from one seed; a promising grain.

*Black Swedish Oats*, ripened late,—September 12; good thrifty grain, but too late; with a beard on most every kernel. They are quite different from Norway oats in style of growth, and other respects.

*Norway Oats.* The package I send you is of a second crop from seed obtained of D. W. Ramsdell. In the spring of 1868, five bushels of seed were bought and divided in this neighborhood. The best yield was from one bushel sown by S. B. Brewster, whose crop was fifty bushels. These were mostly sold at from \$2.50 to \$3.00 per bushel. In 1869 the yield was good, but not as high as 100 bushels per acre in more than one instance. Several men had each from 200 to 300 bushels. These were sold to Ramsdell & Co. for one dollar per bushel. One or two carloads have been shipped from this county during the past winter, but most of the lots in this town have not yet been called for, and are held with some uneasiness by the farmers who are anxious for their money. Some lots can be bought at a trifling discount. In most cases these oats have fulfilled the reasonable expectations of the growers, in heavy growth, freedom from lodging, and good yield of grain, weighing from thirty to thirty-seven pounds to the measured bushel.

*Arnautka Spring Wheat,* is a heavily bearded variety, with short, plump heads; the grain is light colored and very flinty. I raised nearly three bushels, and have sold three pecks at \$1.00 a peck. I have had no experience with the flour from this wheat, but some fears are expressed that the bran will break so fine as to mingle with and darken the flour.

The *Saxonian Barley*, a two-rowed variety from Hamburg, is very productive. I have about two and a half bushels. Sowed three packages of seed.

#### Preserved Crab Apples.

I send specimens of preserved fruits put up last fall. The crab apples are of the "Queen's Choice" variety. They are not as large as some others. My fruit is about one and a half inches in diameter; large enough to pare for pies or to eat—for which purposes they are very good. We like them best preserved. Make a syrup of sugar and water, one-half pound sugar to a pound of fruit, and boil the fruit in this syrup about ten minutes. Some American Fruit Preserving Powder was also used. The apples retain their shape and are considered very palatable. The crab apple has been sold all through the northern part of Vermont, of many varieties,—some larger and some smaller than those I raise. They are also recommended for cider. The trees bear every year, and are very ornamental as well as useful.

#### The Black Naples Currant.

While growing, these currants have an unpleasant muskiness that excites at first a prejudice against them. We make a preserve with one pound of sugar to one pound of fruit, cooked together. This preserve has a peculiar richness of flavor that commends itself to the taste as one becomes accustomed to it.

As most of the apple orchards of native trees died out a few years ago, and common apples that used to sell at twenty-five cents per bushel, are now sold at one dollar or more, the farmers very generally look to other sections of the country for their fruit. But more recently a nursery has been growing up in our midst, where, by careful experiments, the hardy sorts of fruit are tested and selected for propagation and sale, and the prospect is that Northern Vermont will raise enough apples for home consumption, and a pains-taking man may have a pear tree or grape vine, yielding its regular crop.

*Irassburg, Vt., April, 1870.* Z. E. J.

REMARKS.—Our attentive correspondent will accept thanks for his many favors.

#### MAKING SOAP.

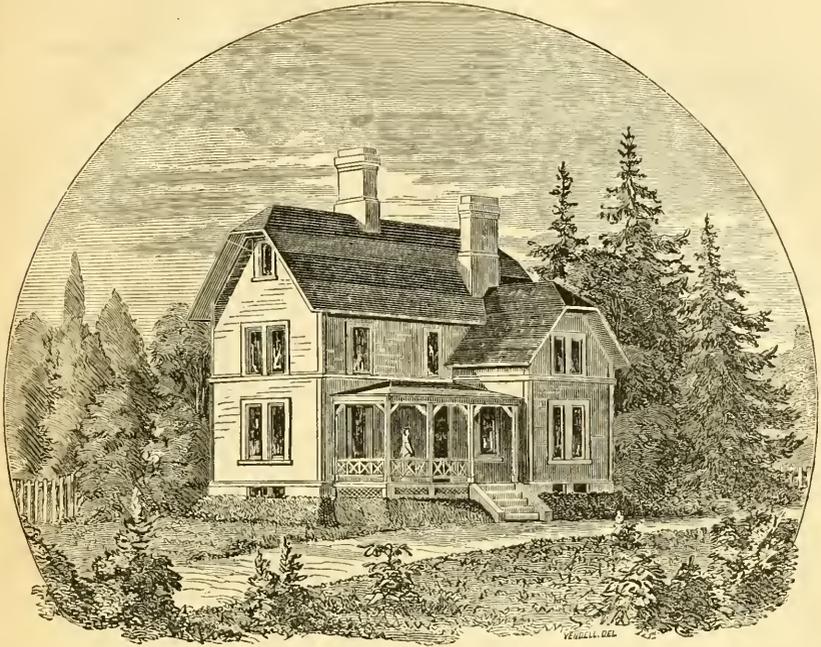
Every farmer's wife is proud of a good barrel of soap, but some are so unfortunate as to seldom get one. They try hard enough, but the ashes are sometimes poor, or the right proportions of lye and grease are not used; at other times the soap appears to be good when put up, but changes entirely after standing a few days. The last trouble usually arises from getting the soap too strong and diluting with water. If very strong, it will be thin and dark, and by adding cold water and thoroughly stirring, the color is changed many shades lighter, and the mass thickened, giving it the appearance of a number one article, when in reality it is very poor.

Hickory ashes are the best for soap making, but those from sound beech, maple, or almost any kind of hard wood, save oak, will answer well. A common barrel set upon an inclined platform, makes a very good leach, but I much prefer one made of boards set in a trough in V shape, for the strength of the ashes is better obtained, and it may be taken to pieces when not in use, and laid up.

First, in the bottom of the leach put a few sticks; over these spread a piece of carpet or woolen cloth, which is much better than straw; put on a few inches of ashes, and from four to eight quarts of lime; fill with ashes, moistened, and tamp down well—tamp the firmest in the centre. It is difficult to obtain the full strength of ashes in a barrel without removing them after a day's leaching, and mixing them up and replacing. The top should be first thrown off, and new ashes added to make up the proper quantity. Use boiling water for second leaching.

Take about four gallons of lye, and boil up thoroughly with this twelve pounds of clear grease, then add the lye as it is obtained, keeping a slow fire and stirring often, until you have a barrel of soap. After boiling the grease and four gallons of lye together, it may be put in a barrel and the lye added there, which will form good soap if frequently





[Entered according to Act of Congress, in the year 1870, by R. P. EATON & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

## RURAL ARCHITECTURE.

BY GEO. E. HARNEY, *Cold Spring, N. Y.*

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

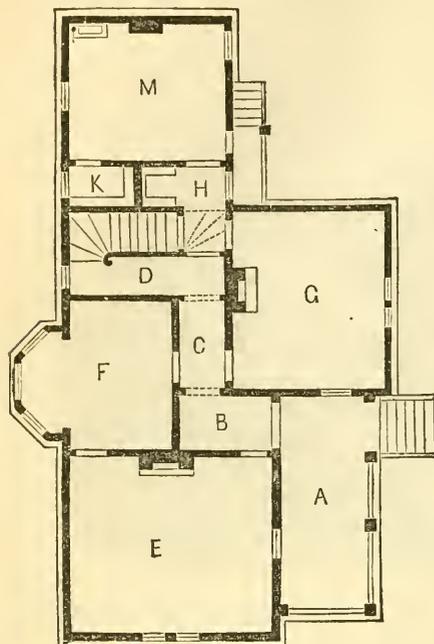
### No. 3.—AN ECONOMICAL VILLAGE HOUSE.

This design was prepared for execution near Boston, and comprises an amount of accommodation very often required in New England villages, besides being well adapted by its shape for a narrow village or suburban lot. We will suppose the lot to be sixty feet in width, (which is an ordinary frontage,) by a hundred or more in depth, and so located that the front veranda and entrance door will face towards the south. This will allow the house to be placed quite near the north line, or within, say, eight feet of it, and along the south side will be a foot path and grass, or a drive-way, as the owner may fancy,—there being about twenty-four feet left between the house and the south line of the lot. The house is placed upon a banking, so that the main floor is about five feet above the grade,

and, approached by a number of steps, is the veranda, which shields the front entrance. The veranda is nine feet wide.

The arrangement of the plan is as follows: B is an entry, five by seven and a half feet, and C a passage four and a half feet wide, connecting it with the staircase, which, as there is but one, is placed somewhat away from the front door, both for greater privacy and greater convenience. The stairs are three feet wide and continue up to the attic. E, the parlor, is a pleasant room, fifteen by seventeen feet, to which it is proposed at some future time to add a bay window, projecting it from the front, where the mullioned window now is. F is the library, nine by thirteen feet. It has a bay window, opening from the north side and is intended to be fitted up with

dwarf book-cases about four and a half feet high on two of the other sides. G is the dining room, on the south side, measuring thir-



Ground Plan.

teen by fifteen feet, and having an outlook along the veranda to the street in front. H is a passage connecting the kitchen with the dining room. It has fitted up in it cupboards for china, as shown on the plan, and from it are reached the stairs to the cellar. K is a good-sized store room fitted up in the usual manner, and M is the kitchen, twelve by thirteen and a half feet. There is a door opening from it on the south side, communicating with the yard.

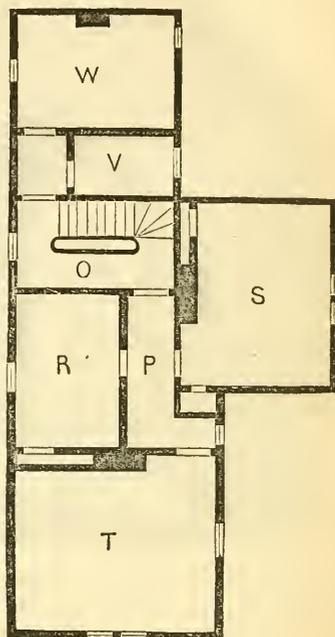
In the second story are four chambers, corresponding in size with the rooms below, except that spaces are taken off for closets. There is also a bath room in the kitchen wing.

The attic has one room and a large space for storing.

The cellar extends under the whole house, and has outside doors under the back stoop. The principal stories are nine feet high in the clear.

The house is designed to be built of frame, covered with hemlock boards and clapboarded, —the roof to be shingled. The eaves project two feet and the external finish is simple, but

bold. All the windows have outside blinds, except those in the cellar. The inside finish is simple, in keeping with the general character of the house.



Chamber Plan.

**COST.**—This house was estimated upon in March, by a competent builder, for actual construction, and his figures were \$2800 for completing the building ready for occupancy, including cistern and cesspool, but not including furnace, plumbing, or the grading of the banking.

**THE DAISY.**—Good words have been spoken for the Canada thistle, twitch-grass, and most other farm pests, by benevolent-minded agricultural writers, and now in Mr. Warren Ferris, of Otsego County, N. Y., the poor despised Daisy—known also as white weed, white daisy, ox-eye, &c.,—finds an enthusiastic advocate. In an article in a late number of the *Country Gentleman*, he offers to gamble on the superiority of the daisy over clover for enriching and improving land. He proposes that two acres of dry, worn-out land be taken for a test. On one acre a peck of daisy seed, and on the other a peck of clover seed, shall be sown, both without fertilizers; turn them both under when in full blossom, and sow both acres to any crop that may be chosen. Fifty dollars that the yield on the daisy land beats that on the clover land.

## MR. WARE'S ADDRESS.

In our recent acknowledgment of the receipt of a copy of the transactions of the Essex County, Mass., Agricultural Society, we gave an extract from the address by Benj. P. Ware, Esq., a practical farmer, and we give below a few other extracts, regretting that we have not space for the whole address.

## Progress in Farming.

"Within my remembrance, it was indeed a laborious task for a man to conduct the business of a farm successfully. He was expected to turn the double swath in the mowing field, to lead the hired men as they were desired to follow, to pitch on the hay, to hoe the hardest row—in short to bear the brunt of the work. Great physical strength, and endurance, as well as good judgment, were indispensable. But now what a change! To lead the labor of the farm does not require great strength and power of muscle, but brains are called into requisition, and skill in the management of machinery. He can overlook and direct those less skilled than himself, while riding around the fields on some of his machines."

By the use of machinery, some of which is simple and can be made by the farmer himself, he thinks all the root crops can be grown with about one-half the labor formerly required. He says, that the changing of an inferior variety of apples or pears for a superior one, is now so simplified by the use of a *liquid grafting-wax applied with a brush*, that no one need be without the best fruit who has healthy trees. But here is the difficulty. Who has *healthy trees*?

## Potatoes and other Root Crops.

"The neighboring State of Vermont, has made such vast strides in the improvement of the potato as to cause those who have lived through the *morus multicaulis*, the *Rohan potato* and *hen fevers*, to stand aghast, waiting for the excitement to abate, to see if Breeze's No. 4 is really *two hours* earlier than the *Early Rose*! But all may be assured that great improvement has really been made in the potato. And yet there are persons among that numerous class who, because they lived upon a farm until seventeen years of age—and so, forsooth, 'know all about farming'—are asking what improvement has been made in agriculture?"

Whoever heard, until within a few years of seventy-four tons of mangel-wurzel being grown upon one acre of land; of thirty-six tons of carrots, or 900 bushels of onions per acre? Such crops as these are facts that can be proved."

If it be true, then, as some French and German chemists estimate, that 250 lbs. of beet roots equal 100 lbs. of hay, "according to this estimate the above crop of mangolds would equal in value nearly thirty tons of hay; or, supposing the chemist's estimate to be only half right, the root crop would then equal fifteen tons of hay per acre!"

Mr. Ware states that it has been ascertained by actual experiment, that breeding swine can be kept upon raw mangolds alone from October to May, in good, thrifty condition. Can any one doubt, he adds, with such facts, the great advantage of growing this and other root crops?

## Ayrshire Cows.

He thinks Ayrshire stock has proved the best adapted to our pastures, and, for milking qualities, heads the list.

## Curculio---Fruit.

In speaking of the failure of the apple crop, he says:—

"By the use of printer's ink and tarred paper, from Nov. 1, to April 1, at a cost of from five to eight cents per tree, our orchards can be protected from the canker worm; and may again be blessed with abundant crops of that beautiful, delicious, and health-giving fruit. My own experience is that no part of my farm yields greater income for the labor expended than the orchard. If the crop is small, the price is usually large."

We wish this were so over broader regions. The wood upon thousands of apple trees in New England increases each year, the trees blossom abundantly, and plenty of apples are formed, and yet little or no crop succeeds.

If the cause of barrenness was the drought of four or five years ago, would the trees grow, and bud, and blossom, and set their fruit? We think not.

There is some cause acting upon the trees, as in the case of the button-woods, which we have not yet ascertained, and, perhaps, never shall. "Yet," we say with Mr. Ware, "let us [if we can] take heart, continue to cultivate the apple as a source of profit, of health to our families, and of growth to our social natures." We believe in a good exercise of faith in all things.

We should be glad to transfer the whole of this admirable address to our columns. Its opinions have been formed on the farm, amidst its multifarious duties, in rearing stock, preparing soils, and cultivating them with various crops of roots and fruits as well as grass and grain; in the use of nearly all the improved machinery and implements best adapted to avert human labor, and, more than all, in what will help the race to become upright, intelligent and industrious people. One or two extracts more will be all we can find room for at present.

## Does Farming Pay?

"Yet, after all, does farming in Essex county pay? \* \* \* \* I need only to refer to the returns of the income tax to find instances where men by farming alone, have in this county returned annual incomes amounting to from \$3,000 to \$5,000,—enough to buy a good farm, with fair buildings. I could name an Essex County farm, of fifty acres, valued at \$10,000, the gross products of which were enough in one year to pay for it. It was an unusual occurrence, but such was the fact for that year. \* \* \* \* I know of no kind of good farming that does not pay well, while no kind of poor farming will yield more than a poor living,—nor should it. Of course, any man who is a man, and cares for the comfort and happiness of his family, will see that abundance of vegetables, fruits, small and large, milk, eggs, and poultry are grown upon the farm for family use."

Pleasant and encouraging remarks were made at the dinner by Hon. M. P. Wilder, delegate from the State Board, by John Keeley, Esq., in relation to the decease of Hon. James H. Duncan of Haverhill, and by George Foster, on the death of Jonas Holt.

### HORTICULTURAL SCHOOL FOR WOMEN.

A few weeks since we published the names of the officers of an association of ladies and gentlemen of this city and vicinity, of ample means and liberal minds, designed to test the experiment of a horticultural school for women. The originators believe that certain branches of horticulture, such as flowers and small fruits, offer a healthful, appropriate and paying business for women, many of whom now complain of a want of honorable, remunerative employment in the various industries open to the other sex. But horticulture is a trade or an art that can be acquired only as other trades and arts are acquired. This association is now ready to afford the instruction and the opportunity for practice necessary to enable women to become practical horticulturists. Thus far, however, it is only a *proposed* experiment. As it requires two to make a bargain, the questions now arise, Do women wish to learn the art of raising flowers, strawberries, currants, &c., as a business? If any, how many will become pupils in the proposed school? Hence the advertisement which we recently published, soliciting correspondence with those women, either young or old, who are interested in the proposed school. The advertisement was published in our paper that the attention of farmers' daughters, especially those living near a good market, may be called to the subject. With the instruction that might be obtained in a short time at the proposed school, it is thought that many such "daughters" might return home, and, with the aid of the other members of the family, introduce upon the old homestead a new employment, a new source of income, and a new adornment of the country home.

*For the New England Farmer.*

### ATMOSPHERIC MOISTURE.

Its Causes and Effects as Regards the Farm.

Read before the Concord Farmers' Club, February 3d, 1870, by FREDERICK G. PRATT.

The changes in moisture on the surface of the earth are probably caused by movements of the air in various ways, over which we have or can have but little control; and any facts I can find that bear on this subject, only prove how little we know, or can do, towards controlling these agents.

Thus we know that clouds are the result of vapor in the air, coming together in larger particles, so as to be sensible to the sight. These, growing larger, drop in the form of rain, hail or snow, according to the temperature of the air; or, conditions being different, these clouds become dispersed, the particles of moisture being separated,—the same amount of moisture in the air, perhaps, but more finely comminuted. Now is there any way in which we can control this moisture in any degree? I think there is. Look at this.

In the monthly report of the Department

of Agriculture, for December, 1869, in summing up the reports from the various parts of the country, in regard to the extensive drought prevailing the past season, are to be found these words:

"A fair summary of reports from the entire district affected by drought would be: Fields badly tilled, overrun with weeds, or with a thin sandy soil, or a heavy clay not ameliorated by culture, —were scorched and partially or wholly laid waste; while deep soils of river bottoms, rich slopes of virgin soil, and fields kept clean of weeds, and frequently cultivated, gave satisfactory and even large returns."

There is one way to keep up the moisture in the soil. *Keep the soil constantly loose and light with frequent cultivating.* I think most of the farmers in this club have seen its value in our corn crop in times of drought. *It comes from allowing the air to permeate the soil.*

Again, in the October report of the Department of Agriculture, I find these true words:

"The great agricultural lesson of the season inculcates the necessity of draining and thorough culture. It is not an exaggeration to estimate the reduction this season over the whole country, from the alternate drowning and scorching of the farm crops, at two hundred million of dollars. Reports from drought-parched regions declare that crops are in fair condition on land well worked, and that the effect of the heat was aggravated by want of cultivation as dry weather set in. That on *drained soils*, properly cultivated, fine crops were obtained; while on wet or undrained lands, and fields neglected or half cultivated a failure was imminent. The crop returns of Great Britain (where the early season was similar to ours) enforce the same lesson, though a far smaller proportion of British lands are not under-drained or poorly cultivated."

At the West, in Colorado territory, I find several authorities which prove that the rainfall is steadily increasing there. One says:—

"That the rain fall has doubled there since 1860, and the dry, and formerly arid, sterile plain between South Platte and the mountains west, which enclosed an extent of country averaging twenty miles wide by 100 long, cut crosswise by valleys, has been irrigated by ditches, and the high prairies have been farmed with the best results. This cultivation, by increasing the growth of grasses, weeds and bushes, has also created greater evaporation and moisture in our atmosphere, which returns to us when our east winds blow in summer, in most valuable fertilizing showers. This year, 1869, no irrigation has been needed until late in the month, when most of the wheat, oats, rye and barley were so far advanced that irrigation would not benefit them. It is a matter of universal remark here among old settlers, that high prairies, miles away from streams, can this year be mowed with profit for hay, where a year ago, grazing in July and August was only indifferent, the soil bare in many places, and parched, or covered with worthless cactus or prickly pear."

This shows what a change comes over the land where the soil is worked, and a chance is given by grass and other plants to absorb moisture, and retain it, to give it out again more regularly the season through. So in Egypt, the Great Desert is being brought

under cultivation by the same means. Once start the plants by irrigation, and moisture seems to increase, we hardly know how, till land that never saw a shower, begins to feel the grateful rain; and the once sand, blossoms like a rose. The initial proceedings there were done by the Viceroy of Egypt, by means of Artesian wells, and once the water runs, grass and trees start up, rains fall, and plants grow with all tropical vigor.

All through Colorado and New Mexico are evidences of this increase of moisture visible. Strange theories are advanced in regard to it. The natives, Mexican and Indian, say the Yankee brings rain with him; and there seems some truth in it. Thus at Denver, the town was first built on what was then supposed to be the dry bed of Cherry creek, as natives did not remember of water running there. A tremendous flood washed the town, and now bridges span the bed, and water occasionally runs, though not always, as ditches above, for the gold fields use it all before it reaches Denver, except in times of rain. Many creeks in this vicinity, formerly dry the most of the year, now run constantly, and even *new* creeks have been formed in some instances. Ditches for irrigation, in some cases, have been allowed to go to decay, the increased moisture rendering them unnecessary, and oats and corn grow luxuriantly now, where three or four years ago nothing would grow.

Mr. Thomas says, in one of these reports, from which I have quoted freely:—

“With these facts before them is it strange the citizens of the territories should claim that there is a gradual increase of moisture? \* \* \* Has the introduction of an active population into the country anything to do with this increase? I believe it has. But I am met by the objection that the amount of population is so small, compared with the extent of country. I admit the force of the objection; yet, until the climatic conditions of the country, and the relations of population to these conditions have been more thoroughly studied, the objection should not be allowed to prevail. We know not how nearly counter-balanced the contending agencies of aridity and moisture have been. The effect of opening mines in the mountains, stripping and burning the pine forests, making roads along the canons and over the plains, ploughing and planting the valleys, building towns, &c., &c., has not been sufficiently studied in the Rocky mountain regions to decide what number of individuals are necessary to disturb the climatic condition. Be this theory right or wrong, the *facts showing an increase* cannot be denied.”

The same was true of Kansas, when the land was new. There is moisture enough there now.

There is another theory which has some claims to plausibility, that may upset the last one mentioned. Some writers think there is a cycle of years, say fourteen, during which time the rain fall has gradually increased the first seven years, and as gradually decreased the next seven. As it is a new theory, time only can determine its truth.

*For the New England Farmer.*

#### NOTES ON ILLINOIS AND ILLINOIS FARMING.

EDITORS NEW ENGLAND FARMER:—According to promise, and by your kind permission, I propose to say something under the above heading.

Theoretically considered, Illinois is a vast plain, not quite horizontal, being more elevated at the north than at the south; as is shown by the direction of the principal rivers within and about her borders.

On a practical examination of the surface, we find it everywhere more or less undulating, in many places hilly, but never mountainous.

The rivers, creeks and brooks within the State, have their origin, most generally, in the level prairies, and depend for their water upon the rains; which, falling upon the porous, loamy soil, slowly finds its way down the imperceptible declivities into the more regular channels.

Toward the middle mouths and junctions of the streams, the more regular woodlands and forests are found, and the land is more uneven and hilly. The largest and finest forests are found in the southern part of the State, yet timber is everywhere plentiful, except that the great width of the prairies, sometimes makes distant hauling necessary. Strange as it may appear, the woodlands rise in price much slower than the prairies. This fact is contrary to the predictions of all the early settlers, and may be accounted for on the ground that native timber is much less lavishly used than formerly. Everywhere live hedges, cheap and excellent, are taking the place of all other fences. Coal is cheap and abundant, and pine lumber from the north is extensively used for building purposes.

Our native forests continually reproduce themselves, and in the absence of prairie fires annually enlarge their borders.

The principal forest trees are the oaks, hickories, maples, elms, ashes, poplars, black walnut, mulberry, sycamore, &c., &c.

We have four distinct soils; 1st. The pale, or mulatto loam on the prairie ridges; usually free from gravel, but sometimes quite gravelly on the sharpest knolls.

2d. The black loam of the more level prairies, which is by far the most plentiful, and on the whole the most valuable soil we have. It is our great corn and grass soil; entirely free from stone and gravel, it is easily worked and naturally very fertile.

3d. The yellow clay loam of the woodland hills. This soil is fine for clover, wheat and potatoes. It is very retentive of manure, and, when once well enriched, becomes the strongest and most productive soil thus far mentioned.

4th. The alluvial black soil of the creek and river bottoms. This is Nature's best soil, made and manured to order. Always the first

to be used by the pioneer cultivator; and, always to the latest generation producing the largest and finest crops of everything valuable.

In Illinois, this soil most often occurs in small quantities together, and in very inconvenient shapes for cultivation; and, also, being subject to occasional overflow, its value is quite inconsiderable.

Besides the soils mentioned as being general, we have in a few localities a sandy upland soil, both prairie and woodland; good for crops ripening early in the summer, and for potatoes; quick, warm and easily worked, but not good to stand drought.

The subsoil is quite similar throughout the State. It is mostly a compact yellow clay, not quite impervious to water. I send you by mail a specimen of the four principal soils mentioned, and of the subsoil taken four feet below the surface on the level prairie.

Our principal Illinois crops are *corn* and *grass*. These are thrown into the market directly, to a considerable amount. But a much larger portion of them is converted into *pork* and *beef* before being sold.

All of our soils when *new* are good wheat soils, and the woodland clay soil is such at all times. Oats, barley, rye and potatoes do well generally; yet, nearly every farm is valued for its corn and grass-producing qualities, and for its stock-raising and stock-fattening advantages. The farmers of Illinois get most of their regular income from corn, grass, and their natural consequents, pork and beef. All other crops and all other products are secondary to these great staples. Horses and mules are good; sheep do well; wheat and the other small grains, fruits, potatoes, &c., are raised at special times and in special localities with profit.

Yet, after all, it is easily seen that *corn* is *king*, *grass* is *queen*, and *beef* and *pork* are *prime ministers* in Illinois agriculture.

In future papers I purpose brief descriptions of how some of our farm crops and farm products are managed. Truly yours,

JOHN DAVIS.

Box 50, Decatur, Ill., April, 1870.

REMARKS.—With the foregoing interesting communication we received parcels of about one ounce of each of the four varieties of Illinois soil mentioned by the writer, and also a specimen of the subsoil, taken four feet below the surface of the prairie. These specimens we shall be pleased to show to any who may wish to see them.

IMPORTANCE OF GOOD COWS.—I had a cow from which we could not make over fifty pounds of butter a year, and that soft and white as lard. I had another that we could make two hundred pounds from in the same time, and solid, high colored, nice butter; but

we could never get the butter without from six to twelve hours persistent hard churning. I had another yielding two hundred pounds a year of the very best butter, requiring only ten to twenty minutes' churning.—*David Goodall, in St. Johnsbury, Vt., Times.*

#### THE GROWING OF CABBAGES.

George N. Prescott, an experienced gardener of Manchester, N. H., who has raised cabbages extensively for the last ten years, furnishes the following statement to the *Mirror and Farmer*:

My land is a light loam, with a sandy subsoil. When I break up a piece for cabbages, I plough from ten to twelve inches deep. I spread six cords of barnyard manure to the acre, and thoroughly mix it with the loam with the plough and harrow. I then furrow about three inches deep, the rows three and a half feet apart, and put into the hill a half shovelful of night-soil, well mixed with loam. I then cover the manure with loam, half an inch deep, with the foot, and make a smooth surface to drop the seed upon, and cover half an inch deep.

The next thing to be attended to is the black bug; it will sometimes attack the plants before they are hardly out of the ground. I have used plaster, and if it is kept on it will save the plants.

There has been for the last few years, a great complaint about stump-footed cabbages, and a great many causes suggested, the most common of which is the manure. In my experience, it is not the manure that causes the stump-foot, for I have used all kinds, night-soil the most, and it is rarely that I find a stump foot cabbage on my lot; if I do meet with one, it is on some hard spot where it has been made hard by turning at the end of furrows. I think that stump-foot is caused by hard, moist land, rather than by manure.

Any land that can be made mellow ten inches deep, will grow cabbages, if not too wet. In cultivating, care should be taken not to disturb the roots and leaves, as they are the sources from which the plants receive their food. I plant none but the best seeds that I can buy. For winter cabbages, I prefer the Stone Mason; for early use, the Winningsstadt and improved Brunswick.

—To make a mare own her colt, a correspondent of the *Rural New Yorker* directs to tie the mare up beside the barn where she cannot harm herself; put a cord around the neck of a good-sized dog; let the cord be fifteen or twenty feet long. Let the dog be set on the colt, holding the former by the cord so that he cannot bite the colt. The colt will run to the mare for protection, and she will own and protect it immediately.

### AGRICULTURAL ITEMS.

—A large vessel recently sailed from Boston for Cork, her entire cargo being Canada peas.

—The cranberry crop at Harwich, Mass., amounted, during the past year, to 3,761 barrels, which were sold for \$39,590.

—The Agricultural Editor of the *St. Paul Press* says flax-culture proved unprofitable last year in Ramsay Co., Minn., from a variety of causes. The crop was good, but it was difficult to sell it satisfactorily.

—H. Stillson of Monkton, Vt., lost thirty swarms of bees during the past winter. Others in that section also lost their bees, and it is thought this great destruction of the honey bee is owing to the lack of bee bread, which they did not produce last season.

—The Fitch brothers of Hatfield, Mass., fattened last season, 100 head of oxen and steers, and 165 sheep; they also raised the past season 60 acres of tobacco, and have that and about 40 tons that they have bought on hand, making in all some 90 tons.

—Almost every country paper published in the northern portion of Ohio, contains accounts of numerous cheese factories being built in their respective localities. At the present rate of increase there will soon be a factory in every school district on cheese-making territory, not only in Ohio but in other States.

—At a meeting of the New England Agricultural Society at Manchester, N. H., April 14, it was decided to hold the fair in that city on the 6th, 7th, 8th and 9th of September. Colonel M. V. B. Edgerly, of Manchester was chosen chief marshal, and Colonel George W. Riddle, the treasurer of the society, was appointed general superintendent.

—The four famous oxen recently marketed in New York, and fed by George Ayrault, averaged 3,300 pounds live weight when killed, having lost eighty pounds each while at market. At one time the largest weighed 3500 pounds. It is said that no records can be found of heavier bullocks in England or elsewhere.

—To be able to successfully check the insect scourge and eventually to destroy the more noxious kinds, it is necessary to understand their habits—the moth that lays the eggs, where and when to look for them, when the transformation takes place, &c., and the remedies to be applied to destroy egg, larva, pupa, or adult insect.

—A remarkably severe snow-storm occurred in the south of France, on the shores of the Mediterranean, during the past winter. So deep was the snow, that hundreds of palm trees were crushed and flattened down by it, like plants when pressed in a herbarium. The olive, orange and lemon trees, in the same district were nearly all destroyed; but the palms, though for ten or twelve days encased in ice and snow, suffered but slightly.

This fact leads geologists to doubt whether fossil palms necessarily indicate, as has hitherto been believed, the former existence of warm climates in the regions in which they are found.

—A committee of the Lexington, Ky., Farmers' Club have been appointed to examine a new hemp brake, the invention of a negro man, which was spoken of in high terms by some members of the association who had seen it in operation. Having read the discussion of the negro question by this club with much interest, we shall look for the report of the committee with some curiosity.

—If any dealer in evil prognostications should happen to run short of "stock in trade" any of these pleasant spring days, perhaps his drooping spirits will be revived by the fact that it is reported by some careful observer that exactly two hundred and twenty-four new spots made their appearance on the sun during the year 1869, and that it is predicted by some wise prophet that no corn will ripen in New England this year.

—The Lowell, Mass., *Journal*, gives the particulars of the sickness of a family in that city from eating a little raw ham, which subsequent examination proved to be filled with the trichina spiralis. Four of the children and the father and mother were prostrated, and for a time were in a critical condition, but with the exception of a lad about ten years old, they are doing well. Strange to say, two children have not been sick at all.

—One of the highest authorities on the subject of animal parasites is Dr. T. Spencer Cobbold, an Englishman. In a work just published, treating of trichinæ, he says that not a single case of trichiniasis in the living human subject has been discovered in Great Britain or Ireland. The animals have, however, been found in the bodies of some twenty or thirty individuals who died from other causes; and in every instance, it is thought, their presence was due to eating German pork-sausages, or other preparations of foreign meat. English swine are almost entirely, if not absolutely, free from the so-called disease.

### EXTRACTS AND REPLIES.

#### DAIRY BARN.

Having seen a number of plans of barns in your paper, I thought I would send you a plan of one that I think more convenient than those heretofore given in respect to putting in the crops and in the arrangement of the stables, the root cellar, &c.

I notice that in all that have been published the driveway is lengthwise of the building, by which a large space is occupied, making the stable too long, and necessitating room the whole length of the floor to feed the cattle.

My plan, supposes that the barn can be built on a hillside (although that is not absolutely necessary) driving in at one side. Hence one end and one side may be supported by a stone wall the height of the cellar; leaving the other and outer side and end to be built of wood or brick.

The barn is supposed to be built of wood, 65 feet long and 43 feet wide, with 16 feet post and a

steep roof. The outside to be covered with 17½ feet boards, planed and either battened or lined, and painted or not, as the builder prefers. The basement should be eight feet high.

Manure Cellar, 33 by 43 feet.	Root Cellar, 12x21	Bay, 20x43
	d	
d	Calf Pen, 12x21	d
	d	

Plan of Basement.

The size and arrangement of the apartments are sufficiently indicated by the Plan. The root cellar being directly under the driveway can be filled by a trap-door in the floor above. To make it safe against frost it should be built of brick or plank and filled on the sides and overhead with one foot of sawdust or chaff. Some advise not to go to the expense of building a root cellar, as they almost always prove failures. Such has not been my experience, after using one fourteen years at Essex Vt., previously to coming here, last April. I regard a root cellar as indispensable.

Feeding Passage, 5x33	d	Barn Floor, 12x43	Bay, 20x43
C. Stable, 11x33	d		
B. Stable, 11x33	d		
Feeding Passage, 5x33	d		
A. Stable, 11x33	d		
d	d		

First Floor.

I would not have any partition between stables B and C. In stables A and B, the cattle face each other. By building a leanto against the eorn opposite the passage by stable C, another good stable would be secured either for horses or cattle with all the convenien-es for feeding, &c.

The cows stand on plank four feet and ten inches long, with a drop of five inches and an inclination of one inch. The feed manger floor is made of matched boards. The cows are separated from each other by a plank one foot wide set up in the feed manger between their heads, and are fastened by stanchions. The stable floor should be placed on very strong timbers, and be made if possible so tight that the stench of the decomposing manure shall not affect the air of the stable. I would as soon omit to build a ventilator for the manure cellar as for the cow stable. Every cellar should be supplied with one, By all means give the cows all the light you can, and govern the air of the stable by well arranged air passages, avoiding as much as possible drafts of cold air. Bad air and sameness of food will cause barn itch. Feed sulphur when you do your salt,—and with other proper care, your cattle will not be troubled. Cattle never have barn itch that are kept out of doors.

As the hay extends below the floor, there is danger that if the hay rests against the brick or stone

walks it will become musty. This can be easily avoided by setting up some poles six inches thick, and nailing on boards or slabs, leaving a passage for the damp air to escape through the cracks above the walls. The capacity of the bay is very much increased by its extreme height from top to bottom, and the amount that can be stored in it is truly surprising. No difficulty will be found in storing eighty or ninety tons of hay.

Allowing three feet for each cow you can put in thirty-three; by building the leanto, already alluded to, eleven more can be added; and by using the space under the barn floor, and cutting through the wall to throw the manure into the cellar, room may be found for fourteen more, making it a cheap barn in which to put fifty-eight cows. This barn can be filled on either side to the ridge by that useful invention the horse pitchfork, and the fork can be used in taking the hay from the bay when it is too low to pitch up with ease by hand. Also, the pullies may be used to haul up the roots from the cellar. My plan was copied with satisfaction by two or three of my neighbors.

E. J. BUTTOLPH.

Buffalo, N. Y., April 17, 1870.

LIME FROM GAS WORKS.

Can you inform me if gas-house lime is worth anything to put upon land? Some are trying it upon their land about here. No one seems to know what good it will do. It can be had at the gas-house for two cents a bushel.

Woonsocket, R. I., 1870.

REMARKS.—The refuse lime of gas-works consists,—according to Prof. J. F. W. Johnston, of England,—principally of a mixture of carbonate of lime with a variable quantity of gypsum and other salts of lime containing sulphur and a little coal tar. He says it may be used directly upon mossy lands, and upon stubble land in spring, when preparing for crops.

In composts it has a tendency to be converted into gypsum. In moderate quantity it may be safely mixed, he says, with barnyard manure. If applied too generously, it is liable to be injurious to crops of young grain. But grass lands, though at first browned by its application, soon recover and repay the cost by yielding a greener and an earlier bite in the spring. We should advise to use it cautiously, in moderate quantity, as sometimes at least, it contains properties that are fatal to vegetation.

At a discussion on Manures, by the Herkimer County, N. Y. Farmers' Club, Mr. Whitman, of Little Falls, said the lime from paper mills, and the gas-lime from the gas-works can be turned to good account when properly applied. At first he did not know how to use it, and by putting on too much the plants were destroyed. He now draws the lime to the farm in the fall and winter and puts it in heaps. In the spring he spreads it from the cart as the team moves along, by giving each shovelful a sweep or flirt by which the lime is evenly spread over the field. In one season he applied about one thousand bushels of gas-lime to his meadows, and thinks it paid largely in the increase of the crops.

A writer in the *Scottish Farmer* says he obtained a quantity of gas-lime one year, but applied it so

liberally as to destroy his crops wherever used. But the next season vegetation was much more vigorous where the gas-lime had been applied than elsewhere. He therefore resolved to make another trial but with more caution. Instead of applying it, as before, in the spring, he spread it thinly over the surface in the winter, and after it had remained there for some time ploughed it in. He speaks of it as a preventive of "finger-and-toe" or club-foot in turnips, &c.

The fact, however, that there is so little demand for this article, is perhaps *prima facie* evidence that farmers and gardeners do not find it a very valuable fertilizer.

THE WILLIAMSON WHIFFLETREE.



By the contrivance shown in the above cut, the Evener and the two Whiffletrees of a double team are combined. As one tug of each horse is attached to the centre, nearly one half of the usual weight of lumber may be saved. Boys whose patience is so often tried and found wanting by stray legs in turning their team about, will be glad to know that all this bother may be saved by the new whiffletree; and the poor horses that have suffered from galled shoulders will find relief by the wider spread given to the traces by this invention.

#### STRAWBERRIES FOR MARKET.

Please publish in the FARMER two or three of the best varieties of strawberries to cultivate for the market.

#### A WET MEADOW.

I have on my farm about four acres of low land that is almost worthless on account of its being so wet. There will nothing grow on it but briars and the poorest kind of grass. A sluggish stream runs through it which is full to overflowing in the winter and early part of spring, and the land for half a mile below is on about the same level with mine; but in the summer the stream is twelve or fifteen inches below the bank, and the land is quite dry, and hard enough to drive a team over it. I want to lay this meadow down to English grass, and any information from you how to do it will be thankfully received.

#### SEEDING LAND TO GRASS.

It is almost a universal practice with farmers in this section to sow grass seed in the spring with some kind of grain; there are but few who sow grass seed in the fall, and none that sow it alone in the spring. When asked why they sow grain with grass seed they say that the grain protects the young, tender grass from the scorching suns, and we get a crop of grain, whereas we should get nothing if we sowed to grass seed alone. I thought so once myself; but on examining my fields when the grain was two or three feet high, I found that where the grain was thin, or on spots where there was no grain, the grass was the most luxuriant. This led me to try the following experiment:—The 14th of last May I sowed a half acre of low land to herds grass, clover and redtop; in a few days the seed came up and grew equal to any of my meadows that had been in grass for years. The 4th of August I mowed it, it then being in bloom.

I did not weigh it, but judged there was a ton and a quarter on the half acre, and the best hay that I put in my barn last year, I should judge by the way the cattle ate it. This experiment has convinced me that the spring is the best time to sow grass seed and sow it without any kind of grain.  
*Long Plain, Mass., April 6, 1870.* E. L.

REMARKS.—For information about strawberries, read the article on "The Culture of Small Fruits," by Capt. J. B. Moore, in the Weekly FARMER, of February 5, 1870. He says, "for profit there is nothing better than Wilson's Albany—for eating without cooking there is nothing poorer in quality." The Agriculturist is recommended for a light soil. Wilson and Cutter's seedling are raised by many. Hovey's Seedling is still cultivated extensively in the vicinity of Boston.

With regard to the meadow, the first thing needed is to remove the surplus water by drainage. When this is done the land can be ploughed and laid to grass in the early part of September, with much certainty of success. This will be the economical way of treating it. Perhaps an open drain or two may answer. It is difficult without seeing the land and its surroundings, to decide upon the practicability of draining off the water.

Your observation of crops and experiments are interesting, but a single experiment does not afford sufficient evidence upon which to establish a rule. The half acre sowed to grass was on "low land," and probably quite moist. If the same amount of seed had been put upon drier upland, it might not have come at all, especially if the latter part of May had been clear and hot. We have no doubt that where grain is not sown very thick, it does shelter and protect the young grass; that is, it affords it just that kind of protection which gardeners give to young and tender plants; just that protection which forests give to the young maple, oak and hickory. Sow the seeds of either of these in the open ground, and the plant will not be half as likely to live as it would springing up in the forest.

Young grass is quite tender, and if sown in the spring, alone, is quite likely to be injured by drought, or scorching suns, unless the soil is very moist.

#### TROUBLE IN A HORSE'S SHOULDER.

As there is no Veterinarian in my neighborhood, I wish to inquire if there can be anything done for a horse which has displaced some or one of the bones in its shoulder, producing what I am told is called in common parlance "shoulder shot." It was done within a week, I think, but how I do not know. There is a depression just back of where the collar comes. It does not seem to trouble the horse.  
WIDOW IGNORANCE.  
*April 14, 1870.*

REMARKS.—The advice, after making an examination, of your family physician, who understands anatomy, would be more reliable than any opinion of ours, based on your description. The diseases and injuries of our domestic animals are not now, if they ever were, considered as subjects below or unworthy the notice or the best skill of

those most worthy of the honorable M. D. Every doctor in a farming community ought to understand something of veterinary practice, and every well read physician necessarily does. There are few bones in a horse's shoulder, and we suspect that the injury to your horse is a sprain of the sinews and not a displacement of the bones. For a sprain Prof. Law recommends iodine and mercurial ointment, equal parts, thoroughly mixed, and applied over the point of the shoulder until considerable heat and tenderness appear. May be repeated when these effects have passed off. Rest is also generally regarded as essential in such cases—provided we understand the case, of which we are by no means sure.

#### HORSES EATING TOO MUCH HAY.

Will horses eat enough hay to injure them, if left standing in the stable after eating?

R. S. DAVIS.

*Williamstown, Vt., April, 1870.*

REMARKS.—Yes, sir, if you give it to them, they will. Don't you remember the old adage, that "a horse will die at the hay-stack?" None of our domestic animals require more systematic care in feeding than the horse. He may be kept well at a moderate cost, and will be more healthy, perform more labor and live longer than if fed so highly as to double the cost of keeping. A horse will spend most of his time in throwing his feed about, topsy-turvy, in his rack or box, and taking a little occasionally, if feed is kept constantly before him. He will not eat with a keen relish, become dissatisfied with all food, and eventually have little appetite, grow thin, become unfit for labor, and in the end diseased and worthless.

A horse that is fed regularly and in moderate amount, and is worked judiciously, will be in better condition for labor than one that is fat, or whose ribs can be counted at a distance of twenty rods. It is not the thick layers of fat which give the horse strength and power of endurance, but the firm, compact muscles, made up gradually by proper feeding and careful working.

Some persons feed their horses but twice in twenty four hours, and we have seen them in excellent flesh and condition for work under such circumstances. But we think three meals better.

A good teamster will never put his horse to a rapid speed or to heavy work on road or farm immediately after his meal. Let the first six miles on the road be moderate, and if carting or ploughing, let the horse be indulged in occasional stops of a minute or two.

A horse without hereditary disease, treated in this manner of feeding and working, will continue a faithful and serviceable servant until from 25 to 30 years old.

#### SEEDING A MEADOW.

I have a meadow which has raised a crop of oats the past two years, and which I wish to stock with grass the present season. What kind of

grass is the best for a meadow? and will it be best to stock in the spring with oats, or in the fall after the grain is harvested?

YOUNG READER OF THE FARMER.

*Corinth, Vt., April, 1870.*

REMARKS.—The term "meadow," in the United States, is especially applied to low grounds on the banks of brooks or rivers, or the low tracts of land lying between higher ground, and which are too wet to be ploughed and cultivated. We suppose our correspondent refers to common uplands of the farm, such as are suitable for corn and smaller grains.

If the land is ready to be seeded, the spring is a good time in which to do it. The grass seed usually employed is timothy or herdsgrass seed, one peck to the acre, and one bushel of redtop seed. If laid down with oats, two and a half bushels to the acre will be sufficient. If with barley—and barley is best for the grass—from one and a half to two bushels per acre will be sufficient.

#### SWEET CORN FOR FODDER.—A WHEEL JACK.

Can you inform me through your paper where I can obtain a bushel or two of sweet corn, such as is recommended for fodder, with the price per bushel? Also, the best and cheapest and most convenient (if all these qualities can be combined in one kind) machine, with which to raise ox wheels so that they can be taken off to oil the axle?

A SUBSCRIBER.

*Lake Village, N. H., March 3, 1870.*

REMARKS.—Sweet corn for sowing for fodder may be obtained at the seed stores in Boston. Price from \$3.50 to \$5.00 per bushel. It is said that if sown in drills,  $3\frac{1}{2}$  feet apart each way, two bushels are sufficient for an acre. That is, that thickness of sowing will bring the most profitable crop. The surest way of getting good seed is to preserve it yourself, being careful that no frost touches it in-doors or out, until it is thoroughly dry. A slight touch of frost, even if the ears are tressed up to dry, will destroy its vitality.

A good wheel Jack may be purchased at any of the agricultural warehouses at a trifling cost. You can probably make a good one yourself if you set about it, that will not cost fifty cents.

#### EGGS IN THREE MONTHS.

I have thirteen hens in all; one pure bred Brahma, one Bantam, and the remainder our common kind of fowls. They have laid forty-four dozen of eggs during the months of January, February and March.

A SUBSCRIBER.

*Carlisle, Mass., April 8, 1870.*

I have wintered thirty Brahma hens at a good profit. During the months of January, February and March they laid eighty-nine dozen eggs.

*Bellows Falls, Vt., April 6, 1870.*

C. E. W.

Tell your hens to crow again, Brother Owens, of Wilmington, Mass. From eighteen Brahma hens I have sold from January 1, to March 29, 1870, sixty-five dozen eggs, besides an untold number used in the family. Many of these eggs would average twenty-six ounces to the dozen.

D. FARWELL.

*Harrisville, N. H., April 9, 1870.*

## WHAT AILS THE COLTS?

A few weeks ago I lost a very valuable colt, four years old, under the following circumstances. He had in the first place, what is known here as the "horse ail;" (strangles, by some writers,) and had a pretty sick time of it; but finally got better—well, as I thought. His head all cleaned out; sore under his jaw all healed up, and he was feeling nicely—could kick up his heels or roll with the best of them. I used him a little, carefully. One morning I went to the barn and found him stiff and sore all over; a lump puffed up on his left breast rather larger than a man's fist, and another bunch behind his left fore leg, on his belly, about as wide and as long as a man's hand; then his legs began to swell, and finally swelled clear to his body; the swelling on his belly extended clear back and all over the belly; then his sheath and testicle bag swelled; then one side of his upper lip and muzzle; then his right eye puffed out, looking as though it had burst, (but an alum curd and charcoal poultice reduced that in about two days and he soon began to see again with it; then his face swelled some. The swelling was invariably hard; would go down partly in one place, and come out in a new locality, but finally began to abate all over, and when he died was not swelled a particle anywhere. His appetite was good,—never better—until about a week before he died, when he began to fail gradually. A little white matter run from his nose for a few days just before he died. There was no smell or disagreeable odor from him, more than from any other horse, at any stage of his sickness or after death. Did not lie down all the time he was sick until he laid down to die; had no ulcers or sores on him, except one on his hind leg, just above his ankle, which broke the day before he died. Was sick the last time just four weeks. Now if there is a name and cure for such a disease, I should be glad to know thereof. Although too late to save that colt, it may benefit some one, as there are other horses in this vicinity taken the same way. Would bleeding be of any use in such a case? My three-year-old and two-year-old had the distemper together, and got better some four or five weeks ago. The three-year-old, although she seems well and appears to feel well, does not gain in flesh as fast as she should; in fact seems as though she had fell away for the last week. What shall I do for her?

The two-year-old seems to feel well, but his cough still hangs on, and about four days ago I found a bunch on his breast about the size of a hen's egg, though not very hard. I immediately inserted an onion and seton, and he has swelled "big" on his breast, but nowhere else as yet. The same colt is fousy. What can I do to kill the lice without endangering the colt? I dare not do much for fear he might take cold.

Lastly I have a little colt, dropped August 17, 1869, that got along finely until about four weeks ago, (I had got over my fears of her having the horse-ail,) when her appetite began to fail, and she began to shrink up, until now she looks as though she was all dried up. Her eyes are bright, but she will not eat and is weak. What is the matter with her? And what can I do for her? What is the best physic for a horse? And what the best to cleanse the blood? Will it do to rowel a mare that is with foal? G. C. H.

Lyndon, Aroostook Co., Me., April 12, 1870.

REMARKS.—The foregoing inquiries were submitted to Prof. James Law, Veterinary Lecturer of the Massachusetts Agricultural College, and we take much pleasure in publishing his replies, as the information in relation to a disease that appears to be unusually prevalent and fatal this sea-

son throughout the country will be of value to many of our readers in other sections, as well as to our correspondent.

## CAUSE OF DEATH IN THE COLTS.

The disease was a low or typhus fever, associated with destructive changes in the blood, and with a tendency to the effusion of serum or pure blood in different parts of the body. It is known in Great Britain as *Purpura Hemorrhagica*, and on the continent of Europe as *Typhus*; but is now generally acknowledged to belong to the same family of diseases as the *Charbon* of our Southern States, and the *Blackleg* or *Black tongue* of the Northern ones.

It often arises as a sequel of strangles or other debilitating diseases, and probably because these leave the blood in an impoverished condition, and loaded with waste products which make it a suitable field for the propagation of destructive poisons. Every debilitating condition of life, however, conduces equally to its development; and like the other members of the same class of maladies, it is especially to be found in undrained or malarious localities. The past winter seems to have been unusually prolific of this fatal affection, probably for the same reason that it has been attended with *bilious* and other fevers so disastrous to the human family.

## TREATMENT.

To prove satisfactory this must be mainly of a preservative character, since if the disease is once fully developed, not more than one in two patients recover. It will consist chiefly in giving support to the system, and obviating any undue prostration of the vital powers. Clean, dry, airy, well-drained stables, nourishing, good food, grooming, and exhilarating work or exercise are important points. Colts suffering from strangles, should be fed freely on boiled grain, and should be made to inhale warm water vapor several hours daily, and have soft poultices kept continuously to the swellings to hasten the formation of matter. After the abscess bursts the feeding should be even more nutritious; and two drachms each of gentian and sulphate of iron may be given daily to maintain the strength. Other complaints should be treated with equal promptitude, that they may not linger in the system, impairing the blood and vital energy and thus paving the way for this destructive malady.

## THE CURATIVE TREATMENT

will differ according to whether the effusions take place into the skin or superficial parts, or into deep seated and more or less vital organs. It will tax all the ability of the professional man to meet the different phases as they appear; but in general terms, treatment, alike dietetic and medicinal, must be tonic, supporting, and febrifuge. Ounce doses of sweet spirits of nitre may be given several times a day, as a stimulating febrifuge and diuretic; two drachms each of gentian and iodide of iron, and ten grains of nux vomica may be allowed daily as a tonic; half drachm doses of carbolic acid, or drachm doses of bisulphite of soda have been found useful as counteracting fermentation or zymotic changes in the blood; and a lotion of one part of carbolic acid to ten of oil may be advantageously rubbed over the swellings. As the disease is essentially one of weakness and prostration, bleeding and other debilitating measures will only aggravate.

## LICE.

The carbolic acid and oil will destroy the lice, if freely applied.

## DEBILITY IN THE COLT.

The cause is not apparent. It may be taking strangles in the irregular form with the swellings

forming internally. It may be worms. It may be merely *anæmia* or poverty of blood. Give warm, wholesome lodging, exercise in the sun, brush the skin well, correct any irregularity in the action of bowels or kidneys, and give twice daily, a tablespoonful of tincture of gentian and half a drachm of carbonate of iron.

PHYSIC FOR A HORSE.

Barbadoes aloes will be found satisfactory: four to five drachms for the average American horse.

TO CLEANSE THE BLOOD.

No direct answer can be given to such a question. Waste and deleterious matters are expelled through one or other of the secreting surfaces; by the digestive organs, kidneys, lungs, skin, &c., and acting on some of these may at times be useful; but it must be borne in mind that the vital fluid cannot be purified like a dish of dirty water, nor have its objectionable constituents precipitated as in a mere chemical solution. A perfect digestion and elaboration of the products of this process are moreover as important to a healthy state of the blood as is the removal of effete material.

April, 26, 1870.

JAMES LAW.

BUTTER FROM A JERSEY COW.

There is but one Jersey cow in this town. She is called seven years old, and is white and light red. Her owner keeps no other cow. In 1869, he sold 125 pounds of butter, beside what was used in the family, and a neighbor had her two weeks in summer. This year an accurate account has been kept since she calved March 3. The first milk saved was March 7, at night, and the first churning was the cream of the milk of 5½ days.

March 7 to 12, . . .	58½	quarts gave	9	pounds butter.
" 13 to 17, . . .	48¾	" "	7¼	" "
" 18 to 22, . . .	55	" "	7¾	" "
" 23 to 28, . . .	63¾	" "	9	" "

At the first churning 6½ quarts of milk yielded a pound of butter. The last churning 7 quarts of milk yielded a pound of butter. The cow makes 1½ pounds of butter a day, and one quart of milk is taken for family use. The quantity of milk above stated is only what is set undisturbed to raise cream.

Her feed is two quarts of corn meal, three quarts of wheat bran and half a bushel of roots a day. The meal and bran is wet and put upon cut hay. As she is an excellent cow to give milk, till near the time of calving, it is safe to estimate a great yield of butter from her during the year. J.

Irasburg, Vt., April 9, 1870.

REMARKS.—If six and a half to seven "quarts" of milk produce a pound of butter, how many pounds of milk are required for one of butter? If the large or beer quart was used, the milk weighed from 14½ to 17½ pounds, nearly; if the wine or small quart, it weighed from 13½ to 16½ nearly. How much is a "quart" in Irasburg?

INJURIOUS EFFECTS OF MUCK.

In 1858 I commenced farming on my own hook. Being short of money and manure, some of my good neighbors advised me to go into the swamp and haul out muck. I told them I thought that would be useless, as I considered muck cold stuff. One neighbor was so anxious to have me make a trial of muck that he told me he would make me a present of some that he had on hand which had been hauled out a year or more. My land was a light, sandy loam, warm and early. I hauled my friend's old muck home and got some new from the swamp, with which I mixed thoroughly what

stable manure I had made from two horses and one cow,—shovelling it over twice or more, and applied it to a field planted with potatoes, corn, cabbages, carrots, beets and vegetables of all kinds. My compost was about one-third manure. On harvesting, my crops were about one-third of an ordinary yield. I told my friends that my neighbor who gave me his old muck had the best of the bargain, and that the swamp had come near swamping me.

In 1868, I sold a plough to one of my neighbors for fifteen ox-cart loads of muck, which was put into my barn cellar in the fall of that year. On this muck I kept two pigs during the winter, and mixed with it the manure from three horses and one cow. This was applied to land on which I planted peas. They were hoed twice, grew well and blossomed finely, but soon after turned yellow. To ascertain the cause, I dug into the rows and saw enough to satisfy me that it was the muck. To put the matter beyond doubt, I tried the same experiment the next year with the same result. This so effectually convinced me of the worthlessness of muck, that it will probably be a long time before I shall meddle with it again.

CYRUS G. UPHAM.

Needham, Mass., April 16, 1870.

REMARKS.—The different results of experiments with "muck" may probably be accounted for by the fact that the substances to which that term is applied are of different qualities. Undoubtedly there is as much difference in "mucks" as in soils. Because vegetation fails in one soil, are all soils to be condemned? Because one bed of muck poisons the roots of peas is it certain that all kinds will do the same?

BALLS ON THE HORNS.—COWS FOR BUTTER.

I have a herd of twelve cows and wish to put brass balls on their horns. Will you please tell me the way in which it should be done? I have put them on to cattle several times, but in a short time they are lost in the pasture, even if I took pains to turn them tight every morning.

Will you please tell me, also, which breed you consider best for a dairy, when butter is the chief object—the Alderney or the Ayrshires? A. B.

Belchertown, Mass., 1870.

REMARKS.—Soften the horn a little by sticking upon it a boiling hot potato, or by some other method. When the horn is softened a little, screw on the ball and turn it down with a wrench. There are balls with threads, and six square so that they can be easily made tight. We believe this would be sufficient, but if you wish for further security, bore a hole in the horn and put a small screw through the hole which is provided for that purpose in the ball.

With regard to cows for butter, if we advised at all, it would be to have one Jersey cow to every five of the Ayrshire, or any other breed. The milk of the Jersey will give color and character to the cream of all the rest. A high grade of the Jersey with the Ayrshire, would make fine cows for butter.

POTATOES.

The time is near at hand when we must put into the ground that crop which is one of the greatest necessities of life. And the inquiry is how shall we plant to get the greatest yield? Perhaps you

or some of your correspondents by actual experiment can tell me through your valuable paper. From week to week, I long for the day to come that I may read the Extracts and Replies, &c., contained in those columns. My method has been to put two small ones or one large one in a hill; or when they are very large, I cut them and make two hills of one potato. I get a good yield by so doing.

#### BUTTER MAKING.

I would say in reply to Mr. Goodall that I don't quite agree with him in some respects. 1st. I think the better way would be after drawing the milk to strain it into a tin can and stir it once in five or ten minutes, until the animal heat is thoroughly out of it; then put it into pans and let the cream rise. If it is set immediately after being drawn from the cow the cream will rise, and the gases contained in the milk cannot escape through the cream,—hence poorer butter. 2d. If he heats his cream to sixty at this time of year he will need ice to cool it. 3d. By putting water into butter it cannot be worked out so as to keep the butter sweet.

L. J. N.

*Cheshire, Mass., April 19, 1870.*

#### DISPOSING OF THE STONES.

Though in some sections the question, how shall we get rid of the stones? may be one of little importance, there are many farms, in New Hampshire, at least, where large unsightly stone heaps, accumulating from year to year, sufficiently testify that the proprietors need a friendly jog. While the use of small stones for underdrains is recommended by some farmers, and is doubtless advisable under certain circumstances, it is generally conceded that tile drain is much better.

What then shall we do with the stones? I should say put them where they will do good. Does your sled-path cross wet places which do not freeze up in good shape until winter is so far advanced that the best time for sledding is over? A few loads of small stones in those wet places would be very beneficial. Or does the road cross a ledgy district where it is difficult to get a road that is not sideling? If small stones are at hand they may be made to do good service in squaring up the path. Does your main farm-road lie across a gulf or a narrow valley? You may build of large or small stones a path as wide and high as circumstances require, covering it of course with gravel, and it will benefit you in three ways:—1st, by getting rid of the stones; 2d, by bringing your road nearer to a level; 3d, by giving you a road bed always hard and dry. On many farms there might be hundreds of loads of stones used to great advantage in this way.

But if a farm has such a surface that these suggestions do not apply, surely there will be farm roads, and in the spring of the year these will often be uncomfortably muddy to team over. In this case, if one has stones to get rid of, he may take off the surface soil of such a section of his road as is convenient to the stones and most needs repairing, to the depth of two or three feet, fill up the trench with stones, cover with brush, weeds or shavings, and give it a good coat of gravel. Thus year by year, he will be building a first-rate farm road.

L. H. O.

*New Hampshire, April, 1870.*

#### PAINTING FLOORS THAT ARE IN CONSTANT USE.

Heretofore I have been bothered a good deal about my floor drying when I painted it. But this year I tried a plan that I can recommend to the readers of the FARMER. Take three-fourths of a pound of common glue, dissolve it in one gallon of warm water. When cool take part of the water

and add enough French yellow to make it the right thickness to spread. After using it awhile you will have to thin it by adding some of the glue water. In an hour after painting my floor it was sufficiently hard to walk on with slippers, but rather pale and would wash off. The next day I took two quarts of boiled oil and one pint of Japan varnish mixed, and oiled the floor all over, which gave it a good color, and so firm that washing does not affect it at all. It could be used almost immediately to walk on, and to all appearance it will wear equal to any paint. We put on one coat only. It did not dry as quickly over old paint, as where it was all worn off.

N.

*Fairfax, Vt., April, 1870.*

#### CULTIVATION OF RAPE OR COLESEED.

On looking over some old numbers of the FARMER, I notice an inquiry by Mr. Judson Thompson of Morrisville, Vt., about the use of rape for soiling cows. I find that the paper containing this inquiry was printed while I was confined to my bed by typhoid fever during the spring of last year, and I do not remember of seeing the inquiry before. Perhaps the inquiry was suggested by a short commendatory notice of this plant that I wrote in 1868, (Monthly FARMER for that year, page 367.) As I have received letters of inquiry from others, I will answer both Mr. Thompson and others through your columns.

The rape or coleseed that I raise is a forage plant, with numerous roots, which run deep, and are so firm as to try the strength of a smart man to pull up a plant. Its stalk will run up four feet high in good well manured soil, with leaves shaped like those of the ruta бага, branching off in all directions the whole length of the stalk. I never fed cows anything they seemed to like so well, or that makes so good butter. It stands frost as well as a cabbage. It fills the gap from frost to hay first rate. Cows will go on to the field after harvest and gnaw stumps of it one and a half inches in diameter as long as they can get hold of them. I think I shall plant cabbage this season, and see which I like best. Rape must have rich land. The right kind of seed is a little larger than ruta бага, and black,—the same that is fed to birds. I saw it first recommended in the *Boston Cultivator* by Hon. Levi Bartlett, some ten or twelve years since. He said at that time no man need let his cows go hungry if he would plant rape. I repeat, it must have rich land.

*Westboro', Mass., April, 1870.* W. S. GROW.

#### BOOKS ON FLOWERS AND SMALL FRUIT CULTURE.

Will you please inform me through your paper the best work on small fruit and flower culture, or where I can get the best and most information, and oblige one who wishes to learn? NAOMI.

*West Dedham, Mass., April 23, 1870.*

REMARKS. — Breck's Book of Flowers, price \$1.75, Fuller's Small Fruit Culturist, \$1.50, and Henderson's Practical Floriculture are the best that occur to our minds. The catalogues of the seed sellers furnish much information in cheap form. Perhaps you will be interested in the proposed Horticultural School for women, noticed in the FARMER of April 30. If so, correspond with any one whose name appears in the advertisement.

#### TRANSPLANTING STRAWBERRIES.

Last fall I wrote an article, in which I disagreed with those who say that the latter part of summer or early fall is as good a season as any to transplant strawberries. I very much prefer the spring,

and as early as the ground can be worked, because, in the first place, allowing that the plants have been properly protected during the winter by a covering, these plants have rested over winter, and in the spring are in just the best possible condition that they can be in to bear the operation of transplanting; and, in the second place that there is less liability from droughts and from the heat of the sun after transplanting than in the fall.

Abington, Mass., April 28, 1870. H.

#### SANFORD PREMIUM CORN.

May 7th, 1869, I planted one quart of the above corn on warm land, well dressed; hoed twice. *Result*.—September 20, just in the milk; short, stout growth; good green fodder for cows. *Observation*.—Too late for latitude 44° north. No. Anson, Me., April 22, 1870. GEO. FLINT.

#### THE CURRANT WORM.

The miller that deposits the egg, is about the size of the common bee miller, with broader wings, and of a dark brown color. They deposit their eggs about the 10th to the 15th of June, on the under side of the leaves, generally on the new suckers, and close to the ground. The eggs are white, and glued to the stem and branch stems of the leaf, in a row, the ends nearly touching—there being sometimes one hundred on a single leaf. They hatch in three or four days, the young worm crawling from the stem to the thin part of the leaf, where it at once begins its work of devastation, being invariably blessed with a ravenous appetite. The first indications of their presence will be seen in the leaf in which they were hatched, being pierced with holes about the size of a pin head, each worm making a separate hole. They continue to gnaw round and round until the several holes meet, and the leaf is entirely consumed, when they all emigrate in a body to the leaf above, which soon disappears, and so on, leaving nothing but the withered stems behind them. After following up to the top of the sprout they started on, they then separate, and go off on to different branches of the bush. They live about twenty-five or thirty days on the bush, when they fall to the ground, change to the chrysalis form, work themselves into the ground, and there remain until about the first of next June, when they reappear in the form of a perfect miller, to repeat the operation of the year before.

My method of fighting these plagues is as follows:—Keep close watch of the bushes after they are fully leaved out, examining very closely the lower leaves on the new shoots, and as soon as you see one that is perforated with small holes, pick it and drop it into an old pail, and so go over all the bushes carefully every other day, as long as the worms continue to hatch, which will be about two or three weeks, and burning the leaves plucked. Be sure and pick, each time going over the bush, every leaf gnawed by the worms. I have about seventy-five as fine bushes as you often see, while most of the current bushes in this

vicinity are entirely destroyed. I have had to be vigilant and persevering, but I have conquered so far, which is some satisfaction, and have all the nice currants I want to use.—*James M. Warder, Bloomingdale, N. Y., in Plattsburg Republican.*

## Ladies' Department.

### TO-MORROW.

BY CHARLES SWAIN.

Let to-morrow take care of to-morrow,  
Leave things of the future to Fate,  
What's the use to anticipate sorrow?  
Life's troubles come never too late.  
If to hope overmuch be an error,  
'Tis one that the wise have preferred—  
And how often have hearts been in terror  
Of evils that—never occurred.

Let to-morrow take care of to-morrow,  
Permit not suspicion a care,  
With invisible bonds to enchain thee—  
But bear what God gives thee to bear.  
By His spirit supported and gladdened,  
Be ne'er by forebodings deterred;  
But think how oft hearts have been saddened  
By fears of what—never occurred.

Let to-morrow take care of to-morrow,  
Short and dark though our life may appear,  
We may make it still shorter by sorrow,  
Still darker by folly and fear.  
Half our troubles are half our invention;  
And how often, from blessings conferred,  
Have we shrunk in the wild apprehension  
Of evils that never occurred.

For the New England Farmer.

### JUNE AND ROSES.

We head our article on gardening for the month with terms which seem to us nearly synonymous. The month and the Queen of Flowers are most intimately associated in our mind, for the rose is now in its fullest glory, and renders the lowliest cottage a bower of beauty. Since creation dawned, its praises have been sung. Solomon chronicles its loveliness. Venus claimed it as her flower. In the palmy days of Athenian refinement and Roman luxury, the rose was pre-eminent among flowers. Altars were decked with its sweet petals; priests were crowned with its garlands; and the milk white bull that bled in honor of Jupiter was adorned with its buds and blossoms. Enormous sums were expended upon these fragrant flowers in the days of the Roman Empire. Suetonius informs us that Nero paid four million sesterces (\$150,000) on roses for one entertainment! The supper tables were covered an inch in depth with the leaves of the flower, the apartments, porticoes and court yards were strewn with blossoms. The rose was dedicated to Harpocrates, the god of silence, and the peculiar phrase "sub-rosa" is said to have originated from this. Nero's fondness for the flower may have

arisen from this knowledge. His disgraceful orgies would thus be unspoken of. Sappho wrote, "If Zeus had willed to set a king over flowers, the rose would have claimed that distinction. It is the ornament of the earth, the glory of the plants, the eye of the flowers, and the blush of the meadow."

How replete with all that is lovely, rich and rare are the spicy, old fashioned Damask roses, the thornless and the white Unique! Hundreds and hundreds of new varieties are now offered by the florists, but the roses of our childhood are the dearest to our heart. The *Lamarque* is one of the most beautiful climbing roses, and in a southern climate produces a fine effect. We shall never forget one we saw growing in Washington's garden at Mount Vernon. It was twenty feet high, and we counted over three hundred buds and blossoms of a delicious fragrance and creamy hue to which no other rose can attain. Hybrid perpetuals constitute a class of great number and variety. The French and English gardeners have paid special attention to the production of new varieties. They are found in all colors and shades, from nearly black into crimson blush and pure white. Covered with suds they will survive our severest winters, even within the shadow of Mount Washington's snow capped head. *Gen'l Jacqueminot* is of the richest crimson scarlet, no garden rose equals its coloring or the beauty of its buds. It is indispensable in the smallest collection. *Mad. Plantier* is of the purest white, and takes the front rank of white roses. *Reine D'Angleterre* is a lovely bright rose. *Baronne Prevost* a rich pink. *Triumphe de l'Exposition* is a brilliant crimson red. Fifty cent currency will purchase any one of these peerless flowers. \$4.50 will give you one dozen of the varieties of this most desirable class. Bourbon and Bengal roses are hardy and in constant bloom, but they do not possess the fragrance of other species. *Hermosa*, *Louis Philippe*, *Madmaison* and *Bourbon Queen* are well known varieties and need no recommendation. Tea roses are much cultivated for their rare fragrance and delicacy of coloring. They are not as hardy as those we have mentioned. In many parts of New England they must be wintered in the parlor or cellar. *Isabella Sprunt*, *Marshal Neil*, *Saffrano* and *La Pactole* are of a canary or orange yellow. Their buds are very beautiful, unsurpassed by any other roses and the fragrance of *Marshal Neil* baffles description. *Madame Margottin* is very lovely indeed,—all the roses of this class are most desirable. The moss roses—loveliest of all the rose tribe—have greatly increased in beauty in the last ten years. *Raphael* is a lovely blush; *Eugene Guinoiseau* is a very mossy, and of a rich cherry-violet tint; *Madame Edward Ory* is of large size and of a deep rosy hue. Moss roses of yellow crimson, blush, white and pink hues are all most beautiful, and some of them should be found in every garden. Their culture is simple, and their profuse buds and blossoms richly repay the cultivator. They de-

light in a clayey soil, and a shovelful of clay dug about their roots will greatly increase their growth. Superphosphate of lime is an excellent fertilizer for them. Dig about them two large iron spoonfuls every month during the summer, and notice its effects—but take care not to touch the main stalk with the *disgusting* black powder.

Roses will grow and bloom in common garden soil, yet no plant will flourish vigorously unless given a congenial soil. The most desirable compost is well rotted manure and leaf mould mixed with good garden loam and a sprinkling of sand—enough at least to prevent the ground from cracking during the heat of summer. Wet, boggy soil is not calculated for its wants, but it is well to mulch the roots with barnyard litter in July and August. The amateur often fails to grow roses in perfection because he hesitates to use the knife freely—cannot endure to cut away the fair growth of a previous summer, yet it is very needful to do this, if a liberal supply of flowers is desired. The buds are produced on the new wood which should be well cut back every spring, and as the shoots come forth, all weaklings should be rubbed off as they weaken the blooming shoots. Use the knife without fear of injuring the plant—often the finest roses are produced from new shoots started at the roots. The best compost for potted roses is one-third each of stiff clay, sand and decayed black manure. In this mixture they will blossom finely and make vigorous growth. They are easily raised from cuttings in this month—taking care to cut the slip partly of old growth, and partly of new. They will strike root in a saucer of sand more quickly than in a pot of earth. Fill a shallow dish with common scouring sand, wet it thoroughly and insert the cutting with a bud at the base. In two or three weeks tiny leaves will appear. Then transplant into rich soil; place in a cool, shady place for twenty-four hours, then give all the light and air possible. Peter Henderson recommends this saucer mode of propagation for all succulent cuttings—geraniums, fuchsias, carnations, verbenas, &c. Cuttings of *Hybrid Perpetual*, *Bourbon*, *Bengal*, *Remontant* and *Moss Roses* can easily be propagated by this process, and by next year will make fine plants.

After our roses have blossomed freely, if the weak, unhealthy shoots are cut off, and even a few strong ones if the branches are crowded, the autumn blossoms will be finer, and we can find plenty of friends willing to take the cuttings. Of late years the rose-bug and slug have greatly injured the roses in every section of the country; but last June we saw the rarest roses possessing the greenest foliage, untouched by slug or bug, and their fair possessor informed us that they had been destroyed by a wash made of ten gallons of warm water, one pint of common soft soap, and half a pint of salt; syringe the roses once or twice a week with the mixture, late in May and until the middle of June, as often as once a week, and no

bug or worm will dare molest them. This most lovely rose garden was at the "Fouquet House" in Plattsburg, New York, and was most exquisitely arranged! Whale oil soap (a horribly smelling compound) will not always drive away these disgusting marauders. Slacked lime scattered in fine powder over the leaves while yet wet with dew has proved an efficacious remedy in many instances. A thorough sprinkling of it around the roots of the rose-bushes will often destroy the worms. Lime and salt are both obnoxious to such vermin, and as they entirely ruin our roses, it is well for us to avail ourselves of their dislike, and wage war against the detestable pests. The lime will not only kill them, but will fertilize the roses. In some parts of Surrey and Kent, whole fields of roses are grown for the manufacture of rose-water. The Provence, Scotch and Damask roses are planted for this purpose. Our Southern States would find their culture very remunerative, as the perfume always finds a ready sale. Six pounds' weight of petals will produce one gallon of rose-water, but it takes ten thousand roses to produce one hundred and eighty drops of otto of roses, which is never sold pure but always mixed with sandal-wood or olive oil.

The Moors of Andalusia were renowned for their roses, and it has been asserted that they succeeded in creating them of a *rich blue color*, but had such a "novelty" ever been propagated it would not have been suffered to die out.

"Roses are of royal birth,  
 Loveliest monarchs of the earth!  
 Not the realms of flowers alone,  
 But human hearts their sceptre own.  
 Mark what flowers the maiden's hand  
 Gathers for her bridal band;  
 What the sweetest influence shed  
 Round the grateful sufferer's bed;  
 What with holiest light illumine,  
 The grief and darkness of the tomb."

S. O. J.

**BLACK WALNUT POLISH.**—Take asphaltum, pulverize it, place it in a jar or bottle, pour over it about twice its bulk of turpentine or benzole, put it in a warm place, and shake it from time to time. When dissolved, strain it, and apply it to the wood with a cloth or stiff brush. If it should make too dark a stain, thin it with turpentine or benzole. This will dry in a few hours.

If it is desired to bring out the grain still more, apply a mixture of boiled oil and turpentine; this is better than oil alone. Put no oil with the asphaltum mixture, as it will dry very slowly. When the oil is dry, the wood can be polished with the following: Shellac varnish, of the usual consistency, two parts; boiled oil, one part. Shake it well before using. Apply it to the wood by putting a few drops on a cloth and rubbing briskly on the wood for a few moments. This polish works well on old varnished furniture.—*Chemical News.*

**TO REMOVE THE TASTE OF WOOD.**—A new keg, churn, bucket, or other wooden vessel, will generally communicate a disagreeable taste to anything that is put into it. To prevent this inconvenience, scald the vessel well with boiling water, letting the water remain in it until cold; then dissolve some pearl ash or soda in lukewarm water, adding a little lime to it; wash the inside of the vessel well with this solution. Afterwards scald it well with hot water, and rinse with cold water before you use it. The reason for this is, the ready combination of resinous matter with alkalies to form compounds soluble in alcohol.

I AM going to draw this beau into a knot,  
 as the lady said at the hymenial altar.



# THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES.

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

## SPECIALTIES OF JULY.

Now let me tread the meadow paths  
While glittering dew the ground illumes,  
As, sprinkled o'er the withering swaths,  
Their moisture shrinks in sweet perfumes;  
And hear the beetle sound his horn;  
And hear the skylark whistling nigh,  
Sprung from his bed of tufted corn,  
A halting minstrel in the sky.—*John Clare.*



JUST as we heralded in the month of June, and declared we had never seen such beauties in Nature, nor had ever realized such charming sensations before, do we now welcome JULY,—July! the month of the early harvests, when golden grains and yellow fruits begin to drop into the lap of the

husbandman, to fulfil the promises of May and June.

The world around us now assumes a character—a July character—so unlike any of its fellows that it scarcely seems to belong to the same family. Not only are the sights, the

external aspects of nature, greatly changed, but the *sounds*, also, are peculiar to the season. Kine cease to low, the meadow lark whistles from the topmost bough of the old apple tree, or some tuft of tall grass near his brooding mate; the martins and swallows skim the air, snatch up unwary insects who are on the wing, and convey them to their clamorous young who receive them with open mouths and thankful tones. Now “the beetle sounds his horn,” and the brooding bittern “booms” to her mate as he soars in circles a thousand feet above, as a signal to her locality among the rushes of the swamp.

Now rains are less frequent, the dust flies; the plants wither, when we “have one of those days which make the house too hot to hold us, and force us to seek shelter in the open air, which is hotter; when the interior of the blacksmith’s shop looks awful; when the birds sit open-mouthed upon the trees; when pedestrians along dusty roads quarrel with their coats, and women go about their work gownless, and the weeping-willow dips its green fingers into the clear cool water.”

Such are mild and lovely aspects of nature. That they generally rule the year in our climate, forms one of our greatest blessings. We are fortunately exempt from those sudden and terrible manifestations of God’s power in the earthquake, the tornado, the sirocco of Italy, or the awful simoom of Arabia and Syria.

Here, we are blest with gradual changes of the seasons, instead of searching droughts and drenching rains, as described by Mr. D. Warren, in his work on British India. "A suffocating calm," he says, "which prevails particularly about the end of the great heats, precedes the setting in of the southern monsoon. With the end of May come on the first storms, which are brief, but of extreme violence. Thunder is heard in the distance at intervals; the sun sets in a bed of clouds, and every evening, the lightnings illuminate all points of the horizon. The rain falls for half an hour, in torrents; after a few days it lasts longer, and towards the middle of June it rules the entire day, for when it is not actually raining, the sky is at least covered with a dense and tereatening curtain of clouds. It rains sometimes, particularly in July, for thirty or forty hours consecutively, and then not in fine lines, broken and almost imperceptible, as in our climates, but in straight parallel streaks, and frequently like a sheet of water coming down all at once with the fury and impetuosity of a cascade.

"The miserable clay huts of the natives become thoroughly soaked under this continued avalanche; their roofs fall in and bury them, or, at all events, escaping that easier fate, they find themselves exposed to all the rigors of the open air, and perish in great numbers. This is the period of wide-spread distress, which does not spare even the nabob and the conqueror; and the very reptiles, those of the most hateful species, like the rest, inundated in their holes, dart to the surface of the soil and seek an asylum among the dwellings of men. Numerous varieties of snakes, centipedes, and scorpions climb your stairs, invade your houses, and glide into every room. It is impossible to take a step in one's bed-chamber at night, without a light, unless one is prepared to run the risk of a sting that may prove fatal. The utmost distrust must be felt of every thing that one touches; a cruel bite may kill you from the inside of a boot or a sleeve. For some time you lead a life of continual alarm and disgusting contacts."

There are other parts of the globe's surface where rain is almost unknown. This is the case on the coast of Peru, and in a large part of Australia, where the trees are obliged to arrange their leaves in the same line as the rays

of the sun, since, if they were in the natural position, they would be too quickly dried up. The Desert of Sahara, is denied rain entirely, and from the immense plains of Africa there rises only a column of burning air, while not a drop of dew falls to moisten the parched surface or to develop vegetation.

Lacking all experience in these terrible operations in nature, we can have no adequate conception of the inconveniences, fears and even destruction of life and property, which they cause. Let us contrast them with our more equable changes of heat and cold, of dryness and moisture,—with our matchless July mornings and sunset hours.

"When day her farewell beam delays,  
Amid the opening clouds of even,  
And we can almost think we gaze  
Thro' opening vistas into heaven,"—

let us indulge more frequently in these contrasts, and we shall complain less of July droughts or July drenchings than we have heretofore.

Upon the whole, our New England climate is more favorable to health and longevity, to the enjoyment of all the comforts of this life, and for preparation for another and better life, than any we have read of or experienced. Its changes are sometimes sudden and severe, but of a temporary character, and we are able to protect ourselves against them by our industry and skill.

#### TRAINING THE TOMATO.

In visiting the grounds of the late Mr. Tudor at Nahant, several years ago, we noticed that he was cultivating a good many tomatoes, and was experimenting in order to learn the best modes of doing so.

The plan which he found the easiest and best, upon the whole, was, to plant the seed in drills and place a rail each side of the plants upon stakes standing something in the shape of the letter V,—that is, slanting out at the top. Care was taken not to have the plants stand so thick as to interfere with each other, and to tie the leading stems to the rails as they grew long enough. In this way the vines would rest upon and hang over the rails, and keep them up in the sun and air, as well as keeping the fruit from the ground. The vines looked as though they would well pay for the labor bestowed upon them. In addition, some persons pinch off the top of the

vine as soon as it has fruited, one joint above the fruit, leaving the leaf entire. Then allow the main shoot to go on again until it has blossomed and set another bunch of fruit, then pinch out as before. All the laterals which grow on the main branches down to the axils of the leaves, are cut out as often as they are produced, but leaving the leaves entire. A person who has practiced this mode says, "it is astonishing what immense clusters of fine, large tomatoes may be produced in this way." When planted in a favorable situation, they will ripen at least as early as those grown in any other way out of doors, and frequently three days or a week earlier.

Another mode is to nail bits of lath across from stakes in a square form, and drive the ends of the stakes into the ground immediately over the hill of plants. The stakes may be four, five or six feet long, in a rich soil, the vines will reach the top of the longest. We have raised them in this way in great abundance, and perfection. If the vines lie upon hay, straw, or brush wood, the fruit will ripen better and be kept cleaner, than if lying upon the ground.

#### THE CURCULIO.

On another page we publish an interesting communication from a gentleman in the fruit region of Michigan. From an article written by the Secretary of the St. Joseph Horticultural Society and published in the St. Joseph *Herald*, it appears that the enterprising and industrious fruit raisers spoken of by our correspondent, have discovered a new process of destroying the curculio, which greatly encourages the hope that at last the means of a successful warfare with this enemy of the fruit growers have been developed. The following description of the process, devised by Mr. William B. Ransom, and now practiced by him and his neighbors, is given:—

Put the orchard in the best order; level down the soil about the root of every tree, and smooth a circle for a diameter of two and a half feet from the tree as a center. Have the ground very clean around the base of the tree. Do not leave a single hole next the tree. Leave no place where the curculio can hide except under the shelter you provide. Now lay close to the tree, and close to the ground, about four pieces to a tree, either chip, or bark, or board, or lath, or rag, or corn-cob, or old leather, or anything for a covert.

The curculios will conceal themselves under this shelter and may be destroyed by the thousands. Go around every day, turn over each chip and kill every curculio. They will generally adhere to the chip, but may often be found on the ground under the chip.

Mr. Ransom has closely studied the habits of this destructive insect for fourteen years, and has

arrived at the following conclusions:—In the Fall the curculio seeks a warm and safe shelter to hibernates. This is either the ground, or leaves, stumps, logs, old fences, woods, and other congenial places of concealment. The first warm day in spring that starts vegetable life calls the curculio forth and it proceeds to its feeding and breeding ground. Last year when bugging he discovered that all the curculios dropped within two or three feet of the roots of the tree, and on examination found the little Turk sheltered on the trunk and in holes near the base and under side of the principal limbs.

Hence the idea of the above described traps was suggested to his mind.

Many instances of the rapidity with which curculios have been destroyed by this process are given. Mr. Ransom, in four hours, destroyed 2109, by actual count; Hon. John Whittlesey killed 2715, in one day, and on the following day 1566 in four hours. By means of these traps, it is asserted that more curculios may be destroyed by a single person, in a few hours, than has ever been done by three men with the old fashioned sheets in a week.

Now is the time to try the "Ransom traps," which will certainly be of immense value to all who have fruit trees, if the process proves as efficient in other hands as it is represented to in be those of our Michigan friends.

#### WALLA WALLA FARMER.

The first number of a four-page or quarto paper, half the size of the NEW ENGLAND FARMER, has been received. It is published at Walla Walla, Washington Territory, by A. H. Simmons, weekly, at \$2.50 a year. Washington Territory comprises an area of 68,000 miles,—some 3000 more than all New England. This is equal to 43,-520,000 acres; of which, the *Walla Walla Farmer* says, about 20,000,000 acres are prairie, and about the same quantity timber, the remainder mountains. It is estimated that about 5,000,000 acres of the timbered lands are susceptible of cultivation, the remainder comparatively worthless after the timber is removed. The Cascade range of Mountains divides the Territory into two unequal parts—eastern and western—differing widely in topography, soil, climate, and productions.

The western portion is densely timbered with fir, cedar, oak, &c., with an occasional small prairie, soil varied, river bottoms sandy mould with clay sub-soil; high prairies are gravelly or light sand. Its climate is humid, but remarkably healthy.

Eastern Washington may be described as a vast rolling plain, traversed in all directions by rivers and creeks, the principal of which is the Columbia, having for its tributaries in this Territory, the Snake, Spokane, Walla Walla, Winachee, Okinakane, Yakima and Clickitat. The soil is uniform, a rich sandy loam, producing a thick, heavy mat of bunch grass. On all the streams is found more

or less timber, but the mountains have to supply the lumber, rails, &c. For climate, safely can eastern Washington challenge the world. A dry, clear sky with an atmosphere balmy and so pure that objects miles distant seem to be but a few hundred yards. Prolific in wheat, corn, oats, barley, rye and buckwheat; in apples, pears, peaches, plums, grapes and small fruits of all kinds. Cattle, on the bunch grass, without other feed, remain fat the year round. Health is such the doctors complain of their pockets.

Walla Walla, in the southeastern part of the Territory, latitude 46, is thirty miles from the navigable waters of the Columbia, two hundred and thirty-six from Portland, and two hundred and eighty-six from Salem.

#### AGRICULTURAL ITEMS.

—G. C. Cox, Secretary, gives notice that an association has been formed in Manchester, N. H., for the settlement of government lands in Kansas under the Homestead Law.

—The Boston and Albany railroad has a new article of freight in manure, which is brought from the stock yards at Albany to enrich the tobacco fields on the Connecticut river.

—Horses have been sold from Middlebury, Vt., for the foreign market this Spring to the value of more than \$20,000, and horse dealers call it a dull season at that. One was sold last week for \$3000 and taken to New York for a carriage horse.

—A man died lately in Montgomery, Penn., of the glanders. During last fall and winter he took care of a horse that had this disease, and the poison got into his blood and was the cause of his death.

—Mr. Pickney stated at a Club meeting in Lansing, Mich., that he had learned that the Northern Spy was a better keeper when grown on clay soil than on sand; so with the Greening. Mr. Potter said his winter fruit was grown on sandy soil and did not keep well.

—The monthly report, of the Agricultural Department for March and April, from 417 counties gives the number of sheep killed by dogs during the past year at 99,389; while it is estimated that full returns would swell this census of slaughter to 500,000, with an actual money loss of \$2,000,000.

—To make an excellent ointment for burns, bruises and cuts, also for sore teats on cows, a correspondent of the *Western Rural* says, take one teacupful of lard, three-fourths of an ounce of laudanum, one ounce oraganum; warm the lard, put in the others when a little warm, and as it cools, stir to mix well, then it is ready.

—A farmer who was brought up on the Western Reserve in Ohio, says that throughout the dairy region the white clover that was once so plentiful in all the pastures had almost entirely disappeared. A few years ago the pastures were white with blossoms, but now a white clover blossom is rarely

seen. Outside the dairy region, where a different system of farming prevails, the white clover is as plentiful as ever.

—The forests are dying out in certain parts of Virginia. The chestnut trees have already submitted to some deleterious agency, and their growth is nearly exhausted, and this year the oak, and in fact all the trees of the forest in certain sections, are dying. No explanation of this disastrous visitation has yet been given.

—According to the report of the Trustees of the Pennsylvania Agricultural College, liming on the eastern and central farms was without benefit, while on the western ones a liberal application increased the corn crop nearly one-half. The presumption is that in the first instance the soil needed something else, while in the second, lime was precisely what was wanted to impart vigor to it.

—A poultry raiser who lost nearly all his chickens in 1867, after trying all the remedies he could hear of, informs the *Prairie Farmer* that the next year he tore down the old poultry house and made a new one in a new place, hauled off the manure and surface soil from the old place and sprinkled lime over the ground. He now makes a new poultry house every year, a cheap building or pen of rails, and has healthy hens.

—A correspondent of the *Rural New Yorker* says that in one case the onion worm was driven off by applying a decoction of red pepper pods while hot to the onions; in another case, by throwing the washing suds over the onions; and the editor has heard market gardeners say they had found a suds made by mixing soft soap and chamber lye, and allowing it to stand two or three weeks before using, efficient. Beside, it is an excellent fertilizer.

—To remove white hairs that appear on horses from the use or wear of the saddle or harness, a correspondent of the *Rural New Yorker* takes a piece of fresh butter or lard, large enough to give the spot a thorough greasing; rubs the same with the hand until it becomes quite hot, repeating the operation at least three or four times, and the white hairs soon come out, and hairs of natural color take their place. Thinks the best time to do it is in the winter before the new coat starts.

—The following rule for determining the amount in bushels of a box or bin was sent to the New York Farmers' Club by Merchant Kelly, of Bentonville, Ind. If you multiply solid feet by 45 and divide the product by 56, the quotient will be bushels, because one solid foot is just 45 56 of a bushel of 2,150 2.5 inches. Example: How many bushels in a crib, box, bin or wagon-bed 8 feet long, 4 feet wide, and 2 feet deep? 8, 4 and 2, multiplied together, make 64 solid feet, and 64, multiplied by 45, makes 2,880, which, divided by 56, gives 51 3 7 bushels in said vessel. If it be ears of corn, deduct for cobs. Some persons deduct a half for cobs.

## SALTPETRE.

**F**ROM some experiments which we have made with this salt, we are inclined to think that it is important as a manurial agent is not justly appreciated. In these experiments, at a cost of five cents per pound, we found it among the cheapest fertilizers we have ever used. Its use is not a modern discovery. Virgil recommended it to Italian farmers. The first English author who wrote upon husbandry in 1532, Anthony Fitzherbert, describes it as having the power to insure to the farmer the most abundant crops. A hundred years afterwards, Evelyn, in a *Discourse on Earth*, told the farmers of his age, that if they could but obtain a plentiful supply of *saltpetre*, they would "need but little other compost to meliorate their ground." Even Jethro Tull, who zealously denied the necessity of manure of any kind, placed nitre at the head of his list of those substances which he deemed to be the essential food of plants. But it is only in modern days that *saltpetre* has been extensively employed as a fertilizer, for it is not long that it has been produced in quantities sufficiently large and at reasonable prices to enable the farmer to profitably use it as a manure.

It is so extensively used in the arts, and especially in the manufacture of powder, that the price has been thought too high to make it a profitable investment in the soil. In large quantities, however, and in ordinary times, we think it may be secured at as low prices as Peruvian guano or the superphosphate of lime. It is much more difficult to adulterate it than either of those articles, so that the pure salt, only, would be purchased.

*Saltpetre* is a natural product in some soils in hot climates, as in India and South America. It is also manufactured by a curious chemical process, in the following manner: Animal substances, flesh, hides, &c. are mixed with lime and earth, and this mixture is moistened and left to putrefy. The result is *saltpetre*. It is found in Peru in a thick stratum 3500 feet above the level of the Pacific ocean. It abounds in Ceylon, Persia, Egypt and Spain, and is frequently found on the surface of the ground, where it is naturally generated under favorable circumstances, and in situations

much more frequent than the farmer is wont to suspect.

"Wherever ammonia is copiously generated, as in stables, farm-yards, &c., and wherever the nitrogen, which forms a component part of ammonia, at the moment of its extrication has access to potash or calcareous matter, there *saltpetre* is usually formed." This is naturally done so copiously, in some of those situations in which the farmer is placed, as to form fine crystalline exudations on the walls. This will account, in some measure, certainly, for the remarkable growth which nettles, horse radish, sun-flower, nightshade, and some other plants, make about the houses of not over-tidy farmers. It slowly collects on the plastered walls of houses, so that during the Crimean war *saltpetre* was in such demand for the manufacture of powder, that hundreds of the old dwellings of France and England were stripped of their plaster walls to get at the modicum of *saltpetre* which had formed upon them. Those persons who gather *saltpetre* from the earth's surface in Southern Africa and Hindostan, and those who have prepared artificial beds in Spain from the sweepings of the streets in Madrid, state that nothing more is needed than a certain proportion of decomposing animal and vegetable matters, with some potash, and calcareous matter. If our farmers will but investigate *their own resources*, perhaps many of them will find that they possess all the essentials within themselves, and in their own soils for the formation of *saltpetre*.

**TOP DRESSING AND CLOSE CUTTING.**—On lands not too wet all will agree with me that it is best to top dress. We should give more attention to the composting of manures to be applied as a top-dressing to our mowing fields. Let any farmer each year make but five or ten cords more of manure by hauling in muck and leaves into his hog-pens or barn-yards to absorb the urine, and apply it as a top-dressing soon after haying, and the results will be wonderful. The grass will begin to grow immediately after the first fall of rain. The roots are nourished and are better protected against frost in winter, and if fed off in the fall it is not done so closely as if no manure had been applied.

One reason why grass crops run out is because they are fed too late in the fall, or over fed. In the spring they should not be fed at all. Cutting some kinds of grass too low is often very injurious. When the top of the root of herdsgrass is taken up by mowing or

feeding too close by sheep, it begins to fail and the owner is at a loss to know why it has run out so soon, little thinking that this close shaving of the roots is the cause of his loss and disappointment.—*Maine Farmer.*

From the New York Tribune.

### THE ROTATION OF CROPS.

BY SERENO EDWARDS TODD.

The rotation system, which good tillers fix,  
Embraces five seasons, and sometimes full six,  
When one crop succeedeth through many long years,  
Each harvest decreaseth, and dwarfeth the ears.

If herds of neat cattle or sheep be thy care,  
Then grass in rotation must form a good share.  
When corn, barley, clover, and turnips, and wheat,  
Comprise the rotation, field peas will be meet.

Ere ploughing and sowing, the tiller should know  
What crops the ground liketh the better to grow.  
First, break up thy grass land and plant it with corn;  
The field, the next season, let barley adorn.

Succeeding the barley, sow buckwheat or oats;  
Then harvest a pea crop to nourish your shoes.  
Oft ploughing and tearing and weeding the ground,  
With liberal compost scattered around.

And sprinkled with ashes to make the land sweet,  
With lime and some bone-dust to fatten the wheat.  
The next, in rotation, a crop of red clover:  
When blossoms are fragrant, then let the plough cover.

A six-years' rotation now beareth the sway,  
And showeth the tiller a progressive way;  
A six years' rotation will cattle increase;  
Will multiply bushels and debtors release.

A six years' rotation, when fairly begun,  
Will harvest two bushels where now groweth one.  
A six-years' rotation, as will agree,  
Two years' yield of clover is better than three.

When poor soil needs succor, to keep the land clean,  
Grow clover and sowed corn to turn under green:  
But where fertile muck and light soils abound,  
Arrange the rotation as suiteth the ground.

**BLADDER PLUMS.**—The singular puff-ball growth of some plums, particularly the common red plum, is believed by the *American Naturalist* to be the effect of a peculiar parasitic fungus, and not of the curculio or other insect. Our correspondent, W. H. White of South Windsor, Conn., states in the *Country Gentleman* that some trees in his garden of the red plums which produced only these abortions were grafted to the Washington and Blue Gage, and produced perfect fruit for several years, until the trees were broken down by high winds.

**WINDHAM COUNTY, VT.**—The Fair of the Windham County, Vermont, Agricultural Society will be holden September 28th and 29th, 1870. The following is a list of officers.

*President*—Hon. O. S. Howard, Townshend.

*Vice Presidents*—Col. H. Plimpton, Newfane; Ruel Smith, Eq., Wilmington.

*Secretary and Treasurer*.—W. A. Stedman, Newfane.

*Board of Managers*.—John Ayers, Grafton; Alonzo Dutton, Dumfrieson; D. E. Robbins, Windham; Geo. E. Hammond, Wardsboro'; Henry Winslow, Putney; Sidney Perry, Rockingham; Phillip Rutter, Townshend; John Mazzev, Jamaica; A. J. Morse, Newfane.  
W. A. S.

For the New England Farmer.

### THE GARDEN IN JULY.

How pleasing to the farmer's wife, if to no one else, it is to have a good garden where she can go and select from a variety of products, vegetables, fruits, &c., sufficient to add variety for the table, which will tempt the palate and give a relish to the more common daily fare; and answer the question that so often arises in her mind, What shall I get for dinner? It is pleasing to all to go into the garden and see "how things do grow." "Tomorrow I shall have a mess of new potatoes dug for dinner; these marrowfat peas will furnish us a mess by the last of the week, and I shall have string beans when I want a mess now; these cucumbers will taste quite cold and refreshing; beets have already been on the table in different dishes; lettuce, radishes, cress and other salads have been enjoyed freely; now come the small fruits, strawberries, currants and raspberries." Who would be without them, when they cost so little to grow them? While driving up the haying and harvesting do not do it to the entire neglect of the garden. Better take a hand a day from the hay field and put him in the garden. But there is seldom need for this. A few moments' attention in the morning, evening, or when the other work cannot well be attended to, will suffice to accomplish very much more than any one unused to it will think possible, if the labor be rightly directed and the time well improved. The best success is met with if we follow up every department of the garden with the hoe and watering pot. Liquid manure, judiciously applied, tells now with redoubled effect; make the most of the sink spout and other sources of liquid manure, too often allowed to go to waste, creating offensive odors, disease, &c. Water newly set trees, dwarf pears and grapes, keeping the mulch moist, not wet. Liquid manure is the greatest inducer to swell fruit of any kind. Do every thing *seasonably*. Take the weeds, &c., when they first appear. Leave no vacant spot. It is better to have two, three, or more crops, than one, when they may be had as well as not.

**BEANS**—Gather for use as they become fit, saving a few of the earliest and most perfect to ripen for seed. Do not forget to plant some early ones for a late crop of string, or for canning for winter use and for seed. Very good pickles are made from string beans.

**BEETS**.—It is not too late to plant early varieties for winter use, in rich, mellow soil. Hoe frequently, and thin to six or eight inches in the row. Beets may be transplanted almost as well as cabbages. There is little danger of having too many, as, if not needed otherwise they are good for the cows and pigs.

**BLACKBERRIES**.—As the new shoots grow they should be tied up to the trellises or stakes. Shorten in the main stem and branches to in-

duce the formation of fruit buds; pull or cut up small canes, unless there is a desire to multiply them. Branches laden with fruit should be carefully and securely tied up.

**CELERY.**—Continue to transplant into well prepared ground till the last of the month, for the late crop. Hoe and water often to induce rapid, tender growth; with good drainage there is little danger of giving too much water. Celery depends for its goodness for the table upon rapid growth.

**CABBAGES AND CAULIFLOWERS,** for late crops and use, may have the seed sown and transplanted. There is always a good home market for cabbage, as, if not otherwise used, they are good to increase the flow of milk, if fed to cows. They need frequent hoeing and culture.

**CORN.**—Do not fail to plant a few hills of that early variety for late use, drying or canning; any surplus will be readily taken by the cows or pigs, and they will reward you therefore; the green succulent stalks are excellent fodder.

**CUCUMBERS** may be planted for pickling. Guard against insects, as hertofore recommended; hoe and water till the vines are well spread over the ground. The small cucumbers, pickled in cider vinegar, make our best pickles. They may be packed down in casks and salted as pork is put up; if sufficient salt is used they will make their own brine. They will need be weighted down to keep them covered in brine.

**CURRENTS.**—The green or half ripe ones make excellent sauce, pies, &c., and when ripe, eaten with sugar, they relish well in moderate quantities. Their juice expressed, a teacup of fruit to a pint of water and sweetened, makes one of the most agreeable and refreshing of summer drinks. Well ripened, they make excellent jelly, of which there should be a full supply, in case of sickness, for drinks, &c. Very good currant wine is made from the juice—one quart of juice and three pounds of sugar to the gallon. So good a fruit as the currant ought to receive good care and be found in every farmer's garden in abundance.

**ENDIVES.**—Green salads, at all seasons of the year, are very refreshing and much relished by most persons. Lettuce stands at the head in all garden culture, but there are few kinds that will stand the heat of summer to head,—will become bitter or of disagreeable taste. To supply its place, we have the endive, which will remain in perfection after lettuce has failed, during autumn and winter. Sow the broad-leaved variety any time during this month, in drills, and transplant to fourteen inches apart, in good, generously rich soil. After the leaves attain the size of a dining plate, gather together and tie, to blanch.

**GOOSEBERRIES.**—This is a good fruit, too seldom found in the farmer's garden. They require mulching with old pots, kettles or

other rubbish; treat them according to their nature, give them plenty of air and you will get good crops. Thin out for sauce; the well ripened are good eating from the bush and at dessert, with sugar or sauce.

**GRAPES.**—To obtain the best and nicest fruit, the shoots need thinning and pinching back, the bunches to be thinned to one or two on a branch, and the bunch thinned, where the fruit crowds. Liquid manure, well diluted soap suds, dish water or like slops, should be given freely till the berries begin to color.

**HERBS.**—The best are dried in the shade, cut in the flower, and preserved in boxes that will preserve their aroma.

**INSECTS.**—The gardener should be constantly on the look-out for them and crush them in the bud or egg; study their habits and experiment to destroy them. They are alike destructive to fruits and vegetables; toads, birds and chickens are excellent destructives of these pests.

**MELONS.**—Give them good culture, same as for cucumbers. A thin board or flat stone placed under them as they grow, will induce them to ripen more evenly.

**ONIONS.**—Weed and cultivate, without hauling dirt to the bulbs. Thin to three or four inches, if good size is desired.

**SEEDS.**—Look closely after seeds ripening now, not to allow them to waste. Better gather before the plant stem and seed vessels dry, and let them mature under cover.

**STRAWBERRIES.**—After the crop is removed, weed the bed and hoe the plants, keeping the runners cut, unless you desire to increase plants; thus kept a bed will last in bearing from four to six years, if well fertilized annually.

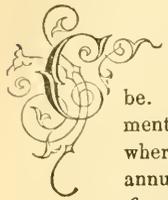
**TOMATOES.**—Reserve a few of the earliest and best for seed. Keep the vines pruned and tied to a stake, if you would get the greatest amount of good fruit.

W. H. WHITE.

*South Windsor, Conn., 1870.*

**GRAFTING GRAPE VINES.**—Keep the scions in the cellar or other cool place until the first flow of sap is past, or until the vine has well started. Then dig down beside the vine, cut off a root four inches below ground large enough to graft into, cut the graft with two or three eyes and cleft graft the same as you would in grafting apples or pears, wind it firmly with cotton twine, brace it up with a stick and fill up the hole, leaving the upper eye just above the ground. Don't put wax around the graft, as it forms a cup that will hold the sap, which sours and kills the vine; the bottom string is sufficient and will decay and loosen as the vine expands with its natural growth during the season.—*J. Terrill, Cleveland, in Ohio Farmer.*

## CLOVER.



CLOVER is a great institution, the value of which is not as fully understood as it should be. The field for its development is the prairies of the West, where the fertility of the soil is annually depreciating, for want of manurial matter, to supply the drain that is made upon it.

When there is but little stock in proportion to the number of acres cultivated, and that little is not stabled in the winter, a large amount of manure cannot be saved to enrich the broad fields of corn and wheat. What shall be done? Two-thirds of the fertility, so far as wheat is concerned, is lost already. Soils that a few years since yielded thirty-three bushels now yield eleven. The remedy is forthcoming just when it is wanted, and experience is teaching how to use it. It is wonderful how nature keeps her treasures stored up until the necessities of man compel him to seek for them. Coal has been buried in the bosom of the earth until man wants it to convert water into steam, and iron ore into rails and ships, and now he finds it cropping out all over the earth.

The fertility accumulated in the virgin soil has sufficed for one generation, and now the little brown clover seed has been given to furnish machinery by which the elements of fertility may be absorbed from the atmosphere, and pumped out of the earth to supply the wants of another generation. On most lands four or five pounds of clover seeds and two or three hundred pounds of plaster to an acre, will in a little more than a year, if the soil is tolerably good, be converted into two tons of the very best hay. This material has been chiefly derived from the atmosphere, by the plants which have the power of changing carbon and oxygen into solid matter in their stems and leaves. This they deposit in the soil when they have completed their growth and fall and decay, and thus fertilizing matter is drawn from the atmosphere by the ton, annually, and placed just where it is wanted for the next crop.

And the clover roots, yes, the clover roots, what have they been doing all this time? If not interrupted they work on two years, and then withdraw from the field and make room for other workers who succeed them. We

call them biennials, indicating that they take two year's jobs. But what an amount of work they do in this short time. They will push themselves into the soil, one, two, three, four, five feet, burrowing into and loosening it, pumping up water from it, and the various minerals held in solution, and depositing them in the stems of the plants, along with the materials drawn from the atmosphere, and thus we have a compost of silex, lime, potash, soda, magnesia, alum, iron and the rest, mixed with carbon, oxygen, nitrogen, &c., as food for the next crop. These clover roots are grand workers. They are no idlers. They do not stop when they have worked eight hours. When one of these little fellows finds a particle of lime or sulphur, away down three or four feet underground he seizes it as his lawful prey—indeed it is the very thing he went down after, and has been hunting after all summer,—and now he sucks it into his open mouth, and pulls and tugs like a boa constrictor swallowing a goat, until he gets it within his œsophagus, then he pushes it on and on through the four or five feet of his longitude, and deposits it in the stem of the plant, to be used where it is wanted in the process of construction. We should like to see all the roots from an acre of thrifty clover washed and shook out, dried and thrown into a heap. Would there be two tons of them,—as much as there is of the plants above ground? If so, these four or five pounds of seed would have drawn from the air and the ground four tons of solid matter, ready to be rotted down into plant food for the crops that are to follow.

Not only has this amount of manurial matter been prepared, but the soil has been bored and loosened in all directions, so that the air could penetrate it, and warm it, and act upon the mineral matter it contains. This soil is then in a very different condition from what it was when the clover seed was sown. Its mechanical condition is greatly changed. The rain can penetrate it. The roots of wheat can run down into it. The decaying vegetable matter upon the surface, as it dissolves by the rain, can accompany the roots into the earth, and yield up to them the nourishment it contains.

If the soil is too poor, or too much exhausted to yield a full crop of clover at the first sowing, plough it into the ground, and repeat the process. The crop will be increased, and the

soil improved by every repetition—until at length, you will get the thirty bushels of wheat.

But we are impatient. We want to get the thirty bushels in one year. We cannot wait. But Providence is patient. "The mills of the gods grind slow." We must wait. Guano at \$60 a ton, and then transported a thousand miles won't pay, and if it would pay one year, it will leave the land in a worse condition than it found it. We must make the manure on the soil where it is to be used. We can get labor, when we cannot get manure. We must put as much labor on ten acres as we now put on twenty, and we shall get more wheat, and more corn, and improve the soil instead of exhausting it. We must raise clover.

*For the New England Farmer.*

#### KICKING COWS--MODES OF MILKING.

I have a young cow, one that was very hard to manage when she had her first calf. She was the most spiteful kicker that I ever attempted to milk. The kick was not one of the uncertain sort; there was no room to doubt of her intention to *hit*, and to hit hard. Now I am not *afraid* of a kicking cow, but confess to a *dislike* of that habit; and I felt in this case a strong desire to convince her of the impropriety of her conduct, and to persuade her to a more quiet course. When all gentle means failed, I tried tying up her fore leg on the milking side, but she would lean over and balance on two legs, and kick with the third; then drop on her knees and give another vigorous kick, the instant a teat was touched. Then her hind legs were tied together, and her nigh hind leg tied to a strong staple driven into the floor behind her; but under both these modes of treatment she would struggle and kick furiously, so as to make it quite impossible to milk her. At this stage I remembered that a neighbor had recommended, in extreme cases, the putting a chain around the cow's body, just back of her shoulders, and with a stick twist it so as to bring the chain tight, but not tight enough to hurt the cow so long as she remained quiet, having a careful person to hold it in just that condition. I tried it and the plan worked to a charm. She found she was hurting herself, and the hurt was certain, and rather severe, whenever she kicked; and so, after a while, she submitted, with only an occasional motion, the beginning of a kick. It was only necessary to use the chain once more, and the cure was complete. Here is, I think, the reason, of the efficacy of this method of treatment: the cow has sense enough to perceive that she *hurts herself* by kicking. If you beat her with a stick, she sees that *you hurt her*, and she kicks again in self defence or revenge.

The same cow lately scratched one of her teats, and in the same unpleasant way declared her intention not to be milked. But two applications of the chain convinced her of the error of her way, and she again became perfectly gentle.

Apropos to the general subject of milking. A few months ago, I read in some of the agricultural papers, a quotation from Professor somebody, (the name is forgotten) which contained remarks that seemed to me to indicate that the author was a *hobby-rider*, and one of the fastest sort, too. I was half disposed to bring his case before the "Society for the prevention of cruelty," &c., and have him fined for cruelly driving his hobby at a rate beyond what it could bear. But as he apparently belongs to that Society, and was laboring in its behalf, it was thought best to let him off this time. The Professor had probably been visiting in the country, and had seen some great, coarse, cruel-minded, or at the least a thoughtless farmer milking a cow,—caught him in the very act of milking in what is called the stripping method; that is, taking the teat between the thumb and forefinger, and pressing it, and at the same time bringing the thumb finger down to the end, thus forcing out the milk. This style of milking was severely condemned, as cruel in the extreme. It was pronounced dangerous, also, to thus roughly pull that delicately formed organ, the cow's udder. Now I have great respect for that humane feeling which is pained by cruelty to any living thing, be it of mankind or wormkind. I honor gentleness to the animals we make use of, more than I do the strength and skill that enable us to bring them under our control. But I doubt whether the worthy Professor ever milked a cow in his life. If he ever milked many, he would have learned that a cow whose milk flows moderately easy will generally *prefer* the method of milking which he condemns. This kind of milking partakes of the nature of rubbing. Did he ever know a cow that did not like to be rubbed? In most cases rubbing the teats and udder will soothe the animal, and make her quiet. For the purpose of testing the Professor's opinion of the exceeding delicacy and sensitiveness of the cow's lacteal organs, I have recently many times taken hold of the teats of different cows, and pulled downward smartly, with a force not less than that of a four-pound weight, without the cow's showing the slightest sign of being hurt. Yet this was a much harder pull than would ever be given in milking. And if the udder is so easily injured, why the instinct of the calf to butt when sucking? That butting is surely rougher treatment of the udder than it receives when a man simply forces the milk out by stripping.

There are some young cows, too, whose teats are so short and small that the milk cannot be taken in the usual way of milking large-teated cows. I am now daily milking a cow,

whose teats are hardly so large as my finger, and only half as long. How shall I take these in my big, clumsy hand, and press out the milk? I cannot do it. I should like to see the Professor try the job with his. I am quite confident, that before he had half drained the udder he would resort to the stripping method, and be ready to take back at least a part of his remarks as published in the quotation above referred to. M.

*Concord, Mass., 1870.*

*For the New England Farmer.*

#### "SHALL WE RAISE OUR CORN?"

Why not? The climate and soil are favorable. If so, then what good reason have we for not furnishing a portion, at least, of the corn we need for eating and feeding? As an article of food for man it is really more valuable than is supposed. Indian corn furnishes more oil than other grains with a fair amount of starch. For cold weather it will supply the place of animal oils or meat, or both, perhaps.

In deciding whether we "shall raise our own corn," there are many things to be considered. As a rule, we cannot raise any one crop on the same piece of ground for a long series of years, profitably or successfully. There are crops which, even if we can buy at a less cost than we can raise them, ought not to be thrown aside, for many reasons. Potatoes very rapidly impoverish the land upon which they are raised. So with tobacco, hemp, flax, &c. Not so with oats, clover, wheat, peas, beans and barley. And still, either of the last named will do much better not to sow two crops in succession. On soils such as are found West on the river bottoms or low prairies, crops may be and are raised for very many years without a single application of manure. There is land to-day, lying contiguous to the Genesee river, in the State of New York,—thousands of acres, too—that have been cropped almost continually for the past seventy-five or one hundred years, without one single application of manure, and yield from seventy-five to one hundred bushels shelled corn per acre; one hundred bushels of oats, and other crops in proportion. I have seen upland, far away from river bottoms, in the State of New York, cropped for twenty successive years with oats, without manures of any kind, growing fair crops. But even then a rotation of crops is far better.

No season is alike favorable for all crops. Corn wants warm days and nights, with occasional showers; potatoes and turnips want moderately warm weather, with cool nights and considerable rain; flax wants about the same; wheat will not do well in good corn seasons; oats are hardy, but will do well when wheat is a good crop. So that we cannot tell certainly what to raise until we try it.

We ought to raise our corn, or a portion of

it. Corn is more profitable than any other crop we can raise, except perhaps, potatoes, and they may be excepted quite often. If we live near markets for garden vegetables and the like, the raising of corn as a money making concern would not be thought of. But farmers away from such advantages would do well to reflect before they wholly throw aside the raising of this valuable grain. One acre of corn fodder carefully and properly saved, is worth more than an acre of grass even if it yields three tons.

On Massachusetts soil prepare well your land and make such application of manure as is needed. Plant in rows both ways three and one-half feet apart; be sure to have no more nor less than four plants in each hill. Cultivate well. Don't be afraid of hoeing too much.

*Cut up your corn at the ground early, as soon as your corn is all well glazed. Stand it up around hills not cut, at equal distances about sixteen hills in a bunch, or more if you prefer, put up carefully, bind firmly at top so that it cannot be blown over. Let it stand until thoroughly cured; don't husk it too soon. Your corn is then a sound crop, even heavier than if you had taken off the top stalks, and your fodder is worth more than it has cost you to raise the crop. I speak not at random, but from an experience of thirty years on the farming lands of the Genesee country in the State of New York.*

Yes, "raise our own corn" for the profit of it. It does not much impoverish the soil. The land is in a better condition for potatoes, oats or barley after the corn crop is off, which is an item worth remembering. With care for the health of your farm you are adding to its value because it is more productive. And while you might have more dollars, cash, at the end of ten years to raise potatoes, your farm would need propping up like an old horse with all the vital energy gone. Every acre of land which you so nurse that you can soon double the amount from, is so much capital, and better than in a savings bank. Certainly, "we will raise our own corn."

W. F. WOODWARD.

*Maplewood, Mass., April, 1870.*

*For the New England Farmer.*

#### THE QUINCE TREE.

Twenty years ago, bushels of quinces were raised where now but a few pecks are seen; and in many localities the trees are dead and gone. Their failure is owing to mismanagement and neglect; and these two things will kill any fruit tree. The quince tree demands food as well as our horses or cows; but if we give it only once or twice a year it will grow and flourish.

But this is not all that is needful to its growth, it also demands cultivation; it requires pruning and training, but does not often re-

ceive it. How rare it is to see a well-formed quince tree! Quinces are usually grown in the shape of huge bushes, with no more attention paid to their shape, than is given to the form of a syringa bush. It is often seen with two, three, and even four stems springing from the ground, and its head is composed of crossed branches and twisted shoots. A quince tree with a straight, smooth stem full three feet in height, and then branching forth into a stocky, compact growth is a *rara arbor*.

It is usually considered as a fruit which requires no care, but will grow and flourish like a wilding of the forest. Its extermination in many places—is now telling a different story, and the question is asked, "What is the matter with the quinces? mine are all dying."

Quinces will thrive well in common garden soil if well manured and pruned, and there is no more beautiful sight than a quince tree filled with flowers or fruit. Its flowers are very beautiful—its fruit almost equals the orange in form and coloring. The orange quinces are our northern substitute for that peerless southern fruit. They equal them in beauty and fragrance, but do not possess their juicy qualities; yet for a pie, tart or sweetmeat, they are fully equal. Indeed there is no fruit in the New England or middle States more to be desired for culinary purposes than quinces.

In cultivating them, pruning is most essential, in order to strengthen their growth. If the tree is growing in rich, well moistened earth, it will throw out a long straight shoot. Prune off all lateral branches, and cut back the shoot to a foot and a half or two feet, and tie it to a firm support. It will grow well that summer. In the winter pruning, spur in the laterals. In every successive year, manure well, and prune closely, clearing the main stem of all side shoots.

By cultivating in this way, and yearly shortening the main branch a stout tree which will not need support can be produced. Three shoots can be allowed to grow the first year that the head is made; cut these back next season and each will send forth two more, and there will be six principal branches. The fruit of this tree is produced on small, short, stout shoots extending down the sides of the branches, therefore in pruning all superabundant, irregular or decayed shoots should be cut off.

The quince grows finer near the sea-shore than on the inland, showing that it delights in a salty moisture. If a peck of salt is dug around an old, nearly barren tree, its fruitfulness will be greatly increased. Scatter the salt over the surface of the soil, but not close to the main stem. A half bushel of ashes unbleached, will increase its growth. From childhood we have loved the quince tree, and desire to speak a good word in its behalf.

The borer has tried its powers upon this fruit, as well as most others, but he can be

routed effectually, if one sets about it. Dip some cloths in kerosene and wrap around the stem as far down in the ground as possible, and pile the soil about it. Should the borer have stolen in before this is done, poke him out with a piece of wire. If your trees are badly infested with these pests of horticulture, set out new ones, or strike cuttings from good stout scions. They will grow as readily as a grape cutting;—set them in boxes filled half full with rich soil, and half with wet sand, plant the cuttings in the sand and they will quickly strike root. Cuttings can be planted along the margin of a hot-bed, or even in the open ground. Don't let this rare fruit die out for want of the care and culture you can so easily bestow, if you will only open your eyes to its needs!

S. O. J.

*For the New England Farmer.*

#### STICK TO THE FARM.

Every position in life has its discomforts. It matters not whether cultivating the soil, attending the sick, selling goods, or preaching a sermon. Some other position, and not our own, seems to be the favored one, and to possess less onerous duties. Confinement in heated, unventilated rooms, as must from present custom necessarily be the case with nearly all professional men and mechanics, is not conducive to either a long life, or a tranquil one.

Unquestionably, man's normal condition is to cultivate the soil. At the beginning he was put into a garden, but getting into difficulty, probably because he was displeased with his employment, and, as is the case at the present day, having ambitious desires in another direction, he was forced to change his location, if not his occupation, and has been grumbling ever since. I believe that farming will pay, but it must be intelligent farming; a conservative exercise of muscles, not an improvident waste of vital forces.

Take care of your health, and don't waste your strength in lifting. Carelessness in this respect, and exposure, bring rheumatism and pleurisy, and they never leave you as well as before. Whenever the aid of machinery can be called in use, it economizes your vitality. Have a system. I know the constant temptation to overdo. Better spend five dollars for hired labor, than fifty in doctor's bills. Do not labor to exhaustion. You can then think as well as work.

It is too true that during the carnival of farmers in the fall, they are always advised, (nine times out of ten by some one not a farmer,) to stick to the farm. The beauties of picking stones and laying walls are skilfully painted, so that for the time all want to be farmers; but the tired, aching back, a week after, does not feel relieved by a sight of the aforesaid orator and adviser driving a pair of blooded horses, without a thought of the far-

mer, except perhaps, to know where he can get a ton of hay the cheapest.

Other things being equal, a resolve to be a successful farmer, involves no more difficulties than cluster around all occupations. Too much land, and too many irons in the fire make the labors on a farm distasteful and unremunerative.

Cultivate less land. Concentrate your forces, for skilful, intelligent labor will win every time. Pursue some specialty. You will get an experience in a few years that is immensely valuable. The successful business man, or the man of leisure always buys a farm as a finality. It matters not whether reared in city or country, the yearning for land comes with mature years. Wisely planted for a beneficent purpose, let us accept the condition. Bringing the same skill to bear as in other professions, we may, like them, reap, some sixty, some ninety and some a hundred fold.

L. W. PUFFER.

*North Bridgewater, Mass., April, 1870.*

#### CULTIVATING THE POTATO.

Enclosed I send you an article that I wrote for the New Hampshire *Sentinel*, which you are at liberty to publish in the *FARMER*.

The raising of potatoes is the most lucrative branch of farming to which those of us who live in the hill towns of New England can turn our attention, and every farmer who produces this crop for the market wishes to plant that variety which will yield the greatest net profit. In order to do this, he must understand which variety is best adapted to his soil. It is well for farmers to try different varieties, and understand which have the most desirable qualities combined.

It is usually the early potato that commands the highest price. But the earlier a potato is, the quicker it loses its good eating qualities; or in other words, the longer any potato is in maturing, the longer it will retain its good eating qualities. The late varieties are not as liable to be cut off by the drought as early ones, for we seldom have a drought last through the whole season. Early varieties will be much better planted as late as the middle of June, in this section of the country. We usually have considerable dry and hot weather from the 15th of June to the 25th of July, that frequently injures the early potato. If planted late there is more cloudy and rainy weather in August for them to grow in.

There is no branch of farming where so great a diversity of opinion exists as in the seeding and cultivating of potatoes. Some say, if you plant small ones, you will get small ones; others, if you want large ones, plant them. I have owned a farm and worked upon it for the last twenty-four years, and have almost invariably planted small potatoes—have planted the Davis Seedling fifteen years, with-

out changing the seed, and seeded with small ones, and never raised larger ones than last year. Care should be taken to seed light with the small ones. I planted a potato in my garden last spring, not larger than a marble that produced but one eye, and from it I raised 2½ pounds of large size potatoes. My rule is to cut two eyes on a piece, and put three pieces in a hill, three feet apart, or in drills the same proportion. Those that I wish to plant early, before the eye would naturally start in the cellar, I bring up to the light, that I may know that my seed is all in good shape, and am particular to cut the seed myself the day it is planted, (as it injures the seed to heat, after it is cut.) Three or four vines in a hill are a plenty; you will get about the same number of pounds, with less small ones. If your ground is mellow, one eye on a piece, with four pieces in a hill is enough; if tough and soddy, more seed will be needed, for some will not come up.

The eyes of a potato are all connected together by roots running through the potato, and if disconnected, every eye will start, while on the whole potato only a part will start. Potatoes should be planted on about a level with the top of the ground; (vary a little from this rule if the piece be wet or dry.) Hill them up just enough for the potato to grow in and no more. Hoe them when very small, have plenty of dirt between the hills and rows. Potatoes have two sets of roots; one that the tubers grow on, and numerous other roots that run from one hill to the other, near the top of the ground, drawing in food and moisture—hence the injury of hoeing them late. If the ground is left nearly level these little roots will much more readily drink in the dews and showers that fall, and of course will not dry up as much as if hilled up. The potato plant needs considerable light and air, and by seeding light the vines grow more erect, and give a better circulation of air, which has a tendency to preserve them from the rot.

N. W. HARDY.

*Nelson, N. H., April 29, 1870.*

**WATERING HORSES.**—Horses should be watered from a brook, pond or river, and not from wells or springs, as the well water is hard and colder, while the running stream is soft and rather warm. The preference of horses is for the soft, even though it be muddy water, to that which is hard. Horses should be allowed in summer time at least four waterings a day, and a half a bucketful at a time and in winter a pailful may be allowed morning and evening, which is sufficient to assuage their thirst without causing them to bloat or puff up. Care, however, should be taken that the horse is not put to work immediately after drinking a full bucket of water, especially if required to go fast, because digestion and severe exertion can never go on together, and

moreover purging is apt to ensue. In some cases, broken wind or heaves is thus produced. Avoid giving warm or tepid water to horses that are often driven from home, because cold or well water will then perhaps be given them, which will be liable to produce a congestive chill, followed by lung fever, and in some cases colic. When horses are thus carefully watered, if one or more of them should refuse their accustomed food, something is wrong, and they should not be taken out of the stable to work or driven further that day; but an examination should be made as to the cause with a view to its removal.—*McClure's New Stable Guide.*

### EXTRACTS AND REPLIES.

#### THE ONION WORM.

Can you or any of your subscribers tell me how I can keep the maggot from eating my onions. Last year they worked upon them till they were pulled. I used sulphur, ashes, hen manure, &c., all to no effect. J. RAND.

*South Windsor, Me., April, 1870.*

REMARKS.—We wish we could tell you how to prevent the ravages of this insect in some easy way. Last year a Montpelier, Vt., correspondent said that he had saved his onions by removing the earth from the bulb with his fingers, being careful not to disturb the roots, while weeding them. A pound of coppers dissolved in a pailful of soft soap and when thinned with water applied to the onions, is said to be good to keep off the maggot and to promote the growth of the onions. Others have poured hot water from a coffee-pot spout upon the bulb. Who knows of a better remedy? These worms have been very destructive of late in many sections. To avoid their devastations, we have adopted the plan of sowing the seed in August, and when the onions are as large as walnuts, or even when smaller, pull them up, dry them, and the next season as soon as the ground will permit set them out. These are not troubled by the worm.

#### "ATTENDED STRICTLY TO FARMING."

If John P. Gager, Jr., of Scotland, Conn.,—see FARMER, April 23, last column, first page,—got rich by "attending strictly to farming," and wishes to "encourage young men to turn their attention more particularly to farming," by his example, why, in the name of reason, does he confess to having dabbled in the "outside speculations" of saw-mill, grist-mill, shingle-mill and bank-stock? Such an example, it appears to me, is a very poor one to encourage young men to turn their attention more particularly to farming. Actions speak louder than words and in this case their utterances are not exactly in harmony, to my ear. G. R. HITCHCOCK.

*Champlain, N. Y., April 23, 1870.*

REMARKS.—In the neighborhood in which we served our apprenticeship at farming, grist and saw-mills were as generally owned by farmers as were cider-mills and maple-sugar "factories." The only shingle mills then known were the kitch-

ens and wood-sheds of farmers, many of whom manufactured shingles by the "thousand." The streams in that vicinity were small, and the mills on them were usually run only during the high water of Spring and Fall, when other farm work was not pressing. Farmers' boys engaged in these "outside speculations," but without a thought that by so doing they were becoming "anything but farmers." As to our correspondent's strictures on Mr. Gager's bank stock, we can only say that we have had no experience in that "branch of farming" ourselves; but after a man has paid for two large farms, and has "a thousand dollars worth of produce on hand," we do not see why he should lose caste as a farmer, by taking a share or two in some Farmers' and Mechanics' Bank. Would a blacksmith cease to be a blacksmith the moment he became the holder of bank stock? Isn't your bedstead a little too short for some farmers, friend Hitchcock, and are you sure it will be best to trim them all down to it?

#### ASHES OF PINE BRANCHES.

Some years ago I found that pine boughs that fall from trees, gathered up and used as bedding for cattle and hogs, or put in yards, were of no value for manure.

In 1869, I piled the brush, where pines were cut, raked up chips and boughs that had been falling for years, and burnt large piles. About one-third part was clean ashes, the rest coals and dirt. I mixed this with twice the amount of clayey loam from the cow yard, in which a little manure was mixed, moistened with water and shoveled over twice. Of this compost I put one cord on one-fourth of an acre of moist, sandy loam, after breaking up. Sowed to flat turnips and grass seed, and harrowed all in together, the last of July. The seeds came up well, but I did not get two bushels of turnips fit for market, and not ten bushels in all.

Can you or any of your correspondents tell me the cause of the failure? Was it the dry season, or too much compost, or is the ashes of boughs, chips and limbs worthless for manure? I am in the dark about it. W.

*Rollinsford, N. H., April 23, 1870.*

REMARKS.—So are we. Did weeds or herbage of any kind grow that season on the same soil? If we were on the spot with you, and should get a reply to half a dozen questions which might be asked, perhaps a reason would become apparent. Pine wood yields but a small amount of ash any way—hardly two and a half per cent., according to Prof. S. W. Johnson, while walnut gives over twenty-five per cent., and then the ash itself is worth but little for soap-making or other purposes, compared with hard wood ashes.

#### RAISING OATS.

I have a Scotchman on my farm, (a splendid ploughman) who says the universal practice in Scotland is to plough lea or grass land in the fall, setting the furrow slice up on its edge. In the spring, as soon as the land is dry enough, oats are sown broadcast on the furrows without any manure. The field is then thoroughly harrowed crosswise, and finished off by harrowing length-

wise of the furrows. When the oats come up they have the appearance of having been sowed in drills. In this way he says good crops are obtained. If the soil is heavy or moist, the Black oats do the best. Have you or any of the readers of the FARMER ever tried this method of raising oats.

#### MILLET.

If a good crop of oats can be obtained as above, why not a good crop of Millet? I have a field of five or six acres, good strong land, part of which is rather moist and late, that was ploughed last fall. Now if I sow millet on this land when it is dry enough to work, without manure, can I reasonably expect a fair crop? Perhaps for millet, it might be well to pass the harrow once over the field, crosswise, before sowing the seed. If any have had experience in this kind of husbandry, let us have the facts. J. R.

*New York City, March 22, 1870.*

REMARKS.—The foregoing was received with other papers, and having been laid aside with them, appears later than it should have done.

#### ALSIKE CLOVER.

Within the past two or three years, the attention of bee-keepers has been directed to the cultivation of honey-producing plants, to afford pasturage for bees in poor seasons, or when natural forage fails, and to add largely to their usual stores in favorable ones.

Alsike clover is the best, everything considered, and is rapidly working its way into public favor. The statement has been made by some, that if every farmer would put one-half of the land now seeded to grass into Alsike clover, bees might be very profitably multiplied in our country one hundred fold, and each hive furnish many times its present profit, and quite as many cattle be sustained as at the present time.

Our experience confirms the favorable opinion that has been expressed by others, of this variety of clover. It not only yields a large quantity of honey and of good quality, but is a profitable crop for farmers to grow for stock, or seed, or for both. It grows nearly or quite as large as the common clover. The stalks are finer and not as woody. It has many branches, consequently affords a multitude of blossoms which are very fragrant, and is much enjoyed by the bees. It does not blossom as early by a week as the red clover, and remains in bloom about four weeks. It is particularly adapted to moist ground. The roots being fibrous, are not liable to be injured by the frost heaving the ground. It is prolific in seed, yielding from six to eight bushels per acre.

As this clover has a two fold value, we anticipate that the time is not far distant when it will be more generally grown, and thereby the thrift of stock and the resources of honey will be greatly increased throughout the country. C. B. BIGLOW.

*Perkinsville, Vt., April, 1870.*

#### FARMING IN VIRGINIA.

In May, 1869, I left Maine, and after looking about in the South, purchased a farm of 500 acres one mile northeast of Manassas Junction and village, which is on the Orange, Alexandria and Manassas railroad, thirty-five miles south of Washington. I moved here with my family in November last. My farm is on the Centreville road, two miles from Bull Run, and about four miles from the battle-field. Soon after the war commenced, the confederates took possession of this place and fortified the town. Fort Beauregard is within a half a mile of me; Fort Johnston a little further off. The house on this farm was

taken possession of and used as the head-quarters of Gen. Jos. E. Johnston; and the house opposite was the quarters of Gen. Beauregard. At a later period, the Union armies got possession of this place, and their generals occupied these houses as their head-quarters also. When the Union army evacuated, they burnt all the buildings on this farm to keep the supplies from falling into the hands of their opponents. This whole country was overrun alternately by the armies, and nearly all the buildings, wood, orchards, fences, &c., were destroyed. Since the close of the war, the village has been rebuilt and is fast growing in importance. The town has two hotels, two small churches, six stores, a grist mill, a foundry, a brick manufactory, with blacksmith, tin and other shops, a weekly paper, &c.

Land can be purchased in this, "Prince William" County, at from \$5 to \$50 per acre, by the farms, except close up to the villages, &c. The climate is splendid, the water good, and markets near. There is room for fifty thousand small New England farmers to locate in the one hundred counties of this State.

I cannot see why this State, with her railroads and water communications, her central location and fine climate, is not destined to be one of the best and most desirable States in the Union to live in. I shall be happy to give all the information in my power to such as may visit this section.

JONAS GREENE.

*Manassas, Va., April 9, 1870.*

#### RAISING CORN.

I regard corn an important farm crop and have given it considerable attention and propose to relate a little of my experience. I do so not because I raise very large crops, but because I obtained a better yield than I have seen by so economical a mode of cultivation as I adopt.

First, plough the ground once about six inches deep in autumn or spring, according to convenience, as well as it can be ploughed. I use none but a swivel plough, and I would not have my ground ploughed into dead furrows and ridges if done for nothing. I intend to have every foot of the ground turned over.

About the middle of May, or soon as the fields will do to work, spread on fifteen loads of thirty-three bushels each of strong stable manure to the acre, and harrow in the manure well with a Geddes' Harrow, lengthways of the furrows. When the ground comes into condition furrow out the field three and one-half feet apart each way, and lay a moderate shovelful of stable manure in the hill, which will require ten to twelve loads to the acre. This manure should be well worked over and in somewhat advanced state of fermentation. Plant on the manure five to six kernels of corn to the hill. When the corn is about five inches high hoe it well with a moderately elevated hill, and thin out to four plants to the hill. When about twenty inches high, hoe the second time, still with a moderately elevated hill, and no more hoeing except to destroy the weeds. I have seen no advantage whatever in hoeing corn too small.

I once saw a field of corn hoed when but just out of the ground and nearly covered up in the operation; then it was hoed the second time when scarcely large enough for the first hoeing and nearly covered up again; then, the third time, still nearly covering it with the earth. The result was the corn never grew to any size, and the crop was almost a total failure, though the field had a fair dressing of manure.

I use twenty-five or twenty-six loads of manure to the acre to raise sixty to seventy-five bushels of corn. I have seen forty loads of manure spread on an acre, and none in the hill, and a smaller

yield of corn than mine the same season. I have seen forty loads of manure spread on sward land and ploughed under with no manure in the hill, and an inferior crop of corn, not more than twenty-five or thirty bushels to the acre. Finally, I have never seen a large crop of corn without manure in the hill.

Seed in my opinion is a matter of much importance in raising corn, but I will defer that subject for the present.

J. H.

*Shrewsbury, Mass., May 1, 1870.*

#### CHEESE FACTORY.

One of the largest and nicest cheese factories in the country is being built in Shoreham, Vt. It is to be thirty by eighty, and three stories high. It will be sufficient for manufacturing the milk of the 600 or 800 cows which the neighborhood is capable of keeping. It was started by a young man by the name of Adin Perkins, who came into the neighborhood last fall, and purchased a small place of about seventy acres, and has taken \$500 of the stock in the factory. Operations are to be commenced by the middle of May, and Mr. Perkins is to take charge of it. His farm and his situation in the factory is equal to a city salary of \$5000, and is probably no better than can be obtained in many other places by competent and experienced cheese makers. What a great blessing it would be if the thousands of young men scattered through our country, who are healthy, intelligent and reliable, would follow this young man's steps and take hold with energy to help build up these, butter and other factories, in the midst of farmers, instead of crowding into the city, with a vague hope of avoiding poverty and hard work, where so few realize their expectations and where so many utterly fail, and die in hopeless poverty. So young men consider well the situations and opportunities that are offered at home.

*Shoreham, Vt., April, 1870.*

LOOKER ON.

#### ONE HUNDRED AND TEN BUSHELS OF CORN FROM AN ACRE.

On 120 rods of land I raised eighty-three bushels shelled corn, being about 110 bushels to the acre. The land had been to grass about eight years. Was ploughed in the fall, manured in the spring, with common barnyard manure, spread broadcast at the rate of six cords to the acre. Put into each hill of corn a small handful of Bradley's Superphosphate, or about 300 pounds to the acre; hoed three times thoroughly. The above corn is a very superior variety of the twelve rowed, pronounced by all to be the best ever raised in this town.

NATHAN G. PIERCE.

*Westminster, Vt., April 30, 1870.*

REMARKS.—Doubts have been so often expressed by farmers as to the possibility of raising one hundred bushels of "shelled corn" on a single acre of land, that we regret that Mr. Pierce was not more explicit in his statement as to the manner of measuring both the land and the crops in this case.

#### PREMIUMS FOR INDIAN CORN IN NEW HAMPSHIRE.

Time is short for offering advice on corn planting, but the letter in FARMER of 23d of April from J. D. Lyman, Esq., prompts me to trouble you with a line on the preparation of the land to receive the seed. Manure well; plough "deep;" keep clean by frequent ploughing and hoeing, and if there is not a great competition for Mr. Lyman's premiums I shall be sadly mistaken. Last year I ploughed my land for corn with heavy oxen, as deep as the point of plough beam would allow,

—turning in the manure and black soil,—bringing up the clay to the top, and the result was such a crop that none of my Irish, Dutch or French neighbors could begin to think of comparing samples. A deal of my corn grew fifteen feet high, had three ears on one stalk, with sixteen to twenty rows on an ear,—which measured from ten to twelve inches long. A result which I think was owing to my reversing the system practiced by a great many farmers out West,—*I hauled the manure on to the land instead of removing my stables.* I wish Mr. Lyman or any other Mr. Somebody Else would make such significant offers up in northwestern Illinois for the growing of corn. My corn is the big yellow Horse Tooth, and was ripe and cut sixteen or twenty days before the first frosts in September. I have many applications for seed from Iowa and Wisconsin. JOHN WHATMORE.  
*Bridgnorth Farm, Dunleith, Ill., April 30, 1870.*

#### WHEN TO SOW GRASS SEED.

It has been the practice of most farmers to sow grass seed in the spring, with wheat, barley or oats. This will do if the land is in good condition to seed down in April or early in May. But when the land is too wet to work until late in May or early in June, it is better to sow grain without grass seed, and when the grain is taken off, plough in the stubble, put on the manure, sow on the grass seed, and lay the land down smooth. It is better for the following reasons:—

1st. The young grass will make a more vigorous growth than when sown late in May, with grain, because the grain will grow up quick and overpower the young grass, which will be but feeble at best. And when the grain is taken off, it will sometimes die out by drought and the heat of the sun, and if it does not die it will make but a sickly growth.

2d. The land is generally dryer in August, and in better condition to seed down, and it puts the stubble out of the way, and farmers have more time to do the work well.

3d. Farmers can grow their own seed for less than half the present high price.

Therefore, farmers that have land in grass, and no grass seed on hand, would do well to wait until grass seed grows before seeding down, and let speculators keep their seed for their own use until they are glad to sell at a fair price.

D. N.

*Amherst, N. H., April 18, 1870.*

#### FARMING, PRICES, &c., IN IOWA.

Having been raised to farming and then engaging in various pursuits for many years, I am again on the farm, and to get and impart information that will facilitate that business in a practical manner is my desire. After traveling through parts of many of the Western States, with a view to location, I pitched my tent in northern Iowa, as the best, all things considered. Having resided here near twenty years, and given some attention to matters generally, I am of the opinion that northern Iowa presents more and better inducements to the industrious farmer than any other place under the sun. Our climate is healthy; our crops scarcely ever fail; our soil is unsurpassed for fertility; our stock is healthy and thrifty; our fruit is abundant, especially of the smaller kinds; our railroad facilities are being pushed forward, so that in a few years our butter will not be sold for twenty cents here and fifty cents in Boston, and other products at the same ratio. Our wheat bins are now groaning under the heavy burden of last year's crop, forty to seventy cents a bushel, not being sufficient inducement to them to drop their burthen. Unlike the State of Maine our legislature should offer premiums to our farmers to raise less wheat and more potatoes and other

cereals. There will be much less wheat sown this year than formerly in Iowa. And right here I wish to ask if the Norway oats, which are being so highly spoken of, are one grand humbug, and are the Western farmers being imposed upon by sending them common oats, calling them "Norway oats?"

Fayette, Iowa, 1870.

F. SNEDIGAR.

NEW OATS.—DRY ROT IN POTATOES.—POTATO BUG.

Please inform me what kind of oats the enclosed are. They yield about sixty bushels per acre. I find my potatoes are affected with dry rot. Will it do to plant the sound portion? Last season I noticed the tops to be covered with a very small black bug, oval in form, and very spry. Did they injure the tubers?

Shelburn, N. H., 1870. H. T. CUMMINGS.

REMARKS.—The oats you enclosed are probably what are called "The Surprise Oats." We have had several samples sent us from various parts of New England, all of which are very plump, white and heavy. They are represented to weigh from 40 to 60 pounds per bushel. The oats which have been cultivated for twenty years past seem, like some other plants, to have greatly deteriorated, so that we need some new and better variety. The "Surprise" seem to promise this.

It would not be advisable to plant any portion of a partially rotten potato. The minute, black bug of which you speak has been very destructive to the potato, and although not directly causing the rot, greatly enfeebles and injures the crop. Scatter dry ashes, plaster or air-slaked lime over the vines, as soon as the bugs appear. If done two or three times it will check their ravages, and help the crop.

WHAT WILL DESTROY WOOD LICE?

Will some writer for the FARMER please inform me what will destroy wood lice?

Dover, N. H., April, 1870. J. M. JENKINS.

REMARKS.—If the writer means the common aphid, he may check their ravages, or destroy them by the use of soap suds, tobacco water or whale oil soap.

If he refers to bark lice, *coccidæ*, the question as to what will destroy them and not injure the tree, becomes one somewhat difficult to answer. And even if we could find a remedy that is safe and efficacious, the labor of going over an orchard would be one of considerable cost.

We have recently seen an account of many experiments made by a gentleman, some of which were perfectly harmless to tree and louse, while others did not kill the branches, but utterly killed the foliage as well as the lice. The experiments, however, were continued with all sorts of appliances which he thought might destroy the invaders, until he hit upon one which he states has proved a perfect remedy. It was the application of fish brine; the brine, we suppose, from the barrel of salted mackerel or other fish. This he diluted, and with a syringe, or pop-squirt, as the boys call them, which cost fifty cents at the tinners, he syringed the trees when in foliage and blossom, without any injury to the tree, but it

proved to be death to the lice! After this the branches assumed a green, plump and healthy appearance and grew vigorously.

The meaning of the term *coccus* is to exhaust, and it seems to us that if some means are not found to check the ravages of these lice, or destroy them, they will eventually exhaust every apple tree in New England. Their presence on the trees is sufficient, it seems to us, to prevent their producing fruit, if they are not themselves the cause of barrenness. Please make the experiment with care and report to us.

APPARATUS FOR A SMALL CHEESE DAIRY.

Please give us an accurate account of the best method, now in practice, for manufacturing cheese where the milk of from four to eight or ten cows is used. As there are not any cheese factories in this section, cheese is made in the good old-fashioned way, which does make good cheese. But, alas! like the frogs in the fable, though it may be fun for the eaters, it is death to the makers.

Madison, Me., April, 1870. B. P. J. WESTON.

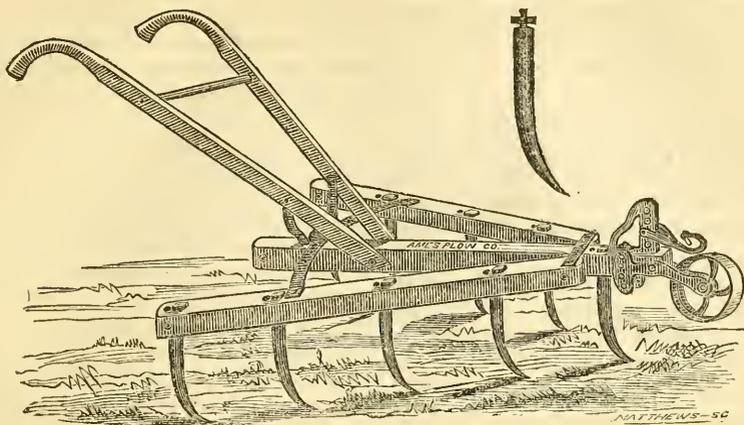
REMARKS.—A few months since, see Monthly FARMER for 1869, page 423, we published directions for furnishing a family cheese establishment of the simplest and cheapest of the "good old-fashioned way;" but our correspondent wants something in advance of this, but not so extensive as the modern cheese factory. Though quite familiar with cheese making in our youth, we presume that our personal experience was with implements, conveniences and processes similar to those which our correspondent complains are much more funny to the eaters than to the makers. How far the factory appliances have been or may be simplified and adapted to private dairies we are not informed, but on behalf of Mr. Weston and others similarly situated, we solicit information from those who have tested improvements on the good old way of family cheese making.

SWELLING ON STIFLE JOINT.

I have a valuable cow that is troubled with bunches on her stifles and is quite lame. I have applied kerosene and chamber-lye and salt without apparent effect. What shall I do for her?

Littleton, Mass., May 6, 1870. I. S. H.

REMARKS.—We mistrust that the leg has been sprained or injured, and that the trouble is in the joint. Sometime when your family doctor is riding by, get him to look at it. It is very important to know the cause and seat of disease. If the bunch is caused by "weeping" from an injured joint, it requires very different treatment from what would be proper in case it is a tumor or sore originating in the skin or flesh. You do not say whether the bunch is hard or soft. If it proceeds from an injured joint, it is probably soft, and contains fluid matter, and it may be of the kind called a bursal swelling. These are often opened at the lower part, and after pressing out the fluid, bandages are applied and drawn over the swelling quite snugly. It may be necessary to repeat the operation.



FRENCH'S PATENT CULTIVATOR.

The increased attention lately paid to dairying, which at the present time is assuming somewhat the type of an agricultural fever, has naturally suggested inquiries for better milk producing feed. Dry hay, especially that which stood till the seed was thoroughly ripened, or pasture feed which has turned white from old age or August drought, is not quite juicy enough for factory cows, or for gilt edged butter, and many farmers are thinking about raising a patch of roots, if not for the daily food, at least for an occasional change of diet for their animals. The remarks made by Mr. Henry Lane, of Cornwall, Vt., in his address at the meeting of the dairymen of that State, about raising beets for cattle and pigs, seem to have been read with much interest by many farmers. But the labor and the bother of raising roots, is the great objection which we fast-horse Yankees urge against their cultivation. To obviate this objection the inventors have been racking their brains to devise ploughs, cultivators, seed sowers, and-so-forth, which they assure us will make a rough field as mellow as a garden, and help us to raise a ton of beets with as little back-ache as a ton of hay.

One of these newly invented implements is daguerreotyped above. The patentee, Hon. Henry F. French, lives in Concord, Mass., and notwithstanding the proverb that a prophet has no honor in his own country, he has put his cultivator into the hands of his neighbors, who after using it one season speak well of it.

A statement signed by John B. Moore, Minot Pratt, Abiel H. Wheeler, Simon Brown and Frederick G. Pratt—names familiar to the readers of the FARMER—closes with the remark that "It saves much of the hand labor, and therefore much of the expense of cultivation of the root crops, small fruits and vegetables." The above cuts show so well the peculiarities of the implement that we need only say that it is a light horse cultivator or harrow, the teeth are steel-pointed, one inch square, about ten long and set cornerwise. Further information is given in an advertisement in another column.

#### ABORTION AMONG COWS.

Cheese factories originated in central New York, and there the system has been perfected. Little Falls, one of its villages, has become the great cheese market of the country. Cows have been selected, managed and fed for the greatest possible production of milk.

Massachusetts is full of cities and large manufacturing towns, which afford a capital market for milk. Hence many of her farmers have made the raising of milk the great object of farm management. Everything else has been made secondary or subservient to this. Few cattle are raised, and cows are selected with reference to the abundance of milk which high feeding and special management could stimulate them to produce.

Chester county, Pennsylvania, famous for its choice butter and pure milk, is near the

city of Philadelphia; and Cumberland county, in the same state, is near the city of Harrisburg. Both counties had in 1860 more cows than of all other stock put together.

In the report of Dr. J. C. Dalton, Commissioner appointed by the legislature of New York for the investigation of abortion in cows, it is stated that "only in New York and Massachusetts have cases been sufficiently numerous to excite general attention. In Pennsylvania they were found in Chester and in Cumberland counties, reaching ten per cent. of all cases of pregnancy reported."

To our own minds the close connection between abortion among cows, as a disease, and the production of milk, as a specialty, is forcibly suggested by a consideration of the foregoing facts.

Nature, it is said, abhors a vacuum; is it not equally true that she sooner or later protests against all specialties in her productions? The farmers of Illinois make a business of hog-raising, and the protest of nature is in the form of a cholera; in Vermont, fine-wooled sheep are raised till the foot-rot intimates that a change is necessary; New Jersey makes a specialty of peach-growing, and that fever is cooled off by the "yellows;" Cincinnati hopes to get rich by growing grapes, but the mildew blights her vines and disappoints her expectations; sanguine amateurs, believing that if a few hens prove profitable, a larger number may be kept with a proportional profit, try the experiment only to increase the number of those with whom "boughten wit is the best;" cotton is raised at the South, and wheat at the West, till the land becomes so tired of these crops, that the men who cultivate them find it necessary to exchange their old fields for new ones.

But we have another fact bearing on the relation of the milk specialty to this terrible dairy calamity.

In the last *Prairie Farmer* we find the following announcement:—

"We regret to state that this scourge that has so long afflicted the cows in the dairy regions of New York and Massachusetts has at length made its appearance in the west."

The editor, regarding it as one of the direst calamities that could happen to the farmers of that growing section of our country, recently visited the locality of the outbreak for the purpose of gathering what information he could in relation to the prevalence of the

trouble. We have read the report of his examination with care, and the only fact stated on which any theory can be grounded to account for the frequent cases of abortion of the cows in this section is the unqualified one that,—

"The complaint is entirely limited to a small number of herds of cows that are kept with a view of sending their milk to Chicago market."

The locality of the disease in Illinois is in the township of Lockport, Will county, conveniently situated on a railroad for the transportation of milk to the city. About 250 cows are kept for this purpose by ten farmers. The section is admirably adapted to dairy purposes. "All the pastures are supplied with water of rare purity, being the product of living springs. The pastures are excellent, and are well provided with shade. The barns are roomy and well ventilated. The cows are fed tame hay during winter, together with bran, shorts and screenings. They are kept in good condition for breeding or giving milk, but are not fat."

In a natural state, cows yield milk for their offspring a few months, which is then weaned, and the mother goes dry the remainder of the year. The milking qualities of our herds are, therefore, largely artificial, and how far this improvement on nature can be carried, is a question that we think is soon to be decided. The limit, we apprehend, has already been reached by some of those who have made the production of the largest amount of milk a study and a specialty; and we regard the disease under consideration as a notice, posted up by nature so distinctly that he who runs may read,—"thus far shalt thou go, but no further."

We do not claim originality for this theory. In the second report of the New York Commissioner, Dr. Carmalt, successor of Dr. Dalton, before alluded to, the idea that the excessive production of milk may be the cause of abortion is alluded to, and the significant statement is made that in diseased sections of New York there is "an average excess of 1815 pounds more milk per cow than the statistics of the whole State determine should be the yield."

Can we reasonably expect that the organism of the cow will bear that management and that stimulating food necessary to so great an increase of her milk producing powers? And

if not, in what form could her failure be manifested more directly in the line of our efforts than has been done in those sections where milk has been made a speciality? Is not nature herself offering, by this very disease, to aid us in our purpose to make the cow a mere milk machine?

*For the New England Farmer.*

**MASSACHUSETTS STATE BOARD OF HEALTH.**

**Look out for Poison---Poison in the Air---Poison in the Water.**

BY JUDGE FRENCH.

The health of the community is of public importance. The State needs the labor, physical and mental, of every citizen. The imbecile, whether in body or mind, is a public burden, a tax on other men's ability. It is, therefore, a primary duty of the State, in every proper way to limit the number of the feeble, the insane, the idiotic, the sick, just as it lessens the number of the ignorant and vicious, by means of schools and colleges. With this view, by an act of June, 1869, the legislature established a State Board of Health, to consist of seven persons, to be appointed by the Governor and Council. Their duty is "to make sanitary investigations and inquiries in respect to the health of the people, the causes of disease and especially of epidemics and the sources of mortality and the effects of localities, employments, conditions and circumstances on the public health," to advise the government in regard to the location of any public institutions, and make annual reports of their doings, with such suggestions as to legislative action as they may deem necessary. They are also charged with investigating the effects of intoxicating liquors as a beverage.

The board has been organized by the choice of Dr. Henry I. Bowditch, as President, and Dr. George Derby, as Secretary, and has made its first report.

Probably no persons in the Commonwealth are better qualified for their important positions than the two gentlemen named. The paper contains a report upon slaughtering for Boston market, and a report on the sale of poisons, and closes with general observations on The Prevention of Disease. To two of the topics most prominent, as affecting public health, I wish to call the attention of your readers. There are some things beyond the power of the State to control, such as our food and drink and clothing, and warmth and ventilation in our private houses, and our personal habits of cleanliness or healthful exercise. These circumstances may indeed be greatly influenced by correct public sentiment and by instruction through various channels.

Another class of subjects bearing on public health may be controlled by police regulations,

such as the management of slaughter houses, the drainage of towns and villages, the supply of pure water and the prevention of disease by contagion, as by vaccination. The great point dwelt upon in this report is

**Pure Air.**

One would think that in the month of March in New England, fresh air might be abundant and cheap, but the want of it kills, perhaps, more than all other causes combined. We can see our food, and we can smell it and taste, so that we have several chances of testing its qualities. What would you think of a man who should go to a neighbor's to dinner and sit down at the table and open his mouth and shut his eyes and tell one of the children or servants to pour in whatever solid or fluid was convenient.

Now we do even worse than this as to the air we breathe. To be sure we cannot usually see the atmosphere or taste it, and I wish we could not so often smell it. But whether we can thus test it or not, it is of far more consequence to health than food.

We may live for days without food, we die in five minutes without air, and we die nearly or quite as quickly in a well, filled with certain gases, or in a close room with a pan of charcoal. Yet we think it a hardship to go to bed without a supper, and make provisions over night for our breakfast, while the little circumstance of whether we shall breathe poison all night for want of ventilation, does not disturb us.

Twenty grown-up men will shut themselves up with an air-tight stove in a close room fifteen feet square to hold a farmer's club, and a majority of them will feel rather injured at the suggestion that air is necessary to respiration; and there is a town, not far from some of us, where a high school house has been lately built at a cost of \$12,000, without any provision whatever for ventilation, and where there are some smaller schoolhouses practically in the same predicament.

Think a moment, reader, if the thought does not make you sick, what sort of mixture you are breathing in a close room full of people. A single whiff of a cigar in that room will be perceived by every person in it in ten seconds, which seems to show that the single breath of smoke from one man's lips pollutes all the air in the room, and a portion of it goes into every other person's lungs. Not to put too fine a point upon it, is not it a pleasing reflection that a substantial portion of what comes out of every pair of lungs passes through your delicate mouth many times a minute. We who are so squeamish about drinking from another's glass, or even using another's napkin, upon what horrors do we daily and nightly sup, for want of a constant change of air.

The two great causes of consumption, says our report, are first, "collective indoor occupations, which may be regarded as almost sy-

nonymous with the habitual inhalation of air rendered foul by respiration, and, second, *soil moisture.*"

As showing the necessity of pure air for children, it is stated that in the great lying in hospital in Dublin during twenty-five years before ventilation was introduced, the mortality of new-born infants in the first two or three weeks of life, was one in six. In the twenty-five years following the introduction of good air, the mortality was one in one hundred and four. The teaching of the report on this point is briefly this, that pure air from out of doors, every moment of time, day and night, introduced, if possible, comfortably warmed, is essential to health. "Ventilate the schoolrooms, and the workshops, and the stores and the houses."

#### A Sound Soil.

Dr. Bowditch is perhaps the best authority in this country as to the diseases classed under the name of consumption, and he is understood to be the first person who deduced from statistics the conclusion that *soil moisture* is among the prominent causes of these diseases. "When a man proposes to build a dwelling in a swamp, warn him of his danger," say the board of health.

In England, in 1865 and 1866, inquiries were made, under government authority, into the effect of drainage-works and other regulations designed to promote health. It appeared that while the general death-rate had greatly diminished, consumption had diminished even in greater proportion, wherever the soil had been rendered dry by means of sewers.

The writer has exhorted so much on the importance of drainage about our buildings, that he is happy to borrow the language of this report. It is well known that in many towns.—and Concord, which ought to know better, is one of them,—a large proportion of the cellars are afloat with water for a longer or shorter time, every spring. The Board of Health say, "Another danger is a damp cellar. Its atmosphere goes all over the house in spite of every effort to prevent it." Again, "most houses in the country are exposed to special dangers from the absence of drains, the refuse from houses being poured upon the ground, thereby infecting not only the air, but water also. In some instances, the kitchen slops, delivered from a spout upon a limited space have in the course of time worn a direct channel to the family well. At any rate it may be useful to remember that the soil surrounding a well is drained by it. In this view it will be seen how important it is for the purity of both air and water, that pigstyes, privies and manure heaps should be kept at a certain distance from the dwelling. Many a case of typhoid, and much impaired vitality ready to succumb to trifling ailments, might be traced to such pollutions. The epidemic

of fever at the Maplewood Institute at Pittsfield, a few years ago, was caused by an accumulation of filth, and ceased on removal of the cause. Instances of this sort, where the cause has been sought for and found, and the epidemic thereby stayed, are so numerous that we need not cite them."

Consumption, typhoid fevers and rheumatism are as much the natural, legitimate products of bad air and bad water, as our crops are of our seed.

*For the New England Farmer.*

#### LIME AS A FERTILIZER.

On page 22 of the Monthly FARMER for 1870, I find the following remark:—"It should be said, once for all, that oyster shells are composed of carbonate of lime; and carbonate of lime is *not a manurial agent*. It is hard, insoluble marble, and of no value in agriculture." This was written by Dr. James R. Nichols of Boston, and is so directly at variance with the generally received opinion, that perhaps a reference to some authorities upon the subject, will not be out of place.

Dr. Stockhardt says that "the same constituents enter into the composition of chalk, common limestone, marble and oyster shells; that they consist of carbonate of lime, and have for a formula (CaO, CO<sub>2</sub>)."  
He also says that "carbonate of lime is one of the principal constituents of our earth."

Now it is undoubtedly conceded that carbonic acid, one of the elements of the formula, enters largely into the food of plants. Baron Liebig says that if by manuring a field with potash or lime, no increase of crop can be observed, it therefore does not follow, that these substances of themselves, are not efficacious; a certain amount of ammonia is necessary to render them efficacious." Also in his "Familiar Letters" he says; "in limestone are certain elements indispensable to the growth of plants and the presence of which renders them fertile;" and that "we possess substances, which by their chemical action render the constituents of the soil more suitable for entering into the vegetable organism, and one of these is lime." Again, he says: "The cerealia require the alkalies and alkaline silicates, and these are liberated by lime from clayey soils, and hence the fertility of the soil is increased by lime." The latter statement is also found in his "Agricultural Chemistry."

Prof. J. F. W. Johnston in his "Agricultural Chemistry" says, "The use of lime is of the greatest importance in practical agriculture. Marls consist of carbonate of lime, mixed with sand, and are considered more or less valuable for agricultural purposes as the proportion of lime increases or diminishes." "Where vegetable matter abounds, much lime may be usefully added; and on stiff clay lands, after draining, its good effects are very remarkable. Upon pastures a greater fineness,

sweetness, closeness, and nutritive character of the grasses is remarkably visible; on *arable lands* a mellowness of stiff soils is produced."

Emerson and Flint in their "Manual of Agriculture" confirm Prof. Liebig in saying that, "lime amends the soil by setting at liberty the potash and other alkalis which exist in combination with clay and in granite sand; that oyster shell lime is of greater value for agricultural purposes than common lime, because it contains a small quantity of phosphoric acid; and no soil, however good, and however favorable the climate will produce first rate crops of wheat unless it contain a proper proportion of lime."

Prof. Nash in his "Progressive Farmer" gives a table of soils, and the one classed fertile without manure, contains a considerable percentage of lime and carbonic acid, while the soil classed barren is nearly destitute of either of these constituents.

Allen, in his "Farm Book," also speaks in the praise of lime as a manurial agent. Bergman found that one of the most fertile soils of Sweden contained thirty per cent. of carbonate of lime. Chaptal analyzed a very productive soil in France which gave near twenty-five per cent. of the same and seven of the organic matter. Tillet even found one, and that the most fertile, which yielded 37.5 of carbonate of lime. Some of the best in the Mississippi valley have yielded upon analysis twenty per cent. of lime, and many other soils throughout the United States contain an equal proportion of carbonate of lime, and such are always the last to wear out.

C. D. Wilber, secretary of the Illinois Natural History Society, speaking of lime, says, "The farmer must have it diffused through every acre of his farm or his crops will fail." An article upon lime, in the United States Agricultural Report, 1856, says, "The purposes served by lime as a chemical constituent of the soil are of at least four distinct kinds, namely: First, it supplies a kind of organic food, which appears to be necessary to the healthy growth of all cultivated plants. Secondly, it neutralizes acid substances which are naturally formed in the soil, and decomposes or renders harmless other noxious compounds that are not unfrequently within reach of the roots of plants. Thirdly, it changes the inert vegetable matter in the soil so as gradually to render it useful to vegetation. Fourthly, it causes, facilitates, or enables other useful compounds, both organic and inorganic, to be produced in the soil, or so promotes the decomposition of existing compounds, as to prepare them more speedily for entering into the circulation of plants." Hon. Thomas G. Clemson, LL.D. in the Report for 1859 writes substantially as above, with regard to the benefit of carbonate of lime.

Here, then, is the testimony of many eminent men direct to the point that lime as it exists in limestone, marble and chalk, is bene-

ficial as a manurial agent. There might also be collected a large amount of testimony from the many that have used lime upon soils, touching the benefits derived from its application. Even an application of plastering taken from old buildings, to the soil, leaves traces of very marked effects produced, years after the application is made.

With all this accumulation of testimony in favor of the beneficial effects of lime, in opposition to the statement of Dr. Nichols, the question very naturally arises, *Who shall decide when doctors disagree?* W. H. Y.

#### FARMERS' CLUBS IN SUMMER.

During the winter the reports from these associations have occupied considerable space in our columns, and, judging from the many expressions of satisfaction which have come to us through our correspondence, no part of our paper has been more attentively read. Not only this, many of the articles have been copied by the leading agricultural papers of the country, and thus the doings of a Farmer's Club in some corner of our noble State, reported through our columns, is made to interest farmers in remote States, and possibly give hints, the improvement of which may be of great benefit to them. Since November last, the organization of sixty-two Farmers' Clubs has been reported to us.

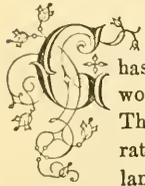
Now that the long evenings are passed, and the active individual work of members upon their own farms has commenced, we suppose the regular meetings for discussion will be discontinued until another fall. But in the meantime the work of the members for the general good of the Club, and the mutual advantage of its members should not cease. It should, in fact, just commence. Each member should this season undertake some experiment or put in operation some train of investigation or thought for determining some disputed opinion, or more firmly establishing some partially accepted theory—the result of which should be reported to the club at the commencement of its next winter campaign. Bear this in mind; and when you begin your season's labors, plan some experiment for the benefit of the Farmers' Club. Thus, although the meetings for discussion may be suspended during the summer, the period may be one of real work for the Club, inasmuch as the experiments and investigations made are such as cannot be performed in the winter, and will furnish material about which to talk next winter. —*Maine Farmer.*

—A Michigan correspondent of the *Rural New Yorker* has been feeding wheat to his "shots" with satisfactory results. He is convinced that it is a cheaper food for hogs than corn, at the present prices. He boils the wheat until it is thoroughly cooked, which nearly doubles its bulk.

## LETTER FROM THE FARM.

CONCORD, May 6, 1870.

The Season—Wet Weather—Farm Work Retarded—Hot Days and Warm Soil—Appearance of Grass and Grain—Promise of the Fruit Trees—Laying Land to Grass—Witt's Breaker and Leveller—Caterpillars—Bark Lice—Carbolic Acid—Potatoes—New Varieties.



GENTLEMEN:—The long continued wet weather in April has considerably retarded the field work of the farm, this spring. The ground is thoroughly saturated with water, even on the high lands, at this time, while the low lands that were ploughed last fall, or intended to be this spring, cannot be entered upon with the team. The few hot days, however, which have occurred, have so warmed the moist soil, that vegetation has been quick. Grass appears well, but few places in our observation having been winter-killed. Winter rye and wheat seem also to be vigorous and healthy.

All fruit trees promise an abundant blossom; plum and cherry trees were in blossom here in the last days of April. There will be quite a full bloom of the apple and pear trees in this region.

Fields to be sowed to grain and grass never presented a more lively time than at present. All that are drained, or on moderately high land, present scenes of the most lively industry. Every available force is called in. The soil is moist and warm, so that grain will germinate rapidly that is got in during the early part of May.

Having ten acres to be sowed to grain and grass, it was ploughed last fall, with the intention to plough again this spring; this was prevented by the rains, so that instead of the plough, WITT'S "*Breaker and Leveller*" was put upon it. The fields are granite soils, some portions of them being quite heavy, and having many fast and loose stones. Notwithstanding this, the Breaker has so reduced the coarse clod, interwoven with the roots of piper or twitch grass, and so finely levelled and pulverized the soil, that there is a capital seed bed over the whole surface, of from four to six inches in depth. I think there is no other implement which would have performed the same service in the same time. The teeth are lifters, about nine inches long, and are followed by a sort of platform resembling the clapboarding on a house.

Caterpillars, and other insects seem to have

flourished through the winter. The nests of the former are growing daily with the growth of foliage on the trees. The scales of the bark louse on the apple trees can only be numbered by millions. Dr. Fitch says they are the bodies of the gravid females, protecting their eggs, which may be found during the winter and spring upon elevating the scales. He says he has counted the eggs, and in some instances found as many as 102 under a single scale, though more frequently from ten to fifty. In my own examinations I have not found so many, rarely more than twelve. The injury which they do to apple and other fruit trees is sometimes very great. When apple trees are infested by them year after year, to a large extent, the trees dwindle away and die. In speaking of the injury done by these lice, HARRIS says they insert their beaks into the bark or leaves, and draw from the cellular substance the sap that nourishes them.

I have seen only one remedy stated as an absolutely efficient one, and that is fish brine, as stated some weeks since in reply to a correspondent. A gentleman states that this was applied, and destroyed the lice wherever it touched, and without harming foliage or bloom. Enclosed, I send some samples of the limbs they have infested,—the larger piece was cut from the tree in the early part of the winter, the smaller taken off to-day. Nearly every branch of some quite large trees are as thickly studded with scales as these samples are. It is said that a wash of two parts of soft soap, and eight of water, mixed with a little lime, and applied with a brush, will destroy them. Some recommend the use of carbolic acid, but give no formula by which to apply it. This is to be regretted, because this "new thing under the sun," is really working wonders. As a disinfectant it is said to be very efficacious in all contagious, infectious, or epidemic diseases. Mr. Secretary Goodale, of Maine, thinks it safe to "assert that for lice, ticks, and other vermin infesting the farmer's domestic animals, and for their cutaneous diseases, sores, ulcers, and the like, its equal for safety and efficiency has not before been found." I am daily using a soap made by its use, which I will speak of more fully hereafter.

A great change will take place this spring in planting the potato crop. Nearly all the old varieties will be abandoned, and new varie-

ties, some of which have been quite fairly tested, will take their places. Among these will be Bresee's King of the Earlies, Harrison, the Early Rose, Vanderveer, Bresee's Prolific and Peerless, the Climax, Excelsior, Early Prince, Granite State, Calico, &c. In a letter to you from Maine, last winter, I spoke of seeing some 2500 bushels of potatoes in the cellar of Mr. MOSES H. HUSSEY, of North Berwick. I then thought he would scarcely find a market for so many, as they were to be sold for planting only. I now learn from some of the Boston dealers, that the 700 bushels of Early Rose, which I saw, have all been sold, and that Mr. H. is making large purchases of the same variety in Vermont.

This potato has gained for itself several excellent points, viz.: It is early, prolific, does not rot badly, is smooth, the eyes being a very little depressed, and is said to be of excellent quality. I have not tested it sufficiently to come to any conclusion as to its merits. As a vegetable, no other compares with the potato in value. Nearly all the old varieties have become worthless, or greatly depreciated, so that every honest effort to introduce new and good varieties is commendable, and confers a public favor.

The opening spring promises well. With the aid of improved machinery, and larger skill, the farmer may look forward to fair profits in his pleasant employment.

Very truly yours,

SIMON BROWN.

MESSRS. R. P. EATON & CO., BOSTON.

#### THE AMERICAN IMPROVED SUGAR BEET.

There is certainly something a little wonderful in the climate and soil of Vermont.

A Massachusetts horse is taken to that State, and the Morgans, the Black Hawks, Morrills, &c., are the result. Massachusetts horses go to other States and are heard of no more.

A few flocks of Spanish sheep find their way to the pastures of the Green Mountains, and the "Improved American Merino Sheep" cross the Atlantic and take premiums in competition with the Imperial flocks of the "mother countries."

A few potato seeds are dropped into Vermont soil, and a single tuber pays for a good cow, and a potato fever rages throughout the land.

A single oat springs up in some Vermonter's field, and he reaps sheaves in comparison with which a good-sized man appears,—in the advertisement,—as a pigmy.

The Agricultural Department at Washington sends out, year after year, parcels of seed by the million—or, to be a little more definite, the number for the year 1861 was stated by the Commissioner at 2,474,380,—most of which, undoubtedly, fell by the wayside, into stony ground, thin soil, or weedy fields, and the Department looks in vain for the promised reports of the result of their cultivation. But a few of these little papers of seeds find their way into Vermont soils, and beets come up that beat all other beets,—and hence the "Improved American Sugar Beet."

Some allusion to the good qualities of this variety by Mr. Henry Lane of Cornwall, Vt., in his address at the Dairymen's Convention, at St. Albans, has excited considerable inquiry among farmers, many of whom wish to obtain the seed. Having published an abstract of this address, several applications for further information upon the subject have been made to us, but as we were unable to furnish it, we wrote to Mr. Lane, and received the following note in reply;—

MR. EDITOR:—*Sir*,—Your letter of inquiry of the 4th inst. has been received. The American Improved Imperial Sugar Beet is one of five varieties that I received from the Agricultural Department at Washington eleven years since. They were at that time the best sugar beet that I had ever seen. Good cultivation and a careful selection for seed has changed and improved them in some respects. Considering the source whence I received the seed, I should suppose there would be plenty of this variety in various sections of our country. But I have never seen them, nor has any one that has seen the beets that are grown with us, pretended to have seen this variety anywhere else. It is now cultivated extensively in this vicinity, and has superseded all other varieties of beets, and nearly all others of the root kind. For further particulars I will refer you to my address that will be printed in full in the Transactions of the Vermont Dairymen's Association. That you may judge more correctly of them than from any description I might give, I will send you a few specimens next fall. Yours, respectfully,  
*Cornwall, Vt., May 7, 1870.* HENRY LANE.

NORFOLK FARMERS' CLUB.—At a meeting of this Club, May 9, 1870, the following persons were chosen a committee of arrangements for the next annual fair of the Club. S. E. Fales, A. G. Hills, H. M. Fales, S. T. Rockwood, Cyrus Ware, of Norfolk; J. H. Leland, Walpole; William Fisher, Medfield; Virgil S. Pond, Foxboro'; Erastus Metcalf, Franklin; Willard Clark, Medway; Hiram Ware, Wrentham.—W. H. ROCKWOOD, Sec.

ENCOURAGING TO COUNTRY GIRLS.—A committee of the city government of Boston have recently held several meetings to hear arguments in favor of the establishment by the city of a "free market." At a hearing on Wednesday evening of last week, Mrs. Daniels ascribed the alarming increase of vice to the high cost of living, and said "it was an impossibility for a girl to get board in a respectable boarding-house at less than \$5 per week, while their wages do not average over \$4.50 per week."



A NEAT COTTAGE HOUSE,

WITH PLAN AND GROUNDS.

In consequence of some unforeseen delays in preparing the fourth plan in our series of "Rural Architecture," we present the above, drawn and engraved expressly for us, from a design by Geo. E. Harney, Architect.

For the execution of this plan, from one-eighth to one-fourth of an acre should be devoted to ornamental purposes; the garden, &c., being in the rear, are not included in this plan. The dwelling should be set back some thirty feet from the highway, and for a good effect it should be on a slightly elevated spot.

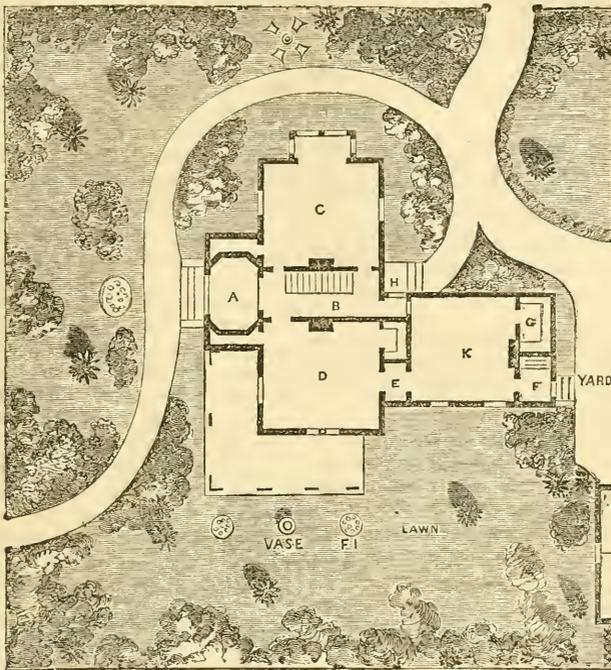
A foot-path, five feet wide, starts from the front gate, passes the front entrance, and terminates in the open yard in the rear. This, with the carriage road, which leads from the gate to the stable, is the only path we have introduced on the plan.

The foundation of the ornamental portion is a smooth, green lawn, extending to the boundaries on either side, which are hidden by plantations of evergreens and shrubbery, with occasionally a deciduous tree introduced to produce a variety, and give character to the whole.

They are mostly arranged in irregular clumps, connected together by other shrubs and evergreens, and planted with a view to obtain as great a diversity of outline as possible, and heavy masses of foliage and flowers, from spring to late in the fall. The clump on the right of the front gate is composed principally of tall growing shrubs and evergreens. In the corner is an American mountain ash, the color of whose red berries contrasts well with the heavy green of the two Norway Spruces, one on each side of it. Close to the path is a large, flowering Syringa, and in front some low, bright flowering shrub, such as Rose Weigela, Double Tree Peony or Double Dwarf Almond, while farther back, near the fence, are a tall Purple Lilac and a Tartarean Honeysuckle.

But without specifying further the exact position or kinds of shrubs, trees, flowers, &c., we will leave that to the taste and means of the proprietor of the house and grounds.

The house itself is an example of the simplest rural gothic style. It is one and a half



stories in height, and contains three finished rooms below and three chambers on the second floor.

The vestibule, A, is approached from the terrace through the pointed arch and measures eight feet by nine. The hall, B, is seven feet wide and fifteen feet long, and contains stairs to chambers and cellar. C is the parlor, measuring fourteen by fifteen, the principal feature of which is the bay window on the side opposite the door, overlooking the small flower-beds and the side street. The dining or living-room, D, measures also fourteen by fifteen; it connects with the veranda by a mulioned window reaching to the floor and opening like the French window. A closet is provided at the side of the vestibule in the front gable and for china, &c., at the other end of the room, furnished with shelves and drawers. The passage, E, which is also fitted with shelves, communicates directly with the kitchen, K. This room is thirteen feet square, and is well lighted by two windows. At the left of the chimney a door opens into a large store room, G, and at the right another leads to the pantry, F. We here have a sink and pump,

with a closet and shelves for tin ware. A door opens directly into the yard.

On the second floor, the two principal chambers measure each twelve by fourteen, and the other, in the gable, ten by thirteen.

Prices and quality of materials vary so greatly that no exact statement of cost of building can be given. It might vary from \$1800 to \$2500 according to locality, and cost of lumber and labor.

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**TO DESTROY THE CUCUMBER BUG.**—A correspondent writes to the *Maryland Farmer*:—"I send you an item, if you think it worth publishing, which effectually protected my melon, squash, cucumber and other vines from that destructive pest, the 'striped or cucumber bug,' the past season, with only one application, viz.: a strong solution of hen-house manure—say one peck of the manure to one and a half gallons water—let it stand twenty-four hours, and sprinkle the plants freely with it after sunset. The above was suggested to me by a negro woman living on my place, who has some practical experience in gardening, and says she has used it for years, and has never known the first application to fail to drive them off, and they never return."

## AGRICULTURAL ITEMS.

—D. F. Appleton, of Ipswich, a breeder of the Kerry cattle has recently received some choice cows from the Island of Jersey.

—Cabbage seed should never be grown from stumps, but from a sprout issuing from the center of a perfectly developed head.

—It is said that Dartmouth College, Hanover, N. H., has received nearly \$100,000 for its Agricultural School. It has bought a farm of 200 acres. There are seven in the agricultural class.

—In a paper read before the Central New York Farmers' Club, Mr. Robert Gibson said he would name the Globe mangel wurtzel as the best root for all purposes.

The *Utica Herald* gives a list of 145 new cheese factories to go into operation this spring in the State of New York, and understands this is far from being a complete list.

—The South Bend, Ind., *Register* says: "Thomas Rockhill, of this place—himself over seventy years of age—is doing his corn ploughing this spring with a span of horses, one of which is twenty-six and the other twenty-seven years old."

—The *Lee Gleaner* says that W. S. Clark, President of the Massachusetts Agricultural College at Amherst, has been engaged to deliver the address at the next annual fair of the Housatonic Agricultural Society in September.

—The increase in the manufacture of beet sugar in Europe for the present year over that of last year, is about 100,000 tons. The product already exceeds that of Cuban sugar cane. France exported 70,000 tons of beet sugar during 1869.

—The Sheboygan, Wis., *Times*, says that the farmers of Calumet county, are preparing to grow hops quite extensively, although hop-raising has not been very profitable of late; some owners are enlarging their yards and seem resolved to make or break in the business.

—Somebody says the reason why there is a greater yield of butter when the whole milk is churned, rather than the cream, is that there is a great deal more casein incorporated with it. When such butter is fresh, the taste is very agreeable, but it will not keep. Is this so?

—A pig about five months old was discovered sucking a cow on the farm of Alex. B. Ramsey, in Clark Co., Kentucky. He watched it afterward for several days and found it in the same performance. The pig would rear up, placing its fore feet against the hind legs of the cow, and would remain in that position until it had satisfied itself.

—There seems to be a great difference in soils with respect to the influence of lime upon them. According to the report of the Trustees of the Pennsylvania Agricultural College, liming on the eastern and central farms was without benefit, while on the western ones a liberal application increased the corn crop nearly one-half. The pre-

sumption is that in the first instance the soil needed something else, while in the second, lime was precisely what was wanted to impart vigor to it.

—Thunder sours milk and kills oysters. You may load a vessel to its utmost capacity, start for market, and one good round clap of thunder will kill every oyster in the vessel immediately. Pounding with an ax upon the deck of a vessel when oysters are thereon, or pounding upon the sides of a vessel with a heavy weight, will kill every oyster that feels the jar.

—The Agricultural College at Hanover, N. H., has been presented with a plough made by Daniel Webster, and used on his Marshfield estate. It is about thirteen feet long and weighs a little less than a ton. From what Horace Greeley "knows about farming," we think he should have had that plough. We fear the New Hampshire farmers will hardly keep their irons from rusting.

—Mr. Richard Peters, of Georgia, informs the editor of the *Ohio Farmer* that neither Devon or Short-horn cattle are healthy in that section. Mr. P. finds a cross of the Brahma stock from India, with the Alderneys and Devons are healthy and profitable. The long wool English sheep he also finds do not succeed as well there as the Merino, and he will keep none but the Merino.

—After working eight years and expending some \$40,000 in time and money, Mr. S. D. Carpenter, of Madison, Wis., has perfected his "Automatic Binder," which is designed to rake and bind the grain and carry the bundles until enough are bound to form a shock. The editor of the *Western Farmer* has not seen the machine in its present state, but is informed that it operates in the most perfect manner.

—According to the Secretary's statistics, the twenty-nine agricultural societies of Massachusetts, received in 1869, \$16,934 from the State treasury, and paid \$30,734 in premiums to 5,666 persons. These societies owe \$110,761, and value their real and personal property at \$466,352, besides permanent funds amounting to \$272,226. Premiums to the amount of 19,319 were offered for live stock, of which \$9,261 were for horses. Total amount paid for "farm products," \$5,989.

—Cyrus Smith, one of the old farmers of Victory, Vt., till recently, never owned a hen. Dogs, cats and poultry, he always regarded as nuisances about a farm. He married a young wife a few months ago who had the hen fever, and persuaded the old gentleman to invest. He has a handsome flock of hens now, and his neighbors do say that when he starts for the barn to hunt eggs, he carries with him the zeal and pride of a boy who has just arrived at the egg-hunting age.

—A correspondent of the *Ohio Farmer* has practiced shallow planting of corn to avoid the cut-worm for more than twenty years. He says, cut-worms always burrow in the hill around the stalk, previous to cutting it off. Shallow covering gives

them no chance to burrow, and if they should, the sun will soon drive them from their place. They universally select their position in the daytime and commit their depredations at night. In shallow covering the seed gets warm and starts much quicker than when covered deep.

—The *Homestead* says that very little, if any money, has been made this season by the cattle feeders of the Connecticut Valley, and some have lost money in the business. If tobacco was as low as other farm crops, feeding cattle would be a poor business, but most feeders expect to more than make up on their tobacco what they lose fattening cattle. Those that have fed sheep are a great deal better suited with what they have done than the cattle men. The price has nearly doubled since last fall, and a fair profit has been realized.

—In speaking of the arrival of six thoroughbred pedigree animals recently bought of H. G. White, Framingham, Mass., by Mr. Levi A. Dow, of Waterville, and Charles Shaw, of Dexter, the *Maine Farmer* says, "we have never known a time in the agricultural history of our State, when her farmers and breeders were showing so much activity and intelligence in carrying forward their operations as at present. We have in Maine gentlemen of character, intelligence and wealth who are engaged in breeding thoroughbred animals of all the types now held in esteem for the various purposes,—Devons, Herefords, Short-horns, Jerseys, Ayrshires."

—An exchange says a Pennsylvania merchant agreed to take a farmer's oats at forty cents a bushel if the latter would let him tramp the measures when filled. The farmer agreed to it. The buyer paid for sixty bushels and next day went after them. The farmer filled the bushel, and the merchant got in and tramped them down; whereupon the farmer poured the oats so compressed into the bag. The merchant protested, and demanded that the measure should be filled up after tramping. The farmer informed him that there was no agreement of that sort, but that he might tramp down the oats to his heart's content after they were measured.

—A farmer named Chilson, living near Girard, Ohio, thinking to rid his cornfield of a troublesome ground hog, managed to administer to the quadruped a dose of strychnine which killed him nearly instantly. The carcass was suspended to a tree, where the crows soon espied the savory bit, and proceeded to appease their appetites. After partaking of the meal, the crows would fly a short distance, as if in agony, and fall dead to the ground. The bones, being thoroughly stripped of the flesh, remained exposed to the bleaching influence of sunshine, rain and frost for nearly two years, when, falling to the ground, a highly-prized dog masticated parts of them, and died ten minutes afterward. We copy the above to show the danger of using this poison.

#### NEW PUBLICATIONS.

**HARRIS ON THE PIG.** Breeding, Rearing, Management and Improvement. By Joseph Harris, Moreton Farm, Rochester, N. Y. Illustrated. New York: O. Judd & Co. Boston: Crosby & Damrell, 100 Washington St. 1870. 12mo, 250 pages. Price \$1.50.

"A farmer's son, and myself a farmer, all my sympathies are with the farming class, rather than with the consumers," is one of the prefatory sentences of this volume. When all our agricultural books are written, and all our agricultural papers are edited by men who can truthfully make that remark of themselves, book and paper farming will be more popular than at present. By his contributions to agricultural papers during the past twenty years, Mr. Harris has given the farmers of this country opportunity not only to form an opinion of his ability as a writer, but of his success as a farmer. He is an earnest advocate of high farming and choice stock. Still he says "the introduction of better breeds of pigs will in itself do little towards improving our farms; but the farmer who once uses a thoroughbred boar and adopts a liberal system of feeding, will find that he can produce better pork at a far less cost than when he uses a common boar; and he will be likely to study the principles of breeding with an interest he has never felt before. The introduction of a thoroughbred boar will lead to the introduction of a thoroughbred ram and a thoroughbred bull of a good breed, and this in conjunction with cleaner culture and a more liberal feeding is all that is needed to give us better and cheaper meat; and at the same time we shall make more and richer manure, and be enabled to grow larger and far more profitable crops of grain."

Of the different breeds of pigs in the United States, he says he knows of none of them that possesses the smallness of offal, perfection of form, early maturity and fattening qualities of the Yorkshire, Essex, or Berkshire. The Chester County Whites he calls a capital sort of *common* swine. But we must content ourselves with marking portions of the volume for future use, and calling the attention of those interested in pig-raising to "Harris on the Pig."

**THE GENTLEMAN'S STABLE GUIDE:** containing a familiar description of the American Stable; the most approved Method of Feeding, Grooming, and General Management of Horses; together with Directions for the Care of Carriages, Harness, &c. By Robert McClure, M. D., V. S., Author of "Diseases in the American Stable, Field, and Farmyard." Philadelphia: Porter & Coates, Boston: Lee & Shepard. 1870. 12mo., 184 pages.

The name of the author and the title-page in full are a sufficient indication of the contents of this book. Dr. McClure needs no endorsement from us, and his books need none of our recommendation. This volume will aid us in answering some of the many questions which are asked in relation to the construction and management of stables. On another page we give an extract from Dr. McClure's remarks on the floors of stables, which is a good answer to the inquiry of "E. T." in the last *FARMER* about concrete floors for horse sta-

bles, with which we have never had any experience ourselves.

**EXAMINATION OF SOILS.**—Prof. C. B. Chapman suggests in the *Western Farmer* the following experiment with soils for the purpose of determining more exactly than can be done by examination, the proportion of sand, clay, &c., which they contain. Put some of the soil into a dish containing a sufficient quantity of water to allow the particles to move freely when stirred. After being well stirred, allow it to settle quietly. The heavier sand will form a strata at the bottom, while the lighter clay will form a strata upon the top of it. The water may be turned off after it has become clear. These layers of sand and clay may then be examined to ascertain the comparative thickness of the two strata. This will furnish much information with regard to the relative proportion of the sand to the clay which had existed in the original homogeneous mass of loam. The experiment may be rendered still more accurate by the careful separation of the clay from the sand; then drying them and ascertaining the comparative weight of each.

*For the New England Farmer.*

#### RAISING TURKEYS.

I saw in your paper a request that some one would inform the writer how to raise *young* turkeys. As I have had years of experience and have been very successful, I will give your readers two methods of raising turkeys, by way of contrast.

I have known many young people, and some that were not so young, to embark in the enterprise in a very cheap way. They would buy one or two small late turkeys, such as they could obtain cheap, and with an expenditure of one or two dollars at most, commence operations. In the spring their turkeys would lay a good number of eggs, and the owner would think they were doing nicely. But such hens always hatch out small, weak young turkeys, and with the best of care it is very difficult to make them live. They are often fed as soon as they are out of the shell, and the mother is either tied with a string to her leg, or placed in a small low coop which is allowed to remain in the same place for days and even weeks, and as her brood is diminished in number, the anxious inquiry is made, What is the matter? This is no exaggeration. I have seen many persons go on in just this way and worse.

I always make the best possible selection of those to winter over from a large flock of turkeys, choosing carefully only the largest and best, and if at any time I find those that are better than mine, I purchase at once, without regard to cost. I keep the Bronze turkeys—they are larger and more hardy than any other variety that I have ever raised. By the middle of March or first of April, I begin to feed

well, and make nests in different places in the barn and sheds, and put in a hen's egg, at the same time scattering a little corn around these places to get their attention. Thus they may generally be induced to lay in these nests from choice, and much time and trouble is saved in finding their nests. These nests should be suitable for them to sit as well as to lay in. They should have a board of not less than a foot in height around them, to prevent the young turkeys from crawling away as soon as hatched. The eggs should be removed as fast as laid, leaving the hen's egg in the nest.

After the turkey shows signs of wanting to set, I put in the nest from 18 to 22 eggs, according to the size of the turkey. If I don't have turkey's eggs enough I put in, in just one week, a few hen's eggs. I have often had a turkey bring up a mixed brood and do well. When they are hatching, I do not go near the nest, except sometimes to remove the shells, till the young are from 24 to 48 hours old. I then prepare a coop of good size, with open places through which the young turkeys can run out when they choose, and put the turkey and her brood into it.

I then take some wheat bread, soak it in milk, and scatter small pieces inside and just outside, and continue to do so occasionally until they eat, which they will soon learn to do. They require but little for a few days, but want it often, and of the best quality. As they grow older, they can be fed with curd, boiled potatoes, dough, and after they get a start, with almost anything. The coop should be moved every day. This is important, and should not be forgotten. It is a good plan to have a place of shelter for them nights. See that they are in their place every night in good season. They are creatures of habit, and will soon learn to come of their own accord, and save a great many steps in running after them, besides being out of the way of foxes and skunks, which often destroy whole flocks at night. A FARMER'S WIFE.

*Hyde Park, Vt., April, 1870.*

#### DISCUSSION ON HAYING.

We make the following extract from a report in the *Maine Farmer* of a discussion on the Hay Crop by the Farmers' Club of Levant, Me:—

Mr. J. West, Secretary, says early cut and well cured clover hay is undoubtedly superior to all other kinds. The Vermont clover is preferable to the Northern or large variety, as it matures earlier and makes finer and better hay. This locality, however, is not adapted to the extensive cultivation of clover. The yellow weed and white weed should be cut first, and then the other varieties in the order of their maturity. Is in favor of cutting early; cut one year after the seed had formed and the result was the rats and mice injured it very

badly in the mow. Milch cows fed on early cut hay, give more and richer milk, and the butter comes without trouble. Cures in the old way, but thinks there is as much danger of drying too much as too little. Hay hurts quicker from external moisture than from its own juices. Does not believe in salting hay—it is a positive injury.

Mr. G. W. Smith said, hay is already a special crop, but it is not admissible to raise it exclusively. Disapproves the practice of mowing until it exhausts the land. Would not mow land longer than it produced a good crop. It is more profitable to raise two tons upon one acre, than the same amount on two acres. Recommends early cutting. We get less in weight, but it is more valuable for stock. It is not possible to cure early cut hay sufficiently in one day to save. Clover should be made in the cock as much as possible, thereby saving the leaves, which are the most valuable part.

Mr. B. Boston said, hay is our main dependence. Late cut hay is almost worthless. Began haying last year before there were any blossoms, and never had better hay; would rather have one-half ton of early cut hay than a ton cut after the seed is made. Cuts clover when two-thirds in blossom; puts up and lets stand in cock over one day, using caps. Meadow hay requires more drying than any other kind. Most farmers cut their meadows too late. Does not believe in hauling in green grass. Referred to the statement of Mr. J. R. Macomber in Bangor *Jeffersonian* detailing his experience, and recommending the new method of curing hay. He (Mr. Boston) had been informed that a committee appointed by the Glenburn Farmers' Club to examine Mr. Macomber's hay, reported it to be black and smoky unfit for market, and nearly worthless to feed to stock.

Mr. S. Y. Luce recommends the use of plaster, and top-dressing with manure. Had learned by experience that hay cut in the blossom is enough better than that cut after the seed has formed, to pay for cutting. Can dry his hay in two days of good weather sufficient to keep; would not dry too much; if necessary to get in green would mix old hay or straw with it.

Mr. E. Clements said, grass should not be cut while the dew is on it. He rakes and puts up his hay while it is hot, opens and gets it in the next day. Put his hay in last year in a greener state than usual. It came out smoky. Thinks it is not practicable to get in the same day it is cut.

Mr. D. Gilman believed in a mixed husbandry, but considered hay the most important crop to cultivate as a specialty. Since the market for potatoes is overstocked and the prospect so poor, the hay crop is the most promising one we can raise. Hay has been worth in Bangor market \$18 per ton at some time in the year for several years past, and is

worth nearly that for stock. He agreed with others as to early cutting, but thought the proper time depended very much upon the season. One year his grass grew nearly one-half after he began haying. There is as much loss in beginning too early as too late.

## EXTRACTS AND REPLIES.

### OYSTER SHELLS IN AN ORCHARD.

S. FLETCHER.—*Dear Sir*:—I have lately taken up one of the one hundred and twenty apple trees that you set out twenty years ago this spring on this place. In doing so I found a quantity of oyster shells about the roots. Some of these shells are but very slightly if at all decomposed. Presuming that you put them there at the time of setting the trees, I wish to inquire your object in doing so, and whether you think they have been of any benefit to the trees, or to the soil.

*Winchester, Mass., May 3, 1870.* ELI COOPER.

REMARKS.—Oyster shells are composed mostly of carbonate of lime. And as the beneficial effects of this material on the soil of New England is a question on which the doctors disagree, perhaps it may be proper to publish the above inquiry, though probably intended as a personal question.

While hauling some ashes from the village to be used as a compost for this orchard, which was set out in the spring of 1850, a pile of oyster shells and other rubbish in a back yard was offered on condition that I would take it away. As individuals in whose judgment I relied, said they thought it might help the trees, I applied several loads to the orchard. The shells which were on or near the surface soon crumbled and disappeared. For some eight or ten years the trees grew as well as any I ever saw. But a few years before you bought the farm, this orchard, in common with orchards generally in the vicinity, gave evidence that something was the matter with the trees. Old orchards ceased bearing, and young ones did not begin. I do not think the few shells applied did any harm; nor am I sure they did much good. I experimented with ordinary lime on different crops, but without being able to see any result, either good or bad. My opinion is that both oyster shells and ordinary lime are pretty slim "manure" in New England, however useful they may be at the South or in old England, where an occasional liming is considered essential in high farming. The opinion expressed in the *FARMER* some time since by Dr. Nichols, that carbonate of lime, whether in the form of oyster shells or chips of marble, is worthless, is controverted by a correspondent on page 320 of this issue. S. F.

### DUSTY HAY.

Can you or some of your subscribers give me a little light on this subject? Last summer I filled my barn with hay and cured it in the usual manner; the most of it was cured without being wet. I kept the windows open in both gable ends, and the great doors, also, until cold weather. When I commenced to use it in December it was dusty, and has continued to grow worse and worse through

the winter. It is just about as bad in the middle of the mow as it was on the top. Sometimes I throw down a couple of hundred and shake it up to get the dust out, and it fills the barn full; the floor of the high beams is covered with dust.

I have a cellar under the barn where I keep all my manure, that is open on the south side. The leanto runs the whole length of the north side of the barn and it has been full of cattle all winter. Can you or any of your subscribers told me what makes the hay so dusty, and what I can do to prevent its being so next winter? G. B. H., JR.

*Shrewsbury, Mass., April 30, 1870.*

REMARKS.—We can think of no reason for the dust in the hay, except that of raking it up with an iron-tooth rake. On light, dry lands, the use of the horse rake scratches the surface and causes a good deal of dust to rise. If your land is not of this character, and you did not use an iron-tooth rake, we are at a loss to know what caused the dust. The inquiry is an important one and deserves investigation. We shall be glad of more information in particulars. Was your hay put into the barn without sufficient drying?

#### CORN, WHERE BUILDINGS WERE REMOVED.

I wish to inquire through the FARMER what I can do on a piece of land where I have removed some old buildings,—two barns and a house? I removed them in the winter of 1869. Last summer I planted the land where the buildings stood with corn, which came up nicely, and grew some, then it died or remained very small. Before planting I removed all of the manure, and some four to six inches of the dirt. Now what can I put on that land to make it fertile, or must I take off some more of the soil? A. H. DAVIS.

*Marshfield, Vt., April, 1870.*

REMARKS.—The want of growth, it seems to us, may be imputed to the poorness of the ground after four to six inches of the soil was removed. The wife of the editor who is sitting by, and who listened to the reading of the above letter, says, "refer the gentleman to the sixth verse of the thirteenth chapter of Matthew, for the reason why his corn did not grow."

#### PREPARATION OF BONES WITH VITRIOL.

Please inform me through the columns of your valuable paper how to use oil of vitriol in the preparation of bones to be used as a fertilizer this spring.

REMARKS.—Without a mill to grind bones fine we are inclined to the opinion that it is not advisable for farmers to meddle with vitriol. See, however, Monthly FARMER, 1869, pages 290 and 338.

#### STRAWBERRIES AND RASPBERRIES.

Having cultivated small fruits for market for the last ten years, I feel called upon to say, after reading the statements of Mr. J. Fleming in the FARMER, of April 16, that he must have been very unlucky if he does not get a paying crop of strawberries more than two years out of five. Of course some years are more favorable than others; but I have never found the year that they did not pay as a market fruit. But certainly, I should not depend upon the *Jenny Lind* and *Triomphe de Gand*. The latter is not a paying variety and the

former only for a few early berries. I have tried nearly one hundred varieties, reserving the most profitable and ploughing under the balance. I would give you my experience in the varieties, but fear I should occupy too much space; but should any one care to know what I have cultivated, and what I do now cultivate, I will inform them cheerfully. And as to getting fifty-two quarts of raspberries from forty-eight plants I think it rather small. My plants give me four to six quarts each, and sometimes more, and sell at from thirty to fifty cents per quart. If new beginners will get the best varieties, and give good cultivation they will find both strawberries and raspberries will pay. MARION FRUIT GARDENS.

*Marion, Mass., April, 1870.*

#### MUCK ON THE FARM.

I see that Mr. O. J. Upham is out against muck. I cannot find it in my heart to believe that he wishes his remarks to have any influence on the mind of any man against muck on land, but I am led to think that he is a drummer for some patent manure merchant. Farmers here all know that most muck as it is dug from the pit is like any other unfermented vegetable matter, but when it is thrown out and exposed to the air, frost and heat of the sun, and is well rotted, it possesses every ingredient necessary for vegetation. But muck from some swamps that are always drained needs only to be shoveled out and carted and spread on to the land. If Mr. Upham will come to my place I will clear all the fog off his brain by showing him land that will yield one and a half tons to the acre now, that did not give five hundred two years ago, and prove to him that the increased crop is owing to top dressings of muck right from the meadow, or I will back down and pay his fare. Come from the 20th to the 25th of July, and he may not have to use guess work any longer. I mean what I say, and say what I know. Brookfield, Vt., April, 1870. V. BAKER.

#### SUPPOSED CASE OF HORN-AIL.

Last summer I had a very sick cow. She gave very little milk, breathed very heavy, and discharged at the nose. The neighbors called it horn ail, and thought she would die. I took about a large spoonful of ground mustard and half a pint of vinegar and turned it into her ears warm. She blowed the worst stuff out of her nose I ever saw. I continued the operation every day or two for a week, giving her night and morning, three large heaping spoonfuls of Schovill's condition powders, put in a bottle of warm water and turned down her throat. She was kept in the barn nights and came out all right. Every morning she sweat like a horse. Whether the powders, or the vinegar and mustard, or nature itself did the cure I can't say. Fairfax, Vt., April 28, 1870. N.

#### ERADICATING SWEET FLAG.

Some months since, some one asked in the FARMER how to kill out sweet flag. If the ground is dry enough for a team to walk, plough the ground. Once ploughing, which need not be very hard for a team, will nearly if not quite kill it. If too soft for a team, spade it over, and with a little hoeing the work is done.

HENRY A. JENCKES.

*Newport, N. H., April 18, 1870.*

#### MR. BUTTOLPH'S BARN.—THE SPRING IN WASHINGTON COUNTY, VT.

I like the plan of Mr. Buttolph's barn in FARMER of April 30, very much, except that the stables and feeding passages are too narrow by at

least two feet each, and the manure cellar should be ten feet in the clear.

It has been very dry here thus far this spring, and if we don't have rain soon the hay crop must be short. Farmers are getting along finely with their spring work. Very good feed now in pastures; last year at this time it had scarcely started.

S. R. HUSE.

Waterbury, Vt., May 7, 1870.

SOWED CORN FOR WINTER FEED.

I have sowed corn for several years to feed to my cows in the fall, and am satisfied that it "pays." This year I think of sowing an acre for winter feed, but know nothing about the time of sowing, curing, &c.

Will you please tell me the best variety to sow; the time and manner of sowing; the time of cutting, and the best method of curing? G. H. S.

Belchertown, Mass., May 15, 1870.

REMARKS.—Corn for fodder is usually sown in drills, from three to seven feet apart, and the seed scattered therein at the rate of thirty or forty grains to a foot, or three or four bushels per acre. It is often planted or sown at different times, to secure a succession of fodder, from early in the spring till the middle or last of June. Although the large Southern or Western corn is much used, sweet corn is generally preferred. Our intelligent correspondent, "N. S. T.," has some valuable hints on the subject at page 313, Monthly FARMER, 1868. He favors a less liberal seeding than is usually practiced, for the purpose of a more perfect maturity of the plant, and recommends only twelve kernels to the foot, with rows two and a half feet apart, and also the use of the smaller and earlier varieties of corn. The immature growth obtained from Western and Southern corn, though large in bulk, is inferior in quality. He says, "during the early stages of growth, its cellular tissue is imperfectly developed, and the juices are thin and watery. As the stalks approach full development, the juices thicken and become richer in saccharine matter, the goodness of the stalk is absorbed rapidly by the ears, which if undisturbed would take up from the stalk nearly all that is valuable for nutrition. The stalk, then, has its greatest value for fodder while the ear is forming." Curing for winter use is the most difficult part of the process. After being cut and well wilted, bind it in small bundles and put it into large shocks, and if put up neatly and the top snugly bound, it will keep until late in the fall; but even then it will not be dried enough to be put in large heaps in the barn. Sometimes the bundles are put astride poles, or laid up in such a manner that the air will circulate through the mass.

Ordinary cultivation may produce a fair crop, but only good land, plenty of manure, and high culture will secure the best success. Let us know how you succeed in growing and curing the product of your acre.

A correspondent of the N. W. Farmer says that he has tried thick and thin seeding, and prefers about 40 kernels to the foot. The finer growth from thick seeding produces more weight of fod-

der, and cattle eat it cleaner, but it is more difficult to cure. With a little practice the seed may be strewn in the furrows as fast as one can walk. The corn may be covered by a cultivator run either across or lengthwise of the rows. Some of the seed sowers might be so adjusted as to drop the seed sufficiently near together.

VALUE OF GROUND BONE.

Mr. Joseph Harris, of Rochester, remarks in the Country Gentleman, "The fertilizing value of nitrogen and phosphoric acid depends very much upon its condition. Nitrogen in the form of nitric acid or ammonia, or in compounds such as urea, which readily decompose and form ammonia, is worth (at the present prices of Peruvian Guano) 20 cents a pound. But when nitrogen exists in substances that decompose slowly, it is, of course, not so valuable. Hair, hide, horn and wool contain more nitrogen than the best Peruvian Guano; but no farmer could afford to pay as much per ton for them, because it takes a long time for them to decompose. And so it is with bones. We would rather pay 20 cents a pound for nitrogen in dried blood, urea, or guano, than 10 cents in coarse bone dust. And the same remarks will apply to phosphoric acid. Soluble phosphoric acid is worth 15 cents per pound, while that which is locked up in insoluble combinations is not worth more than five cents. Pure bone dust contains—

4 lbs nitrogen, worth say 10 cents . . . . .	40
Phosphoric acid 22 lbs, at 5 cents, worth . . . . .	\$1.10
	\$1.50

This is all there is of material value in bones. They are worth more or less, according to their fineness and consequent availability.

If ground very fine we should estimate them as follows:—

4 lbs nitrogen, at 15 cents, . . . . .	60
22 lbs phosphoric acid, at 7 cents, . . . . .	1.54
	\$2.14
	R.

Concord, Mass., May, 1870.

CUTTING AND CURING HAY FOR ITS VALUABLE QUALITIES.

The great crop of New England—the hay crop—is almost ready to harvest. Four weeks, at most, and much hay should be in the barns.

Upon our rough farms where the scythes must do the most of the cutting we are obliged to cut some out of season. Which shall we cut first? Last June we cut about two tons of meadow or swamp coarse, wild grass. The quality of the hay was much better than the same grass would have made if it had stood until August. We wanted hay to make milk and beef. Though the meadow hay was eaten without waste we do not think it was worth the cost of cutting at that time. We thought the best of our hay was worth the highest market price more than the swamp hay. If that opinion was correct, the swamp hay was worth nothing to feed to our cows, provided we could buy the best quality.

Which grass will give the best color to butter? Will a hot sun drive the color out of the hay? What kind of grass will retain the coloring properties best during the drying process? We believe as much butter can be made from hay in winter as from grass in summer. We believe that it is easier to obtain the quality than the color we desire.

If you, Messrs. Editors, or some one at the head of an agricultural college, will tell us how to preserve the valuable properties of grass in a dried state, we will ever be your debtor. Our own ex-

perience has taught us that there is a right time to cut hay, but it has not told us just when that time is. That experience has taught us that the quantity and quality of the butter is much changed by the curing process, but has not told us how to cure grass to obtain the most desirable results. Fearing we may never learn it on our own farm, we ask for information. F.

*Mast Yard, N. H., May 17, 1870.*

#### GARGET.

I have an extra ten-year old cow which I value very highly both as a stock cow and milker. She is farrow this year, and is gargety, frequently giving stringy milk, accompanied with swelling of the udder. I can keep it down by giving a spoonful of saltpetre every day. But as soon as I omit giving it for two or three days, the disease will return. Can the cow be cured, and if so, how?

*West Concord, Vt., May 16, 1870. H. C. W.*

REMARKS.—Twenty grains of Iodide of Potash, given three times a day in drink, often prove beneficial, as well as saltpetre. Mr. W. B. Brigham, of Roxbury, Vt., stated in the FARMER over a year ago that a mess of about half a pint of beans given twice a day was the best remedy he ever used for the garget. He said they might be given either dry or green. If green, a few hills of the vines and beans may be given. The cow will eat them greedily. To be sure, this is no "great thing," and its simplicity may lead to doubts of its efficacy. But Mr. Brigham stated that he had used it for several years, and that it had never failed with him. Others had tried it with the same result.

#### EARLY CUT HAY.

As the time will soon arrive for cutting hay,—if we cut it when it should be cut, which with many of us is a little too soon for the completion of all such work as shearing sheep, hoeing and many other things, which keep us too long from the hay field,—I thought I would write a few lines of my experience with early and late cut hay; hoping thereby to do some good by inducing some one to cut his hay earlier. I have commenced for the last few years from the 20th to 25th of June, and finish by the middle of July, if I can; when formerly I commenced after the 4th of July and finished in August.

I can keep more stock from one acre of early cut hay than I can from an acre of late cut, and keep it better, and I think it does not injure the ground as much; and then I have a crop of rowen or good fall feed. I feed my sheep nothing but good early cut hay, and they usually look better in the spring than when they come to the barn in the fall, and eat their hay all up clean. When I fed late cut hay I could not make them eat it clean, and they came out in the spring poor.

When I first began to cut my hay so early, people would come along and ask me if my grass was fully grown, in a tone and manner that indicated that they thought that I had commenced haying quite too early. But after careful observation I am satisfied that few farmers in this section lose much by cutting hay too early. On nearly all farms there are some pieces newly sowed to clover or which have run into June grass, that are almost worthless, if allowed to get ripe, but which make good hay if cut at the right time. Such pieces will do to commence on, while the later portions are growing. But even allowing that there is some loss in that first cut, I think we had better begin

before it is all grown, than to wait till the last spear gets grown before we begin, and then have the last get so ripe that we lose more at the last end than we do at the first. I may say something about feeding at some future time.

C. F. LINCOLN.

*Woodstock, Vt., May 16, 1870.*

#### FATTENING TURKEYS.

TO A FARMER'S WIFE:—*Madam*.—Having read with pleasure in the NEW ENGLAND FARMER of May 7th, your article upon raising turkeys, I concluded you could give valuable information to me and the public about fattening them. Last year I raised a few for the amusement of my children, for the first time in my life, but I did not succeed in getting them fat for the table. Whether they were too young to fatten, or what the difficulty was, I know not. Will you either write me or publish an article in the FARMER, and let me know when it will appear in the paper, as I do not take that paper regularly, giving the best mode of fattening turkeys and the age at which it can be done most successfully. With the anticipation of again deriving pleasure from your plain, direct, sensible style, I am with much respect, your obedient servant,

THEODORE OTIS.

*Wellesley, Mass., May 14, 1870.*

#### BEST FERTILIZERS AND IMPLEMENTS.—SICK COWS.

Will the editor of the FARMER, or some experienced farmers, please answer two or three questions for one who has just commenced farming and oblige him, and perhaps others?

Let me quote a few lines from a late number of the NEW ENGLAND FARMER, which will serve to introduce one subject:—"The compounds put off upon the farmers as fertilizers have proved of so little value that hundreds are discouraged from using anything in the form of compact manures."

How, then, shall we who have little money to risk in experimenting, determine what manures to purchase? Shall we buy Bone Meal, Coe's, Bradley's or Fales' fertilizer? Who can tell us of the operation of the last? We read of failures because the right kind of manure, the kind needed in the soil, was not used. Why not have a "Prof. of Soils" in our Agricultural College, to whom we may send samples from our different fields to ascertain what is needed? Will not others give us results of experiments with different fertilizers?

Two or three years since, much was said about Horse-hoes, warranted to do the work of six or eight men. Does the invention prove to be valuable? Does Ilbrook's do the work of the common hoe?

A new, more simple and less costly Horse-rake was mentioned some weeks ago, with the promise that we should hear more of it. I think it was made in Maine. Is there really much difference in horse-rakes?

Is there danger of feeding cows too plentifully for a few weeks before coming in? I have heard of several cows in good condition, and so far as known, in perfect health at the time of calving, that soon became too weak to stand, and finally died. Can any one explain the difficulty or give a remedy? No SIGNATURE.

*Townsend, Mass., May 10, 1870.*

REMARKS.—"Ask of the learned the way? The learned are blind; one bids us seek, the other shun mankind," is as near as we can remember one of Mr. Pope's rhymes. And there appears to be just about the same diversity of opinion among farmers as to fertilizers, implements, &c. After all, each individual must act on his own judgment.

This is one of the laws of our being. Each one must do his own thinking and his own choosing. Editors or agricultural colleges cannot relieve him of this labor and responsibility. The experience of others may furnish hints, but not rules for us. The Almighty might have saved us the responsibility of our manhood. In every emergency, our duty might have been written on the blue arch, or on the intervening cloud, but it is not, and never will be.

At the request of the writer of the foregoing inquiries, we withhold the initials of his name, though we think the request an unwise one.

#### HORSE-TAIL—*Equisetum arvense*.

The inquiry of our correspondent who enclosed a specimen of a plant which he finds in his hay is answered by W. S. Clark, Esq., President of the Massachusetts Agricultural College, to whom it was forwarded, as follows:—"The plant enclosed in your favor of the 18th instant is *Equisetum arvense*, and is known, in different sections, by the various names mentioned by your correspondent. It is believed to be poisonous or at least injurious to horses."

#### RAISING CALVES.

As I raise a few calves each year I will state my method of doing so. First I select calves from my best cows, which by the way, are full-blooded Durhams and grades. I feed them about six quarts of milk right from the cow for one week. I then give them skim milk until they are a month old. I then give them sour milk, six or seven quarts, until they are five or six months old. I think it is better to warm the milk for them rather than to give it to them cold. I prefer keeping them in the barn during hot weather, giving them what hay and water they want, together with one quart each of oat meal. A YOUNG FARMER.

*Williston, Vt., Apr. 18, 1870.*

#### MILK AND BUTTER FROM NATIVE COWS.

Having read many accounts of your fancy breeds of dairy cows, I venture to send a statement of the New Hampshire native breed. During the past winter I have milked two farrow cows and one which calved January 25, from which I have sold eighteen quarts of milk a week, used one quart daily in the family, and churned twenty pounds of butter once in two weeks. J. M. W.

*Hillsboro' Centre, N. H., April 18, 1870.*

#### EGGS OUT OF PLACE.

If the gentleman that finds eggs out of place in his hen house will remove the straw and hay to the pigs and in the place of it cover the earth or floor with sawdust; allow no straw about except for nests; arrange for his hens to fly to the upper nests, and give them all the corn they have on the cob to pick off as they will, thus giving them exercise, he will soon find eggs in place, or if out of place, where they can be found. Mrs. L. F.

*Franklin County, Vt., 1870.*

#### PROTECTION AGAINST CROWS.

I am one of those who have spoken ill of the crow for his depredations in the corn field. I tried to keep him out in various ways, especially by lining the field, without success. Lines and images did not, in my case, seem to impress him with any of that salutary fear which I desired to excite,

notwithstanding some of my neighbors found the lines alone, a perfect protection. By and by some one told me that the line should be put around the field *before the corn came up*. I tried the plan with this improvement, and have always found it a perfect success. I think for the last half dozen years I have not had a hill of corn pulled up by crows, if the lines were in place before the corn appeared. Let others who have suffered try it. I think they will, with me, cease to curse the crows. M. P.

*Concord, Mass., May 13, 1870.*

#### THE "OLD" NEW ENGLAND FARMER.

While examining the private library of Andrew S. Fuller, the veteran horticulturist, the editor of the *Rural New Yorker* found an article credited to the "New England Farmer" in a book printed in 1806. Now, as the present NEW ENGLAND FARMER claims to have been established in 1822, the inquiry is made "What was that New England Farmer, published as early as 1806? Who edited and published it, where was it printed, when and by whom was it established, and when did it cease to exist?"

In reply to these questions, we may say that the "New England Farmer," to which the article alluded to was credited, was a book of some 400 pages, of which the following is the title page:—

THE NEW ENGLAND FARMER; or Geographical Dictionary: containing a compendious Account of the Ways and Methods in which the most important Art of Husbandry, in all its various branches, is or may be, practised to the greatest advantage in this country. By Samuel Deane, D. D., Fellow of the American Academy of Arts and Sciences.

"Frigoribus parto agricolæ plerumque fruuntur,  
Munusque inter se læti convivia curant;  
Invitat genialis hyems, curasque resolvit."—*Virgil*.  
Printed at Worcester, Massachusetts, by Isaiah Thomas, sold at his Bookstore in Worcester, and by him and company in Boston. MDCCLX.

The dedication, which is spread over a full page, runs thus:—

To the Honourable James Bowdoin, Esq., L. L. D., President of the American Academy of Arts and Sciences, &c., &c., the following work is inscribed by his much obliged and most obedient humble servant, The Author. *Portland, Massachusetts, 1790.*

The partiality of the author for the classical portion of the title of his book is shown by the fact that on the back of the volume the words "New England Farmer" are omitted, and the gilt letters indicate simply:—"DEANE'S GEOGRAPHICAL DICTIONARY."

In consequence of "the rapid sale of the book, arising from the general acceptance it has obtained," a revised and improved edition was published, at Worcester, in 1797, in which "Vice President of Bowdoin College," was added to the previous honorary title of the author. In September, 1822, a third edition was published in Boston by Wells & Lilly, one month after the commencement of the publication of the NEW ENGLAND FARMER in newspaper form.

We thank brother Moore for calling our attention to this old book, as we have looked over its pages with interest. It was published soon after the smoke of the Revolutionary war had cleared

away, and in alluding to this event the author says, in his introduction, that he "has had more zeal and courage in attempting to promote improvements in agriculture, since the happy termination of the late struggle for independence than before. Our holding the rank of a free and independent nation allows us to consider the country as indisputably our own, and ourselves as monarchs over our farms. But the most forcible reason for our cultivating this art, is the indispensable necessity of it, to enable us to live as becomes an independent people. The alarming effect of the present low state of husbandry is, that we are necessitated to import much of our food, and clothing, while we are incapable of making proportionable remittances in the produce of the soil, or in anything else. As a good system of national government is now established, I see no reason to doubt but that a spirited attention to husbandry and manufactures, accompanied with a more general practice of frugality and economy, would put us on a respectable footing; so that such a foundation would be laid for our increasing wealth, that we should be able, in a short time to cancel our public debts; and might reasonably hope ere long to become an opulent, respectable and very powerful nation."

We think the readers of the *NEW ENGLAND FARMER* in 1870 will be interested in the following paragraphs written by the author of the "New England Farmer" in 1790. "Forty years ago" is an expression that is often considered as suggestive of better times than our own. Here is a picture of New England farming, as it was seen by a careful observer, twice forty years ago:—

It is much to be regretted, that the most complicated of all the arts, in which the brightest genius may find sufficient room to exert and display itself, should be slighted and neglected by a people not generally wanting in ambition. And it is equally strange and unaccountable, that the most useful and necessary of all employments should have been considered, even by the enlightened people of New England, as below the attention of any persons, excepting those who are in the lowest walks of life; or, that persons of a liberal or polite education should think it intolerably degrading to them, to attend to practical agriculture for their support.

Perhaps, one occasion of the low esteem in which husbandry has been held, in this country, may have been the poor success which has most commonly attended the labours of those who have embraced the profession. Not only have most of them failed of rapidly increasing their estates by it, but too many have had the mortification of making but an indifferent figure in life, even when they have used the strictest economy, and worn out their constitutions by hard and incessant labour. The misfortune has been, that a great proportion of toil has been lost by its misapplication. To prevent this evil in future is a leading design of the present publication. And since many among us begin to be convinced of the urgent necessity of having the attention of the public turned to agriculture, it is hoped that the following attempt to promote the knowledge of its mysteries, and a spirited attention to the operations of it, will meet with the greater approbation and success. And as a very respectable Society

in the Commonwealth of Massachusetts have undertaken to propagate the knowledge of husbandry, the day may be at hand, when the employment of the farmer shall no more be treated with contempt; when the rich, the polite, and the ambitious, shall glory in paying a close attention to their farms; when respectable persons shall confess it is one of the noblest employments to assist nature in her bountiful productions; when it shall be our ambition to follow the example of the first man in the nation, who does not think an attention to husbandry degrading; and when, instead of being ashamed of their employment, our laborious farmers shall, as a great writer says, "toss about their dung with an air of majesty."

#### HUNGARIAN GRASS.

If properly managed, a large amount of excellent fodder may be obtained by growing this grass. But, as is true in the case of herdsgrass, good fodder and good seed should not be expected at the same time. If allowed to mature its seed the fodder becomes woody, dry, hard, and of little value. For fodder it must be cut early, and if seed is wanted, a patch of suitable size should be raised by itself for that purpose. The attempts to raise both together has excited much prejudice against the Hungarian grass.

The following remarks of a correspondent of the *Prairie Farmer* are worthy of attention, as they state the difficulty correctly. By following them we shall get one of the most valuable crops for horses and milch cows:—

The trouble about Hungarian grass is that it is not generally cut at the proper time. I have raised it several years, and consider it the very best hay for horses. They will keep fat on it, when on Timothy hay they will grow poor. Cut it when in the blow, before any seed is formed; wilt it in the swathe, the same as clover, and make it in the cock. The stalk is nearly solid, and the hay very heavy; and if made in this way, will be as green as grass, and a horse will want little grain for farm work. Give your horses all they will eat of it, and they will fat with decent forage. But if allowed to turn yellow, and form seed, it is the same as any other grain, and will, of course, injure a horse, the same as if he were fed wheat in the bundle to excess. It is better to rake it by hand, but on a good soil you will tumble up a big cock in a small space."

If cut and cured in the same way, there is no better feed for milch cows, nor any that will make more milk. We think the best after treatment is to plough in the stubble as soon as the grass is cut, and sow grass seed in the fall. Grass seed is not apt to catch well when sowed with it in the spring.

MISSOURI.—The agricultural college of Missouri has been located at Columbia, Boone county, in connection with the State University. To secure this location the citizens of the county gave a deed of 640 acres of land, conveniently located to the present University grounds, and \$30,000 in cash.

The *St. Louis Rural World* says, the soil, climate, position and social surroundings of the State Agricultural and Mechanical College, are such as will please every friend of industrial edu-

cation, and will satisfy the scruples of the most conscientious parents.

As an act of justice to the people of Boone county, the same paper says, that thirty-one years ago they gave one hundred and seventeen thousand dollars as a bonus to the State University. A private citizen of the county, Dr. Anthony W. Rollins, placed at the disposal of the curators of the State University, a sum now amounting to \$26,000, the annual interest of which is to be forever appropriated towards the education of poor but promising youth, of both sexes, at the State University.

#### SUMMER CARE OF HOGS.

We believe one of the reasons why many fail in realizing what they might from their swine herds, is that they devote too much attention to the corn field, and too little to the hog pasture. In their eagerness to produce an abundance of feed for their hogs in autumn and winter, they are negligent in providing them with sufficient food during the earlier portions of the year. Hogs that are stunted during the summer will not take on fat readily on the approach of cold weather. A good healthy growth should be kept up all the season.

Now the truth is, an acre of clover to be fed off in June is worth more in making pork than an acre of corn that is to be devoured in November. The first can be produced by little labor, while the latter is only raised at the expense of patient and continued toil. The grunting hog delights in fat pastures no less than the bleating lamb and the lowing cow. Pure cold water is as grateful to the one as to the other. In fact the hog has greater need of it than either of the other animals, because he requires a bath every day, and would take it too if he had the facilities.

August is ordinarily a hard month for hogs. The hog pasture, unless it is of unusual size, is likely to become short and much of the ground rooted over. The soil is often parched; the vegetation dried up; the water scarce, and nothing abundant but heat and flies. At such a time, of all times, the hog requires attention.

A crop of peas, if sown even at this late day, will be ripe early in the month of August. Two bushels sown broadcast on an acre of well prepared land should produce at least thirty bushel of shelled peas, to say nothing of pods and vines.

For growing swine in the warm season of the year there are few kinds of food that will compare with peas. They do not need to be harvested—the hogs will do that—will eat them, if they are not too dry, stalks, leaves and all. If peas will form less fat than corn, they will produce more flesh; and that is what is wanted at the period that precedes fattening. They are easy to raise where the soil and climate is suitable for them; do not exhaust the

soil like most crops; and come in at just the time they are most needed. In England, where it is impossible to raise corn, farmers rely largely on peas to fatten their hogs; while in Canada, where they can raise very fair corn they hold that more food can be raised from an acre of peas than from an acre of corn.—*Prairie Farmer, abr.*

#### HOW TO SELECT A HORSE.

Probably in no article of trade are persons so often deceived as in the purchase of horses. So risky is this that many prudent buyers never purchase except on a trial of a week or more, and I would advise all who do not know how to select a good horse to adopt this course.

In buying a horse particular attention should be given to the eye. It should be clear, stand out round and full. The eyebrows and lids should be free from bunches, and there should be no swelling under the lower lids. I would turn from a horse that has a dull, sunken, flat eye. In nine cases out of ten there is trouble connected with it. Either the disposition of the horse will be bad, or he will be lazy, or his eyes will fail. A good way to test the present condition of sight is to lead a horse out of a dark stable into a strong light. If he knits his brow, throws his head up as if to get more light, acts as if he wanted his glasses to see clearly—stand from under, you may be sure he has bad eyes.

The feet should also be carefully examined. A horse with bad feet is little worth. A good foot is smooth, tough and solid. The heels firm (not spongy) the frogs dry and the soles shallow. See the foot that the honest smith calls a good one. The shoulders should be of medium size for common use; as then you have good speed and durability.

The limbs should be clean, free from splents, and wind-galls, and spavins and tumors of all kinds, and should look as if made for the body. In movement, the fore legs and shoulders should seem to have but one action. If you want a good horse look well to this.

The body should be well formed, back straight, and the hips lower than the withers. See that the breathing is natural and that there is no uncommon motion under the short ribs. A broken winded horse, unless rosined, nearly always shows this.

A horse with a large fleshy head, and thick neck, also one with fleshy legs should be rejected.—*Ohio Farmer.*

—The Iowa City *Republican* says Mr. A. J. Bond, of this county, is now feeding 169 head of cattle. This lot of cattle will probably bring him \$10,000 in addition to the value of the hogs which follow them. He feeds hay and corn from the shock in winter, turning on grass in summer. He will plant 250 acres of corn this season.

## LETTER FROM THE FARM.

CONCORD, May 16, 1870.

GENTLEMEN:—Never did a morning dawn upon this beautiful world that seemed to my senses more lovely than this. Never was vegetable life more active and luxuriant at this season. There was a great amount of moisture in the land, and a few days of an unclouded and powerful sun has so warmed the soil, that all plants have started as by some magic influence.

A portion of the apple trees are in full bloom; in a few days they will be so generally. Within a single week grass has grown in an unusual degree. There are fields near me where a thick swath could be cut to-day.

Turning to the Transactions of the old *Massachusetts Society for Promoting Agriculture*, published more than half a century ago, I find some interesting observations recorded in relation to the time of blossoming of apple trees. In 1793, and '94, they were in blossom April 29; in 1795, May 10; 1796, May 4; 1797 to 1803, from April 28 to May 5. This year, it will be May 19 or 20 before the apple trees are generally in bloom.

The following table of the growth of Indian corn, and the number of days from planting for each period of growth, will be found interesting and instructive.

Planted	Sprouted.	Silked.	Eotab. green.
1792, May 4	12 May, 8	14 July, 71	1 Aug., 89
1793, April 23	6 " 13	10 " 78	
" " 26	8 " 12	5 " 70	23 July, 88
" " 27	8 " 11	5 " 69	
" July, 15	22 July, 7	16 Sept., 61	16 Oct., 85
1794, May, 3	15 May, 12	12 July, 70	29 July, 87
" June, 21	28 June, 7	13 Aug., 53	1 Sept., 72
1798, April 27	15 May, 18	21 July, 88	

The principal circumstance which caused any difference of growth, appears to be the time of planting. What was planted about the beginning of May, appears to have required from 86 to 89 days to be fit for eating. What was planted earlier took a longer time to come forward, and did not ripen at so early a date as that planted at the beginning of May. That planted in July lost in the fall the time it gained in summer, and furnished green corn for the beginning of October.

The specimen planted about the middle of June kept its growth the whole summer, and became fit for eating in seventy-two days.

The prosperity of the plant depends more, I think, upon the condition of the soil at the time of ploughing than most persons are aware

of. Seeds must have heat and moisture in order to sprout, and when sprouted the germ requires a loose and highly-pulverized bed to travel and grow in. Without this, a plant may live and grow, but its progress will be slow and feeble, and yield little or no profit to the cultivator.

This matter of making the soil fine, has received much attention during the last five years. Ploughs and other implements have been constructed in numerous forms in order to accomplish it quickly and well. In some ploughs they have succeeded in cracking the upper portion of the furrow into innumerable pieces, while the under half remains undisturbed and compact. To reach and break up this portion with the harrow is out of the question. Before it could touch it, the upper surface would be as solid as that below. Nothing but the plough or some implement that lifts and *twists* at the same time will do it.

I have rarely been so much interested and instructed in the art of ploughing as I was a few days since in looking at the work done by some new swivel, or hill-side ploughs, on a neighboring farm. It was soon found that a plough exactly suited to turn a thick, tough sward was not the best one to turn over a tender sward. For the first, a convex mould-board was required, something like the shape of the human hand, when the fingers are slightly bent down; and the other, a mould-board considerably flattened, so that its upper edge should not only break the furrow into numerous particles, but turn it entirely over into its bed as the plough passed along. For completely inverting the soil of a stubble field, a mould-board of somewhat different form may be required. All these were illustrated in the most gratifying manner. The sod on the sward land, as well as on the stubble ground, was not only turned over, but cracked into innumerable fissures, so that a stick or straw could be put into them nearly through the furrow; and when walking over them they had a soft, velvety feel under the foot.

Three or four ploughs were used, all of the *swivel*, or *side-hill* pattern, although the field being ploughed was nearly level. It has been a want long felt by the farmer, to get a side-hill plough that was light, easily managed, and that would do good work on level land, as well as on the hill-side. This has been ac-

complished. Each plough has *four* mould-boards, all adapted to the same beam, so that, with the exception, perhaps, of a light one-horse plough, no other is needed on the farm. These mould-boards are suitable for tough sward, stubble, meadow and sandy loam, where the turf is thin and tender.

It is my experience that a six-acre field can be well cultivated as easily with a swivel plough, as a five-acre field can be with a land-side plough. In the first place, all *dead* furrows are avoided, and these are not only unsightly, but inconvenient, as they are so many trenches where the soil is taken away, leaving barren lines, and piled up in other places where not needed. In the second place, they save a great deal of travel, for wherever a land "is laid out too small to make it an object to set in at the ends, at every round these are passed over without doing any work, and the time is lost. But even where the ends are ploughed, a second ploughing is needed because the furrows become completely trodden down by the team passing over them in turning. Again, with a swivel plough, a narrow strip may be ploughed on the edge of the field by turning the first furrow against the fence, and so continuing until as many furrows are turned as desired; and this can be done, leaving the ploughed portion level, and the remainder of the field uninjured.

As a matter of convenience and economy, in every respect, the swivel is fast taking the place of the old land-side plough; and, within a few years past several patterns, differing more or less from each other, have been introduced and advertised in our columns. The ploughs used in the trial to which we have alluded were all of the swivel form, and of the series devised by Ex.-Gov. Holbrook of Vermont. With the operation of the other patterns of the swivel plough we are not as familiar as with this. But we are pleased to know that the demand for this style of ploughs has so far stimulated the inventive genius of manufacturers that excellent swivel ploughs are now offered to farmers who have become dissatisfied with the old style of land-sides.

—Woodpeckers, and all the family, are most useful birds. The borer stands but little chance where they have undisturbed access. They penetrate through both bark and wood and destroy this and other pests.

*For the New England Farmer.*

#### MUCK IN GOSHEN.

In Mr. O. J. Upham's criticism of what I said in favor of muck, I am charged, in the first place, with living in Goshen. To this I plead guilty. To his second charge of having a large family, guilty, also. To his third charge of supporting a family on a farm on which muck has been used five years, I respond by referring him to Psalm cxxviii. 2.

I believe these are all the specifications he has brought before the public to prove that muck is of no value as a fertilizer, with the exception of his assumption that muck taken directly from the swamp and applied in that state to the soil has no effect.

Muck taken in its crude state directly from the swamp and ploughed into a cold or wet soil, I should say would be slow in showing any good result; as when applied in that condition it has little chance to decompose. But mix it with a warm or sandy soil and it will soon make its presence manifest in letters plainer than printer's ink can do it; not in poisoning peas but in hastening them and other vegetation to a corpulent and rapid maturity.

Before going farther, let us consider what muck is composed of. Usually where you find a muck or peat bed of much depth and size it will be surrounded by higher lands, with one or more streams flowing through it, having formerly been a lake or pond, which was gradually filling with leaves, decayed vegetable matter, floodwood, dust, wash from the uplands, dead fish, frogs and all decayed substances gradually collecting for centuries and forming a vast deposit of material, which I think the Author of the universe intended for the use of man, when the uplands should become worn and reduced to a barren condition by cropping and waste.

To all discerning minds it is becoming more evident that Nature had some wise design in store for man when the world was created, and that all things were intended for some use. We all remember how almost incredible was the news, when first received, of pumping oil from the bowels of the earth. How wonderful are the vast deposits of coal, guano, phosphates, &c., that have been discovered; how startling are the discoveries that science is constantly bringing to light. Let us cease to wonder, as children, and hasten to apply, like men, the means that Nature has stored for the benefit of mankind.

That there should be a great difference in the value of different deposits of muck is as reasonable as the fact is obvious. If the surroundings of the peat bed are sandy, and the timber pine or soft wood, and the soil naturally poor, the peat would be composed or formed of moss, water plants and sand, with the sheddings of the softwood timber. This I suspect to be the case with those peat beds

which are experimented with by those who assert there is no value in muck. Muck of this kind would not of course have near the value of that surrounded by maple, oak, and other hard wood timber with a rich loam for soil.

Mr. Dana says, in his Muck Manual, in speaking of good peat, that it has, chemically, all the ingredients of the best barn manure, with the exception of ammonia, to a small extent. But bear in mind that ammonia is contained in the liquid excrement of all animals to as large an amount as it is in the solids, and that it is impossible to retain it all without an absorbent. Now as muck is the best absorbent known, there can be no reason why muck composted with manure until it ceases to throw off its most valuable gases, should not increase its value to a large extent.

If, as Mr. Upham asserts, there is no value in muck, why is it that one-fourth the manure applied to crops of any kind on a reclaimed swamp show as good and better results, than four times the quantity applied to upland? This fact I will prove to Mr. Upham's satisfaction if he will call on me.

A neighbor of mine has a reclaimed swamp of some fifteen acres, which cuts nearly four tons of good English hay to the acre. This meadow a few years since was a barren peat bog. A slight top dressing of manure, once in three years, is all that is now required.

If you, Messrs. Editors, or the Messrs. Uphams, should ever chance to journey from Easthampton to Florence, Mass., I will refer you to what was once a peat bog, nearly midway between the two towns, where you can see as fine crops of tobacco, corn, and other crops as grow in the Connecticut valley.

Although I have not exhausted my subject, I fear I have the patience of editors and readers, and close for the present.

LORIN BARRUS.

Goshen, Mass., May 12, 1870.

For the New England Farmer.

### MEDICAL TOPICS.

BY A MEDICAL MAN.

#### The Causes of Disease.

Sickness does not, as a rule, come upon us unbidden and uninvited. Whatever may be said of the operations of "Him who worketh all things after the counsel of his own will," it is certain that a large majority, if not all of the diseases which afflict humanity, are the results of the operation of natural laws—the legitimate effects of secondary causes. Some of these causes are beyond our control, and if we suffer, it is no fault of ours; but many, and, indeed, quite the greatest number of these causes may be avoided, either wholly or in part, and if we suffer from their effects our sickness is justly chargeable to a disobedience of the laws of health.

The causes of disease are either *predispos-*

*ing* or *exciting*. Predisposing causes are such material agents, and such omissions and commissions as induce a *tendency* to disease in general, or to some disease in particular. Exciting causes are such material agents, or, what is far more common, such acts or such neglect on our part as directly induce the *disease*, determining both the time and the manner of its occurrence. The errors which induce a tendency to disease and which, thereby, become *predisposing* causes, may be our own, or they may be those of our parents or of others; but the errors which become the *exciting* or *direct* causes of disease are, with few exceptions, our own. The particular kind and character of disease from which a person may suffer, may be determined by either the predisposing or by the exciting cause, and the same agent may be a predisposing cause in one instance and an exciting cause in another; or, some powerful agent may so affect the system as to induce all the phenomena of disease regardless of the operation of any antecedent cause, and, indeed, when no such cause has existed.

Of the various causes of disease, the following are most noteworthy, viz:—

#### Miasms.

By this term is meant the effluvia, exhalations, &c., which emanate from vegetable and animal matter while undergoing decomposition, one from the bodies and excretions of sick persons. The exhalations which abound in the vicinity of extensive marshes are called *marsh miasma* or *malaria*; and the emanations from decaying animal matter from stables, privies, crowded and unventilated apartments, the bodies and excretions of sick persons, &c., and which are propagated through the medium of the atmosphere, are called *infections*. Intermittent and remittant fevers are examples of malarious diseases. Typhus and typhoid fevers, measles, small pox, &c., are infectious diseases.

#### Contagions.

This word signifies such material substances as propagate disease from one individual to another, by contact of person or of clothing. Itch and syphilis are contagious diseases, and small pox and the plague are both contagious and infectious.

#### Atmospheric Changes,

Especially sudden changes from heat to cold, and from cold to heat; from dry to wet, and from wet to dry; these always predispose to disease, and not unfrequently excite it. Catarrhs pleurisy, pneumonia, bronchitis, &c., are often produced by such causes.

#### Overwork.

Fatigue of body by excessive physical labor is both the predisposing and exciting cause of many diseases; and the same may be said, and with much greater emphasis, of excessive mental exertion—indeed, too much brain-work

in the case of business, intense anxiety, grief, despondency, &c., are among the most prolific sources of dyspepsia, neuralgia, insanity, and organic diseases of the brain and of the heart. **The Habitual Use of Alcoholic Liquors, Tobacco and Opium.**

Although these several articles may be valuable remedies in certain diseases, their value is lost by habitual use, and they become the causes of many diseases. Insanity, apoplexy, epilepsy, and other diseases of the nervous system; dyspepsia, ulcerations of the stomach, cancer of the stomach and liver, &c., are especially apt to result from their daily use.

#### **The Excessive Use of Tea and Coffee.**

There are many persons who cannot use these very common articles, to any extent, without injury; and those who might use them moderately, with comparative impunity, are frequently more or less injured by an intemperate use of them. Dyspepsia, palpitation, headache, and various nervous affections, are the diseases most likely to result from the excessive use of these articles.

#### **Intemperance in Eating.**

Eating too much, and eating improper food, are very common causes of dyspepsia, gout, diseases of the liver, constipation, diarrhoea, &c., &c.

#### **Sexual Abuse.**

This, solitary and social—legal and illegal—produces more chronic and incurable diseases than all other causes combined. Do I state the case too strongly? I believe that every candid physician who has practiced his profession during any considerable number of years, and who has observed carefully the causes of disease, will agree with me in such an assertion. This evil—wide-spread, and destructive, far beyond what is commonly supposed—predisposes to almost every disease by weakening the general tone of the system, and thus rendering the person more liable to be affected by the ordinary exciting causes of disease; and besides, it is itself the exciting cause of a class of diseases whose name is legion.

*For the New England Farmer.*

### **AGRICULTURAL SCIENCE AND COLLEGES.**

Agriculture is practical—not theoretical. It can only be taught in the school-room, as navigation is taught there,—simply in theory. "When science and art have done their best for the preparation of the soil," says Mr. Everett, "they have but commenced their operations in the lowest department of agriculture."

When we enter the field of agricultural research, and study the mysteries of assimilation—the laws of composition and decomposition—the reduction of inorganic mineral and vegetable substances to an organized condition that shall raise lifeless nature into action, and

transfer air, earth and water into bread, beef, pork and wool, for food and clothing, we shall behold the great mystery of production and reproduction, and the unaccountable results of light and heat upon the vegetable kingdom.

The skilful agricultural chemist may mix soils, and compound minerals, but with all his apparatus, and with the aid of a thousand drug stores, he cannot create a single element, or fabricate the smallest leaf in the vegetable kingdom. The manufacture of a single kernel of wheat, or corn, with living, reproductive power, is as far beyond his power as the creation of a new world.

That agriculture should advance to the state of a physical science, no sensible man will deny. Agriculture is an interest that men both private and public are by far more inclined to praise than to help by legislation or otherwise.

The professions of law, medicine, and theology have in all past legislation demanded and received favor and support. This error has its ground not so much in the merits of the case, as in the fact that theory is restless and active,—labor quiet and passive. I doubt there was ever a people more free in their praise of the great system that feeds and clothes mankind than ours, and I had been led to hope that the funds appropriated to the several States by the Morrill Bill would be applied to the promotion of *practical progressive agriculture*; but by the manner in which many of the States have already disposed of this fund, the old institutions of learning, already rich and presumptive, will gain new strength; their laboratories will be enlarged; professors increased and a new stimulus given to the old theories, that shall work a detriment to the progress of agricultural science. This will draw more sweat from the laborer's brow; lessen the charms of rural life; degrade and disgrace honest labor; throw a new halo of glory around the altar of speculative philosophy; leave the sublime work of tilling the soil to "move on in the even tenor of its way" in the transformation of air, earth and water into food and clothing for man and beast; revive soil analyses, with all its follies, and demand a professorship and chemicals for the purpose of "restoring exhausted fertility and revealing and expounding the laws of vegetable physiology," to teach the practical tiller of the soil how to cultivate his fields with *drugs* and *chemicals* by the "arts and sciences."

I would not assume that science is not a co-worker with man in conducting agriculture upon a wise and practical basis. I object to the application of this fund, or any part of it, to the dissemination and support of a *false theory* and a *false philosophy*. Science, in its primary relation to the cultivation of the soil is practical and effective. The transformation of the organized materials and elements of earth into food and clothing is sci-

ence, in its most comprehensive form. In this noble work, God puts in all the "stock in trade"—man puts in his highest conceptions of Divine wisdom and power, and of physiological laws to guide him in carrying forward the noblest of all avocations within the scope of human industry.

How unlike the tricks and schemes of art and trade are the study and practice of agriculture. To learn the nature and use of mineral and vegetable substances, the agents that influence and govern them in their composition and decomposition; the relations they hold to each other, to light, heat, frosts, rains; the overhanging atmosphere; the process of condensing volatile fluids in vapors, dews and showers, by the changing currents of the atmosphere. This is the science of nature. God is the teacher; the open field the school-room. Science shows the relation both mind and matter hold to physiological laws; its application to agriculture, by *theory*, is vague, and positively uncertain. How the raw and unorganized materials of all cultivated plants should be re-combined, so as to give the greatest return for any given capital and manual labor, are problems in agriculture, which learned science and steady industry alone can solve. Every dollar dug out of the earth by the agriculturist, pays a double toll into the treasury of the State.

I believe it was the design of the mover of this great enterprise to diffuse among the masses the scientific and primary knowledge of agriculture, by establishing in every State in the Union a fund that should be devoted to the interests of those engaged in rural pursuits. It must be admitted by all that every other human enterprise would be largely benefited by encouraging the productiveness of rural labor. Such a course of instruction would give *mind* the power over *matter* in all results of rural industry by which, instead of exhausting the soil of its bread-forming elements, the earth should be made to grow richer and the State stronger. Why should not farmers have the same facilities for scientific and special education so long enjoyed by lawyers and doctors? The speculative philosophy, which is allowed to keep the company of the "arts and sciences" of the old theoretical schools is no guide to one engaged in rural pursuits, but would lead him astray in the acquisition of that knowledge which imparts productive value to the labor of human hands. As the mind of a human being lacks science or knowledge, his physical force depreciates in value. Give us a model farm and model *farming*; not model buildings, not a palace for professors and chemicals; but teach such farming as may be done profitably by any intelligent farmer. Not only sow seeds in the earth, but also sow seeds of knowledge in the minds of men that shall produce a harvest in future generations.

In this country we spend too much money in educational buildings, and then starve the teachers and paralyze the germ of the science to be taught. There is no nation under the sun where knowledge gives man so much *power* as it does in this country. With unbounded fields and a broad liberty, full scope is given to the noblest ambition of the highest aspiration. Give the young ruralist clear and comprehensive views of the cultivation of the earth, and a correct knowledge of the nature and power of the elements that surround him, and with which he has to deal. Liebig says, "you have no first class professors in America; but you have instead first class mechanics, first class business men, and managers of large and colossal establishments." The great philosopher runs aground here; we need no "great professors" in progressive "young America," no more than we need great bishops or great priests. If there is one thing we need to know, it is how to till *our* soil. Agriculture is one continual experiment. Science, as applied to agriculture, in my next. L. L. PIERCE.

*East Jaffrey, N. H., 1870.*

REMARKS.—In discussing the character of the institutions established under the congressional grant, it should always be remembered that the fund was accepted under certain conditions. The law expressly provides that the interest of the fund shall be devoted by each State "to the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, *to teach such branches of learning as are related to Agriculture and the Mechanic Arts.*" The acceptance of this grant, obligates compliance with its conditions. And hence it would seem that the name, "Agricultural College" is an improper one, for a single institution, as the title of the Bill reads, "Colleges for the benefit of Agriculture and the Mechanic Arts." Massachusetts established two colleges under the Act—the Institute of Technology, "to teach such branches of learning as are related to the Mechanic Arts;" and the Agricultural College "to teach such branches of learning as are related to Agriculture." Maine calls her institution the "State College of Agriculture and the Mechanic Arts;" New York christens hers the "Cornell University."

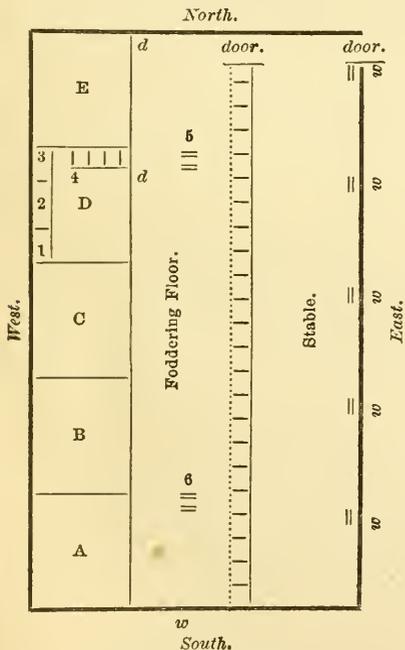
Whether a better law could have been passed, or a better plan devised for the promotion of agriculture is another question.

For the New England Farmer.

**HAY AND GRAIN BARN FOR CATTLE AND SHEEP.**

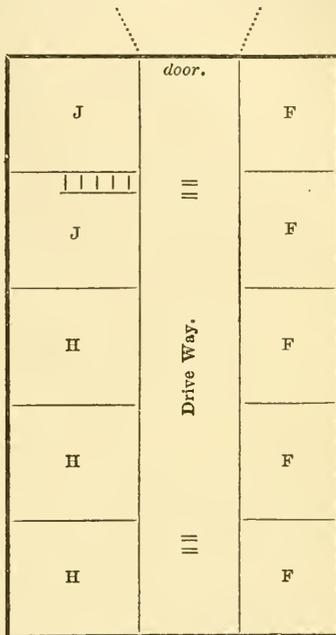
The following is the plan of a barn built on the farm of Jedediah Smith during the summer of 1869. It is 40x72 feet, with posts 21 feet, with basement under the whole, nine feet in height. The basement is level with the ground around the barn, except at the north end, there being a bank with a wall built perpendicular with the north end, with a jet back nine feet from the ground on which sets the end of the barn; the rest of the barn resting on posts securely braced. There are twenty of these posts, which are arranged in five rows of four posts each across the basement, two of each row being under the side sills. The south end is open. The east side receives the manure from the stable above and the remainder of the basement can be divided into as many apartments as may be desired, by bars extending from post to post. There is a drive-way across the cellar near the centre, with doors on each side. The water trough may be located where most convenient. There are windows on the side to correspond with those in story above. The plan of the basement is so simple that it is hardly necessary to present an engraving of it.

at w. The stable floor declines two inches. The foddering floor is 12x72, with cribs 3 feet wide. A, B, C are bays for hay, 16x14 feet. D, clutter-hole, with stair way leading to second floor. E, calf pen, 16x16. 1, 2, 3, are grain boxes; 5, 6 are trap-doors for passing hay, &c., to basement. At south end of the foddering floor is a window of 12x2 lights.



PLAN OF FIRST FLOOR.

The stable is 12x72 feet, with entrance at side, as the end is against the embankment; a bridge or platform rising from the yard to the door. The = indicate traps for passing the manure to the basement below, with windows



PLAN OF SECOND FLOOR.

The driveway is 19 feet above bottom of basement and 10 above the first or foddering floor. At the south end is a long window, also one over the door opposite. The four divisions, marked F, are for hay. They extend three feet lower than the floor, and may be called either bays or scaffolds. They are over the stable. H, H, H are bays for hay, 14x16 feet. J, J are scaffolds, one 14x16 and the other 16x16, with stairway.

Thirteen feet above the drive way there is a floor 16 feet wide, extending the whole length of the barn, intended for standing bound grain while green, and as there are windows at each gable end, the circulation of air is so free that grain cures nicely here.

The roof is boarded lengthwise and shingled with pine and spruce shingles, laid six inches to the weather. The body of the barn is covered with two thicknesses of boards put up and down.

The owner of this barn had other out-buildings for horses, carriages, &c., and this was designed especially for cattle and sheep, hay and grain. Those differently circumstanced might desire some slight modifications, but

I think the plan combines as many conveniences as any barn I ever saw.

Grantham, N. H., 1870. A READER.

**TRAVELLING CONTRASTS.**—It is looked upon as a matter of wonder, to find any adult person now, who has not travelled in the cars, pleasantly reading, talking or sleeping, and at the rate of three or four hundred miles in the course of twenty-four hours? And this tends to health, general prosperity and a higher civilization.

What a vast change has taken place in this respect in a comparatively short space of time. About 1650, Mr. Pennant, in his "Journey from Chester to London," says:—"The first day, with much labor, we got from Chester to Whitchurch, twenty miles; and on the sixth day to London, about 100 miles, before the commencement of night. The strain and labor of six good horses, sometimes eight, drew us through the sloughs in many places. We were constantly out two hours before day, and as late at night; and in the depth of winter proportionably later. Families who traveled in their own carriages, contracted with Benson & Co., and were dragged up, in the same number of days, by three sets of able horses. The single gentlemen, equipped in jack-boots and trousers up to their middle, rode post through thick and thin, and, guarded against the mire, defied the frequent stumble and fall; arose and pursued their journey with alacrity."

About 1670, the journey from Oxford to Loudon, which is under sixty miles, occupied two days. An invention called the "Flying Coach," achieved it in thirteen hours; from the middle of September to the middle of March, it was uniformly a two days' performance. Now some people grumble if they do not make that distance in two hours.

#### THE CURRANT WORM AGAIN.

This pest has appeared again, and has commenced the work of destruction in earnest upon the leaves of the currant bush. We find no account of them in Harris, Fitch, or Kollar. The eggs which produce them are probably from a fly of some kind. They are deposited on the under side of the leaf, in rows, and placed, usually, on the centre rib of the leaf, sometimes on two or three of the ribs. When hatched, they eat a small hole through the tender leaf, and then march off to its edges, and frequently surround it entirely. How long the eggs will continue to be hatched out we do not know; indeed, very little seems to be known of the fly that deposits the eggs, or the habits of the worm that destroys the foliage. We hope some one will give us information on the whole matter.

Various modes of destroying the worm have

been suggested. We have tried several ways, but find only one that promises success, and even that remedy may prove destructive. The remedy is to begin to pluck off the leaves containing the eggs, as far as they can be found, and follow this up, picking off the leaves containing the worms, as fast as they are hatched. They are easily found by the broken leaves or bare stems. But if this process is carried too far, the growth of the fruit will be suspended, by arresting the action between leaf and fruit. The flour of hellebore sifted upon them is said to destroy them. This is a poison, and must be used with care. The carbolic soap did not kill them in the experiments first made. They evidently disliked it, but would shake their sides and crawl off. A stronger dose might be more effectual with them. Now is the time to look after the pests and exterminate them.

A correspondent of the *Oneida Dispatch* says: "To destroy the currant worms, go out at 8 or 9 o'clock in the evening and jar the bushes so as to throw the worms on the ground. Do this three successive evenings, when the worms make their appearance. This will finish them for the present year, and if everybody will do it for three successive years it will destroy the race."

**THE CURRANT WORM.**—Mr. Charles Blaisdell, of Wellesley, Mass., informs us that he has been successful in destroying the currant worm and other plant insects by the use of Buchan's Carbolic Acid Soap. The soap sold for laundry or common washing purposes contains much less carboline, the principle destructive to insects, than the preparation sold as Carbolic Plant Protector. The former was the kind we used in the experiment alluded to above. The latter, which we have since tried, we find to be fatal to the worms when dissolved in water and sprinkled upon them. We notice also a statement by Rev. Dr. Marvin of the Boston *Daily News*, that he found a showering applied to his bushes, cleared them of worms in a few minutes. A dusting of White Hellebore is also said to prove effectual, but this is a costly and somewhat dangerous poison to use. The carbolic suds, it is claimed, is harmless to foliage and person.

As this worm threatens the destruction of our currant bushes, we hope this remedy will be carefully tried by those who are unwilling to be deprived of this delicious fruit.

—The Rockingham County, N. H., Agricultural Society will hold its fair on the 14th, 15th and 16th of September next. Place not given.

## EXTRACTS AND REPLIES.

## A METHOD OF GETTING HAY.

In these days of high prices for farm labor, and low prices for the products of the farm, any way of producing a desired result by a less expensive process than the usual one, is to be adopted by the progressive farmer without hesitation.

A process of curing hay has been adopted and followed by several farmers of my acquaintance, which, as far as I can learn, has proved very satisfactory, for several years.

It may be that this process has been followed very much more extensively than I know of. If so I would like to hear the opinions of persons who have tried it.

It is as follows: The hay is all cut in the afternoon, when entirely free from external moisture. Next day, after the dew is all off, it is turned. After dinner it is raked, and got in without delay. There is no cooking at night, and opening next day. All such labor is saved.

One man who has practiced this several years, is justly considered one of the best farmers in town. His stock look well, and produce as much as any. His farm improves yearly; his buildings are in the best of repair, and he makes an annual investment every year, outside. He considers his hay to be better than when cured the old fashioned way, and it certainly looks and smells as well as any I ever saw.

The hay crop of New England is one of vast importance. More than any other, it lies at the basis of all farming. According to its increase or decrease, the increase or decrease of the manure heap, and of the consequent productiveness or sterility of the soil, may be reckoned. And it is plain that any improvement in the manner of securing the crop will increase the amount produced.

The method of curing with salt and lime, which attracted so much attention two years ago, although not very satisfactory for the curing of fodder, has saved me a good deal of labor in curing bog hay for litter. I use four quarts each, salt and lime, to every ton. But how about the other process? JOHN.

*Franklin, Mass., 1870.*

## WINTERING BEES.—BUNCHES ON CATTLE.

Will you or some of your friends tell me what is the best way to winter bees? We have lost quite a number the last winter. And what is the cause of small bunches on the skin of cattle? What it is and how to cure it? A SUBSCRIBER.

*South Sangerville, Me., 1870.*

REMARKS.—Bees wintered badly the past season in many parts of the country. Jasper Hazen, of Albany, N. Y., gives the particulars, in the *Country Gentleman*, of the result of the experience of quite a number of bee-keepers of his acquaintance. Three different methods were practiced by these men. Some kept them upon the stand, some put them in cellars, and others buried them in the ground. The burial process is described as follows: A trench is dug two feet and ten inches deep, and of length proportionate to number of hives. The hives were kept from contact with the dirt by boards and straw, and ventilation secured by a pump stock one and a quarter inches in diameter. The dirt was then thrown on as a farmer would bury his potatoes.

Names of owners and other particulars are given, but the result, in brief, may be thus stated:

of the 98 colonies left on the stand, 86 died, and 12 lived; of the 29 in cellars, 12 lived, and 17 died; of the 35 buried, 23 lived, and 7 died.

Mr. Hazen further states that he is informed that Mr. Marsh, of Sharon, Vt., who has buried his bees for a number of years past, has satisfied himself, by careful weighing, that their average consumption while buried does not exceed five pounds per colony. This is making out a strong case in favor of burying bees, and we solicit the experience of other bee-keepers as to the best way of wintering swarms.

By "small bunches on the skin of cattle," do you allude to those lumps generally found near the back of the animal, which are caused by the larvæ of the gad-fly, sometimes called "grubs," "wormals," &c? In Webster's large dictionary you will find, by turning to "gad-fly," pictures of the fly that deposits the egg in the skin, and of the larvæ, or grub, which finally changes to the fly as it leaves the animal. These grubs may be pushed out of the bunches by a sharp pressure of the two thumb nails, or destroyed by a sharp awl or needle. It is possible that a good suds of carbolic acid soap, well rubbed and carded in, will destroy them. It is said that the fly generally selects the healthiest animals for the breeding place of its young.

## TOO MUCH LAND—FERTILIZERS—SWEET CORN.

Having taken your valuable paper upwards of two years, and having never seen anything in its columns from this town, I thought perhaps a letter from this region might not be uninteresting to at least some of your readers. I am not much of a letter writer, as you will readily see; nor am I much of a farmer. Yet I take the greatest pleasure in reading the *NEW ENGLAND FARMER*, and often wonder why it is not read by more village people who have a rod of land to cultivate. My principal business is merchandising, but I have a house and about three-fourths of an acre of land about a half mile from my place of business, and if I had ten acres as good as this small lot, I think I would sell out my store and pay my whole attention to farming.

I think one great trouble with farmers in this region is, they undertake to cultivate too much land. They think they must work over about so much every year, whether they have dressing for it or not. So they spread on their manure and make it go over four or five acres, when the quantity is hardly sufficient to secure a good crop from two or three acres. I sometimes ask such farmers why they do not purchase phosphate, and their answer generally is that it does not pay, or that they cannot afford it; and sometimes their answer is that they bought one cask and it was good for nothing, and consequently they had no faith in patent manures.

I think, Mr. Editor, there is more or less stuff sold through the country for patent manure that is worthless; but on the other hand there is much that is good. And if the farmers would all subscribe for the *NEW ENGLAND FARMER*, or some other reliable agricultural paper, I think it would be money in their pockets. I have for the past three years used Bradley's Patent Superphosphate of Lime, and have always been satisfied with my crops, and have often astonished the farmers in this vicinity, by telling them what I have raised from my farm of three-fourths of an acre.

I keep a cow which has given on an average eight quarts of milk per day, all winter, which is not a great yield to be sure; but I think she has done well, considering that she has eaten no hay of any account but meadow. I give her some potatoes, shorts, and a little meal. The first of the winter I gave her sweet corn stalks, which, by the way, I think is the best fodder a cow can have, and I have made up my mind to plant this spring less potatoes, and more sweet corn, not only for the stalks, but also for the corn, which I have an idea is much better for hens and for fattening pigs than common corn. I fed out a lot to my pig last fall and I thought it made pork faster than the common corn meal had before or did afterwards. If any of the readers of the FARMER have ever fed it to hens or pigs I would like to hear from them. CHOCORUA.

Guilford, Lake Village, N. H., 1870.

ATTENDING STRICTLY TO FARMING.

I have been much pleased with the large liberty you give in the FARMER to all men for the expression of their minds, whether they favor muck or no muck; but the difficulty with some of us, backwoodsmen, seems to be in making ourselves understood.

I had not a thought in my communication of April 23, of objecting to farmers owning all the bank stock they could pay for, and all the mills they could manage. By no means! Some of the very best farmers of my own town are those who own all these things and more also, and let any one see their well tilled farms and splendid herds of thoroughbred cattle and sheep and he will not say that they have "lost caste as farmers."

No, no, Mr. Editor, the *bedstead* is not of my construction. I only designed to point out the inconsistency of men preaching "stick to the farm," "attend strictly to farming," &c., &c., while they themselves indulge in the luxury of other and more profitable employment. And were I allowed a guess, it would be that John F. Gager, Jr., did not pay for two large farms and accumulate \$1000 worth of produce before engaging in outside speculations, or more properly *other business*; but that his farming and milling went hand in hand and that his "bank stock" was the result of both.

G. R. HITCHCOCK.

Champlain, N. Y., May 20, 1870.

REMARKS.—Farmers are getting so tired of this "inconsistency" that they do not listen very patiently to orators, poets, or "talking farmers" who discourse learnedly about the profit and the nobility of the farmer's vocation, when it appears that these men have all their lives "attended strictly" to some other business, and design that their sons after them shall do the same. This extolling farming by words, though smooth and eloquent, and condemning it by actions, sharp and powerful; this rowing one way and looking another, disgusts many and is putting the theoretical and the practical farmer at arms-length.

RED WATER, AND HOW CURED.

I had a valuable cow taken with this disease, some eight or ten days after dropping her calf. Her water was the color of a strong decoction of hemlock bark. I went to the NEW ENGLAND FARMER for a remedy, but found so many cures and all composed of such small amounts of various ingredients that they appeared too small doses to cure a cow. I then applied to a neighbor who had had some experience with this disease. He told

me to take a pint of spirits of nitre, and an equal quantity of water, and give it in three doses, once in six hours. I gave her two doses, and finding that she was much better, thought it best to wait a few hours and note the result. In twenty-four hours she was perfectly well, and remains so.

WM. S. FOSTER.

North Tunbridge, Vt., May 3, 1870.

SCHOOL DISTRICT NO. 6, BROOKFIELD, VT.

Within the limits of this district there are 155 persons in all,—old and young, male and female. There are 53 males over 18 years of age—of whom 15 will average 71 years of age. There is not an intemperate person in the neighborhood, nor a loafer, unless some of us, old chaps, who can't do much else may be charged with snuffing and chewing a little,—the result of bad habits and patriotism, as we thereby help pay the national debt, you see.

But what about the district? Though not duly appointed to take the census, I have pretty thoroughly canvassed this neighborhood, and beg leave to make the following report, which includes the year from March 1869, to March 1870. Our territory comprises 2577 acres, or about four square miles. On this little farm there were raised, during the year:—

Wheat . . . . .	450 bushels	Roots . . . . .	1230 bush
Corn . . . . .	1963 "	Butter . . . . .	9400 lbs
Oats . . . . .	2787 "	Cheese . . . . .	6325 "
Indian Wheat 1424	"	Pork . . . . .	17 260 "
Rye . . . . .	68 "	Beef, (killed) .	18,858 "
Barley . . . . .	30 "	Sugar (poorrun)	7228 "
Potatoes . . . . .	3735 "		

The cash value of which is estimated . . . . \$16,012  
 Horses, oxen, cows, calves, sheep, lambs, pigs, poultry, eggs and wool sold, say . . . . . 5,000  
 \$21,012

In addition to which we cut 660 tons of hay. Our stock consisting of 51 horses, 10 yoke of oxen, 135 cows, with young stock, swine, &c., was estimated on the first of March, 1870, to be worth \$17,912.

Now, one word to those who are scolding about the high prices of beef, pork, butter, &c. Last fall when our stock came to the barn it could probably have been sold for \$15,960. Estimating our 660 tons of hay at \$15 per ton, it was worth \$9900 at the same time. These cattle have eaten up all this hay, and now let us figure out the profits of our winter's work in feeding stock:—

Value of stock last fall . . . . .	\$15 960
Value of hay consumed . . . . .	9 900
	\$25 860
This stock is now valued at . . . . .	17,912
Showing a loss of . . . . .	\$ 7,948

for which we have nothing to show but our manure. Now, dear city friends, don't suffer your bowels of compassion to burst for our sakes. Like ells, we are accustomed to being flayed. It is one of the taxes we annually pay to keep our farms in running order. And though the figures look a little discouraging, we take hold of another year's labor with our usual courage. V. BAKER.

Brookfield, Vt., 1870.

LIME AND OYSTER SHELLS.

I have taken the NEW ENGLAND FARMER for about twelve years, and have read no paper for sixty years that I think is of more advantage to the public, and wish for its future prosperity. But I saw in it a statement by Dr. Nichols, which I consider the greatest blunder that I ever read, and one calculated to mislead those who know no better. He says lime or carbonate of lime is use-

less in agriculture, or words to that effect. I say, from long experience and observation, that there is no good soil without it; and where it is abstracted by long tillage it must be added. No fertilizer is of itself useful till it is decomposed and mixed with other materials.

The beautiful gardens near New York, in New Jersey, owe half their fertility to being on oyster shell beds. There is an oyster shell bed ten miles from me where corn has been planted for twenty years in succession, holding good without any other manure. The upper part of New Jersey owes half its fertility to burning their rocks and liming their lands once in seven years. Those shells spoken of had been doubtless partly burned, but if they were wholly burned they would be four times as valuable. Doctor N. makes me think of another doctor, who thought there was no harm in kindling a fire on a carpet, because it is the nature of fire to ascend upwards.

Lime cleanses the soil, prevents weeds, kills insects, makes fair fruit and vegetables and is indispensable. Where oyster shell beds are or where bone dust is used, cabbages will grow twenty years in succession, while in other places they cannot often be raised more than one year. Peter Henderson, who has been made rich by gardening, the author of *Gardening for Profit*, will tell you the same. I have known the use of lime on land from boyhood, and am now about 86. Lime is the great thing wanting to bring back the fertility of worn out soil. It enters in some shape into all grain, seeds, vegetables or animal life.

*Deep River, Conn., 1870.* PHINEAS PRATT.

#### SAW DUST BEDDING.

During the past year, I have been doing a fair business in supplying stables with saw-dust for bedding, and I would like to give the saw-dust ball of some of your correspondents one more turn. Without particular reference to its value for manure, as that is a secondary consideration with stable keepers, which is the cheapest and best bedding, rye straw at \$25, oat straw at \$22, meadow hay at \$15, or saw dust at \$1 a cord?

*Massachusetts, 1870.* ANONYMOUS.

REMARKS.—If you throw its effects on the manure out of the question, the cheapness and efficiency of sawdust as a bedding is a point which must be determined by the experience of stable keepers, and we refer your inquiry to them.

#### DUSTY HAY.

I suspect that your correspondent G. B. H., Jr., who complains of dusty hay, has a tight barn, and that after the cold weather began he kept his doors and windows closed, thereby causing the moisture from the breath of his team, full of cattle, to settle upon and around his hay, which would make it musty. One spring, several years ago, the writer was examining the hay in a large new barn, and found it all more or less musty. Upon inquiry, he was told that as soon as the cold began the fall before, the ventilator was closed, and that in the coldest weather, (there being a large stock of cattle in the barn) the sides and tops of the mows, and also the sides and top of the barn were covered with a thick coat of frost every morning. To my mind, that solved the question.

As to the dust gathered by iron-tooth rakes, we think, as a farmer once said, he intended to have men smart enough to shake the dust all out of the hay, when spreading it the second day.

Hay well dry will keep well in a tight barn without ventilation; but with a large stock of cattle in the barn it is necessary to have some kind of ventilation. In old times, before it was

thought necessary to have barns made tight, the cracks between the boards gave sufficient ventilation and there was less complaint of musty hay.

*Reading, Mass., May 21, 1870.* A. G.

#### TWIN CALVES.

Will anybody be so kind as to inform me whether twin calves make as good cows as those that are not twins? ALBERT S. HATHAWAY, JR.  
*East Wareham, Mass., 1870.*

REMARKS.—We have heard it said that twin heifers were not as likely to do well as others, but we have no facts bearing on the question, and are disposed to think there is no ground for the opinion. Shall like to hear from those who have been more close observers than ourselves.

## Ladies' Department.

### CARNATION "GEN. GRANT."

The beautiful picture on our next page, reproduced from Hovey's new Catalogue of Plants, represents one of the latest acquisitions for the flower garden. It is white, and produced in clusters, and blossoms through the season. Breck gives the following interesting description of the Carnation:—

There is no flower more desirable in the flower-garden than the Carnation. A well-grown, superior variety, cannot be surpassed in elegance, beauty, or odor, by any other flower; yet we scarcely ever see it in perfection. Its cultivation in our climate is attended with many difficulties, which may account for its rarity. Our winters are too severe, and springs too changeable, to keep it in perfection in the open ground; and then our summers are too dry and hot for the full development of its beauties. Seedlings stand the winter and spring without difficulty, with a light covering of leaves and evergreen boughs, and flower very well; but then not one plant in a hundred will be considered worth saving by the florist, although they will all be interesting as single, semi-double, or irregular flowers, and richly repay all the labor. Valuable varieties are generally propagated from layers, which often keep very well in the open ground by letting them remain with the parent plant, and covering them with leaves and pine boughs; but the most certain way is, when the layers have taken root, to pot them, and at the approach of winter put them in a frame where they may be kept with perfect safety, provided air is given them in mild weather, and they are not exposed to the sun when in a frozen state. The mice are very destructive to all Pinks; therefore the frame must be tight.

The propagation of the Carnation by layers is a very simple operation. When the plant is in perfection of bloom, lay around it one and one-half or two inches of compost, first



Carnation "Gen. Grant."

gently stirring the surface so that it may mix well; remove the lower leaves of the shoots selected; pass the pen knife, slanting upwards, half through the joint; fasten the shoot, where so cut, about two inches under the surface, with a small hooked peg, bending carefully so as not to break it at the incision; then fix it firmly by gently pressing the earth around with the fingers, and finish by cutting off about half an inch of the upper extremities of the leaves with scissors. The sap soon begins to granulate at the wound, and throw out roots. In about a month or six weeks, if the soil has been kept moderately moist, the layers may be severed from the parent plant and established for themselves; or they may remain where they are, if the stem to which they are attached be carefully cut off.

The Carnation requires a rich, generous, deep soil. A compost of three parts of good, strong garden loam, three parts hot-bed manure, two years old, three parts of coarse river sand, two parts dry manure from the hen-house, sifted, and two parts of soot from a wood fire, has been recommended.

*For the New England Farmer.*

#### FLOWER GARDENING FOR JULY.

"A gracious mother art thou, kind July!  
Thy lap all laden with most precious things;  
Earth seems to mingle with the distant sky,  
That sheds a hallow'd light upon thy wings."

It is now high summer in the deep wood, and through the broad meadows the tender grasses and flowers are profusely scattered. Our gardens are also bright with the gorgeous

blossoms of the "bedding out plants." We number thirty-five Geraniums and Pelargoniums of all sorts and colors. A large border is given up to them, and they are one mass of scarlet, cherry, pink, salmon, white, striped and spotted. A glorious combination! The variegated leaved varieties, *Mrs. Pollock*, *Golden Pheasant*, *Golden Vase*, *Cloth of Gold*, and *Mountain of Snow*, gleam like jewels under the bright rays of the sun. Their flowers are scarlet, but very inferior in size to the *Zonales*, so we gather all the buds, thereby throwing the strength of the plant into its leaves, which form a perfect edging to dishes of flowers. A lovely vase or dish can be made of several sizes of plates. Take the largest size the pantry holds; edge it with the leaves of *Mrs. Pollock*, mingled with white flowers, feverfew, white candytuft, or any pure white blossoms; turn water into the plate, and cover a smaller plate, bottom side down, upon it; around the edge of this arrange leaves of *Mountain of Snow*, or any of the silver-edged varieties; place among them scarlet Verbenas or Geraniums, or any scarlet flower you may have; turn in the water, cover with a smaller plate; upon this mingle leaves of *Achyrantheus* or *Coleus*,—if the former, intersperse them with yellow flowers—*Golden Alyssum*, *Chlora*—or any you can select. Proceed as before, and place a shallow glass dish over the stems; fill this with bright leaves, sweet-scented Geranium leaves and blue Delphinium or Forget-me-not or blue Sage, with a large proportion of white and pink, light delicate flowers. Over the whole of it put the feathery Cleaver or Mist, or *Gypsophila muralis*. The effect is truly artistic! Purple flowers can be substituted for the blue, if more easily obtained. A lady can make her own selection of colors—the brilliant Tropæolums mingle prettily with the dark leaves; the fairy bells of the Fuchsias are very lovely among the silver-edged leaves. A dish of flowers thus arranged, will be a "thing of joy" for two or three days, and makes a beautiful ornament for a dinner or supper table. Flowers are always a delight when arranged in the dining-room. Even a tiny vase, with the moss rose, a fuchsia, and a few leaves, is a great appetizer. The great man of Queen Elizabeth's court—the immortal Bacon—never sat at his table without flowers. In them he recognized the hand Divine. There is a fascination attending the cultivation of both flowers and fruit—one gratifies the eye, the other the palate—but we must attend closely to their cultivation to bring them to perfection. Every morning they claim some attention. With a hand rake and hoe the soil should be stirred frequently. Much finer vegetation is attained by this simple thing. High cultivation is most needful in a flower garden, also daily waterings. The English gardeners in their "misty moist climate" are not forced to use the watering pot so often; but our dry, hot summers

require frequent applications of warmish water, soap suds, and liquid manure. Last season we used quantities of Bradley's Superphosphate around all our plants, and they flourished finely. This season we are using a new fertilizer, purely mineral, being the pulverized ore of the Dolomitic part of the gold mines of New Hampshire. It contains thirty-two per cent. of carbonic acid, which is said to be the cause of the high state of vegetation in California. Japan lilies, Gladiolus, Roses, Geraniums, with all the beautiful sisterhood of flowers, are making most vigorous growth. It is a grayish white powder, perfectly inodorous, and for all green house plants, as well as for those of hardier habits, is unequalled. It is now ready for market, and it will find many consumers when its desirabilities are known.

Carnations and Picotee Pinks are now in their glory. Of all the beautiful flowers which adorn the garden, whether by their beauty or their fragrance, the Carnation may take front rank. Second only to the Rose is this perfect flower! It is easily propagated by layers, which should be made when the plant is in its fullest bloom. Select a strong, vigorous stem, and remove all the lower leaves, so that they need not decay in the soil when the shoot is fastened down. Cut a slanting slit a quarter of an inch above a joint, forming a tongue, and smooth off its tip; then bend down the shoot, taking great care not to break it, fasten it down with a strong hair pin, (these same pins are invaluable for pegging down verbenas, and all runners); and cover the tongue with not more than three-quarters of an inch of rich soil, with a good mixture of sand. Shade it from the sun for three or four days, water every night thoroughly, and in three or four weeks it will have become well rooted. Cut the shoot from the main stem, leaving half an inch of the stem, which connects it on to the layer, and pot it in rich soil composed of three parts turfy loam, two parts of well rotted manure and one part river sand; a teaspoonful of lime is a useful ingredient, it being so destructive to worms; but it should be well mixed up with the compost.

Picotee Pinks are a hardier species than the Carnation, as they will often endure a New England winter, yet to bloom in full perfection they should be potted. They are propagated by seed and cuttings—the former, if sowed as late as this month will make fine plants for spring blooming, in the house or garden. The latter are taken off from young shoots while the plant is in its most vigorous condition. Cut them just below the third or fourth joint, smooth off the end, pull off the lower leaves, plant them half an inch deep in sand, but place good soil underneath, so that the tender rootlets can find rich food. Shade from the sun for a week, water thoroughly—if possible cover with glass. When they appear to have struck root, give

all the sun you can. They require the same compost as the Carnation.

All potted plants desire a good supply of water at this season. It should be given to Fuchsias twice a day, and they should not stand where the noonday sun falls directly upon them. They love shade and moisture—these supplied they fully repay the care bestowed upon them. Our stand of plants exhibits fifteen Fuchsias of different colors and forms, all in the fullest bloom. In May, dark peaty soil was obtained from the woods. A plentiful supply of sand was stirred in, and all the plants were repotted. A teaspoonful of "fertilizer" was stirred around them, and their growth is wonderful, glorious! It is not too late to apply the same compost, even now, if your plants do not flourish.

Plants must never be watered when the sun shines hot upon them—it scorches them as badly as the frost of autumn. Always water after sunset, and be sure to give the soil a thorough drenching. If only the surface is wet the roots will not strike down deeply and give the plant a vigorous habit. Sprinkle the foliage with the fine nose of the watering pot, but pull it off to water the roots.

Asters and Zinnias, Stocks, &c., grow much finer if the ground is mulched with manure at this season. Train up each plant to sticks; pull up all the single ones, excepting a few of the Stocks, as the double varieties of that flower do not seed. Keep down the weeds—do not let them steal the strength from your garden—pull up a few every morning. In doing so they are kept under. Don't cultivate so large a garden that you cannot keep it neatly. It was a saying of the Carthaginians that "the land should be weaker than the husbandman, since of necessity he must wrestle with it, and if the ground prevailed, the owner must be crushed by it." All of us know of gardens which get the upper hand of their owners; but don't let them become our masters. Weed, stake, train, and prune daily, remembering that neatness is as requisite in flower beds as in our houses. None of our readers are too poor to have a garden—it need not be a large one—the smallest circle cut in the turf will be greatly prized by its owner; indeed, it may be treasured all the more for its diminutiveness, and surely it will receive much more attention!

If insects infect your roses and other plants, prepare a mixture of ten gallons of warmish water, one pint of soft soap, and half a pint of salt. Syringe the roses once a week; if badly infested, twice a week will not hurt them, and after a few applications you will find your plants free from vermin. This is a good remedy for the cabbage worm, but make the mixture twice as strong, and water freely.

S. O. J.

#### DOMESTIC RECEIPTS.

**FAMILY YEAST.**—A subscriber asks for an approved receipt for making potato yeast. We have applied to one of our lady correspondents in whom we can rely for good receipts, but, not having yet received an answer, we give the following which we find in the *Country Gentleman*:—

The following is the most *superior* receipt for yeast that I ever saw, and I have tried dozens, for we always use "hop rising." It is especially available to country people, as it requires no yeast to commence with. Try it, and you will *never* use any other. Boil two ounces of best hops in four quarts of water, half an hour; then strain it and let it cool to milk warm; then add a small handful of salt and half a pound of brown sugar; beat one pound of flour with some of the liquor, and mix all together. The third day add three pounds of potatoes boiled and mashed, and let it stand until the next day; then strain it and it is ready for use; stir it frequently and keep by the fire while making, and stir well just before using. This is very strong, and only half of the usual quantity is required.

**FOR MOTHS.**—The following simple precaution against moths is represented to be quite as sure as any of the popular antidotes:—

Safety from moths for furs consists in having them undisturbed through summer in a snug place. Muff boxes are not secure. Taking them out occasionally to air exposes them to the moth. No pepper, camphor or tobacco is needed; after you have worn them for the last time in spring put them into a linen pillow case, tie up the end in a tight knot, and shut them up in a drawer which will not be often opened. A true and tried prescription.



# THE NEW ENGLAND FARMER

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NEW SERIES.

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

## DESTROY THE WEEDS.



ONE MILLION of dollars, large as the sum is, would not probably pay for the labor annually expended in the New England States, in exterminating weeds, whose seeds were sown with the grass seeds.

Hence, in preparing lands for laying them down to grass, no operation in the work is so essential as that of securing such seeds as it is desired to sow, and those only.

There is only one way of securing this, by cultivators, and that is by owning and using, in each neighborhood of farmers, a good separator, which will separate ten bushels of seed in an hour, and divide them into a dozen different boxes, if there are as many kinds of seeds. Such a separator may be found at the agricultural warehouses, and would be cheap in any of our farming towns at almost any price.

Our fields are now white with the blossoms

of the *ox-eye daisies*; they cover thousands of acres, and in many instances almost to the entire exclusion of the grasses. It has become a great nuisance and source of loss to the farmer. Cattle may taste it occasionally, but only taste it, and refuse it as winter feed, when it is a hard, bitter plant. It propagates itself with great rapidity, appearing first in stools, and throwing up a cluster of stems some two feet high, but soon extends itself all over the ground, and throwing up single stems in every direction. It takes the place of the grasses, and is an expensive nuisance.

Another, and one scarcely less annoying and expensive, is *field sorrel*. Well was it designated as "Nature's grave clothes." It probably covers thousands of acres of sandy loam lands in Massachusetts at this moment. But it is not confined to such lands; it finds its way into heavy clays, clay loams, and into every soil that is cultivated. It has creeping roots, which pervade the soil in every direction, and any portion of them left behind will soon throw up a new plant.

Then we have the *sour dock*, *curled dock*, *narrow and broad-leaved dock*, all unsightly and troublesome weeds. They have long and stout roots, which require the strength of a strong man to pull them up. Cutting them off two or three times in the course of a summer seems only to encourage them.

Still another is the *chicory* or *succory* plant, one of the most persistent and obstinate grow-

ers in the vegetable world. We have cut off the same plant with a spade an inch or two below the surface, ten different times in a summer, and still it flourished beyond all other plants of the field. Its stem rises from two to four feet. The flowers are a bright blue, and quite showy.

It was a foreigner, but is becoming extensively naturalized. It has a large and long tap root, which goes to make up a considerable portion of what is sold for coffee in the shops. Left to its own powers of propagation, we think it would cover a fifty acre farm in a few years.

Then we have the *buttercup*, or *crowfoot*, with its fair name and face. These are all there is to commend it. It is a highly acrid plant; cattle do not eat it in the pastures; it is hardy, and soon drives out the grasses.

There are many other weeds that are costly nuisances to the farmer.

What are we to do about it? Who introduced them? Did any of their seeds come to us by a cool, money-maker's design, or were they accidentally brought to us? Let us see.

Some years ago the members of the Royal Agricultural Society of England offered a prize for the best essay on "*Agricultural Weeds*." It was awarded to Professor Buckman. He says the following extract from the letter of a French dealer in London, addressed to the well-known seed establishment of the Messrs. Sutton, of Reading, Eng., will show how systematically this fraudulent trade is carried on:

"I have sold this day some India rape-seed for mixing with turnip seed, and enclose a sample. If you will have some at 56s. per quarter, in the docks, you can have it, if unsold, to your answer. I have some East India radish seed at 9s. per bushel. If you want some for mixing, I shall be very happy to serve you."

A man guilty of such frauds as these deserves to be shot with some of his own vile mixtures.

There are two ways to prevent sowing the seeds ourselves. One of these we have already suggested. The other is, that no dealer in seeds should sell any until he has had them thoroughly examined by a competent person, and separated, if there is a mixture. No sensible person would decline paying the additional cost of such cleansing.

The duty before us now is to allow no weeds to go to seed in our fields. When

they are in mowing fields, cut all before the seeds are ripened in the weeds; and where they are in the cultivated crops, see that none ripen. Weeds multiply themselves surprisingly. A stem of wheat may have twenty-five or even fifty kernels upon it; but some of the weeds we have mentioned would be more likely to have some thousands of seeds than only fifty! On this point we will remark further hereafter.

*For the New England Farmer.*

#### CUTTING AND DRYING GRASS.

The time to cut grass and the amount of drying it needs in order to keep well, are important questions. There is no crop that the farmer of New England raises, that exceeds in value that of grass. Hence the best way of saving it is of the greatest importance.

If the farmer wishes to cut but one crop of grass from the land in a year, it should be done when he can secure, every thing considered, the greatest value. In my opinion, that time is when it is in full blossom. Cut at this time and well cured, it certainly makes the best hay. I judge this to be so, from the fact that cattle of all kinds are very fond of it, and, when otherwise cared for, always thrive upon it. Cut at a later stage, while ripening its seed, there may be a larger bulk of hay but of much less value. It may keep the same number of cattle longer for the reason that they do not like it as well, and consequently will not thrive upon it. This is one reason why some cut their grass late, because the stock will not eat it up so quick. Another reason is, it takes less time to make it.

Farmers who have much grass to cut, and comparatively a small amount of help to do it, should commence some time before the grass is in the blossom, that they may not be too late on the last cutting. When there is a good prospect of fair weather, cut the heaviest grass, and when it is otherwise, cut the lightest, and that where much time and labor are required in getting it.

How much grass needs to be cured to keep well, can be answered by saying that the water or sap, which is the same thing, should be nearly all dried out of it; just as you would evaporate the water contained in maple sap in order to keep it, or as you would dry fruit in order to keep that. Farmers need not talk about cutting clover in bloom, averaging two tons to the acre, and in ordinary weather curing it sufficiently in one day to keep well in the mow. It cannot be done. No man of common sense believes it can. It is true that grass will make more in one hour sometimes than it will during a whole day at other times.

Do grasses drying in the heat of the sun lose any of their value as food for stock? Particles of matter pass from grass while dry-

ing, else we could not smell it. Such particles may be very minute and of little value.

It is not necessary to dry grass so much that it cannot be moved without crumbling and wasting. It should be prepared for the fork and then dried more if necessary. However, it were better to lose a few crumbles in handling it than to lose the whole by being got in so damp as to heat and mould in the barn. It is not necessary to dry grain for the bin as thoroughly as we should were it to be ground for coffee, in order to have it keep after putting it in a dry place; yet who would think of putting grain in a bin so damp as to have it heat there? Or who would lay away dried apple when so damp as to mould and rot?

JOEL HERSEY.

Williamstown, Vt., June, 27, 1870.

*For the New England Farmer.*

#### THE LENTIL.

The Journal of Agriculture and Transactions of the Highland Agricultural Society of Scotland, gives the following account of this plant:—

“The lentil is a New British crop. We spoke in the Journal of Agriculture for July, 1851, of that ancient vegetable, so often mentioned in the Bible, so prolific and above all so nutritious, which M. Guillerez, a French professor in our city, has acclimatized by his unwearied efforts at great cost and without any other reward than the gold medal of this society. In 1851 M. Guillerez saw his disinterested efforts repaid for the fourth time with a success beyond his most sanguine hopes. From a spot sloping to the north and exposed to all winds, at the back of South Queens Ferry, he gathered two and a half bushels, weighing 167 pounds, from five and three-fourths pounds sowed, although the rain in August spoiled a great part of the crop, which was then budding. The lentils, sown between rows of beans, have produced on an average 30, 25 and as much even as sixty-one for one. Besides he had a splendid crop of beans, and also cabbages, cauliflowers, salsify, beets and leeks all flourished most beautifully. The lentil rows were propped up by stakes. If the lentil crop had not been injured by the heavy rain of August the product would have been an hundred fold. M. Guillerez tried them as forage. He cut them off twice and they grew to the height of four feet.”

The American Institute of the city of New York, says:—“It is now some years since we recommended the cultivation of the lentil in our Farmers' Club meeting. We were induced to do it in consequence of the representations made by a distinguished officer of our government, who had suffered from dyspepsia for many years. Having seen an account of the wonderful cures performed in Paris by a new vegetable medicine called *Erva-lentil*, he bought some at a dollar a package of about

a quarter of a pound, eat it, as directed, in the form of a porridge and got perfectly well. On some investigation we learned that this famous medicine was flour of lentils. We sought for the lentils, found some at a grocer's, whose stout, healthy appearance caused us to ask if he lived on lentils. He replied that he sent to Germany for them for his own use, and had been restored by them to sturdy health, from a wretchedly low condition. He sold some of them to us at ten cents a quart. We distributed them frequently among the members of our club at their meetings. Further accounts are contained in our Transactions published by the State. We still urge young America to add to his list this valuable grain. It is partially introduced into Europe—more in Germany than anywhere else.”

N. WRIGHT.

*Brokenstraw, Chautauqua Co., N. Y., 1870.*

#### FEEDING AND WORKING HORSES.

Where one has smooth land that can be mown with a machine, it is a great mistake to turn working horses out to pasture in summer. There can be no question that land will produce more food when the grass or clover is allowed to grow until it is in flower, than if constantly cropped down as it grows. With a good mower, tedder, rake, and unloading fork, the expense of getting the hay into the barn, if it is a good crop, need not exceed two dollars a ton. In the summer let the hay be cut into chaff and soaked in water for twelve or twenty-four hours, and the horses will eat it almost as readily as they will fresh grass. With the proper boxes for soaking it, the labor is very slight. I used to chaff my hay with a horse-machine, cutting up enough at a time to last for several weeks; but I question if it is not better, after all, to cut it every day by hand, as it is wanted. One of Gale's Copper-strip machines will cut in two or three minutes all the hay a team will eat at a meal; and if the knives are sharp, it is mere child's play to turn it. The object of soaking the hay chaff instead of merely moistening it in the ordinary way, is to soften it and allow it to absorb water—just as we soak dried apples before cooking them. Of course, we must not use more water than the hay will absorb, as in such a case it would wash out the sugar and other soluble nutritive matter from the hay. It is true that if the water is used for soaking the next feed of hay, the sugar would not be lost, provided it did not ferment. A little experience will enable any one to regulate the matter. Horses so fed, with a little grain, will fill their stomachs sooner and have more time to rest, and will be able to do more work than if turned out into a pasture—and in the morning you know where to find them and can eat your breakfast with dry feet. But the horses must be well groomed, especially at night, and the stables properly ventilated

and kept clean and sweet. No food should be left in the manger. If it is not eaten up clear, it should be removed before the horses are taken from the stable. I would give them what hay they would eat in the rack, but none to waste. I have a span of horses that will pull out from the rack, and waste more hay than they eat, if allowed an unlimited supply. They should have a little hay in the rack to eat when they first come in from work, and after the harness is removed and they are rubbed down a little and are cooled off, give each horse a peck or so of cut feed. When he has eaten this let him be watered, and then give more cut feed. The practice of watering the horses at the pump or pond, as they are brought from the field, is not to be commended. A careful farmer may do it with impunity, because he would not allow them to drink too much when they are hot or tired, but many a good horse has died from careless watering.

If horses are worked steadily from 7 A. M. until 11.30, and then from 1.30 to 6 P. M.—say nine hours, they will accomplish more than if they were kept longer in the field and rested every few hours. When I hear the horn blow about five o'clock in the afternoon and see great, stout young fellows leisurely walking to the house to eat their cookies, leaving their teams tied to the fence, or with their heads hanging down in the furrow, I think this may be a good country for men, but a hard one for horses. Because a horse cannot grumble and a man can, is no reason why the horse that does the hard work should not eat as often as the man who drives. By keeping on until seven o'clock instead of five o'clock, and spending half an hour at lunch, the horses are kept out an hour longer in order to do half an hour's work. Would it not be better to keep right along until six o'clock, and thus let the horses have an hour's more time in the stable to eat before lying down to rest for the night? There would then be plenty of time to clean the horses, and attend to many little things that are now neglected. And, from the horses being in better condition, more work would be accomplished. In haying and harvesting, of course, we must often work as long as we can see, and the men, and horses too, should have lunch. But in plowing, harrowing, cultivating, and other ordinary farm work, there is no advantage in keeping horses out so late, except occasionally in getting in the seed, &c. and when such is the case the horses need lunch just as much as the man who drives them.

Let the boys, when at work in the field, have lunch, morning and afternoon. *They* need it. When I was a boy, I went to plow at six o'clock, which was my father's rule, and I can recollect how terribly hungry I got by nine o'clock, and how good a little bread and cheese and beer tasted about half-past nine or ten. —  
*J. Harris, in Am. Agriculturist.*

*For the New England Farmer.*

### THE GARDEN IN AUGUST.

Who will say that a garden is not a good thing to have on the farm in connection with household economy at this season of the year? The products seem to find and fit an appropriate vacancy in variety for the table. Fresh, crisp, vegetables, right from the earth! How they refresh the weary laborer! None so relished, none taste so sweet and fresh as those gathered from our own garden,—planted, watched and cared for by ourselves! What wonderful changes we observed from the time the frail seed was deposited in the soil, till the full grown vegetable was ready to be plucked for the table, and what a field and opportunity for study and comparison. What caused the seed to unfold and grow into the plant producing its kind? Who can tell us all the intermediate changes of the circuit? The chemist will resolve the composition of the product into its varied elements, showing the proportions of each; but here his capability stops. Having the exact elements, he cannot again recombine them to form the vegetable. Only one human way is there known of reproduction. "Except a corn of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit."

Our labors, if they have been judiciously directed, are now being rewarded by generous supplies of all the various delicacies of a good and well kept garden. These may be kept up so long as our variable climate will admit,—till Jack Frost locks up the teeming earth for a season of repose and recuperation.

The spaces from which early crops have been removed, may be made to yield yet another quick growing crop,—turnips, cabbage, spinach, radishes, &c. Only a partial advantage of the garden is reaped if only one crop is gathered from the same soil during the whole season.

**ASPARAGUS.**—It is well to keep the bed clear of weeds, to encourage the development of the plant and seed. If it is desirable to increase from seed sow it at once, in well prepared soil, as soon as fully ripe.

**BEANS.**—We shall now be enjoying the snaps and shell from the poles; be sure and save a few of the earliest and best to ripen for seed. This consuming all the first maturing and best, and saving for seed the leavings, is the cause of degeneration. A few early bush may be planted to furnish late strings, and for pickling, and canning for winter use.

**BEETS.**—As you pull out for use, take them from where they stand the thickest, leaving room for those left to grow. The culture should be continued to keep the ground well loosened and free from weeds.

**BLACKBERRIES.**—Pick as fast as they become fully ripe. But all are not ripe that color. Some varieties need to hang sometime to mature sufficiently for eating. The

means of preserving are so simplified that we may now have this fruit the year round, by canning, making into cordial, &c.

**CABBAGE, CAULIFLOWERS AND BROCCOLI** need have the soil kept moist for them to best perfect themselves. Frequent hoeing and deep stirring the soil is the most practical way of accomplishing this result. Seed may be sown for fall greens, and plants for wintering in cold frames—although next month is soon enough for the last.

**CELERY.**—Late planting is the best way to obtain a winter supply of this much prized salad. Plant any time this month. The successful grower will tell you there is nothing easier than to produce this vegetable in perfection,—tender, crisp, and juicy, but you must first learn how. To produce it nice, tender, and juicy, the growth must be rapid; to secure this, the soil must be rich, and the plant not be allowed to want for suitable moisture.

**CORN.**—We shall now be enjoying good sweet corn, roasted and boiled, and with beans as succotash. Mark some of the earliest and best ears to ripen for seed. The corn-worm eats downward from the silk to the kernel. These pests are very little known with us, but in some sections they are quite troublesome and need looking after.

**CUCUMBERS.**—This cooling, cholera-breeding, vegetable is now in its best stage for the table, and the vines will be yielding full pickings for pickles. To keep them in bearing to the best, they should be close picked. Save a few hills for growing seed and allow only a few of the earliest and best formed to grow. Ripe cucumbers, when properly prepared make good sweet pickles.

**CURRANTS AND GOOSEBERRIES.**—The best time for pruning is soon after the fruit is all removed. A considerable proportion of the old wood should be cut out, and the shrub shaped to desired form, whether as tree or bush.

**EGG PLANTS.**—Encourage to early ripening by hoeing, slightly hilling, and by placing a board painted white so as to reflect the heat and sun upon the plants.

**GRAPES.**—Tie up the leaders to the trellis. Keep a sharp look out for insects, caterpillars and worms. As we increase the culture of the grape, enemies of various kinds increase, and unless we zealously guard against them they will very likely reap where we have sown. To prevent mould and mildew, the side shoots of bearing branches that have been pinched off, must be shortened-in to induce early ripening of wood and the formation of fruit buds.

**MELONS.**—If only three or four specimens are allowed to grow on each vine they will usually be larger and of finer flavor. A broad flat stone or a board placed under specimens will keep worms from them and cause them to ripen more evenly.

**ONIONS.**—Gather for use and for market as

soon as they ripen. Where they are to be kept any time, it is better to leave them exposed to the sun after being pulled, till properly cured, before storing. Seed may be sown for "pips" to be left in the ground over winter for early use next season.

**PEAS.**—Most of the earlier planted will have yielded their fruit; the ground may be cleared, the vines fed to the pigs, cows, or be cured and stored for winter fodder. Plant the ground to some crop so that no space be lost.

**POTATOES.**—Harvest and market early crops. Compost or burn all tops; the last is the better way of treating those diseased or much infested with insect enemies.

**RASPBERRIES.**—Cut out the weakest new growth, leaving only what is desired for the next crop or for increasing the planting. Keep them properly tied to their stakes or trellises. It is a good plan to hoe in a good dressing of compost and ashes, around the plants.

**SEEDS.**—Save the earliest and best specimens of every desirable kind for perfecting seed, and when well ripened save, dry suitably and lay away in some dry cool place for future use. It is always better to grow the majority of seeds one desires, the professional seed grower to the contrary, than to depend upon the market. Carefully label each variety and keep secure from vermin.

**SQUASHES.**—Destroy insects, remove the eggs of the squash bug from the leaves, and look out for borers.

**STRAWBERRIES.**—For fall planting, August is the best time; but spring planting at the North is much the best and safest time, generally.

**TOMATOES.**—Continue to train and trim the vines, and destroy the worms by hand-picking. The worms cannot hurt you, however much you may read of them, at least we never saw one that could do any injury to man. W. H. WHITE.

*South Windsor, Conn., 1870.*

**TO CURE HARD MILKING COWS.**—This is my answer to that question, *i. e.*: "How shall I cure my hard milking cow?" Take a clean, smooth knitting needle wire, No. 16, heat it red hot, (use a candle at your side, and heat about one-half inch from the end,) and burn out the orifice. Perform the operation quickly, (say one second,) and the cow will not move, nor will she notice it afterwards. No blood runs, no soreness occurs. I have known it to be tried, and never knew it to fail. Don't wring or twist the needle; straight in and straight out, quickly, are the directions. If you wish to use a larger or smaller needle, do so, but not so large as to make the cow leak her milk.—*D. R., Fredonia, N. Y. Censor.*

For the New England Farmer.

## FLOWER GARDENING FOR AUGUST.

"By the breath of flowers  
Thou callest us from city throngs and cares,  
Back to the woods, the birds, the mountain streams,  
That sing of Thee. And Thou biddest  
The hills of the field with placid smiles  
Reprove man's feverish strivings, and infuse  
Through his own soul a more unworldly life  
With their soft holy breath."

We trust that many of our readers will this month reap the reward of all their labors, in the sweet fragrance and brilliant colors of flowers which their own hands have planted and cultivated. Gray, the poet, was also a skilful gardener and naturalist, and he observes that the chief enjoyment of life exists in "having always something going forward." "Happy are they," he says, "who can create a rose tree or erect a honeysuckle." It is the daily growth of each plant and flower which constitutes the chief part of the delight of the amateur gardener; the fragrance and beauty of the "bright consummate flower" form the crowning gratification. There is a pleasing pride in walking out in the morning with a flower of one's own raising, sparkling in the button-hole. It mentally elongates a man's vertical longitude, and is a most honest and desirable kind of pride—a pride that keeps a man from saloons and the destruction which walketh in the darkness. The creation of a beautiful object is certainly a great fact to be justly and honestly proud of, and the lowest intellect can produce flowers which even Solomon in all his glory could not eclipse! The love of flowers seems a naturally implanted passion, without any alloy or debasing motive. We cherish them in youth, and the love of them is not lost when age has whitened the hair and palsied the hand. Summer flowers are harbingers of good will, and we love to distribute them with lavish hands, to both young and old,—delighted to delight others with the harvest of beauty our grounds contain. There is constant occupation in amateur gardening. Nothing looks more unseemly and slovenly than weeds and untrained plants.

Tall, growing plants must be carefully trained to stakes, which should be straight and strong enough to support the plants. Much taste and judgment can be exercised in staking plants effectively. The stake should always be put at the back of the plant, so as to be concealed by its foliage, but in some instances where the plant has several stems, the stake should be placed in the middle, and the stems tied round it, not in a bunch, as we often see them, but each stem tied separately to the stake, taking care to arrange them gracefully, and allowing the leaves and flowers to hang in their natural position. Verbenas, if planted in mixed borders or small gardens, should be tied up, giving a stake for each shoot, and training them in the shape of a fan. When the plant is in full growth and flower, the outspread shoots will produce a fine effect.

Mignonette can be sown in pots, at this season, for winter blooming, and can be kept in bloom throughout the year. The soil should be light, sandy, not rich, otherwise it grows too rank, and loses, in a degree, its delicious odor, which constitutes its charm. If old stalks are cut off before the seed pods form, new blossoms will put forth, and the blossoming continued for a long time.

A correspondent inquires "how to raise a *Mignonette tree*." It takes two years to produce a fine specimen. The seed must be planted in a five or six inch pot, with a goodly mixture of sand in the soil. Plant three or four seeds, lest one should not germinate; but do not allow but one to grow. As soon as a lateral or side shoot appears, nip it off, and throw the whole strength of the plant into the main shoot. Continue this process for a year, not allowing any buds to form, and tying the main branch to a stake. When the plant is six to eight inches high, the side shoots may be allowed to grow, and the tree formed in a graceful shape. It is well to allow the branches to grow in a fan shape. The soil may be enriched once a month with guano water, or weak manure water, and the blossoms will form thickly and continue in bloom all the season, making a most beautiful plant for a "Window Garden." Mignonette does not require much sun-light, but loves the shade. A stiff piece of copper wire makes the best stake for a "tree," and it must be tied to it when the plant is two inches high, tying it loosely, with a worsted thread. In pinching off the side shoots, the leaves nearest the stem must be left, as a plant breathes through them—they are its lungs. When the pot is full of roots, shift it to one a size larger. The side shoots must occasionally have their ends pinched off, to force them to form a bushy head of ten or twelve inches in diameter. When this is accomplished, you will have a "tree" of delicious fragrance, which will perfume a large room. By pruning the "trees" and shifting into larger pots, as they require it, these plants will last several years.

Tulips and Hyacinth roots should be taken up in this month. Many growers of these flowers allow them to remain in the same place three years, but it is much better to take them up every summer, when their leaves are quite decayed, but not before, and keep them until the last of October in a dormant state. They are usually propagated by offsets, which should be removed from the parent bulb at the time they are taken from the ground. They can be raised from seed, but as they will not flower for seven or eight years, this mode of culture is employed only by rich amateurs and florists for the purpose of obtaining new varieties. Bulbs are storehouses of prepared pulp, laid up by the plant for its use the following summer, so the larger and fuller the bulb is, the more beautiful will be its flower.

For this reason the seed-pod should be picked off when the plants have flowered, as maturing the seed exhausts in a degree the strength of the bulb, and as the leaves have their work to do in preparing the bulb for the next season, the plants should not be lifted from the ground until they are sere and yellow. Take up the bulbs when the ground is dry, spread in the shade to dry, and when somewhat hardened, separate the large ones from the offsets and put into separate bags or boxes. In the autumn plant the latter by themselves in any sunny part of the garden, and if they attempt to flower the next season, pick off the bud, so as to give its strength to the bulb. The next year they will flower finely. Hyacinths begin to decay almost before the bulb has become fully matured. Therefore it is well to assist nature a little, so when the plants are taken up they should be laid in ridges, with the bulbs covered with earth, and the leaves and stem left exposed to the air. Thus treated, the leaves speedily decay, and the bulbs attain their full growth; then they should be left to harden a day or two in the shade, and afterwards packed away in sand until late in the season.

Fritillarias, Crown Imperials, Narcissuses, Jonquils, and other bulbous plants, after flowering, may be taken up for the purpose of separating the offsets. Fritillarias will not bear to be kept out of the ground any length of time, and therefore should be planted again immediately. Indeed, with the exception of tulips and hyacinths, the dormant periods of bulbs are so little known, and differ so widely, that it is best to err on the safe side, taking as a general rule that weak bulbs should not be kept out of the ground more than a few days—stronger ones about a month.

The Begonia Discolor is a very ornamental variegated-leaved plant, and as it requires to be kept in a dormant state throughout the winter, it takes up no room among our house plants. It is commonly called "Blood-leaf," from the rich crimson veinings of its leaves. As soon as its stem and leaves decay, it should have no more water that season, and be put away in a dry cupboard, cellar, or any place where it will be kept from damp and frost. Early in the ensuing spring it must be taken from its winter quarters, and repotted in rich, loamy soil; after which it should be liberally watered through the summer, and have all the sunshine that it can drink in until the decay of its leaves announces that it is ready to hibernation. It is a beautiful addition to the popular variegated plants for which we have quite a "mania." Yearly they increase in gorgeous beauty, and their insignificant flowers are of no consequence excepting in the propagation of the plant. Yet some of the golden-margined geraniums possess very brilliant, handsomely shaped flowers. "Golden Pheasant," now in bloom in our garden, has as

handsome a blossom as "Gen. Grant,"—its color is as vivid a scarlet, its shape as elegant, but the truss of flowers is not as large. Next month is the season to start cuttings from our favorite Geraniums for flowering the ensuing season.

S. O. J.

#### NEW PUBLICATIONS.

CRANBERRY CULTURE. By Joseph White, a Practical Grower. Illustrated. New York: Orange Judd & Co. 1870. Price \$125. 123 pages.

Since the publication of Mr. Eastwood's book on the Cranberry, in 1856, the cultivation of this fruit has wonderfully increased, and many new facts have been added to the previous stock of knowledge in relation thereto. A new work to embrace more modern experience was therefore needed, and we have had inquiries from correspondents for such a book. We think the author has succeeded in his purpose "to embody, in a plain and concise manner, all the useful and practical facts which study and experience have yielded to the inquiring cranberry grower of the present time." The last chapter in the book is devoted to letters from practical growers, in reply to inquiries by the author. As an appendix, the report of William C. Fish, to the Cape Cod Cranberry Grower's Association on insects injurious to the cranberry,—an excellent paper,—is re-published. The publishers have presented the editor's labors in an attractive form, and the many excellent illustrations add much to the value as well as cost of the book.

THE TENTH ANNUAL REPORT of the Board of Agriculture of the Province of New Brunswick. Fredericton, 1869.

This board has the general supervision of the agricultural interests of the colony, including the auditing of the accounts of the local societies, some thirty-five in all, which received last year from the treasury of the Province between eight and nine thousand dollars. Irregularities, to use a mild term, were discovered in the management of a few of these associations, not very creditable to the fair dealing of some of their managers. Money was drawn on bogus names, and other practices were exposed which seem to show that the Yankees are not the only "sharp" people in the world. But the firmness exhibited by the Board will probably check like operations in the future. The Report shows that the Board has an industrious and efficient worker in the person of Chas. S. Lugin, Secretary, Fredericton. The Report embodies a large amount of information in respect to the agriculture of New Brunswick.

—Of the multitude of fairs to take place next fall, special attention will be claimed for the exhibition at Augusta, Georgia, of the "Cotton States Mechanics' and Agricultural Fair Association." This is to occupy nearly the whole of the last week in October, and will be one of the most extensive festivals of the kind ever held in the South.

## CARBOLIC ACID.



THE efforts of scientific men and women are constantly discovering some new thing which tends to avert human toil, to increase the products of the earth or the factory, and to facilitate transportation. They pry into the mysteries of the skies,

explore the vast beds of the ocean, and the profound depths of the solid earth.

Many of the old customs of men are fast disappearing. We smile at the simple habits of our English ancestors of only a few hundred years ago, and wonder at their want of intelligence and foresight in the construction of their dwellings, carriages, tools, machinery, and the barrenness of their homes in most articles now so highly prized by us in our domestic life.

Now, light and air are admitted into our rooms, where, with them, a "port-hole" subserved the same purposes. A stone chimney and a yawning fire-place have been superseded by elegant stoves of various patterns for the purposes of cooking.

Pope, the great poet, Addison, Sir William Blackstone, and scores of others, are represented as wearing enormous wigs of hair, perhaps that of some of their former friends, or, perhaps, that of some favorite horse which they had ridden in the chase! Queen Elizabeth, in addition to her coronet of jewels, wore a profusion of hair, but for a purpose very far from that which impels the ladies of our day to vie with each other in loading the head with the cast-off hair of others, or with the grasses which imitate it. Then, the art of building and warming houses was scarcely worthy of the name.

Elizabeth's parlors, drawing-rooms and halls, had no vulgar mortar of sand and lime,

"To stop a hole and keep the wind away,"

but were covered with tapestry, in some cases highly embroidered with silk and gold, and in others with less rich materials. But all this did not "keep the wind away," and so Pope

wore his huge cap, and Sir William and Addison their enormous wigs. Now, however, with plastered walls, a small furnace or steamer, or an air-tight stove properly arranged, the whole house is warmed, and woolen caps and horse-hair wigs are entirely unnecessary. But still, the women wear the borrowed hair, "When they will, they will, and that's the end on't."

So in medicine, in surgery, and all the range of the arts, we have gone far away from the habits and modes of life of our ancestors; and by this departure have added innumerable comforts and length of days to our existence. They tend, also, to educate, civilize and exalt us, and properly received and used, will gradually raise us into a higher scale of being.

Now, in addition to the numerous blessings flowing from the oil which has been so profusely poured from the bosom of the earth, we have another which assuages pain more than ether or chloroform, and still another, *carbolic acid*, of various merits, and which has suggested the foregoing remarks.

Let us see what is said of this wonderful substance, especially in matters which relate to the farmer.

Mr. GOODALE, Secretary of the *Maine State Board of Agriculture*, in his report for 1869, has a chapter upon "Phenol, or Carbolic Acid," which we have read with unusual interest. He says no feature of the remarkable age in which we live is more noticeable than the wonderful discoveries of science, and their application to useful ends. He quotes from a lecture delivered by Dr. F. G. Calvert, before the "Society for the Encouragement of National Industry," in France, in which the Doctor says "carbolic acid exercises a most powerful destructive action upon the microscopic and primitive sources of life, and is, therefore, an antiseptic and disinfectant much more active and much more rational than those generally in use."

Carbolic acid was used with marked success in England, Belgium and Holland, during the prevalence of cholera and cattle plague. Mr. W. Croakes states that he has not met with a single instance in which the plague has spread on a farm where the acid had been freely used; Dr. Ellis says, "I have, in many instances, allowed whole families to return to cottages in

which persons had died from cholera, after having the cottages well washed and cleaned with carbolic acid, and in no case were any persons attacked with the disease.

Prof. Chandonel stated, that out of 135 nurses employed upon cholera patients—where two thousand patients died—only one nurse died, but they were washed over, and their clothes sprinkled with carbolic acid.

It has, also, a wonderful efficacy in most of the painful diseases to which flesh is heir. But it is to its uses on the farm that we intended to call the attention of the reader.

Mr. Goodale says it is safe to assert that for lice, ticks, and other vermin infesting domestic animals, and for their cutaneous diseases, sores, ulcers, and the like, its equal for safety and efficiency has not before been found. Its applications and uses in a sanitary point of view are more important and numerous than those of any other known substance whatever.

The purest carbolic acid requires about twenty times its weight of water to dissolve it. When thus made a *much further dilution* will be needed for most purposes. Mr. Goodale found a weak solution effective in immediately arresting mildew on grape vines and on other plants; it also destroyed plant lice.

It is also adapted to many other purposes, one of which is as soap, prepared as follows: slice a quantity of bar soap, set it over the fire in a suitable vessel, after having added first water enough to liquify it by stirring and warming to less than boiling heat, then take it off and mix thoroughly for each pound of soap employed, from a quarter of an ounce to a whole ounce of carbolic acid, according as it is desired to have it mild or strong. When cool, the soap may be cut into cakes and laid by for use.

This recipe we find in Mr. Goodale's report, and along with it he handed us several cakes of soap, made up of different degrees of strength. This soap has been in constant use for washing the hands for three months, and has a cleansing power that we have not found in any other soap.

—To make a white wash that will not rub off, the *Boston Journal of Chemistry* says mix up half a pailful of lime and water; take half a pint of flour and make a starch of it, and pour it into the white wash while hot. Stir it well and apply as usual.

*For the New England Farmer.*

#### SCIENCE AS APPLIED TO AGRICULTURE.

Our lands are "running out," and must be renovated. Animal manures are not the only fertilizers within our reach, although they contain all the elements that enter into the composition of plants in a highly organized condition. Certainly the earth and the atmosphere contain all these elements of vegetable life, requiring only composition and organization to make them available.

After animal manure, wood ashes is undoubtedly the greatest organization of vegetable food in combination; but neither solid nor liquid particles contain the life-giving power of vegetation, any more than of human organization. No plant is a living being, however organized, until God "breathes into it the breath of life," when it becomes a living plant. Composed of the same materials as man and beast, it becomes food for his growth and maturity. The composition and assimilation of these elements; the relations of the vegetable to the mineral kingdom; their organization and disorganization; the wonderful power and influence the atmosphere has upon all these relations, is the science of agriculture, and are principles in vegetable physiology which every tiller of the soil should carefully study and studiously observe.

Man or plant when excluded from the atmosphere becomes entirely destitute of all vital action—life. Out of this fact, as connected with agriculture, grows the grand principle of pulverizing the soil.

Experience here introduces another branch of science—*drainage*. Draw out from the subsoil the cold water, and pulverize the surface finely, and you have laid a permanent and lasting foundation for successful agriculture. This cold, acid water in the sub-soil is injurious to vegetable life until it has been brought under the influence of the atmosphere. This pulverizing, draining, trenching the soil is no new thing. It was taught and practiced in Rome two thousand years ago. When Professor Mapes was turning agriculture up side down with his theory of soil analyses, he was practicing "deep trenching" in his pear orchards, which led to a success that dazzled his own eyes and led a confiding community astray in the ways of a false theory.

In finely pulverized soils the air penetrates every particle, imparting carbonic acid which dissolves and organizes crude minerals into life giving food, which is drawn by capillary attraction into every tissue of the growing plant, and is crystalized into vegetable leaf and woody fibre by light and heat. Water also contains carbonic acid, and this being a solvent of mineral substances, detaches and sets at liberty carbonates and phosphates that rise to the surface and produce vapors or dews, when coming in contact with the atmosphere,

imparting life and vigor to vegetation, holding the organized elements in a state of solution as food for the immediate and constant wants of the growing plant.

This process may go on for ages; for the earth, from centre to circumference, is one grand store-house of all the mineral and vegetable substances that enter into the formation of man, beast or plant.

The physiological condition of the earth is ever changing. The decomposition of one kind of tree or plant, prepares the soil for the growth and production of another, and in many instances one altogether dissimilar. Draining and pulverizing aerates the soil, deposits with and imparts to the growing plant such food as is required for its growth and maturity, all surplus atoms passing down to be held in store for other kinds of plants. Mineral substances are valuable as food for plants in proportion to the source from which they are derived, and the nature of their composition. The ammoniacal gases, passing through the soil, imparting life and vigor, are the legitimate source of fertility. There is but little doubt that all lands that ever were productive may be made so again, unless positive physical causes prevent.

Long experience and observation teaches us that there are other than animal manures to be used as fertilizers in the restoration of exhausted soils. Shade is a great fertilizer. Nature shades or mulches all her plants and trees to prevent too free or too sudden evaporation. Vegetation suffers from extreme heat, and brisk, drying winds, unless protected by some kind of mulch. In mountainous or highly elevated districts, at a distance from large bodies of water, all vegetation suffers from heat and frost. In such districts every intelligent man will see that science is compelled to apply different rules of practice in the cultivation of crops, than is required in districts under the influence of large bodies of water, with a humid atmosphere, which renders essential protection from extreme heat in summer and cold in winter. Science, observation and experience, man's great teachers, direct us up to natural laws; and when we reset a proper proportion of our "worn out" fields to forests; mulch our fruit and ornamental trees, as nature directs; cultivate less acres and cultivate better; return the immense quantities of vegetable and mineral deposit to the hill sides whence it has been washed for ages, and mix with the more solid portions; drain, trench, pulverize and reunite and mingle these old friends and relatives of the soil; then we shall have fields that will groan with grain and smile with beauty. The forests will entice back the birds to sing us ten thousand sweet songs, and to devour myriads of insects that now destroy our fruits and vegetables; rural life will be invested with new charms and new pleasures, and we shall have no need to sigh for a "land where

the sun has smiles and flowers perennial bloom."

Let the agricultural colleges do this by example. Appropriate the national fund to the purchase of land, and make a model farm instead of model buildings; instead of establishing professorships, laboratories with chemicals, teach young men to cultivate and beautify the earth and make home pleasant, happy, permanent, and then we may exclaim "science is come to our aid, and we are advancing in practical agriculture." L. L. PIERCE.

*East Jaffrey, N. H., 1870.*

REMARKS.—But, without the professors and the laboratories, how are the boys to learn all about the "carbonates," "phosphates," "acids," "composition," "assimilation," "minerals," "decomposition," &c., of which our correspondent has discoursed so ably and so well? True, "science, observation and experience—man's great teachers—direct us up to natural laws," but may not our upward progress be greatly facilitated by the guidance and direction of those who have been over the road before us, and by the aid of the facilities which they enjoyed in their journey?

#### CARBOLIC ACID.

This peculiar substance which is extracted from coal tar, has been unfortunate in its name, in the first place from its similarity to a very different thing, Carbonic Acid; and, in the second place from the fact that it is not sour, and has none of the qualities of an acid any way. As, however, it is coming into general use, we think the following facts in relation to its nature and effects, from an article by Prof. J. Darby, in the *American Grocer*, will help to a better understanding of this valuable material:—

Carbolic acid is prepared by treating what was called the light oils (benzines) from the distillation of coal with dilute alkalis and carefully distilling the products which are heavier than water, the alkali being previously neutralized by muriatic acid. It is seldom found pure, it having more or less of cresylic acid in it, and often other closely related bodies. Carbolic acid is a solid at ordinary temperature, melting at 106° Fahrenheit and soluble in twenty parts of water; is a powerful antiseptic and disinfectant, preventing putrefaction and fermentation. Its whole effect is due to its arresting change. It is simply a preservative. As an antiseptic, it prevents change in the materials. As a disinfectant, it accomplishes the result by the same means—that is, kills the spores, if malaria consists of such, or

arrests chemical change if malaria is a putrescent material. Carbolic acid is a powerful poison. Every one has known that creosote is poisonous, and carbolic acid is only a new name for an old, well-known material, only less crude. Creosote will do all that is claimed for carbolic acid.

It is an active poison, acting directly on the nervous system, and may cause death; indeed, death has ensued from its application to an aching tooth. In the Glasgow Royal Infirmary the records show that when dressings in amputations and compound fractures contained no carbolic acid, one case in four and a quarter died, with carbolic acid in the dressings, one in three died; showing that the use of carbolic acid was positively injurious. It coagulates the vital fluids of the body and of course stops vital action. In the hands of skilful physicians, carbolic acid is susceptible of important uses; but for family use it is no more appropriate than arsenic or corrosive sublimate.

Its application, when not very much diluted, produces effects very similar to that of burns, blistering the skin and producing a sore that can be cured by the treatment that would cure a burn. It is offered the public in all forms, as soaps, washes, salves and also as a medicine for various diseases, empirics taking advantage of its popularity to render it available for their profit. That it is for many purposes very useful, is not to be denied; but it is very evident that it should be used with caution and care. We have used these carbolic soaps upon our own hands and face, and carbolic acid for disinfecting purposes, and recommend it. Our article is not designed to deter any one from its use as a disinfecting agent, but to give people who use it the knowledge of its properties they ought to possess.

#### CANADA THISTLES.

I have been amused at the great amount of anxiety shown by some of your correspondents in regard to the extinction of the Canada thistle. I have worked at farming all my life, and am still on the young side, and I hold that any farmer that cannot extirpate Canada thistles is not worthy of the name. I have killed them in so many different ways that it would be tedious to specify them all. Good summer-fallowing in a dry season will kill them. On pea ground, immediately after the peas have been harvested, if the ground is dry and loose, plough the land two furrows deep, one plough following the other; then, as soon as ploughed, cultivate and harrow effectually, and continue doing so, at intervals of a few days, as long as the land remains in a fit state to work. Mature on the surface, plough again in spring, sow with spring wheat or barley, and seed with clover (ten or twelve pounds to the acre, if more all the better,) cut the first crop of

clover about the end of June, and as soon as the second crop is a foot high, plough it under; cultivate and harrow as after the peas, and if properly tilled afterwards, you have done with Canada thistles on that piece of land.

I have bought and partially cleaned two of the worst farms with thistles I ever saw; and I do not want any better recommendation of a farm than that it is able to produce a Canada thistle four or five feet high and an inch in diameter at the root. Such land, when properly tilled, will produce the best of crops.—  
*Cor. Canada Farmer.*

#### EXTRACTS AND REPLIES.

##### CLAM AND OYSTER SHELLS.

*Editors New England Farmer:*—I do not question the good intentions of your correspondents, W. H. Y., Mr. Phineas Pratt and others, who are writing about the great fertilizing value of clam and oyster shells. However honest they may be, it is certain that they are confusing the minds of farmers, and thereby doing much injury to the interests of agriculture. Some months ago I stated in your journal that clam and oyster shells were not manurial agents; that they were composed of carbonate of lime, which is valueless.

This simple truth, which it would seem every intelligent New England farmer ought to understand, has caused this excessive literary activity among some of your patrons. The trouble with your correspondents is that they do not clearly understand the matters they are discussing. No one of your intelligent readers will expect me to make any formal reply to what has been written, as the views presented are too preposterous to be taken into serious consideration.

Mr. Pratt evidently regards *oyster shells*, and *bones*, of equal fertilizing value. He does not understand the difference between a *carbonate* and a *phosphate* of lime. He says, "where oyster shell beds are, or where *bone dust* is used, cabbages grow twenty years in succession," &c. He does not know the chemical difference between *hydrate* and *carbonate* of lime, or between oxide of calcium, (caustic lime) and carbonate. Again, he says, "New Jersey owes half its fertility to *burning their rocks* and liming their lands once in seven years." As a statement, this is very absurd. Lime rock and oyster shells are no longer *carbonate of lime* after being *burned*. The carbonic acid is driven off by heat, and oxide of calcium is formed. This is a different agent entirely. The remark that "lime is the great thing wanting to bring back the fertility of the soil," is not true, but it may be noted as showing that Mr. Pratt regards lime (oxide of calcium) and oyster shells (carbonate of lime) as identical. It is certain that Mr. P. is not an authority in matters of agriculture involving chemical principles.

W. H. Y. falls into the same errors, and fails to understand the views of the writers he quotes. Neither Liebig, Stockhardt, Johnston, Way, Bous-singault, or other chemist of any repute, ever stated that clam and oyster shells are manurial agents. The quotations made from two or three of the above named writers, regarding the fertilizing value of *lime*, has no bearing whatever upon the question at issue.

Let it be understood by soil cultivators everywhere, once for all, that clam and oyster shells are *not manurial agents, in any proper sense*; that they should receive no consideration at their hand, as substances to be *bought* at any price. Writers

who endeavor to make agriculturist believe to the contrary are doing that which is detrimental to their interests.

JAMES R. NICHOLS.  
150 Congress St., Boston, June 4, 1870.

**WOOL FROM HALF BLOOD COTSWOLD.—MARKETING WASHED AND UNWASHED WOOL.**

Enclosed, you will find a sample of my half blood Cotswolds. The one from which the sample was taken is an ewe, one year old this spring. She sheared eleven pounds and six ounces. There is some of this description of wool in this vicinity. Where shall we find a market for it, and at what price? Will some manufacturer of wool inform us, through the FARMER, why unwashed wool is not worth as much as washed, in proportion to what it will cleanse? In 1867 my sheep averaged six pounds washed wool; in 1868 they averaged six and three-fourths pounds unwashed, that shrank from forty-seven to fifty per cent. in cleansing. In 1869 the same sheep averaged six pounds washed wool again. I received thirty-two cents per pound for unwashed and forty-two for washed; making \$2.16 per head for unwashed, and \$2.52 for washed.

M. DUSTIN.  
West Claremont, N. H., May 25, 1870.

**REMARKS.**—The specimen received measures seven and a half inches, and with such beautiful material it is not strange that manufacturers can make woollen cloth that rivals silk and linen fabrics in fineness and beauty. Your statement of marketing wool illustrates the injustice of the one-third rule that buyers attempted to establish, and shows very clearly that wool, like butter, flour, beef, or mutton, ought to be sold by its merits or quality, and that dealers in wool, as well as in other commodities, ought to understand their business. Most of the large wool houses in the city buy all kinds of wool, or sell it on commission. We know nothing of the value of such wool as yours, in addition to what you can gather from our market reports. The price we suppose is regulated by the cost of the foreign wool, which has been somewhat reduced by the decline in price of gold.

We see by the last monthly report of the Revenue Department, that for the seven months ending Jan. 31, 1870, there were 29,397,098 pounds of wool imported into this country, to compare with 17,788,015 for the same time last year; the value being stated at \$4,254,217 for the seven months for 1870, and \$2,539,636 for 1869. During the same seven months, ending Jan. 31, 1870, the value of woollen cloth imported is stated at \$21,174,242. These figures have an ugly look. Over twenty-five million dollars worth of foreign wool and woollens in seven months! Do these importations put money in our purse? Yet these importers demand a larger liberty and are working like good fellows to secure it.

**MUCK—SPECIAL MANURES.**

I am not an indifferent reader of your paper. It contains much that is valuable upon all subjects interesting to farmers, as well as other subjects that are now moving the great human mind. Permit me a word upon special manures. We small farmers must have something better adapted to our wants and the soil, something that will cost

us no more than stable manure does. Much is said the papers about muck. Some praise it; others condemn it as worse than nothing. I believe there is a great deal of difference in muck. We have muck enough here in Marlow,—if it had vegetable life in it equal to some of the patent manures,—to manure the whole of New England. It is very different from the muck of the lower towns. What the difference is we want some one that knows to tell us. Is there not some way that this muck can be made into a quick manure without so much handling and overhauling? The man that will answer this for the farmers will be worthy of a monument as high as Mount Washington. Such manure ought not to cost more than \$5 per cord, and it should have all the energy of half a ton of patent manure. We have bought twelve hundred pounds of Bradley's Phosphate, for which we have to pay 3½ cents per pound. Dear stuff at that price. We are using it with green manure, a spoonful to a hill with a shovelful of manure. We are going to try it by putting half a shovelful of muck mixed with lime, ashes and salt in the hill, then drop the corn, and at weeding time put on the phosphate. What think you?

PUTNAM TYLER.

Marlow, N. H., May 23, 1870.

**REMARKS.**—You are just the man to determine the value of the Marlow muck, and to discover the best and easiest way of using it. Try small parcels in all ways you know or can think of, and hold fast to the best. Try it with "dear stuff" and cheap stuff; with much handling and little handling; dry it and use it to save all liquid manure at house and barn, cattle yard, sink spout and privy, and that monument may be raised to your memory. If your muck is a good absorbent it has at least one very valuable quality. The wise ones have glory enough in books and papers. You can teach them more than they can teach you about the use and value of muck. They "blow bubbles," why may not you? The portion of your letter which you will see we have omitted shows your ability to do so, though the editors, like men walking among eggs, have to be a little careful where they put their feet.

**OUR GEORGIA LETTER.**

I must acknowledge that I am slow and unfaithful; promising more than I can perform, ever thinking I will do better in the future; but always behind.

I have just been looking in your bound volume of the Monthly FARMER for 1867, at some of the articles on manure, of which I find more than 60 in that volume. While reading some of them I could not help thinking how much the farmers of this county would gain by reading good agricultural works, and thinking more on the subject, and making their own manures instead of buying the so-called fertilizers.

I do not know the precise amount that is paid out for agricultural publications in this county, but I suppose from \$100 to \$150 yearly; while there are paid from \$100,000 to \$150,000 for fertilizers. I have no doubt farmers will learn better before many years, but they are certainly paying dearly for their education. We have everything that is really necessary for the improvement of our lands, right around us, if only saved and properly prepared and applied, gypsum excepted; and that we should have if we had everything that is now purchased. This is the only thing that we do not have, and this it appears, we can

scarcely get; of course I mean that which is good. There is some here from south-western Virginia, but they have got to furnishing an article there that is worthless. We must have Nova Scotia plaster next year.

This is an excellent country, but still food and raiment are not found without some labor and care. We grow 200,000 bushels of wheat, and let nine-tenths of the straw rot wherever it is threshed, and buy hay, often not as good as wheat straw, at \$40 per ton; and that too where we can make two or three tons of good clover hay per acre. But our people are soon going to learn better. There are a number of tolerably good farmers here now, and they will still increase. Farmers will raise less cotton and more wheat and clover; some now have 50 to 100 or 200 acres of clover, and from 200 to 400 of wheat.

We have earlier spring and summer here than you. We have had strawberries ever since April, but they are nearly gone now. These will be followed by berries and fruit till December. We have also peas, potatoes and other garden stuff. Our wheat harvest will be on in two weeks or less.

This section, although devastated, in 1864, beyond anything I can describe, by the armies, has more than regained its former prosperity. Cartersville was more than half burned; but to-day it has more than three times the population it had before it was burned. The whole country bears the appearance of thrift, prosperity and contentment. Crops of all kinds, though later than usual, look fine.

The Van Wert railroad is progressing toward Alabama, and another is in contemplation—*an* air line road—from here to Lynchburg, Va. More anon. J. H. R.

Cartersville, Bartow, formerly Cass Co., }  
Georgia, May 25, 1870. }

REMARKS.—The great increase in number and improvement in appearance of southern agricultural papers since the close of the war is evidence of the prosperity of the people. The *Southern Cultivator*, published at Athens, is an able farmer's paper and ought to have a larger circulation in Bartow county than our correspondent's figures indicate. We hope that "J. H. R." will not forget his promise of "more anon."

#### A SICK HEIFER.

I had a three-year-old heifer which gave milk last summer and last winter up to the first of February. She had been fed with meal to keep up her milk until that time, when, as I wished to dry her, the meal was discontinued. After which she fell away in flesh until about the time she began to make bag, when I again put on her feed, in order to get her into condition for another flow of milk. She gained rapidly in flesh, and her bag got to be large, and she had the appearance of being ready to come in, an event which I expected at any hour. All at once she refused her meal, and began to fall away in condition, and has continued to do so until now. This was about four weeks ago, and she is now quite poor and feeble. Her bag has all gone down, and she has no appearance of ever coming in. About a week since, however, her bag increased a good deal, but it has now all gone down again. She has been carefully watched, and I feel confident that she has made no attempt at calving. I have no doubt the calf is alive, but how long either cow or calf will live under such circumstances, remains to be seen.

I was brought up on a farm, and have been a farmer on my own hook for thirty-five years, but I never saw, or heard, or read of such a case as this. Can you or any authority which you can

consult with in Boston inform me of any such cases or the proper remedy for a case of this kind.

I should state here that the mother of this cow died two months since with ulceration of the womb; this organ had eight ulcers four inches in diameter and four inches thick, making the organ sixteen inches long, eight inches wide and four inches thick. T. L. HART.

West Cornwall, Conn., 1870.

REMARKS.—We have never witnessed such a case as is described above, nor heard of one like it before, and are inclined to think that if no meal had been fed to the heifer, she would have done well enough. It is not improbable, however, that the cancerous affection of the mother may have descended to the offspring.

If any of our stock-raisers have knowledge in the matter they will confer a favor by communicating it to the FARMER.

#### CHICKENS CAN'T HATCH.

I have the full bred Leghorn fowls, have set four hens, but when their time is up they can't hatch them out, for the skin of the egg is so very thick the chick cannot break it. Can you give me any information what the difficulty is?

West Medway, Mass., 1870. JOSEPH BARBER.

REMARKS.—We do not think we can. Evidently there was something wrong somewhere in the process of incubation. Fowls that "steal their nests" usually have "good luck" in hatching, if not interfered with, and such nests are often on the ground. Possibly there was not sufficient moisture in your nests to effect the proper decomposition of the "skin" of the egg, and we would suggest the experiment of a nest on good clean soil with a slight covering of fine hay, straw, feathers, &c. Many fowls, you know, "feather their own nests." Some of our poultry conveniences and arrangements are too artificial. We consult our own tastes instead of those of the biddies. Their instincts and habits are not enough studied or consulted. Our improvements on nature are sometimes carried too far.

Possibly, too, the hen might have been unwell, either from disease or the effects of lice, and lacked the ordinary degree of animal heat, or remained off her nest too long.

#### "METHOD OF GETTING HAY."

All farmers are concerned in this subject, and are certainly under obligations to those who are willing to give their experience and advice. Statements, however, should be explicit, lest they should mislead others.

The article in your paper from Franklin, Mass., of June 4, is quite too vague in some respects. It tends to results so unlike the common experience of farmers in Essex county, that we need to know a good deal that "John" does not tell us. Thus, must not the grass be *dead ripe*, to be fit to go in in twenty-four hours, and consequently *hard and woody*? Other writers go strongly for cutting earlier than formerly. Now, if cut before fully ripe, can it be safely put in the day after cutting? Again, if the farmer has a hay-making crew of workmen, who mow only in the *afternoon*, how are they to be employed in the *forenoon*? Or how can the same men mow only in the *afternoon*,

when the hay cut on the previous day is to be put in during the afternoon? And again, if the grass is so ripe as to go in the second day, must it not also be a case where there is but very little of it, as nothing is said about *spreading scalds*, simply directions for *turning*, an operation which in heavy grass, might be done without exposing much of the crop to the sun at all.

The saving of labor is certainly a thing much to be desired; but this mowing and getting in at the same time, viz., both in the afternoon, with nothing to do in the forenoon, is what some of us cannot understand.

The evidence offered by the writer to show that hay so made is good, also needs a little examination. "One man who has practiced it several years has his stock look well." He may or he may not give other and better keeping, as of roots and meal. We need to be informed on points like these; for if English hay can be cured generally by this short process without coming out smoky, nay, without danger of *spontaneous combustion*, it is something not agreeing with our experience in Essex county.

That grass is oftentimes allowed to get too ripe is common, but to avoid this, the only alternative is to cut early; and this again conflicts with the short process recommended by your correspondent "John." But should this fall under his eye, I hope he will enlighten us, for all are concerned in it who have hay to make.

INQUIRER.

County of Essex, Mass., June 4, 1870.

#### DUSTY HAY.

Having had for two or three years an experience similar to that detailed by G. B. H. in Weekly FARMER of May 21, I will give the course I have pursued to avoid the difficulty. First, I put a coat of plastering, about one inch thick, on the floor, to keep the dampness from rising from the cellar; then set some 2x6 inch joist up edgewise on the plastering and covered with loose boards; then nailed some strips of boards two inches wide to the studding on the sides of the barn,—thus getting a six-inch space between the floors and four inches at the sides. Now, by cutting my hay while in bloom and making it as described by Asa G. Sheldon in Monthly FARMER, for 1867, page 417, and taking with any but an iron tooth rake, my hay is entirely free from dust or smoke.

North Providence, R. I., June 2, 1870. G. E.

REMARKS.—As many who may see this article may not remember Mr. Sheldon's process, nor be able to refer to what he said, we may remark, that his rule, stated in brief, is to cut herdsgrass and retdop when in full blossom, and then give it the best attention and a drying sun for two days.

#### THE IRISH AND FARMING.

I have taken the FARMER for some time and find much, especially in the inquiries and replies, which are of great advantage to me. In the FARMER and in other papers that I read I see it stated that many of the old farmers are selling out to Irishmen, and the question is sometimes asked why it is so. I have worked out with farmers long enough to be able to give some reasons for it. In the old country agriculture, or at least land owning, is considered desirable and honorable, though but few laboring men can ever hope to buy and pay for land. There we had to support kings, queens, lords, dukes, earls, &c. For one, though I did not believe in more than one Lord, one faith, and one baptism, I could not help myself. But in this country as we earn the means, our first wish is to own land, and as soon as we can we buy a farm.

But here, as the Yankee boys grow up they want

to get into a store, shop, factory, office, and dislike to work on the farm. They will not handle a spade or dungfork, because an Irishman does; and the Yankee girls will not put their hands in a washtub because Irish girls do. Thus both of them leave their parents in their old age, and get into some other business. I will not call them lazy, perhaps they go where they have to work harder than at home. But go they do, and the old people finding themselves deserted by their children, and not able to carry on the farm themselves, are obliged to offer their places for sale, and if none but the Irish are willing or able to buy, what in the name of common sense can they do but sell to Irishmen? Farming must not stop. All the wise presidents, governors, legislators, &c., of this country, as well as the horn emperors, and lords and all such like of the old country, must be fed, and if somebody did not raise the food they would have to do it themselves, and thus come on a par with other poor folks. This would be a sad affair, and therefore the Irish buy the farms and carry them on.

My wife has looked over what I have written, and thinks there is some truth in it, but says it ought to be written in a more polite manner.

From MICHAEL MCNERNEY.

Becket, Mass., June, 1870.

REMARKS.—We agree with Mrs. McNerney that there is "some truth" in this letter,—we think there is a great deal that ought to be pondered by all,—but we do not see that it needs to be expressed in a more polite manner. Two things should be remembered. The country cannot prosper without farming; but farming may flourish without Yankee boys or girls. For agriculture, there is no substitute; but for the Yankee himself there are substitutes. The old farms may change owners, but they will still have occupants.

#### FOOT DISEASE IN CATTLE.

I have a cow that was taken lame in one fore foot about the 25th of April. I examined it very thoroughly and could find nothing, only it was swollen about the hoof and between the claws. I washed out the claws and foot with soap and put on resin and grease, and let her run in the pasture where it was dry. In about a week after, it began to look mangy and crack just above the hoof, between the claws. Not knowing what better to do, I made a flax seed poultice and kept it on two days and then bathed it in wormwood, but as it grew worse I put on tar. The foot is still very much inflamed, with a deep spongy sore, that discharges but little. The cow had good care the last winter, and was fleshy when taken ill. I have also one two-year old heifer similarly affected, but only in the hind foot; and also three yearlings and a four-year old ox that has not been worked. They are all in good condition and are very nice animals, being grade Darhams. The cow was wintered separate from the yearlings and has not been with them. It appears that the disease originated in my herd, as there are no other cattle about here affected the same manner. Some of my cattle had a little meal and a few roots, but most of them nothing but good hay during the past winter. This spring after the frost came out of the ground in my barn yards, my cattle were kept in the barn, except when turned out for water twice a day.

I have seen cattle that had what was termed the Fouls, but think it different from the disorder above described. My pastures are not swampy, but dry, with a stream of living water running through them.

And now, Messrs. Editors, can you or some of the readers of the FARMER give me information as to what ails my stock, and what can be done to cure the disease?

D. K. W.

Rockingham, Vt., June 7, 1870.

REMARKS—A disease known as the Foot and Mouth Disorder has been quite prevalent and fatal in various parts of England for a year past. It is described by some as attacking the hoof first which gets sore, is licked by the animal, and thus the disease is communicated to the mouth. Others think the disease commences at the mouth, teats and foot at the same time. This dangerous disease is highly contagious. But from the account given of it, we think it is quite different from that described by our correspondent.

Mr. Allen recognizes two different forms of the Pools in cattle, which he calls the *Soft* and the *Horny*. Dr. Dadd says the disease is analogous to foot rot in sheep, and is caused by a stoppage of the natural evacuations usually thrown off from the system through the vessels or outlets that exist between the cleft. The object of treatment is to restore the lost function. The part should be cleansed, relaxed, and warmed first by water and soap, then by a poultice, of half a pound of marsh mallows, bruised; a handful of powdered charcoal; a few ounces of powdered lobelia, and a teacupful of meal, with boiling water sufficient to soften the mass; or equal parts of powdered lobelia, slippery elm, and pond lily, bruised. Mix with boiling water and put in a bag and secure it above the fetlock. Give the animal a dose of half an ounce of sulphur, one ounce powdered sassafras bark, and two ounces of any part of the burdock plant, steeped in a quart of boiling water, strain and cool. Whenever any fungus excrescence makes its appearance, apply powdered bloodroot or burnt alum. If there is a fetid smell wash with a tablespoonful of salt, and a wine-glass of vinegar, in a quart of water.

In reply to an inquiry about a similar disease by a farmer who says that out of a dairy of thirty cows, one-half are affected, Prof. Law says, in the *New York Tribune*, that the disease is *Dry Gangrene*, and is caused by an excess of *Ergot* in the grasses and grains of last year. He says the feed must be changed, and sound hay, steamed straw, bran, shorts, roots, &c., used. He recommends poultices of bran or oil meal, and if there is any unpleasant smell add a few drops of carbolic acid. To each sick animal one ounce of powdered gentian should be given internally, each day.

Will the readers of the FARMER give our correspondent the benefit of their knowledge and experience with the disease which affects his stock.

#### FATTENING TURKEYS.

It is very easy to fatten turkeys where there is plenty of corn, but it often costs nearly as much as they are worth, where corn is scarce and high; and people are apt to think so much of their corn and feed so sparingly, their turkeys are just about as fat after they suppose they have got them ready

for market as they were when they began. I will give the best and cheapest mode, in my opinion, from my own experience; and if any of your readers have any better and any cheaper way, I would like to have them publish it in this paper, for the benefit of myself and many others who would like to know.

When I commence to feed my turkeys in the fall, about three or four weeks previous to killing them, I begin to feed them potatoes boiled and warm, two or three times a day. After I have fed them a few days, I begin to put in a little corn meal, and mix well together,—a little at first, and increasing in quantity as the turkeys grow fatter, always giving it to them warm, until they have all that they want to eat. I feed them in this way until they are fat.

The time that it will take to fatten them will vary according to the condition they are in when I begin, their age, &c. Early turkeys will fatten much easier and quicker than late ones, and will look better when dressed.

I think the value of potatoes and their fattening properties are not generally understood as they should be, either for poultry or pigs. I feed them to hens, turkeys and pigs with good success. I do not like the way of feeding potatoes raw or of boiling enough to last a week, and feed them cold as many people do, and then say that potatoes are good for nothing to feed. By taking a little pains I can get turkeys as fat by feeding in this way, as with corn, and much cheaper. If I have a large flock, and not a very good chance for them to glean harvested grain fields, I feed a few potatoes to them during the fall. A small flock will usually get their living in the fields till the first of November, after which they should be well fed.

A FARMER'S WIFE.

Hyde Park, Vt., June 3, 1870.

#### WINTERING BEES.

As you wish the experience of bee-keepers on wintering bees, I would say that for wintering on summer stands, the following is a cheap and safe way. Make a box without top or bottom, set it on over the hive, having a space of three or four inches around the hive, and about six inches higher than the hive after the cap is removed. Then fill in around with shavings or cheap hay, leaving a passage to correspond with the entrance into the hives, and lay a board over the top to keep out snow, rain and mice. Keep them shaded after the first of December, except about twice a month, when the temperature is 47° or higher, so that it will be safe for the bees to fly. My bees, wintered in this way, consumed but very little honey, and came out in fine condition, and swarmed as early as the 26th of May to the 4th of June.

For wintering a large number of hives a building like the following would be better: build a house eleven by twelve feet, and six feet six inches between floors, make the walls with ten inch space filled in with sawdust, clap boarded outside, and sealed inside. Have a double door in one end, with shutter and window in the other. The upper and lower floor to be covered with sawdust. Both upper and lower floor to be ventilated by a six inch stove pipe. The cap should be slightly raised, and the room kept dark and still.

A. GREEN.  
Amesbury, Mass., June 6, 1870.

#### FRUIT AND OTHER CROPS IN MICHIGAN.

This is one of the great fruit growing sections of the United States. For miles and miles it is a wilderness of fruit trees and vines and beds. The prospects are of a medium crop, but no surplus to be wasted, as was the case last year. The peach growers are making a vigorous fight with the cur-

culio. Millions of the little pests are taken each day. I am surprised at the amount of care and labor successful fruit growers consider it necessary to give to their orchards. Five acres of fruit is as much as one man can attend to properly, and he will find work to do thirty weeks in a year and six days in a week, certainly. But if properly attended to, the returns are large; and if neglected, no returns; as inferior fruit here will scarcely pay for picking, when there is an abundance of first class offered at fair rates.

The wheat that was not winter killed is looking well; but it is too early yet to say with certainty what it will be. The farmers are beginning to look anxiously for rain. Wheat is \$1.20 per bushel. Flour \$7.00 per barrel, and potatoes have jumped the last week from thirty up to forty cents a bushel; the potato bug having attacked the new crop in great numbers and with evident disposition to make a clean sweep. They make no distinction and show no preference,—Early Rose or old varieties, it is all the same to them.

L. E. BICKNELL.

*Benton Harbor, Mich., May 30, 1870.*

#### WHO SHOULD TAKE AN AGRICULTURAL PAPER.

Not the farmer alone, though to him it is, of course, one of the essentials of life; a wise counsellor, a friend in need, a safe and healthful fire-side companion. But it should have a wider range of usefulness. Every one who owns a garden, even if it be but a "window garden," has an interest in its teachings, and would derive pleasure and profit from them. A good and high-toned agricultural journal exerts a pure and ennobling influence wherever it goes; and it should carry that influence into cities and villages, as well as among the farming community. To those who have scarcely an opportunity of seeing the rich fields, the gay meadows, and the dark forests, from one year to another, it would bring a breath of pure country air, as refreshing as the cool breeze of heaven in a crowded overheated hall. To many it would be a pleasant reminder of the past; of the happy childhood spent in some far off country home, and now remembered as the brightest portion of a busy life. It would lighten the weary hours of the invalid, while the convalescent would find its Domestic Receipts and Market Reports especially interesting.

If half the money that is wasted upon story papers were turned into this purer channel, what a renovation in morals there would be throughout the land; how much less of extravagance and dissipation, of vice and sorrow; how much more of peace and temperance, of health and happiness.

*Marlboro', Mass., June, 1870.*

MATTIE.

#### CABBAGE WORMS.

About a year ago I wrote you in reference to a cabbage worm which had destroyed the cabbages in this section.

The inquiry in Mr. Scudder's note on "Cabbage Worms," (Monthly FARMER, 1869, page 362,) as to "whether I know or only thought the butterfly to be the parent of the worm," led me to pay considerable attention to them during the past year. I was well satisfied then that the worm was the offspring of the butterfly; but to be more certain, I confined a butterfly in a box with some cabbage leaves. She laid her eggs, and in a short time the worms made their appearance. The cabbages in this section were entirely destroyed by the worms last year,—nothing remaining but the bare stumps. The turnips were also badly damaged, apparently by the same species of worms. I could not distinguish any difference between the butterflies on the turnips and those on the cabbages. The but-

terflies commenced to lay their eggs about the first of June, and continued until the last of August.

Last August I confined several cabbage worms under a glass, with plenty of air and cabbage leaves. In about a week they fastened themselves to the top of the glass and gradually turned into a chrysalis state, where they remained until about the first of May, when they burst the shell and revealed a yellowish white butterfly with black spots on the wings. The under edge of the clapboards of a building, standing near my cabbage patch, was completely covered last fall with the worms in a chrysalis state. We have not as yet discovered anything that will destroy the worms and not injure the cabbage, except picking them off by hand, which is not very desirable.

Mr. Scudder, in the note above referred to, says, "the butterflies are of feeble flight, and easily taken in a scoop net," and recommends that as the "easiest way to destroy them." In this, Mr. Scudder is very much mistaken, as our butterflies are quite active, and it would be a difficult job to catch them in a scoop net.

On account of the ravages of these worms, very few cabbages will be set out here this season. If any of the readers of the FARMER know of a remedy to destroy the worms, they will confer a great favor on the lovers of sour crout in this vicinity, by sending it to us through the columns of the NEW ENGLAND FARMER.

H. L. SOWLES.

*Alburgh, Vt., May 30, 1870.*

#### SIGHT RESTORED BY SALTS AND CIDER.

Some eight or nine years ago, Mrs. David Batchelder of North Reading, Mass., now 80 years old, gradually lost her sight, and finally became blind. About a year ago, being somewhat out of health, she was advised to take Epsom salts dissolved in cider to cleanse her blood. She had about a tablespoonful of salts dissolved in a pint of old hard cider, and took a wine glass full each morning. She took it in this manner about three weeks, then left off two weeks, and then began again, continuing about the same length of time, and leaving off again for two or three weeks, until she had taken half a pound of salts. About this time she began to discern bright colors, which encouraged her to continue the salts and cider at intervals to the present time. She continues to improve in sight and general health, but cannot as yet see quite as well as formerly. Knowing that others have been afflicted much in the same way as Mrs. B., and the remedy being so simple, I send you this for the benefit of the community.

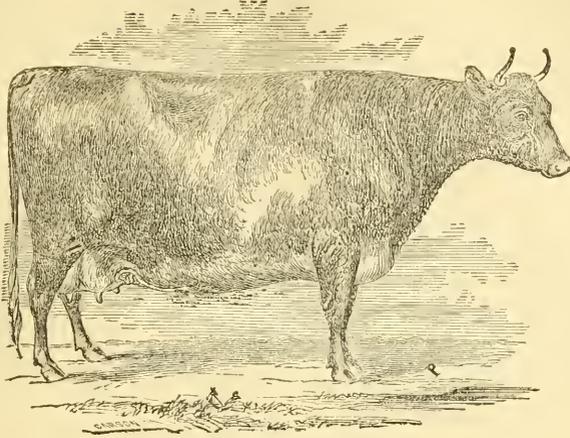
*Reading, May 23, 1870.*

A. G.

#### MUSTY AND IMPERFECTLY CURED HAY.

We read the injunction to provoke one another to good works, and I was almost thus affected by reading an article in a late FARMER from one who wished to know what caused his hay to be smoky. I never have any trouble with smoky hay when rightly cured and housed. But I am one of those old foggy farmers who have but little faith in housing hay half made. This putting in the barn heavy burdens of clover hay the day it is cut is something I can never do without having smoky hay. That we may dry hay too much I am fully satisfied, but believe that where one farmer dries too much, ten dry too little. I see it stated by some writers that it is best to house heavy clover hay after just a little wilted and pack it down solid in the mow. For one I believe that if I should fill my barn thus, I should have the next spring a good supply of manure without putting the stock to the trouble of chewing the hay.

*Bedford, N. H., June, 1870.* T. G. HOLBROOK.



AYRSHIRE COW.

On copying the above illustration of a modern Ayrshire cow, from Mr. Allen's book on American Cattle, we do not propose to give a detailed history of this well known breed of cattle. Mr. Rankin, an English breeder, claims that the Ayrshires unite, perhaps, to a greater degree than any other breed, the supposed incompatible properties of yielding a great deal of both milk and beef.

Mr. Aiton, another English authority gives the following description of the Ayrshire cattle.

"*Head* small, but rather long and narrow at the muzzle; the *eye* small, but smart and lively; the *horns* small, clear, crooked, and their roots at considerable distance from each other; *neck* long and slender, tapering towards the head, with no loose skin below; *shoulders* thin; *fore-quarters* light; *hind-quarters* large; *back* straight, broad behind, the joints rather loose and open; *carcass* deep, and *pelvis* capacious, and wide over the *hips*, with round fleshy *buttocks*. *Tail* long and small; *legs* small and short, with firm *joints*; *udder* capacious, broad and square, stretching forward, and neither fleshy, low hung, nor loose; the *milk veins* large and prominent; *teats* short, all pointing outwards, and at considerable distance from each other; *skin* thin and loose; *hair* soft and woolly. The *head*, *bones*, *horns*, and all parts of *least value*, small; and the general *figure* compact and well proportioned."

#### PROSPECTS OF THE CROPS.

In a ride of about sixty miles by horse power through a portion of Middlesex and Essex counties, we have had opportunity to notice the condition of the crops, and of conversing with many farmers in relation to them.

We have no recollection of ever seeing the grass crop more promising in the second week in June than it is now, June 9. The clover is exceedingly luxuriant, and some portion of it so stout as to be beaten down by the gentle rain of the sixth instant. This will require cutting at once, though not more than a fourth of it is in bloom.

The cereal grains and Indian corn look finely. They came quick and well and are very promising.

All the early garden stuff seems to have come well. Some peas were in bloom; potatoes, beans and the garden vegetables generally were looking finely.

There is promise of an abundant apple crop. Though millions of the young fruit have fallen, other millions remain; enough to afford a crop beyond anything we have had for several years, if no attack by blight or insects is made upon them hereafter.

In some localities the canker worm has entirely destroyed the foliage, and in others only partially so; but the injury is not general in any locality.

Pears, cherries and peaches looked well wherever we noticed their trees.

It is early, we are aware, for dry and scanty pasturage; but it is rarely the case, even in "leafy June," to find them so densely clothed with luxuriant grasses, and gemmed with white clover blossoms.

The stock on every farm visited was in fine condition. It came through the winter well, and passing into such excellent pasturage is presenting a remarkably good appearance. The finest we saw, in any considerable number, was at the State Alms House, at Tewksbury, under the care of the Superintendent, Capt. THOMAS J. MARSH. When he entered upon his duties there, twelve years ago, he found but three cows on the farm, although the milk bills were annually some two to three thousand dollars! It was several years before he could induce the inspectors to allow him to enlarge the number of cows. They urged that all the hay and grain they consumed must be purchased, and that therefore, the milk would cost more than to buy it as they had done. It was true that the farm—of a hundred or more acres—did not produce enough to furnish the hay and grain required to keep these cows and the two or three horses whose services were needed in the business of the institution.

Now, Capt. Marsh has upon the farm sixty-nine head of neat cattle, or had at the close of winter; some of the young stock being away at pasture. Most of these he has raised on the farm, and now cuts a large portion of the hay from it, upon which the stock has been fed. Among the stock are six working oxen, each animal of about eight feet girth. These were purchased, but he has two pairs of exceedingly promising steers coming on. At milking time we saw twenty-four cows in the leanto, as fine-looking as we ever saw, and whose products were all that ought to be expected of any cows. They were scrupulously clean and docile, and of mixed breeds generally. There were four bulls, one a pure Short-horn, judged to weigh 2100 pounds, a pair of two-year olds and a yearling. The Short-horn had a strong and easy-fitting harness and was worked daily, alone or before a pair of oxen. The younger ones were also moderately worked, headed by the pure Jersey yearling. By this usage they were all gentle

and good-tempered, and were found profitable workers in the field. The remaining portion of the stock is young cattle, but not including calves,—several of which were in the stalls. In addition to the oxen, two or three horses are required for the farm, and as many more for the different vehicles needed in the business of the institution.

The hay for all this stock, if we understood statements made correctly, is now cut on this farm, on which, twelve years ago, there was not hay enough raised to supply three cows. Within a year or two the farm has been enlarged by some fifty or sixty acres, but these acres have not yet added much to the hay crop. They are still in a transition state, but are rapidly being changed into beautiful and fertile fields.

Passing through the kitchen we saw *three* large wash tubs filled with soaking peas, and as many tubs of corned beef to make a part of the pea soup for the next day's dinner.

When the inmates are to enjoy cabbage for dinner, it requires a *large ox-cart full of heads*, after the outside leaves are taken off, to supply the plates of those who are not in the hospital! Between *four and five thousand bushels* of potatoes are annually required for the family. Five barrels of flour are kneaded up at once for baking, two or three hundred pounds of codfish for a single dinner, and other things in proportion throughout the whole cuisine department.

The most perfect cleanliness and order were apparent everywhere, inside and out. The drainage and sewerage excellent, and generally the ventilation of the buildings; but in this particular some changes are needed and of such a character as to be wholly independent of the inmates. Persons who do not understand the importance of breathing pure air, are quite apt to close all doors and windows and run the risk of suffocation. Ventilation, therefore, should not depend upon opening and shutting doors or windows. It is somewhat doubtful which would kill the quickest, impure air or fresh currents rushing in on certain portions of the body when not in exercise. We think we should rather take our chance in the carbonic acid.

When the fact is considered that the farm improvements to which we have alluded, have been made at the same time that a family of

from three to twelve hundred persons have been cared for, and well cared for, it will be conceded, we think, that no better evidences of agricultural skill have ever been presented to the farmers of the State, than in the management of this originally wretchedly poor farm.

Twelve years ago, three cows could not be fed from it; now seventy five head of stock are fed from the hay cut, several thousand bushels of roots harvested, cabbages by thousands of heads, and potatoes by thousands of bushels, and, every day, forty pounds of the most delicious butter are made.

It is true, that Capt. Marsh has unusual facilities in the use of fertilizers and labor, but in the hands of many persons, these would only increase the bills of cost to get rid of them. A large amount of the labor comes from persons who are incompetent to direct themselves, and must be constantly guarded and directed by others. And yet, this labor, trifling as it is individually, is sufficient in the aggregate to produce such excellent results.

#### BEEF SUGAR MANUFACTURE.

The expectations which were excited several years since by the purchase at Chatsworth, Ill., of some 2400 acres of rich land, and the establishment there of a costly factory, to be operated by experienced men from Germany, have not been realized thus far. On the contrary we have had reports of disappointment and partial failure, which have been disheartening to those who had hoped that this establishment would demonstrate not only the possibility, but the profitableness of producing at least a portion of the large amount of sugar consumed in this country.

A writer in the New York *Tribune*, who has visited Chatsworth, and examined the premises of the Company, thinks that that section does not possess all the vital conditions of success. The soil is a strong black clay loam, exceedingly rich in humus and the nitrates, especially adapted to corn, oats and grass, but having too great an excess of salts, for sugar beet culture, until, by grain growing, these have been somewhat reduced. The soil is inclined to wash and run together, under the action of water and frost; while "one requirement for success in sugar-beet culture is a thoroughly drained soil, that can be worked at all seasons within twenty-four hours after the heaviest rains, and which shall be sufficiently sandy, so that it will not crust nor bake, but easily disintegrate in cultivation. Another necessity is plenty of sweet soil water, accessible to the sugar factory for use in both cleaning and steam power. Now these particulars, *absolutely essential* to suc-

cessful and profitable beet culture and sugar manufacture, do not exist at Chatsworth, in a state of nature, but at great expense are being gained by artificial means. The experiment at this point is an exact parallel of one in Germany, where nearly all the natural conditions were the same, and where the capital of three successive companies were sunk before it was made a success; but which we may say, for the comfort of the stockholders at Chatsworth, is now one of the best paying companies in Germany."

A "black-sand" soil, like that of the Rock and Fox River bottoms, of Alton and Villa Ridge, Ill., also along Winnebago Lake, at Fond Du Lac and other points in Wisconsin, is considered more favorable than the prairies for beet growing.

Speaking of the last year's operations, in cultivating beets at Chatsworth, this writer says, their lack of complete success can in no way be attributed to mismanagement. The seven weeks of uninterrupted rain in May and June washed off or rotted away all but 100 acres of the beet plants. The succeeding drought and early frost left them from this but 300 tons of beets for their toil. Yet with all these disadvantages beets were placed in the mill at a cost of \$4.50 the ton—10 per cent. lower than the lowest estimate for this result by the German manufacturers. This was effected in part at least by newly invented machinery. The indications for the present season are regarded as favorable. Three hundred and thirty acres of beets, 150 of grass, 140 of wheat, 150 of rye, 400 of oats, 1100 of corn, &c, are now under cultivation, and all looking well. The writer anticipates for Chatsworth a good measure of success this season, and believes it is now in hands in all departments competent to realize the wishes of its friends, and those of this industry generally, as to its success both financially and otherwise.

#### CURCULIO TRAPS OF MICHIGAN.

The Horticultural Editor of the *Prairie Farmer* has visited St. Joseph, Mich., and examined the new plan of destroying the curculio, of which we gave some account last week. While he advises cultivators to try the traps, he is less sanguine of their efficiency than are the people of St. Joseph. During cold nights the curculios descend for a more comfortable lodging, but when the weather becomes warm enough to swell the fruit sufficiently large for their operations, he says they do not descend, but remain all night in the tree. From this time there are not less than thirty days, during which they fly freely, and migrate from one orchard to another. Indeed, fruit was found to be stung on trees that had been most carefully trapped, and on resorting to the old jarring process many more insects were caught on the sheets than had been under the traps. While, therefore, the new process may lighten the labor of jarring, it appears that it cannot be relied upon as an exterminator.

Prof. Riley, of the *American Entomologist*, agrees

with the views expressed by the *Prairie Farmer*, and also shows by an extract of a letter from a Mrs. Weir, published Jan. 28, 1865, in the *Rural New Yorker*, detailing her success in capturing the insects under boards laid on the ground for that purpose, that the invention is not a new one.

### NEW PUBLICATIONS.

MEMORIAL of Benjamin P. Johnson, read before the New York State Agricultural Society at the Annual Meeting, Feb. 10, 1870, by Maria R. Patrick, Ex-President of the Society.

Throughout the country there is a general complaint of the want of hearty co-operation by the tillers of the soil with the leaders of agricultural progress. Books printed at great public expense for the benefit of farmers gravitate to the rag-bag and junk store. State Boards of Agriculture hold sessions in rural districts, but even there they do not reach the rural people. State Societies hold shows and fairs, but the attendance of the "intelligent yeomanry" is secured by almost any device that will "draw." "Great names" are placed on the agricultural stump, but they fail to attract the masses. Why should these eloquent speakers, these attractive exhibitions, these learned discourses, these elaborate Transactions be so poorly appreciated?

One reason for all this is suggested to our mind by the perusal of this Memorial, and that is the want of sympathy between these men and those whom they wish to reach and influence. Though written in the ordinary eulogistic style of such compositions, this Memorial sketch of Mr. Johnson's life, presents the following facts. Until fifty-three years of age, he was a lawyer, politician and office holder. In the language of his eulogist, he was "so generous in his feelings" that "it is not to be wondered at that he was never a successful financier, or manager of his own money matters, or that he became gradually, and almost insensibly embarrassed in his pecuniary affairs, until he suddenly found himself wholly unable to meet his engagements." In May, 1846, he departed abruptly for Europe, and left his "financial unpleasantness" to the care of his friends, by whom, we are informed, it was "satisfactorily arranged," and Mr. Johnson returned to his native land, in November of the same year, when the same good friends secured for him the snug little position of Secretary of the New York State Agricultural Society. Once in this office, he was retained twenty-two years,—though later in life a "lethargy was stealing over him" that incapacitated him for the discharge of its duties,—because, and we again quote both the sentiment and the language of the Memorial, "To have dropped him from the rolls of the Society, as its Secretary, would have been to pronounce his sentence of death."

We can honor these charitable feelings for a needy incumbent, though we may not approve of the form in which they were expressed in this case by the managers of the Society. We believe

that the State has suffered greatly from the inefficient manner in which the Transactions of its Agricultural Society have been edited for many years past, and that in this way something has been done to foster that indifference on the part of farmers so generally deplored.

TRANSACTIONS of the Vermont Dairymen's Association, 1869-70, with Addresses and Essays Original and Selected. Published by the Secretary, O. Bliss, Esq., Georgia, Vt. 1870.

This pamphlet of 120 pages give us the addresses of Hon. E. D. Mason, President of the Association; of Hon. Henry Lane, on the cultivation of Beets; of Hon. K. A. Willard, on Dairying; of Dr. M. Goldsmith, on Experiments in Dairying; of Hon. T. G. Alverd, on Salt; of Hon. R. Goodman, on Grasses; of Prof. G. C. Caldwell, on Fermentation and Putrefaction; of Prof. A. N. Prentiss on Ergot; of O. S. Bliss, Esq., on Butter Making; together with List of Officers, &c. These are valuable papers, and will be read with interest and profit by farmers. In his introductory remarks, the Secretary says, that the afternoon of the second day's session "was devoted wholly to discussions." And from our experience with similar meetings we can readily credit his subsequent remark that "the time was fully occupied, affording new evidence that one of the most valuable features of such meetings is the extemporaneous discussions among the members themselves." Yet we find no trace of this "most valuable feature" in the printed transactions of the society.

On the same page, the Secretary says:—"It is a source of regret that no more of the practical dairymen of the State were in attendance upon the meeting."

But why was there not a more general attendance of the practical dairymen of the State at the St. Albans meeting? There can be no question of the fact that a large number of the farmers of Vermont are deeply interested in dairying. They buy liberally and read carefully books and papers that relate to this and other branches of farming. They are always ready and glad of an opportunity to talk upon these subjects. But when a meeting is called at which men of note and distinction are invited to discourse upon these same topics, they somehow seem indifferent about attending, or if they are present they take a back seat, and act for all the world as though the meeting belonged to somebody else, and as though they were not at home there.

This is as true of the farmers of other States as of those of Vermont. The Convention in St. Albans is not the only one that has had cause to complain of empty seats. But what shall be done to fill them in the future? is a question that we do not propose to answer affirmatively here; though we cannot refrain from suggesting, negatively, that, whenever the extemporaneous discussions of the practical men present at any of these meetings prove the most valuable feature of the exercises, their entire omission from the printed journal of

proceedings, will not be likely to fill these seats, or to encourage their occupants to take a more active part in the proceedings at another meeting.

But this does not impair the value of the papers which constitute the bulk of the Transactions of the Vermont Dairymen's Association, which we commend to the attention of dairymen in Vermont and elsewhere.

**PEACH CULTURE.** By James Alexander Fulton, Dover, Del. Illustrated. New York: O. Judd & Co. Boston: A. Williams & Co. 1-70. 190 pages. Price \$1.50.

This book gives directions for raising trees, planting and cultivating orchards, gathering and marketing fruit, with suggestions on varieties, &c. The author lives in the centre of the peach growing districts, where orchards of twenty to fifty acres are common, and in which individual planters have as many as six hundred acres. He ought, therefore, to be able to give the results of a large experience in this branch of fruit culture; and his effort has been, he informs us, to make a handbook and guide to every planter, that may be used as the student uses his dictionary in the acquisition of a language. Whatever may be the respectability of men engaged in other branches of farming, he says "most of our large peach growers are gentlemen of wealth, refinement, and leisure; many of great social, and some of high official position."

**CINCINNATI INDUSTRIAL EXPOSITION.**—We have received a circular from the committee of arrangements for a Grand Industrial Exposition of Manufactures, Products and Arts, at Cincinnati, Ohio, by the Chamber of Commerce, Board of Trade and Ohio Mechanics' Institute, to commence Sept. 21, and continue until Oct. 15, 1870. Articles for exhibition will be received from the 1st to the 20th of September. Circulars containing full and specific information relating to the Exposition may be obtained by addressing "Cincinnati Industrial Exposition," Cincinnati, Ohio. Charles F. Wiltach, President; Abner L. Frazer, Secretary.

**PROFIT IN FEEDING STOCK.**—There is a general impression at the East that fattening cattle and hogs at the West is very profitable business. An Ohio feeder states as the result of experiment, that beef at 6½c and pork at 9c per pound live weight, gave him 55½c per bushel for corn. An Illinois farmer says that in his section they cannot afford to feed corn after the price has reached 50 cents. A farmer in Central Illinois who is a prudent, careful, and economical man, shows by his books that he does not get fair pay for his labor when he sells good cattle at 8c per pound live weight.

**CHEESE FACTORIES IN ENGLAND.**—The first establishment in England, was started in Derbyshire, but a few months since, under the superintendence of an American, with the milk of 300

cows. At first, farmers were very doubtful as to the success of the Yankee notion, but in three months there has been so great a change in public opinion that the company has been obliged to refuse offers of milk supply from 500 additional cows. A second factory is to be opened immediately at Longford, nine miles from Derby, and it is believed that it would not be difficult to start six factories within ten miles of Derby.

#### AGRICULTURAL ITEMS.

—One thousand cows every day contribute their milk to supply the cheese factory in Hinesburgh, Vermont.

—In speaking of raising corn on "clay lands" in Georgia, a correspondent of the *Southern Cultivator* estimates the average crop, including good and bad years, at ten bushels an acre.

—Figs grow very abundantly in South California. They ripen twice a year, and compete, when dried and packed, with the foreign imported ones in the home fruit market.

—Canker worms are stripping orchards very badly in many parts of Massachusetts, while in some places where they have heretofore been most destructive, there are not as many this year as usual.

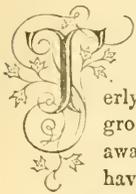
—Wm. F. Barber of Castleton, Vt., lately sheared 70 Merino sheep, all ewes, with an aggregate of 1,025½ pounds, giving an average fleece of 13½ pounds to each. The sheep were all raised by Mr. Barber, and the growth of the fleece is a year, less one day.

—A statement of the hogs sold by the farmers of Neponset, Ill., from Nov. 1, 1869, to March 15, 1870, is published in the *Prairie Farmer*. The whole number is 8300, making 2,905,000 pounds of pork, averaging 350 pounds. A list of eighteen farmers is given who sold 932 hogs, that weighed from 400 to 556 pounds each.

—J. H. Crook & Son, of Pittsfield, have just purchased five Short-horns in Xenia, Ohio, from the strain long famous in that State and Kentucky for beef. They are Kitty Clover 2d, a four year old cow; Kitty Clover 3d, one year old heifer; Kitty Clover 4th, a calf five months old, and Country Gentleman, a bull six months old. Their farm contains 280 acres. They are believers in thorough drainage and have underdrained five acres with good results, one acre of which is now worth more than the whole five were before it was drained.

—The Lawrence, Kansas, *Journal*, says Alfred Gray, a somewhat noted fruitist of Wyandotte, undertook, a while since, to console some friends whose orchards had been nipped by the frost. In one of his orchards he built fires to preserve the fruit blossoms, and not a bud was injured. This produced the usual "See there, now," of his auditors, when he coolly added, "I had two or three more orchards in which no fires were built, and not a single bud was injured in them either!"

## ON PRUNING.



THE best season for pruning apple trees is now near at hand. Trees which have been properly managed during their whole growth, will never need the cutting away of large limbs, unless they have been injured by teams, or broken by snow or wind.

What are called "suckers," may be thrown out, more or less, every year; they are often cut out when the sap is in full motion, and where they have stood thickly, the branches from whence they were taken have become black and diseased. It is better to take away even these small shoots at a proper season.

All fruit trees growing as common standards, should be allowed to assume their natural form, the pruner going no further than to take out all weak and crowded branches.

Some persons go into the centre of a tree and cut away quite large limbs, when the desired object could be much better gained by thinning out their extremities. It is always better not to cut a large branch, unless it is actually endangering the tree considerably. Taking off large limbs tends to throwing out suckers the following summer. All these should be rubbed off when they first appear.

When pruning,—Mr. Downing says,—is not required to renovate the vigor of an enfeebled tree, or to regulate its shape, it may be considered worse than useless. Bearing in mind that growth is always corresponding to the action of the leaves and branches, if these are in due proportion, and in perfect health, the knife will always be found rather detrimental than beneficial.

But the injury arising from pruning apple trees, is infinitely greater from doing work at the *wrong time of the year*, than from injudicious cutting. Our object is now, mainly, to present some authorities on this point.

*Prof. Lindley* says, "If well directed, pruning is one of the most useful, and, if ill-directed, it is one of the most mischievous, operations that can take place upon a plant. The season for pruning is usually midwinter, or at *midsummer*. It is, however, the practice to perform what is called the winter pruning *early in the autumn*."

*Mr. Downing*. "We should especially avoid pruning at that period in spring when the buds

are swelling, and the sap is in full flow, as the loss of sap by bleeding is very injurious to most trees, and in some, brings on a serious and incurable canker in the limbs. \* \* \* Our experience has led us to believe that, practically, *a fortnight before midsummer is by far the best season, on the whole, for pruning in the Northern and Middle States*. Wounds made at this season heal over freely and rapidly."

"The best time for a general pruning is at the close of the first growth of summer, 15th of June to 15th of July."—*Am. Agriculturist*.

"In the spring, the tree in all its parts, is filled with sap, and the wood at the wound cannot season. Hence it readily decays. Any person who should cut timber at this season, and expect it would season with the bark on, would be considered out of his senses."—*M. B. Sears, in Maine Farmer*.

"June is the time to prune fruit trees. Limbs taken off at this season, will begin immediately to send out a ring of new wood, just where it is needed, and will thereby protect itself in the soonest possible period from external harm." So states *E. D. Wight, in the Genesee Farmer*.

A writer in *The Culturist*, says from the middle of June to the first of September is claimed to be the proper time in which to perform this important operation.

We do not know who claims this, but are quite confident that it is postponing the proper time too long. Avoid pruning when the sap is in full flow, and the tree will not be injured when the work is properly done.

Most persons have observed that trees show, in August and the early part of September, what is called a *new growth*. On this growth the color of the foliage is a lighter green, and has, every way, the appearance of being more recent than that of the rest of the tree. And so it is.

By the time that midsummer comes, most of the sap that flowed up in the spring has gone to the branches and aided in expanding buds and blossoms, and in sending out new leaves and extending the twigs. When the tree has done this, the superabundant sap returns down the tree through the bark and increases its diameter.

The tree has now a season of rest. The sap vessels are comparatively empty, so that if

its branches are cut, the wound will rarely bleed. The returning sap, we suppose, soon forms a green, healthy ring about the cut, in the bark, and the remainder of the cut dries and shrinks before the sap is again in motion. This season of rest, then, of three or more weeks, is the best time to prune. It has its inconveniences, we are aware, but they are of less consequence than the injury of the tree.

No harm comes to the tree, we believe, if pruned in the autumn, soon after the leaves have fallen. The tree is then, also, in a comparative state of rest and may be cut judiciously without injuring it.

*For the New England Farmer,*

#### DRAINAGE IN ENGLAND.

As the climate and some other circumstances that affect the farmer are different in this country from those of England, and as many Americans are prejudiced and set against British or Scotch modes of farming, I feel somewhat reluctant in commending any of their practices. But having had considerable to do with draining land in England myself, and having seen much of the operations of others there in the same line, I beg to give a few instances to illustrate the mode adopted there, the material used and the effect produced. In doing so, I may repeat some facts and particulars stated in an article I wrote some time ago for the *Prairie Farmer* of this State.

1st. The Right Honorable Lord Forrester in Shropshire, England, had several hundred acres of cold, wet, clay land under the plough. The grain was poor, late in maturing, and not an average crop, compared with other land on the estate. On sinking the drains the clay was found to be so cold and wet that it was decided to drain from four to five feet deep.

Some laughed and others ridiculed the idea of putting in a drain five feet deep, and said through such a stiff clay, the water would never find the drain. Scores of men were put to work, and the land was drained with two and a half inch pipe (not tile) the drains being fourteen feet apart. The land gently fell to the west. At the mouth of each drain outlet was a little iron door fixed to the pipe by a spring pushed into the pipe, the door being on an easy playing hinge, so that if only a little water came out it was sufficient to force open the little door to admit of its flowing. The more water the wider the door was forced open, which opened and shut itself. Those doors were to prevent rats and moles from getting into the drain.

That effectually drained the land and made it some of the best wheat producing soils on the whole estate. For any person to take out,

or steal, or break one of those little spring doors, was in the eye of the law, felony, and on conviction, the offender was sentenced to not less than three months hard labor on "The Tread Mill," up to seven years transportation; that kind of property coming under the head of "unprotected property."

Another gentleman had a deal of useless land, which grew little else but rushes, the water lying on the surface for months in the year. That land was drained with one and a quarter inch pipes laid three feet deep, and the rows twelve feet apart. After it was drained it was deeply ploughed in the fall, let lie till spring, then cross ploughed, sowed with red clover and rye grass, let grow till next year, and when the clover was in full blossom it was ploughed in the contrary way, just deep enough to cover the grass and clover, and in October sown with winter wheat. The rushes soon entirely disappeared and the whole field was transformed into some of the best land on that estate.

All drainage used to be done with tile; a flat tile placed in the bottom and then a four, five or six inch drain tile placed on the top of the flat one; but it was soon found that in filling in the drain it frequently got broken or cracked, which in time fell in and then stopped up the drain.

Pipes were then invented from one to six inches in the bore, which were not easily broken by any pressure, being quite round, and if a rat or mole got into the drain he had no other alternative but to back out.

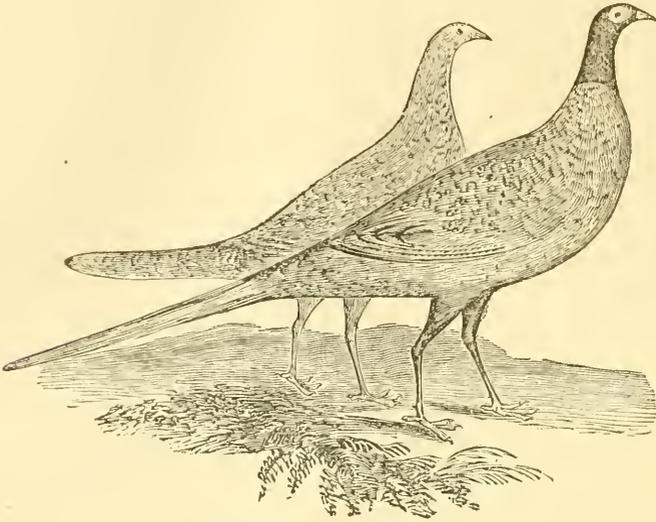
The pipes of one inch bore are nine inches long, others of larger dimensions, ten to twelve inches long, and sold by the thousand not by the foot.

Another instance was near the town I came from,—about one hundred acres of grass land which could at will be floated by the town sewer or brook. Surface drains or gutters were dug a spade's width, about six or eight inches deep, in different parts about the land, and the town filth turned on, and in a few hours the whole field would be inundated. It would be left inundated two or three days, when the bolt would be dropped and the water turned off. After a few years it was found the land became too rich, the grass so strong that while growing and looking well on the top, it was rotting in the bottom—and it was found necessary to underdrain. It was too rank for hay, and so it was always grazed by milking cows or fat cattle. The under drains were buried only about eighteen inches, and was drained with one and one-half inch pipe. Let the summer be ever so hot and dry there was always grass in those fields.

JOHN WHATMORE.

*Bridgenorth Farm, Dunleith, Ill., 1870.*

—Mr. M. L. Sullivant, of Burr Oaks, Ford Co., Ill., has this year planted 6,500 acres of land to corn.



ENGLISH PHEASANTS.

English farmers have one class of troubles and one source of annoyance, from which American farmers are happily exempt; we allude to the peculations of animals protected by game laws, and the privileges exercised by sportsmen. From the Norman conquest to the present day the game laws have been more or less severe. Originally the killing of one of the king's deers was equally penal with murdering one of his subjects. In 1389 it was enacted that "no manner of artificer, laborer, nor any other laymen who hath not lands and tenements to the value of forty shillings by the year, nor any priest or other clerk if he be not advanced to the value of ten pounds by the year," shall keep hunting dogs or use other means of killing game, upon pain of one year's imprisonment. The property qualification was abolished in 1831, and a certificate or license, costing nearly twenty dollars, must be taken out annually, to give one the right.

The law is still very severe against killing game on any land by unauthorized persons, and as the enforcement of the laws is in the hands of the class interested in preserving game, it is most rigidly enforced, and the privileged owners and hunters claim rights for themselves and their game that Yankee farmers would be very unwilling to concede.

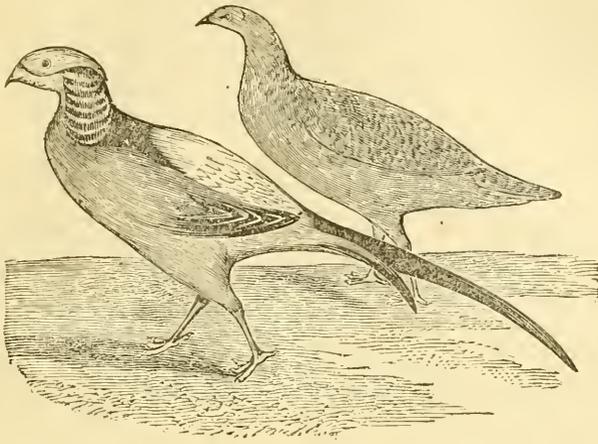
In addition to deers, foxes, hares, &c., several kinds of birds are protected by the game laws of England. Among these we often see pheasants named, and read accounts of pheasant shooting.

Peacocks, turkeys, Guinea hens, &c., are sometimes, we believe, included under the general name of Pheasant; but the word now is generally applied only to a single species, of which there are several varieties, two of which are represented by our illustrations.

The first cut shows a pair of Common Pheasants. The male is about three feet long, of which the tail is one-half; color bright rufous above; head and neck blue with green and golden reflection, and variegated with black and white; the cheeks bare and red; the side and lower parts purplish chestnut. The female is smaller, brownish gray, varied with reddish and dusky.

#### Golden Pheasant.

This magnificent bird is described by Mr. Wright as follows:—The head bears a crest of beautiful amber-colored feathers. The back of the head and neck is of a beautiful orange red, passing low down the breast into a deep scarlet, which is the color of the under parts. The neck feathers are arranged like plate-armor, and are often erected by the bird. The



The Golden Pheasant.

back is a deep gold color, the tail covert feathers being laced with crimson; tail-feathers brown mottled with black. The hen is of a more sober tint, being of a general brown color with dark markings.

Pheasants are naturally wild, and require great freedom and seclusion and much care in breeding. The eggs are often hatched under common hens. They are bred for beauty, not utility.

#### COARSE WOOL SHEEP IN LARGE FLOCKS.

All young, growing animals, other things being equal, need more food and that at shorter intervals than animals that have attained their growth. And the great secret of success in raising improved breeds of stock, is to furnish the young animals all the food they can digest and assimilate. As long as they are growing rapidly there is little danger of their getting too fat. The popular notion that we cannot keep Cotswold, Leicester, or Southdown sheep in large flocks arises from the fact that when so kept the young sheep and lambs do not get the extra food and attention that they require. I have a flock of over ninety thoroughbred Cotswolds and about two hundred and fifty Merinos. And I am satisfied that with the Cotswolds a *given weight of mutton* can be kept in a smaller space than with the Merinos. A neighbor said of the Cotswolds: "You cannot keep so many. You ought not to have more than a dozen or so—These sheep are not like Merinos. You can not keep them in large flocks. So-and-So tried it and the sheep pined away." Now

all this is sheer and unadulterated nonsense. I happened to know the history of the flock he alluded to. Many of them were imported sheep, brought over at different times, by an English farmer who gave them good care and plenty of food, and they did remarkably well, although they had no "roots"—only good pasture in summer and plenty of good clover hay in winter. But by-and-by the farm and the stock passed into the hands of some young men who did not work the land as well, nor give the sheep the requisite attention, and both farm and flock run down rapidly. My father used to keep a large flock of Southdown and Leicester sheep, and I spent two years on the farm where one thousand splendid Hampshire down sheep were kept; I never heard the first intimation that there was any objection to having large flocks, provided they had plenty of food and the requisite care and attention.—*J. Harris, in American Agriculturist.*

**FAILURE OF COWS TO BREED.**—In the summer of 1868 I purchased an Ayrshire cow that for two seasons had failed to breed. During her first heat she was with the bull all day; she came in heat again, was served and left alone; the third and last time I was advised to bleed her; she being rather fleshy I took six quarts of blood from her; she was then served by the same bull; in due time she dropped a calf, and is now with calf again. When I have a cow left at my yard that is troubled as above, if low in flesh I take two or three quarts of blood from her and let the bull cover them once, and have not had one of them fail as yet.—*H. W. C., Derby, Conn., in Country Gentleman.*

*For the New England Farmer.*

### DRYING MUCK FOR BEDDING.

In the Monthly FARMER for June, page 275, I notice an inquiry by Mr. Smith, as to how I dry my muck so as to prevent its freezing in winter. In answer, I would say that it would not freeze in the cellar where I keep it, if ever so wet. I keep it in one end of the basement, which has a wall on the back side and end, the other side being double-boarded and filled in with flax shives, and is so warm that apples would seldom freeze in it. But as dry muck is worth four times as much for an absorbent as wet, of course I get it as dry as possible, and I dry it in various ways as seems most convenient.

Last summer the weather was so wet that I drew up a quantity and left it in a broad pile at the end of the barn which has the cellar, and near the window through which it is thrown into the cellar, and as fast as the top dried, threw it into the cellar, and so continued to do until all was thrown in.

I get my supply from a small natural pond on my own premises, of about one-half acre in extent, and from one foot to four in depth. I have been at considerable expense to drain this pond, to make it more convenient to get out the muck. I find decayed leaves, wood and bark all the way through the muck, which lies on a bed of pure blue clay. The banks around the pond are hard land, and my usual practice is to throw the muck out on the bank in piles, and in ordinary seasons it will dry sufficiently to put into the cellar after haying. I throw it out at any and all times when I have leisure, and put it in the cellar at any time when it is dry and I can attend to it.

I have a Black Ash swamp of about four acres, in which the muck is from one foot to ten feet in depth. Last year I commenced to drain it. I took the muck from the ditches and put it in a heap near the barn, which was fortunate, as the season was such that it did not dry very deep at a time. I have put in quite a quantity the past week which was thrown out from the pond last fall. The exceedingly dry weather of the past month had made it like powder, and it was consequently in the very best condition.

If I had no barn cellar I would partition off a room in the stable, double-board it, and fill in with some non-conductor, put in the muck and cover over with straw and it would not freeze very much.

I see that Mr. Upham indulges in occasional flings at the use of muck. Now, it is seldom that I notice such things, but I should like to ask Mr. Upham what he understands by the term muck. He calls it "meadow muck," a term I never have used. I should infer from his article in the Monthly FARMER for April, that he would go into any low land meadow that had a black soil and take it for muck.

I have a neighbor that has a small pond on his

place, from which, one season when it was dry, he carted out a quantity of the bottom which looked about the color of common clay, and when left on top of the ground to dry became as hard as clay. He put it on a clayey soil, and of course it did no good. What I call muck is the deposit in the swamps and ponds of a black color and as free from grit as dough, and I suppose is composed in good part of decayed vegetable matter, although I am not learned enough to tell what it is composed of.

Notwithstanding that Mr. Upham has spoiled some of his land by the use of muck, I will say that if any man will take muck out of my swamp or pond and compost it with one-third stable manure, and put it on his land by the side of the same bulk of clear stable manure, and if his crops for three years are not fully equal, and the fourth year greater, on the composted part than on that where the clear manure was used, I will pay him for all his trouble, and if it spoils his land I will buy that too. Understand that I am speaking of dry soils, either slaty, gravelly, sandy, or any soil not naturally moist or clayey.

It is singular how some men will jump at conclusions. One will apply a mixture of clay and iron ore or some other substance on clay land, which of course can do no good, and he then comes out and says that *muck* is of no benefit! All kinds of fertilizers, and all methods of application, sometimes fail; but it does not become the energetic, go ahead farmer to give up at the first failure. I have tried it for years, and I know that swamp muck is a good and cheap fertilizer for me to use on dry soils, and it is my opinion that there is no dry soils but it will benefit if properly applied; some more than others, undoubtedly, but all enough to pay its cost, if procured on the farm.

Oak Hill, N. Y., June, 1870.

B.

### MOVEMENT OF WATER IN THE SOIL.

If a wick be put in, a lamp containing oil, by capillary action, gradually permeates its whole length, that which is above as well as that below the surface of the liquid. When the lamp is set burning, the oil at the flame is consumed, and as each particle disappears, its place is supplied by a new one, until the lamp is empty or the flame extinguished.

Something quite analogous occurs in the soil, by which the plant is fed. The soil is at once lamp and wick, and the water of the soil represents the oil. Let evaporation of water from the surface of the soil or of the plant take the place of the combustion of oil from a wick, and the matter stands thus:— Let us suppose dew or rain to have saturated the ground with moisture for some depth. On recurrence of a dry atmosphere with sunshine and wind, the surface of the soil rapidly dries; but as each particle of water escapes (by

evaporation) into the atmosphere, its place is supplied (by capillarity) from the stores below. The ascending water brings along with it the soluble matters of the soil, and thus the roots of plants are situated in a stream of their appropriate food. The movement proceeds in this way so long as the surface is drier than the deeper soil. When, by rain or otherwise, the surface is saturated, it is like letting a thin stream of oil run upon the apex of the lamp wick—no more evaporation into the air can occur, and consequently there is no longer any ascent of water; on the contrary, the water by its own weight, penetrates the soil, and if the underlying ground be not saturated with moisture, as can happen where the subterranean fountains yield a meagre supply, then capillarity will aid gravity in its downward distribution.

It is certain that a portion of the mineral matters, and perhaps also some organic bodies which feed the plant, are more or less freely dissolved in the water of the soil. So long as evaporation goes on from the surface, so long there is a constant upward flow of these matters. Those portions which do not enter vegetation accumulate on or near the surface of the ground; when a rain falls, they are washed down again to a certain depth, and thus are kept constantly changing their place with the water, which is the vehicle of their distribution. In regions where rain falls periodically or not at all, this upward flow of the soil-water often causes an accumulation of salts on the surface of the ground. Thus in Bengal many soils which in the wet season produce the most luxuriant crops, during the rainless portion of the year become covered with white crusts of saltpetre. The beds of nitrate of soda that are found in Peru, and the carbonate of soda and other salts, which incrust the deserts of Utah, and often fill the air with alkaline dust, have accumulated in the same manner. So in our western caves the earth sheltered from rains is saturated with salt—epsom salts, Glauber's salts, and saltpetre, or mixtures of these. Often the rich soils of gardens is slightly incrustrated in this manner in our summer weather; but the saline matters are carried into the soil with the next rain.

It is easy to see how, in a good soil, capillarity thus acts in keeping the roots of plants constantly immersed in a stream of water or moisture that is now ascending, now descending, but never at rest, and how the food of the plant is thus made to circulate around the organs fitted for absorbing it.

The same causes that maintain this perpetual supply of water and food to the plant are also efficacious in constantly preparing new supplies of food. As before explained, the materials of the soil are always undergoing decomposition, whereby the silica, lime, phosphoric acid, potash, &c., of the insoluble fragments of rock, become soluble in water and accessible to the plant. Water charged with

carbonic acid and oxygen is the chief agent in these chemical changes. The more extensive and rapid the circulation of water in the soil, the more matters will be rendered soluble in a given time, and other things being equal the less will the soil be dependent on manures to keep up its fertility.—*Johnson's New Work, How Plants Feed.*

#### ECONOMY IN SMALL THINGS.

There is no truer saying in all the proverbial wisdom of sensible Old Richard's Almanac, than that, "he who saves in small things will in time rejoice in great possessions," and in so earnestly impressing the importance of economy upon the attention of Southern farmers, we think that the newspapers of that section are proving themselves the true friends of their readers. And there is great need for the practice of this homely virtue by the farmers of this State, who, with their large farms and heavy crops, are too much inclined to underrate the value of the innumerable small things about them, which by timely attention might be made to enhance their revenue. Tools and implements, if taken care of, would last much longer than they generally do; the sweepings of the hen-roost, the refuse from the hog-pen and the slops from the kitchen, with one-half their quantity of leaf mould from the fence corners in the woods, would furnish every week, two or three hundred pounds of fertilizing material, just as good as Chinch Island guano. This applied to the worn-out fields or gardens would largely increase the corn or vegetables, besides leaving the ground in an improved condition. Now there are numerous instances on every farm where things heretofore wasted as of no value, might by a trifling expenditure of labor, be utilized and made a source of profit. Why not, then, pay the needed attention to such matters as these, when the brief time required could be spared from more important concerns? There is, certainly, nothing discreditable in the prudence that seeks to prevent the waste of anything that may be rendered valuable. Is it the fear of being regarded penurious? Will you be led to disregard your own interests by such unworthy apprehensions? Certainly, the opinions of those who would ridicule such economy are not worth retaining. We do not ask our readers to be miserly and avaricious, and we urge only the duty of economy. There is a very wide difference between stinginess and prudence, for the one is to be condemned and the other approved. The true philosophy of life is, to enjoy in moderation the goods we have, not wasting nor hoarding, and this is the practice we commend.

In times past, more frequently than at the present, comparisons were instituted between the system of farming practiced at the North and that followed in Kentucky, very much to the discredit of our people. Now, if the farmer

in Massachusetts or New Hampshire makes more money in the year from a tract of not naturally fertile land, with the disadvantage of a severe climate, than the Kentuckian did on a greater number of acres of land as productive as any in the world, the result must not be attributed to any superior shrewdness, better judgment or greater skill, upon the part of the Northern man, but simply to the fact that he never allows anything to go to waste, no spot to remain idle, no opportunity to save or improve the place, to go unimproved. His stock are housed in winter and their manure all saved to go on the "poor points;" the feeding is carefully done so that nothing is lost, and yet, we doubt, whether, on the whole, any person enjoys life more fully than this provident, industrious man. We have eminent authority for the assertion that "comparisons are odious" and we have referred to this difference in systems in order to point the moral, that economy, watchfulness, and attention to small matters, will bring profitable results to our people as well as to those in other sections.

We are entering upon a new era in the South, and we are hopeful that a few years hence will witness a more rapid progress in agriculture, and a greater degree of prosperity for our people, than has ever been before. The cultivation will be more thorough, and our people will learn to utilize many things that were thought to be too insignificant for notice in the slow-plodding, unenterprising ante-bellum days—and then we will see the beginning of our growth in wealth, importance and power as a State.—*Farmers' Home Journal, Lexington, Ky.*

REMARKS.—In copying the foregoing sensible remarks from one of our best agricultural exchanges, we cannot avoid the expression of a fear that, while the Southern people are adopting those principles of economy and industry which laid the foundation of the prosperity of New England, the people of the North are, in turn, falling into those habits of carelessness as to incurring debts and expending money, that dread of being considered penurious, and that dislike of labor, which resulted so disastrously at the South.

#### MULCHING BEARING FRUIT TREES.

There is no doubt now by our most intelligent horticulturists about the practical advantages to be gained by mulching the surface of the orchard and fruit garden. This, should be more generally practiced in fruit-producing districts, for it is the least expensive and most effective method of protecting the fruit trees against the bad results often following the frequent and sudden changes of temperature

during the summer and fall months, when the surface of the ground is left exposed to the direct rays of the sun. Again, when the mulch is put two or three inches in thickness, the surface soil is constantly moist and loose, even when no rain falls for a term of several weeks, and the trees or fruit receive no check for want of moisture and food under such circumstances.

My method is to cultivate the spaces between the rows of trees in the orchard, using a small one-horse plough and cultivator, running not more than two inches deep, during the early part of the season. From the 1st to the 15th of July I have put on a heavy coating of salt hay, covering the surface as far as the branches extend. After this there is no more trouble with weeds and grass. There may be a few scattered ones start up, but they are easily destroyed.

Every fruit-grower knows that two or three weeks before the time of gathering the main crop of fruit, fine specimens are constantly falling off or blown off by strong winds. When the ground is mulched the majority of such specimens are not bruised or injured for sale. This saving alone I consider pays me for the trouble of mulching the orchard.

There is only one serious drawback to the application of a mulch, that is the danger of the hay or straw getting on fire when rendered dry by continual warm weather.—*P. T. Quinn, in N. Y. Tribune.*

*For the New England Farmer.*

#### HOW TO MAKE THE MOST MONEY FROM THE FARM.

The following is an abridgment of an address given by M. J. HARVEY, Esq., at the March meeting of the Epping, N. H., Farmers' Club, as introductory to the discussion of the question "How to make the most Money from the Farm."

Before attempting to answer the question which comes before the club this evening, perhaps I ought, in the first place, to attempt to prove that any money at all can be made from the farm. If we take men's actions as evidence of their opinions, must we not meet the stern and inevitable fact that "no money can be made by farming?" To prove that such is the opinion of nine-tenths of the farmers of this town, do we need any better evidence than is furnished by the course pursued by their sons, a large proportion of whom leave the paternal acres, and go to the villages or cities for a clerkship or a trade? Would they do this if their fathers thought an equal amount of money could be made on the farm?

Leaving this question for some future debate, I will, before proceeding to answer the question how to make the most money from the farm, mention a few ways in which not to do it.

I have seen so-called farmers pitch out their manure in heaps against the side of their barn,

exposed to sun, wind, and rain, until the boards are rotted away, leaving large holes in to their cattle stalls, admitting cold and storm; then the boards are turned bottom end up, leaving the same holes against the hay mow above. I have seen others plough and not plant; plant and not hoe. Others make no effort to furnish absorbents to hog yard or stable; they never lay up the stones that fell from the walls in the days of their fathers, forty years ago. I heard such an one testify upon the witness stand that "he was a farmer," a fact that I should have hardly credited, did he not positively swear to it. Others taking up the patriarchal cry, "go down into Egypt and buy corn," depend on the West for their bread. Others feed their crops on commercial fertilizers, and send their farms into Boston market in the potato sack and the hay bale.

If any money can be made by farming in these ways, it is evident that we have not yet answered the question, "how to make the most money from our farms." Such practices were tested three thousand years ago. The ruins of twenty-seven cities on the banks of the Nile, partly covered by drifting sands, attest to the former prosperity of the agriculture of old classic Egypt, first in the science of astronomy and architecture, as well as agriculture. Country produce was transported to those cities to be consumed, but nothing returned to the soil. All this manurial matter was suffered for ages to pass with the waters of the Nile into the Mediterranean, thence perhaps into the Atlantic, possibly to be deposited on the Chincha islands—thus, perhaps, answering the disputed question of our last evening—where it was stored for the use of a people living in a then undiscovered world.

#### Save the Manure.

This is the first thing for us to do who wish to make the most money from the farm. This is the great Archimedean lever in agriculture. It is the corner-stone of the foundation of all successful farming. By increasing the manure heaps you take the first steps towards "making the most money from the farm."

Give me plenty of manure and I can spread a corn field in every valley; cover every hill side with waving grain; "make the desert blossom as the rose;" load a vessel with provision for every hamlet of half starved and down-trodden Ireland; and hasten on the Millennium days spoken of by Isaiah, so far as the landscape is concerned.

The manure heap can be increased by furnishing hog yards, cattle and horse stalls with turf, as an absorbent, from the road side, from under the stone walls in the fields, and such corners as no plough can reach. A thousand loads can be taken from every small farm, from places where grass has rotted and leaves collected, and only bring the banks down as low as they were fifty years ago. Saw dust and swamp mud answer the same purpose.

Cattle and horses should be housed in summer as well as winter, and absorbents be spread under them to save the liquid part of the manure, which, according to Dana, is fully equal to the solid. My own experience proves it to be better. In 1857 I spread loam soaked with cattle urine on one end of a piece of oats, and on the other end solid manure. Where the urine was spread the crop was far the heaviest and darkest colored.

Swamp mud, a thousand loads of which may be found on almost every farm, when rightly prepared, by being drawn out before hand and exposed to sun and frost to remove its acidity, and then mixed with ashes or lime, is another great manurial element to help you "make the most money from the farm."

In confirmation of these views, I quote from Dr. Andrew Nichols in the Agricultural Transactions of Essex County, Mass. He says: "If from six to eight bushels of lime are thoroughly mixed with 100 bushels of muck, and that amount applied for two or three years in succession, it will not only bring good crops during the years of its application, but in connection with other manures usually employed, will give a permanent fertility to the land."

On this subject, Mr. Holbrook says: "I have frequently applied a compost of muck with dry slacked lime, though, when I can buy ashes readily at not too high a price, I prefer a given outlay in ashes, rather than lime. The best fresh unslacked lime is the cheapest, because it is more effective in compost, and swells very much in bulk, when dry slacked for use. Six years ago I had a heap of seventy-five half cords of muck, mixed with lime, in the proportion of half a cord of muck to a bushel of lime. The muck was drawn to the field when wanted in August. A bushel of salt to a tierce of lime (6 bushels) was dissolved in water enough to slake the lime down to a dry fine powder, the lime being slacked no faster than wanted, and spread immediately while warm over the layers of muck, which were about six inches thick; then a coating of lime, and so on until the heap reached a height of five feet, and of a convenient width and length to embrace the whole quantity of muck. In about three weeks a powerful decomposition was apparent and the heap was nicely overhauled. Nothing more was done do it till it was loaded the next spring for spreading. The compost was spread on the ploughed surface of a dry sandy loam, and harrowed in at the rate of fifteen cords to the acre. The land was planted with corn, and the crop was more than *sixty bushels to the acre.*"

You can see that this is fully equal to barn yard manure, as fifty bushels to the acre of corn is more than an average crop with us, where ten cords of the best barn yard manure is used to the acre. Larger reports are made of late, but I can say that the framers of these

reports are ahead of us in exaggeration, or we are behind them in agricultural science.

Forest leaves are another great auxiliary to the manure heap, and consequently to "making the most money from the farm." Every acre of forest leaves, where the rotten mould is three or four inches deep is sufficient to manure an acre in the field, equal, in my opinion, once every five years, to twenty loads of barn yard manure. It contains two out of the four bases required for plant food, viz.: potash and nitre; also a large amount of vegetable matter. I have heard of a man who lost all of his large farm but twenty acres, inherited from his father, by dissipation, and who, on concluding to reform, having no manure nor stock, collected from a few acres of pine growth the leaves and mould which he spread and ploughed in to his worn out acres. By this means alone he brought his land up to a high state of fertility, so that it produced more than the whole farm formerly did.

#### Application of Manure.

The subject of the application of manure is next to be considered. If I collect all the materials for a splendid house and fail in architectural skill in building, I become a derision and reproach to the passer by. If Solomon in all his glory, after he had gathered the gold and silver for his great temple, had failed to employ the cunning workmen of the King of Tyre, he would have become the laughing stock for surrounding nations. So if manure is misapplied, your labor is lost, and proper results are not obtained.

I think manure should be harrowed in on wet land and ploughed in on dry land. Then, in the first case, it will not be leached and go down below the reach of plant roots, nor in the other case, be too high and dry above them, and its strength evaporated in the air, as it was with me on a piece of corn, in 1863. This was broken up ten inches deep, the fall before. Eighty loads of compost and barn yard manure were harrowed in on the furrow. It was planted with 13,000 hills of corn, which started well, but soon dwindled and proved not worth harvesting. Last year I made a failure on the other extreme. On less than half an acre of tough barn grass sward, I spread fourteen loads of barn yard manure, and ploughed under and planted with corn, the roots of which could not penetrate downwards in season to reach the manure, and poor corn was again the result.

Low land should be ploughed, where practicable, even if you have to use a steel plough, and be laid up in beds of about twenty furrows each, leaving a dead furrow between for water to run off, and a compost of sand, rather than muck, applied to the surface, soaked with cattle urine from the barn yard or under the stable floors, and sowed down to herdsgrass. Treated in this way it will bear heavy burdens of grass for a long series of years, the pro-

ceeds of which, in the shape of barn yard manure, can be carried on to the high ground where it is so often needed.

#### Flowage.

Next in order comes the subject of flowage or irrigation; not that method by which water is conducted along the brows of hills in ditches at great expense. I once knew a young man in Gilmanton, who inherited a thousand acres of land and thousands of dollars at interest, yet came near bankruptcy by digging ditches miles in extent, to irrigate his fields in this way. I refer to the winter flowage of natural meadows through which a stream of water runs. Only a short dam is needed near the outlet to effect the purpose, with a bulk-head by which the water can be let on or off, and its depth regulated. Land thus flowed would be enriched by an annual deposit of fertilizing matter. Millions of tons of hay might be added to the crops in the New England States by this method. This principle was also well understood by the nations of antiquity. The flat fields of old Egypt were fertilized by the annual overflow of Father Nile, while her once productive lands, lying above the reach of the enriching waters, became a desert of shifting sands. Ancient Rome, too, has remains of vast works which show that the value of water was well understood by the farmers of old. Virgil, in *Georgic 1st*, says:—

"Lo! on yon brow, whence bubbling springs arise,  
The peasant bending o'er the expanse below  
Directs the channel waters where to flow,  
Down the smooth rocks melodious murmurings glide,  
And a new verdure gleams beneath the tide."

Isaiah testifies to the same sentiment, "As the rain and the snow that cometh down from heaven, returneth not thither again, but watereth the earth and causeth it to bud and blossom, and bring forth seed to the sower and bread to the reaper," &c. Snow water, according to Dana, contains 25 per cent. of ammonia.

[A member, Mr. T. Dow, here remarked, that he "had tried it, and made a fine skating pond of his field for the boys, and that his crop of grass was increased four-fold, but it was nothing but swamp grass; every particle of English grass was killed out. English grass will not grow where the roots do not freeze in winter."]

I admit the truth of the statement. Put down your gate, then, in the spring as the snow begins to go off, and flow your land for two or three weeks and you will get the full benefit of the water and loose no English grass.

#### Stock.

Next, what kind of stock shall we keep to make the most money? Since the war yearlings and two-year-olds have nearly doubled the farmer's money in one year; cows come next in profit, often times doubling the price from fall to spring. As to breeds, I think experience teaches us that the native is best

adapted to our keeping, which is not the best with the majority of farmers, having much swamp hay and corn fodder and hay of inferior quality. I knew a mechanic who had acquired money by his trade, who bought a farm, and having read much of the crack stock in the agricultural papers, bought a Durham bull and commenced raising stock. As he fed much inferior hay, his stock was inferior to that of his neighbors who kept the native breed, being gaunt, long legged and poor. Take care to breed from the best native stock and all will be well.

#### The Orchard.

Next comes the orchard in our programme. I do not believe in continually ploughing it or that it should be heavily manured, as trees thus treated soon die. There are millions of small roots that run close to the surface and carry sustenance to the tree from the best of the soil. Cut these often, with the plough and you oblige the tree to draw sustenance through the lower roots from the barren subsoil. Neither should orchards go to grass and have it mowed off every year or fed off by cattle. They should be fenced as in old times, when no complaint was made of barren trees, and the grass that grows up suffered to fall down and rot on the surface, forming a mulch and keeping the surface of the ground loose and rich.

#### The Forest.

Last of all I shall mention the forest. Many of the New England farmers, from the increase of taxes or lack of agricultural skill in keeping up the fertility of their fields, have encroached and committed vandalism upon the forests left them by their prudent fathers. Now that the price of wood and timber has more than doubled since the commencement of the late war, I think the way for you "to make the most money from the farm," is to stand guard with gun and bayonet if need be over your forest trees. I quote from an article in the *New York Sun*:—"There is danger that before many years have passed that the United States will become a country without trees. A treeless country is equivalent to an arid desert land, in which agriculture is an impossibility. As trees disappear from the heads of the great water courses from whence much of our timber comes, the rivers lessen in volume, the annual fall of rain throughout the cleared district diminishes and the agricultural product is reduced. Should the destruction of timber in this country continue with its present rapidity, and no provision be made for replanting forests, all the States will probably become a rainless region, like Arizona, where crops can be raised only by expensive irrigation. The present consumption of wood in the United States is enormous. One hundred and fifty thousand acres of the best of timber is cut every year for railroad sleepers alone. For railroad buildings, repairs and cars, the annual expenditure in wood is thirty-

eight millions of dollars. In a single year the locomotives in the United States consume forty-six millions of dollars worth of wood. There are in the whole country more than four hundred thousand artificers in wood; and if the value of their labor is one thousand dollars a year each, the wood industry of the country represents an amount of nearly five hundred millions of dollars per annum." Thus, if the statements of this article, from which I make but a meagre quotation, be true, one more way to make the most money from the farm, is to preserve the growth of the wood and timber.

*Epping, N. H., March, 1870.*

#### A WHOLESOME DRINK FOR SUMMER.

More than once we have had occasion to speak of the injurious effects of drinking large quantities of cold water during the hot weather; and have also advised our readers to follow the suggestion of an old and esteemed physician, long in successful practice in this State years ago, to use only hot or warm drinks during the excessively hot weather of summer. This physician advised the housewife to always have the teapot upon the stove, that the workmen at haying might have warm drink, as it satisfied thirst much better than cold water, was more healthful, and when accustomed to its use would be preferred by the men themselves. In our desire to suggest all the comfort possible to men obliged to labor hard in the heat of a summer sun, we again mention the above, and also present the following receipt for a wholesome field drink, furnished by "a farmer's wife" to the *German-town Telegraph*:—

"Take of the best white Jamaica ginger root, carefully bruised, two ounces; cream of tartar, one ounce; water, six quarts, to be boiled for about five minutes, then strained; to the strained liquor add one pound of sugar, and again place it over the fire; keep it well stirred till the sugar is perfectly dissolved, and then pour it into an earthen vessel, into which you have previously put two drachms of tartaric acid, and the rind of one lemon, and let it remain till the heat is reduced to a lukewarm temperature; then add a tablespoonful of yeast, stirring them well together, and bottle for use. The corks must be well secured. The drink will be in high perfection in four or five days. This is a very refreshing and wholesome beverage, and one which may be largely partaken of without any unpleasant results even in the hottest weather."

*Maine Farmer.*

—Mr. J. N. Bagg, of West Springfield, Mass., editor of the *Ayrshire Herd Book*, is about to prepare another volume of that valuable work. It will be issued in the latter part of this year, and breeders of *Ayrshire* stock are invited to forward pedigrees, &c.

## BOTS IN THE URINAL BLADDER.



R. H. L. SMALL of this place has just lost a horse under rather peculiar circumstances. No one in this section ever saw or heard of a like occurrence. The horse lived about ten days from the first appearance of any difficulty, which to all appearance was a stoppage of water. An examination after death revealed the fact that the bladder contained upward of one hundred bots, similar in all respects to those found in the stomach of all horses. They covered over two thirds of the interior of the bladder, sticking tenaciously to it, and in many places having nearly eaten through. The bladder where they had eaten presented a purple hue, but the portion that was untouched looked healthy and natural.

Now we would like to know how these bots obtained access into the interior of the bladder, as the exterior and all other parts of the water passages were sound and whole. Mr. Small has the bladder, together with the bots as taken from the horse, preserved in alcohol, and will Dr. Dadd or some one of the professional horse surgeons answer through the columns of the FARMER the above inquiry.

D. G. SPAULDING.

Brownsville, West Windsor, Vt, May 30, 1870.

REMARKS.—We have examined all the books on veterinary practice to which we could get access; also, the extensive correspondence of Prof. Law, as reported in the New York *Tribune*, and we fail to find a case parallel to the one here described.

Bots are not, as many persons suppose, worms which commence and terminate their existence in the stomach and intestines of the horse, but they are the *larvæ* or maggots of the horse *gad-fly*. Guided by instinct, the female fly deposits her eggs or "nits" on such parts of the horse as are within reach of the animal's mouth—usually upon the fore legs. Here they occasion some degree of irritation, to relieve which, they are seized with the tongue and teeth, and conveyed into the mouth, whence they easily reach the stomach. Subjected to the warmth and other favorable conditions afforded by that organ, these nits are soon converted into *larvæ* or "bots," and fasten themselves to the walls of their temporary abode. Here they feed upon the nutriment contained in the stomach, and, unless disturbed by disease or the action of medicines, remain in these comfortable quarters until the approach of the time for their final metamorphosis. They then detach themselves from the inner coat of the stomach, pass along with the food and feces through the intestines, are ejected from the rectum with the dung, and very soon, (the time being proportioned to the degree of temperature to which they may be exposed,) they are changed into a perfect insect—a full

grown *gad-fly*. Such, in brief, is the history of that little insect, one stage of whose existence is represented by the loathsome maggot called *bot*, and which in this *larva* state is the great humbug of ignorant "horse doctors."

How often, and to what extent, the presence of bots in the stomach of a horse may become a source of disease, is a disputed question. Doubtless they produce discomfort sometimes, and when existing in large numbers, they may occasion serious disease; but the most learned naturalists and the most skilful veterinarians agree in the opinion that they are far less injurious than most persons suppose them to be; indeed, it is well known that they exist in considerable numbers in the stomachs of most horses, at particular seasons of the year, and that without disturbing the animal's health in the least.

The idea that bots gnaw or feed upon a healthy stomach, eating their way through it, sometime, and escaping into other portions of the body, is an erroneous one. The horse's stomach is their natural habitation, and unless disturbed by some unnatural cause, they will not leave it until their appointed time. But this organ may become diseased. By too much food, by improper food, by too much medicine, by improper medicine, or by the operation of some other cause or combination of causes, inflammation may invade the stomach. The horse stamps with his fore feet, strikes at his belly with his hind ones, groans, looks anxiously and frequently behind him, lies down, gets up, lies down again, bites at his sides, and in various ways manifests his intense suffering, and his anxiety to obtain relief. The neighbors assemble; one calls it a case of bots, another calls it something else, and each recommends a remedy. But the animal gets "no better very fast," and a "horse-doctor" is summoned, who, perhaps, possesses a little more knowledge of diseases and remedies than his patient does. Medicines are now administered with an unsparing hand. The doctor shouts "BOTS!" and tries his best to find something *strong* enough to kill the bots, and *weak* enough to save the horse! But the disease progresses—aggravated, it may be, by the treatment; adhesions and ulcerations, more or less extensive, take place; gangrene or mortification ensues; and the poor sufferer succumbs, at last, to the combined forces of dis-

ease and doctor. A *post mortem* or after death examination reveals the presence of bots in the stomach, in the intestines, in the cavity of the abdomen outside of the intestines, and in various other localities; whereupon the doctor looks exceedingly wise, and with the composure that ignorance usually imparts, exclaims: "There! Mr. Smith; didn't I tell you it was the bots that ailed your horse?"

But we are requested to account for the presence of bots in the urinary bladder. Our first thought, on reading Mr. Spaulding's letter, was that our Brownsville friends were mistaken,—that they had been deceived by appearances,—that what they supposed to be bots were some other substance. Stone and perhaps other materials have been found in that organ, but nothing with animal life, so far as we had ever heard. But wishing to consult those better informed than ourselves, and as Dr. Dadd, alluded to by our correspondent is dead, we wrote to a gentleman whose opinion is entitled to as much respect as that of any veterinary practitioner in the State, stating in brief the facts detailed in the communication from Mr. Spaulding. We have been favored with the following reply:—

MESSEURS. R. P. EATON & Co.—*Gents*.—Yours of June 21 came duly to hand and contents noticed. After thirty years' experience in the cure of horses, I can say that I never knew of death being caused by bots. After a certain time nature expels them from the system. The case you speak of—bots in the bladder—is absurd. No such thing could happen. Yours Respectfully,

J. HENRY JENNINGS, Veterinary Surgeon.  
Cambridgeport, Mass., June 8, 1870.

But Mr. Small has the bladder and the bots preserved for exhibition. Mr. Spaulding says they are similar in all respects to those found in the stomachs of horses. Now supposing there is no mistake in these statements, or in the facts and appearances on which they are based, bots were found in the urinary bladder of the horse in this case, if never before. If they were there, two ways occur to our mind by which it is possible they obtained access to the interior of that organ.

First. It is possible there had been active and extensive inflammation of the bladder, which was indicated by the appearance of that organ after death. Ulceration and gangrene followed the inflammation; this, also, is evident from the appearance of the organ. Such extensive inflammation, ulceration, and gangrene would, almost necessarily, involve adja-

cent parts—especially that portion of the intestines which lies near to the bladder, and *adhesion* and *perforation* of the several parts involved would very naturally occur. In this way an opening might be made between the intestinal canal and the bladder, which could not easily be detected, except by the careful dissection of the parts, made by a person who expected to find such a thing.

Second. By some unaccountable perversion of instinct, the female fly might have deposited her eggs at the extremity of or within the *urethra* or pipe which conducts the urine from the bladder; and when hatched, the maggots might have found their way along the urethra, through the *sphincter*, or that band of muscular fibres which surrounds and closes the neck of the bladder, and finally into the bladder itself. We have known beans, peas, pebbles, and other small articles to be passed into the human bladder; and why might not a little maggot find its way into the bladder of a horse? The chief difficulty in the case seems to be in the number of bots found. We can more easily believe that a small number of these creatures might travel this road, than that a hundred or more of them should do so. This is a pretty severe tax on our credulity.

But supposing the bots to have obtained a lodgment in this unnatural tenement, the questions then arise, how did they live there? how did they resist the usually deleterious effects on animal life of the contents of this organ? This is something for which we are unable to suggest even a possible cause.

#### NOW AND THEN.

"There are none so blind as those who won't see."

A farmer who used to team a good deal on the road to Boston forty years ago, said to us the other day that he formerly took many barrels of cider into that market. His load was made up of barrels, each including cider and barrel, weighing 300 pounds; in all 2400 pounds. Distance, twenty-five miles.

To haul this load he had *four oxen* and *one horse*, and it was load enough for them.

"Now," said he, "we take 3000 pounds of hay, or other product, over the same road with one horse!"

"Why this difference?" we inquired.

"Because," said he, "the team was a *meadow hay team*, small, poor and weak, compared with the team I drive now. The wagon went hard, because it was not made right; it was too heavy in some parts and too weak in others, and did not

run stiff and strong over the road. When the wheels struck a stone the wheel oxen would be jerked to one side or the other, so that there was a continual wiggle with wagon and team. The roads were bad, and altogether it was a considerable of a job to get *eight dollars*, all that the whole load brought."

In conversation with another farmer the other day, he said "there had been no improvement in the plough for the last forty years," although he ploughs two acres now with a pair of horses, in about the same time that he ploughed one acre, forty years ago, and does the work much better. There certainly is truth in the old adage, that "There are none so blind as those who *won't see*."

**EPPING, N. H. FARMERS' CLUB.**—In a note accompanying the abstract of his address, published on another page, Mr. Harvey says that the North River District is the nucleus of this flourishing association, and is, perhaps, the most wealthy and energetic agricultural portion of the town. The owners of these well cultivated farms, and of the fine buildings which stand upon them, are, without any exception, holders of government bonds, and other evidences of invested capital, all accumulated by themselves or their predecessors by farming; and yet some of these men join in the common assertion that "nothing can be made at farming!" To the progressive and believing farmer the growing interest in farmers' clubs, and the increasing readiness of the conductors of the local public press to publish agricultural matter, is most encouraging and hopeful. Though farmers are busy with hard work at this season, they will observe and note facts which may be used next winter when they meet with their neighbors to talk over matters connected with their business. Those who attended such meetings last winter, will perhaps be surprised by the frequency with which they will be reminded, while at work, of something that was then said, or of something that might have been said, at those discussions. In quickening the power, or improving the habit of observation, one of the most valuable results of farmers' clubs will be experienced by every member.

**TOMATO FLY, NOT WORM, POISONOUS.**—S. Haynes, M. D., of Saranac, N. Y., details in the *Plattsburg Sentinel* the particulars of the poisoning of one of his patients by a green fly. The insect has a long bill and legs something like a mosquito. He was handling over some tomatoes that he had just gathered, when feeling pain in his forefinger he brushed off a fly. The pain continuing, he soaked the finger in kerosene and in turpentine, which gave relief. On handling the tomatoes again, he saw the same or a similar fly alight on his thumb, and he watched its operation. He says, "the part where the bill was planted began to burn and feel very disagreeable, and shooting pains extended up the arm, and finally the thumb

swelled as large as three or four thumbs, and the swelling extended to the whole hand and arm and glands in the hollow of the arm, and finally, the pain extended to the head, particularly on the side of the injured thumb, and the side of the body became affected." After twenty-one days he had not fully recovered.

Dr. Haynes believes the stories of the poisonous effects of the tomato worm to be founded on facts; but that this fly, and not the worm, is the fact to be guarded against. The experience and observation of others are solicited.

**THE AGRICULTURAL HORSE TROT A PRECEDENT.**—In the discussion in the Massachusetts House of Representatives on the Governor's veto of a bill to legalize horse-racing, Mr. Woodbury urged that it was unfair that tracks near the city of Boston should not be allowed to offer prizes for trotting horses as well as the little tracks in the interior of the State. Mr. Sweetser, of Lowell was still more explicit. He said that "the same thing which this bill sought to legalize, was already done under the cover of law by agricultural societies. Purses were nominally offered by the societies, but were really made up by the men who entered their horses." It is certainly a little curious that the presence of a few bulls, cows, sheep and pigs, should legalize prizes and purses, betting and gambling on Fair grounds in the country, which are considered detrimental to public morals at the race courses near the city. This distinction, however, is a compliment to the managers of agricultural fair grounds. The law allows them to do what it forbids being done by jockeys. Hence, for the savor of respectability, our law-abiding citizens hold agricultural "meetings" and "fairs" instead of "horse races," and multitudes attend the "Show" to see the "Race."

**CEMENT WATER PIPE.**—The injurious effects of lead on water has caused much inquiry for some practical substitute for this metal in conducting water, intended for domestic purposes. Mr. N. Reed of Dutchess County, N. Y., writes to the *Country Gentleman* that hydraulic cement is extensively used in his section, and is preferred on account of its freedom from all poisonous effects, its durability, cheapness, &c., to lead, iron or wood. An inch and a quarter pipe was laid from a spring to his buildings a distance of 120 rods for \$144 for the pipe,—less than seven and a half cents a foot,—the whole cost of digging, covering, and including some iron and lead pipe, &c. for pentstocks, &c., was \$238. He says its durability must be indefinite, as it grows harder for several years, till it becomes as solid as stone; but if broken by accident it is easily mended. The best Rosendale lime should be used, and the work should be done by one who understands the business.

—Minnesota has 66,000 less sheep than it had two years ago.

## EXTRACTS AND REPLIES.

## THE SEASON IN WESTERN MASSACHUSETTS.

The wet, lowry weather of late has been favorable for grass, and the prospects for a fair crop of hay are more flattering. Corn has come up well, but its growth and perfection will depend very much on the weather during the summer months. Not the usual quantity planted in this section. Broom corn looks finely for this season of the year. Onions have come forward rapidly, but the maggots are destroying them to some extent. Strawberries are being gathered for market. Apple trees are fruiting well and making a vigorous growth. Shall we mulch them? Early peas will soon be ready to pick. Can they be packed for market in anything better than barrels? Raspberries are looking first-rate, and with favorable weather will ripen about the first of July. Shall we send them to market in boxes or baskets? Farmers here are amusing themselves by hoeing corn and weeding onions—being firm believers in thorough culture. W.

*Sunderland, Mass., June 13, 1870.*

REMARKS.—Mr. Pierce of Arlington, Mass., who has raised good crops of apples yearly during all the many past poor fruit seasons, ascribes great virtue to mulch. On another page of this number you will find an article on the subject by an experienced fruit cultivator.

Most of the small fruit raised in the vicinity of Boston comes to market in boxes; that from the south in baskets. We think the baskets are gradually taking the place of boxes.

## THE CURRANT WORM.

The currant worm attacked my bushes last fall and damaged them badly, and this spring they began early. I met them with a determination to conquer and have finished the war. Of the various remedies I used it is useless to speak, but they were many. At last I tried the poke and that finished them. I had about thirty rods of bushes, and I boiled a bushel of the roots and applied it with a force pump, and I found it to be a specific, though more than one application may be required, and now the foliage begins to look healthy. If it is not too late you can give the remedy and warrant a cure to all that will apply it faithfully.

E. W. ORMSBEE.

*Montpelier, Vt., June 14, 1870.*

REMARKS.—We regard this as a very valuable communication. White Hellebore, Carbolic acid preparations, &c., which have been used and recommended by "book farmers" and chemical men are somewhat costly, some of them rather dangerous poisons, and on many farms cannot always be immediately obtained. Poke roots are a home-grown material and can be had at any time on most farms for the digging. And if a decoction of them proves destructive to these insects, the public will thank Mr. Ormsbee for his perseverance in the experiments which resulted in his discovery.

Mr. Ormsbee says his bushes were injured last fall. This is an important fact, as the currant worm appears in the spring, and then again later in the season. We wish he had stated at what time they commenced their fall operations. Mr. Riley, editor of the *American Entomologist*, pub-

lished in St. Louis, Mo., says in that section the second brood bursts from the cocoons of the first brood about the last week in June or the first part of July, or occasionally not until the beginning of August. Probably they appear later further north. A correspondent of the same paper, living in Canada, says that after a brief absence he visited his garden on the 19th of August, and found the worms were again stripping his bushes. This second brood must therefore be fought as well as the first.

The *Entomologist* says the first brood appears in the spring. The fly deposits its eggs along the principal veins on the underside of the leaf. From these eggs worms with eighteen, twenty or twenty-two legs soon hatch, with black heads and many black dots on their bodies, but after moulting for the last time they are entirely of a grass green or yellow color, except large eye-spots on each side of the head. After attaining their full growth of full three-quarters of an inch, they burrow in the ground or elsewhere, spin a thin oval cocoon of brown silk and assume the pupa state, from which the perfect saw-fly again come forth, as before stated, in July or August. These go through a similar process and furnish the army which appears in the spring. Hence it is not yet too late to publish Mr. Ormsbee's remedy, as the second battalion will need a dose of poke.

Currant worms of other kinds have always been known in this country. But the one that is now making such sad havoc is a foreigner, that landed on our shores only about a dozen years ago.

## TURNING FARMER.—BUYING AND HIRING FARMS.

As you are always ready to answer all reasonable inquiries, I take the liberty to ask your advice. I am a journeyman mechanic, and a constant reader of your valuable paper, and as close confinement indoors injures my health, I desire to go into the country and own a few acres of land near some good reliable market. Now I have not capital to amount to more than six or seven hundred dollars, which I want to invest to the best advantage. If I buy I shall be obliged to pay my small capital down, and then have nothing to commence farming with. Would it be possible for me to lease a small place for from three to five years, with the privilege of buying at the expiration of said time, or before, and what had been paid as rent be added as so much toward the purchase? What do you think of the suggestion, and how shall I proceed to find such a place, providing such terms can be had. A MAINE BOY.

*Boston Highlands, Mass., June 12, 1870.*

REMARKS.—You are a journeyman mechanic, but on proposing to change your present business for that of farming you think of assuming at once the character and responsibilities of "boss." We are entirely ignorant of your qualifications for that position. When landsmen turn sailors, they seldom make their first voyage as Captain, however small the vessel. When farmers turn mechanics, they seldom buy a shop to begin with. And the same is true of men generally who engage in a new business. Why farming should be an exception to the general rule, we do not know,

nor do we think it is safe to assume that it is an exception. If you do not understand farming, if you have yet to learn the trade, we think it would be better and cheaper to commence as an apprentice or journeyman under the instruction of some good workman who understands the particular branch of farming that you prefer. The idea that anybody can be a farmer is just as true, undoubtedly, as the assertion, sometimes made, that anybody can be a musician, a mechanic, merchant, &c. No one can be either only by learning how. And in learning farming an instructor or master is just as beneficial and necessary, as in learning any of the mechanic arts, any of the professions, or any of the fine arts.

Farms can be purchased on almost any reasonable terms, in almost any section of the country. And we can think of no better way for you to proceed to find a place to suit you than to invest your money safely, go to work as a journeyman farmer in such location as you fancy, and as you work, and learn, and establish a reputation, keep your eyes and ears open for the best opportunity for a permanent location. It is by no means uncommon that farms, or at least land, can be hired for a few years for a much less rent than the interest on the sum asked as purchase money. Still there may be a shorter cut, a more royal road to farming, but we think the experience of journeymen mechanics, retired merchants, professional men, &c., who have tried these by-ways, fully justify the caution, "NOT SAFE TO TRAVEL," especially by those of small means.

#### DEATH OF A CALF BY CONVULSIONS.

Did you ever hear of the death of a calf from a fit? I had a beautiful Jersey heifer calf, about four weeks old. It had been taken from the cow at four days old, and learned to drink milk, from which part of the cream had been taken. It seemed to be doing well. I had hitched it out on a plot of grass several days, for a few hours at a time, which it seemed much to enjoy. I led it into the stable about six o'clock, apparently as well as ever, but it immediately began to be agitated and convulsed; to turn round and round; to jump, throw itself down, then up, then against anything that happened to be near, with great violence; to bellow, froth at the mouth, &c., &c. In this state it continued without change, only as its strength was gradually exhausted, till it died in about 30 minutes from the attack. I can hardly think that an animal dying of hydrophobia could suffer more. Have you any knowledge of such a case?

The cow had been out to pasture little more than a week, had been sick one day, five or six days before the calf died, from eating "Indian poke," as we had reason to believe. Could the calf's death be attributed to anything the cow had eaten? Now, Mr. Editor, I don't want you to guess about it, but if you or your readers know anything bearing upon my inquiry, please let us know it.

Mechanic Falls, Me., May 30, 1870.

Z. T.

REMARKS.—The death of this calf was caused by convulsions. Convulsions consist in involuntary contractions of the muscles; and when the muscles of respiration are so much affected

as to render that function impossible, the subject dies. The cause of this muscular affection is a disturbance of the nervous system generally; and this may be caused by injuries of the head, or of the back; by a wound of one of the larger nerves; by overloading the stomach, and by taking poisons into the stomach. Sucking calves, pigs, lambs, and other little brutes, like "nursing" babies, are easily, and sometimes fatally affected by substances taken into the stomach of the mother. So much we "know"—we "do not guess about it;" but, in the absence of sufficient knowledge of the facts in this case to do any better, we must be allowed to make one "guess."—We guess that the convulsions, of which this calf died, were caused by "Indian poke," or some other poison, eaten by the cow.

#### THE SEASON IN CANADA.

We have had a very dry spring. Work commenced rather later than usual, but the land was in prime condition, and seed was put in about as early as common, although there was much *croaking* about the "backward season." Fruit trees were in blossom a week or ten days earlier than last year, and vegetation generally was quite as forward as in several years past. But the severe drought of the last month, injured grass on old fields and grain on clay or gravelly soils. In forty-five days from the 25th of 4th month to 8th inst., inclusive, only *three-quarters of an inch* of rain fell in this vicinity. The weather was warm, and a part of the time hot. The 31st of last month the mercury rose to 82° in the shade, and to 90° the 4th of this month.

But the spell is broken. The 9th was showery, and the 10th it rained moderately, and quite heavy in the night. The ground is well watered now, and if rain continues to fall frequently, crops will yet be fair, though I think barley must be light.

The prospect for fruit is pretty good. The curculio is very abundant, and the currant worm is very destructive. Powdered White Heltebore is an antidote to the latter, but I neglected to apply it in season on some of my bushes. I put it in a pepper-box, and sprinkled it on the leaves. No matter whether it touches the worms or not, they will leave. I have never known any one poisoned by using currants from bushes that had been so treated.

A great many curculios have been caught here by jarring the trees, and it is found quite as necessary to jar them in the evening as in the morning. One of my neighbors has procured a prize of ten dollars, offered by the Canada Fruit Growers' Association for 1000 curculios. GRANITE.

Bloomfield, Ontario, 6th mo., 13th, 1870.

#### RIPTON, VT.

Ripton is a rough and stony town, situated up among the Green Mountains, which surround it on all sides, seeming to shut it out from the outer world. Still it can boast of no grand mountain scenery, picturesque views, &c., but it can truthfully claim a good soil, which, under a judicious system of cultivation, yields large returns. Many of its farmers now successfully compete with those of the fertile valley of Otter Creek, in amount of crops. The owners of these valley farms, however, give their attention entirely to farming, while with us a large portion of the farmers devote much attention in the winter season to lumbering and wood drawing; business which occupies their

thoughts and employs their labor, but instead of being a benefit to the town, is directly the reverse. They would, in my opinion, make much more money in taking good care of their stock and getting their year's supply of wood, which too many of them, in consequence of engaging in lumbering, neglect. But a new interest has been awakened in farming. Many are cultivating their land better, keeping better stock and raising better crops, and are thus adding much to the real wealth of the town. Mowing machines and horse rakes are being introduced, which, although the land is somewhat rough and uneven, are doing good work; and, in short, a great change is going on in all the departments of agriculture. Farmers are laying aside their old ways and adopting better, which may be attributed partly to the NEW ENGLAND FARMER and other agricultural papers. The FARMER is a welcome Weekly visitor in my father's family, where it is highly prized. It is also taken considerably throughout the town. C. E. G.

Ripton, Vt., 1870.

#### "LEARNING TO SPELL."

The brief remarks on this subject, in a recent number of the FARMER, were timely, especially those relating to the influence of some of the comic writers of the present day. What the influence of such orthography must be, unless sedulously counteracted by parents and teachers, no one can doubt. Now, if ever, the guardians of the young should see that this branch of education receives due attention.

It is a good plan for children to write the words of their spelling lessons, and also to be in the frequent habit of writing letters and compositions; for many who are fair oral spellers are, in writing, as likely as not to misspell every word in which a mistake can possibly be made. But in order to do this, they must learn to write much earlier than they usually do. Indeed I know no reason why children should not commence writing when they enter school. It would take up their time and attention, and be a pleasant change from the inevitable picture drawing with which they continue to while away so many of the tedious hours. Besides, they would feel that they were doing something useful; a very pleasant thought to most children, let us remember, whether at home or at school.

It would be quite an improvement in many schools if the pupils were required to pronounce each syllable as it is spelled, instead of running through the entire word before stopping. This has been strangely neglected of late years, and it is quite time to return to the former practice.

But our schools, however long continued and expensive they may be, do not obviate the necessity of home instruction, in the elementary branches at least. This alone can restore that individuality which is in a measure lost in the class system. Parents who are interested in the progress of their children, may find abundant opportunity of facilitating that progress, without the formality of set lessons. In spelling, especially, the chances for instruction are constantly recurring. Children should learn to spell the names of every house and farm utensil, of every tree, shrub and flower which they see; of animals, of ordinary diseases, and so on, *ad infinitum*. There are also many little words in common use which should receive special attention, as they are very liable to be misspelled in hasty writing. MATTIE.

#### KING BIRDS DO DESTROY BEES.

I noticed some time ago quite a discussion by the New York American Institute Farmers' Club, on the question, "Do king birds kill honey bees?" This question was decided in the negative by the

combined wisdom of the learned Doctors of that Club.

I have since had occasion to doubt the truth of that decision. Watching a swarm of bees a few days since, my attention was called to the peculiar movements of one of these birds in the immediate vicinity, and by careful observation, I was convinced that he was there for the very purpose of catching the workers as they returned to the hive, loaded with honey, and also that he was succeeding at the business very finely. A few days since, Mr. P. E. Grow of this place, shot a king bird which was flitting about among his swarms, and upon dissecting him, found ten of the bees in his stomach. Now if king birds don't eat bees, how came bees there? J. J. WASHBURN.

Randolph, Vt., June 13, 1870.

#### CRANBERRY WORM.

Several lovers of the cranberry in this vicinity will be much indebted to the FARMER for a remedy to destroy the worm or maggot that infests our cranberries. A FARMER'S DAUGHTER.

South Berwick, Me., June 12, 1870.

REMARKS.—We know of no practicable method of destroying these worms, except by fowage. When these worms make their appearance they are destroyed by letting on the water for a few hours. But as this is impracticable in many cases, we hope the request of "A Farmer's Daughter" will be responded to by any one who can furnish the desired information.

#### REMEDIES FOR THE CABBAGE WORM.

Last season I raised quite a large quantity of cabbages, but as they commenced to head nicely, the cabbage worm commenced its destructive work. Having some air slacked lime on hand, I concluded to give it a trial. I sprinkled it on to the cabbages while the dew was on in the morning and it proved successful in destroying the worm. The worms were soon lying around on the ground dead, and they seemed to turn to a whitish color. The lime does not injure the cabbage, and I hope it will prove as complete a remedy with Mr. Sowles and others as with me. J. B. HOLTON.

West Charleston, Vt., June 13, 1870.

In reply to a request in the FARMER for information about destroying worms on cabbages, I will say that last year they were very numerous on my cabbages and almost destroyed them before I did anything. I then turned on each head about one pint of water once in three days, and at the same time sprinkled it over with black pepper. It drove them all off, and my cabbages headed and did well. N. HALL.

Canaan, Me., June 11, 1870.

#### A PRECOCIOUS APPLE-TREE SPROUT.

Two years ago, while cultivating corn, I broke down one of my apple trees. From its roots a sprout has grown in two years which is one and a half inches in diameter at the but, five feet in height, and this spring it had several blossoms. Can you or any reader of the FARMER tell me how to destroy apple-tree worms? HIRAM NORTON.

Addison, Vt., May 23, 1870.

#### CAUSE OF DRY ROT IN POTATOES.

I have made some inquiries as to the cause of the dry rot in potatoes in cellars this winter. I found two persons who were not troubled with it, while their neighbors who raised the same varieties of potatoes, were losing theirs. Both of these

persons kept a cellar window open to air their cellars and to keep them cool; shutting them only in coldest weather, when there was danger of freezing. So I concluded that too warm cellars and bad air have much to do about rotting potatoes. If this is the cause thousands upon thousands of bushels of potatoes might have been saved this winter. One person says the cellar to keep potatoes must be dark, cool and well ventilated. I hope others will inquire into the cause and give us their conclusions. B. LIVERMORE.

*Enfield Centre, N. H., April 10, 1870.*

#### TO KEEP CROWS FROM CORN.

The recommendation in the FARMER of lines to keep crows from corn-fields, reminds me of my experience with them crossed all ways; also, with images, old boots, shingles, strips of white cloth, paper on rocks, &c., all of which have proved to be useless with me. The best thing I ever tried was to take into the field an empty barrel, a spoonful of powder, a piece of paper and a match. Place the paper on the ground, pour the powder on the paper, covering most of it with dry dirt, light the paper as a slow match, invert the barrel over the powder, and hold it till about two minutes after the flash, then right up the barrel, and it will give off a stench for a week or two that is so offensive to the corn pullers that they will keep their distance. SCRIBBLER OF THE BUSH AND BRIER.

*Milford, N. H., June 1, 1870.*

#### KILLING APPLE TREE WORMS.

I kill them in an old-fashioned, but a very good way, and as they are more than usually plenty this season, a description of it may be of use to some one. Take a pole suited to the height of your trees, tie a small swab on the small end and saturate the swab with water to prevent burning. Then dip the swab in spirits of turpentine, or alcohol will do, if you can get such as will burn, (?) touch the swab to some live coals or match, and apply it to the nest. If those that are not killed gather and spin a new web, apply again. It will cost but a few cents, and, if you have no better way, try it and save your fruit. C. B. FISK.

*Brookfield, Vt., June 4th, 1870.*

#### CURRANT WORMS.

By sprinkling my bushes twice with an ordinary waterpot, one table spoonful of White Hellebore to a gallon of water, I have killed all the worms on my bushes, which are now looking finely. On a row of currants ten rods long I used half a pound of the Hellebore, which can be obtained of any druggist. JOHN WAYLAND.

*Stoughton, Mass., June 3, 1870.*

#### MARKETING WOOL---WOOL HOUSES.

For five or six years past commission houses have secured the handling and sale of a large proportion of the wool clip of the country. The theory upon which they claim to do business is a good one. They claim that by aggregating the clips of large districts in one city, or one house, buyers are more certainly attracted; and that by assorting the farmers' wool into the several grades sought by different manufacturers, and also by keeping it uniform as to condition, a better price can be obtained for it, than the grower can hope to get at home. A very fair basis for an honest business, as any one will readily admit; but

somehow or other the wool houses have become unpopular with wool growers. They find that manufacturers, who generally are shrewd business men, have taken advantage of the opportunity, and dropped into these wool houses about once a month, and sometimes oftener, and bought their stocks in small installments, instead of taking a year's supply at once, as formerly, thus in reality forcing the growers to carry the manufacturers' raw material until such time as the latter was ready to pay for it and work it up. No one could find fault with either the manufacturer or middle-man for this; for the former was only doing what any business man would do—using all honest means to make his business profitable—and the latter could not rightfully be blamed for not selling wool faster than buyers would take it. But the result was that the grower generally waited for his money from three to nine months—and then was called upon to pay a neat little bill for storage, insurance, &c., into the bargain.

Other facts tended to render the wool commission houses unpopular with their consignors. Prominent among these is the rule of making time sales. From one to four months' time is generally given, without interest. These time sales require the grower not only to carry the raw material until the manufacturer is ready to use it, but until he has had nearly or quite time sufficient in which to place his goods upon the market and get his pay for them. This feature we deem a fault of the commission men; for until wool houses became so numerous, manufacturers, as far as our information goes, never asked for or expected credit in purchasing their raw material. It is a concession begotten of competition among commission houses, rather than of the necessities of the manufacturer; is an unnecessary hardship upon the grower, and should be discountenanced by such men and firms as wish to be considered as acting in the interests of the producer. We think the experience of a majority of wool-growers is that they are better satisfied with the sales they make themselves, than those made for them by others. This is natural—and herein wool-growers are in no wise different from other folks. Our advice to our correspondents, and others seeking like information, is to put their wools into the best condition possible under the circumstances. If they have a really good chance to wash it, and then can keep it from dust till shorn, we would say *wash it!* If you cannot do it just right, shear it without washing. Put it up well and honestly; pile it in a clean, dry place in the barn or some out-house, and wait awhile for a buyer, keeping yourself well informed the mean time as to the wool and the woolen goods market, so as not to be "caught napping" by a buyer when one comes round. If you need money, and really want to sell when you get a fair offer, take it.

Our advice would be to ship to no man or

house who speculates in wool. The temptation to buy the customer's wool before a rise, and pocket the advance, is greater than a speculator should undergo. When once your property is in the hands of a commission man, make up your mind to be satisfied with the result. There may be obstacles in the way of good sales, that no business tact or ingenuity can surmount. If he does well for you, and you are satisfied, say so. If, on the other hand, you are convinced that your interests have been made subservient to some other man's, let him alone in the future, and see that your friends adopt the same course.

The rapidity with which wool commission houses have sprung up in all our large cities, very clearly indicates that there is money in the business, and may well warrant growers in asking themselves if it is not costing them more to sell their wool than it ought to. Eastern houses charge two and a half to three cents per pound for selling wool, and Western, we believe, invariably charge two cents per pound. Let us work and wait for "the good time coming" when a woolen mill in every county, will furnish the grower of wool a reliable and profitable market at his own door, free from the drawback of six to ten per cent. as commission for effecting sales.—*A. M. Garland, in Western Rural.*

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#### THE AMERICAN IMPROVED SUGAR BEET.

It will be remembered that some weeks since, the Hon. Henry Lane of Orwell, Vt., in reply to inquiries for further information in relation to this variety of the sugar beet, referred to his address to be published in the "Transactions of the Vermont Dairymen's Association," for a full statement of its origin in his neighborhood, and of his opinion of its qualities. We, therefore, make the following extracts from his address:—

When Merino sheep were considered more valuable than they are at present, sheep breeders in Addison county very generally adopted the practice of having their lambs dropped in March, thus requiring, besides hay for the ewes, extra feed for two months before coming to grass. By actual experience we found that no food would produce as great a flow of rich milk, or milk that would grow a lamb as fast as the sugar beet. We first raised the Silesian and the white French sugar beet. These varieties grow almost entirely in the ground, and of medium size. In order to produce a good yield the drills and the plants in the drill must be at about the same distance apart, requiring nearly the same labor in their culture as the carrot, and their weight and food-product per acre was far below an ordinary crop of the variety now raised. The two

beets I have placed on the table, weighing 10 and six pounds respectively, are specimens of the variety now raised in Addison county, this having almost entirely superseded the old varieties.

In 1858, I received from the Agricultural Department at Washington seeds of three varieties of the sugar beet, and two of mangolds. These seeds I sowed separately, gave them good culture, and watched their growth with much interest. At harvesting the crop, the variety sent to me with the name, "*The American Improved Imperial Sugar Beet*," filled my idea of a good beet to raise for stock feeding. The shape of the root, size, yield and quality, I thought was all that could be desired in this root. All that I raised that season of this variety were carefully saved for seed, and set out the following spring. From the seed thus raised I sowed, and furnished my neighbors seed, to sow side by side with the Silesian and white French varieties. After various trials the old varieties were discarded, and this has come into general cultivation. This is the only variety now raised in Cornwall and vicinity. It is such a decided favorite that I have often heard farmers say, that they would rather pay five dollars per pound for seed of this variety to sow, than to raise the common varieties, even if the seed were given them.

The cheapness with which they can be raised, and the large amount of healthy, nutritious food raised to the acre, have brought this beet into general use, almost every farmer raising his cellar full of sugar beets to feed, and hundreds of bushels are sold yearly in Middlebury village. Every man keeping a cow wants a load or more of beets to feed during the fall, winter and spring. By great care in selecting for seed, beets that were of uniform shape, fair size, well developed, without forks or lateral roots, and good culture, this beet has been very much improved since its first introduction into Addison county. Yielding, as the root does, with great certainty, a greater amount of food per acre than any other, at less cost, of better quality than the turnip, nearly as good as the carrot for young stock, and better for milk, ready to feed by the first or middle of October, keeping sound through the winter until late in the spring, this root is growing rapidly into favor and general use. Cattle, sheep and swine feed greedily upon it with favorable results in their health and condition. Thus far its cultivation has been attended with very satisfactory results.

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—A writer from Brazil says that you will see no potatoes, no corn, no fields of grain or grass about Rio. The butter used nearly all comes from England, as well as cheese, the flour from the United States, the potatoes mostly from England. Meats, rather than vegetables are the table staples. Rice is used in the place of potatoes.



[Entered according to Act of Congress, in the year 1870, by R. P. EATON & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

## RURAL ARCHITECTURE.

BY GEO. E. HARNEY, Cold Spring, N. Y.

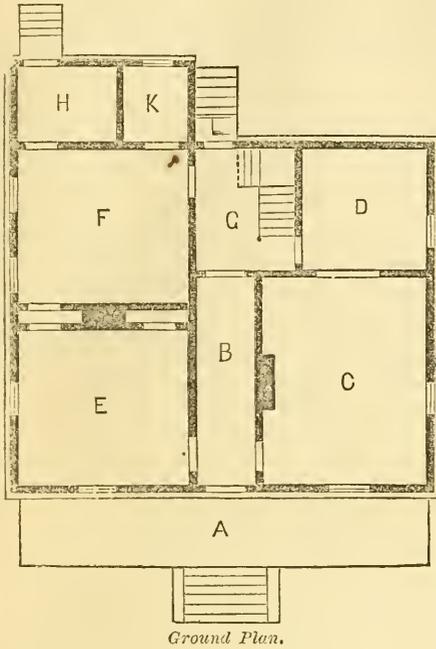
DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

### No. 4.—A PLAIN TWO-STORY HOUSE.

This is a design for a very plain, simple and economical house, containing eight good sized rooms, four in each story, with a low garret under the roof and a good cellar under the whole house. The entrance is in the centre of the front, by a veranda marked A, which extends across the whole width of the house. The house is raised up about five feet, and is surrounded by a banking. The entry B, is five feet wide, and on the right is a pleasant parlor C, which measures fourteen by eighteen.

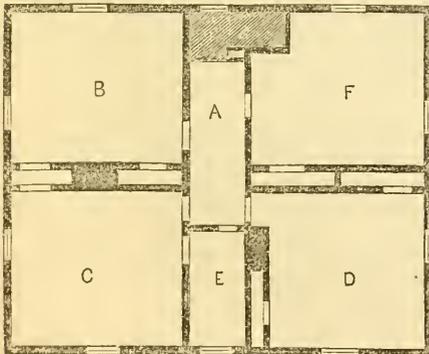
Opening out of it by double doors is a room D, ten feet by ten and a half, designed as a library, to be used in connection with the parlor whenever desirable. This makes virtually one room twenty-eight feet long, an arrangement very well adapted for entertainments. E is a dining-room fourteen feet square, and F, a kitchen thirteen by fourteen. They are connected by a small passage at the side of the chimney, and on the other side of the chimney is a china closet for the dining-

room. At G, the staircase is located—in a central position and convenient to the whole house, yet sufficiently retired for private use. A door leads to the yard at L. H is a large



pantry or wash-room opening from the kitchen and having communication with the yard. K is a large store closet.

In the second story the head of the staircase leads to a hall five feet wide, and from this hall open the several rooms. They are all the



same size—thirteen by fourteen—and each one has a closet attached; the small room E, over the front of the hall, is a dressing-room belonging to the chamber C.

This house is designed to be built of frame, boarded and clapboarded on the outside, and the roof covered with shingles. The dimensions of the main part are thirty by thirty-five feet on the outside of the frame, and the small rooms H and K are in a one-story leanto. The stories are nine and a half feet high. The cellar has a stone wall up to the top of the banking, and above that, a brick underpinning, which should be painted some dark color corresponding with the darkest color of the trimmings of the house. The inside finish is of the plainest description.

This house may be built for \$3500.

**CLUB-FOOT IN CABBAGES.**—A. G. Peabody, Machias, Me., writes to the New York Farmers' Club, that Club-foot is caused by worms which devour the small fibers of the root of the cabbage plant. These worms come from eggs which are laid at the point where the plant touches the ground, just beneath the surface of the earth, by a fly like the house-fly. Any one, by scraping away the earth a week after the plant is set, can see the eggs. A sure remedy is to put a tablespoonful of air-slaked lime around the cabbage plant when it is set out, and cover it with a quarter of an inch of pulverized earth. The fly lays the egg in the lime, and the egg, being moist, absorbs the lime and is killed. If the worm is once hatched it dives into the ground, and is then out of reach of any remedy.

Mr. R. G. Kimer, Penn Yan, writes:—I never fail in cabbage. My plan is to set the plants in a hollow, such as a wash-bowl pressed in soft earth would make; give them good cultivation, and keep the soil in the same shape, always dishing around the plant. My reason—the stalk of the plant will be shaded, the top will conform to the shape of the place where the plant is set, the leaves being upright, the more readily conveying the dew directly to the roots, thus supplying itself with moisture daily.

**KEEPING HAMS AND BACON FOR SUMMER USE.**—I give you the method which my wife adopted several years ago, and which I find to be the best I ever saw tried, viz:—Cut the ham in slices of proper thickness, fry it just enough to get the moisture out of the lean, (or about half cooked,) then lay the slices into a stone crock and pour the fat over it which has been fried out; add enough melted lard to cover the meat and set away in a cool cellar, keeping it covered. Take it out as wanted and finish cooking. This method may not be new to many of your readers, or perhaps most of them know of better methods.—D. B. Cornell, in *Country Gentleman*.

## SELECTING SEED WHEAT.

Mr. Fruit tells, in the *Prairie Farmer*, how he obtained the "Early May" wheat, a very good variety, equal to any, even that which is being advertised at a dollar a pint by the seedsmen.

Being in a wheat field at harvest time, he noticed some heads that appeared riper and sounder than the rest, and got leave to go among the standing grain and select such heads as he chose. He soon made a collection of heads, riper, sounder and better developed than the mass of grain in the field. This he sowed, and has produced what seems to be a new variety of fine, heavy early wheat, which he warrants with fair treatment to yield from twenty-five to thirty bushels to the acre.

This reminds us of a story that is told of the Chinese emperor who, noticing a stalk of wheat growing in a field, taller and riper than the rest of the field, caused it to be gathered and planted, and its produce cultivated. He thus introduced a finer variety than had hitherto been grown in China, greatly to the advantage of his people.

These instances simply show the advantage of selecting good seed, a matter that receives much less attention than it deserves, and is as applicable to all other grains as to wheat.

When wheat is cultivated in the drill it is easy to go through the field and select the ripest, largest and soundest heads. A few quarts of such seed, carefully preserved and cultivated—as of course it would be—would soon produce a marked effect in any neighborhood. Any farmer who will follow this practice of gathering the best heads in his field would soon make for himself the reputation of having the best seed wheat in his neighborhood, which would be a small fortune for him, and the influence of his example would render him a public benefactor.

The practice of selecting the best ears of corn for seed, which has long been pursued by New England farmers, is doubtless one reason why the corn crop in our less favorable climate and soil equals or even surpasses the average crops of the corn States at the West, where they dip into the corn bin and use the average corn for seed.

The time for selecting the best heads of wheat is now close at hand. How many farmers this season will devote a few hours to

selecting the best heads of wheat for seed the next year?

**CHEESE FACTORIES IN MICHIGAN.**—In giving an account of a visit to a cheese factory in Farmington, Oakland county, the editor of the *Michigan Farmer* says, it is the first institution of the kind established in that part of the State. Milk is delivered at the factory night and morning,—the practice of delivering it only in the morning having proved unsatisfactory. About 2300 pounds of milk are received daily, and one pound of cheese is produced for each ten pounds of milk. A branch factory has been established near by, and another has been built in North Farmington. From a personal acquaintance with the farms of this section when they were more than thirty years newer than they are now, we agree with the remark of the editor that "there is no good reason why the very best of cheese cannot be made in Oakland County, Mich., as well as in Chautauqua or Herkimer, N. Y." The same remark might be made of many other counties in many other western States.

**THE WIRE WORM.**—There is much complaint this season of the wire worm destroying the corn. Especially is this true in the West. Some whole fields, especially where the soil is black and rather moist, are almost entirely destroyed. The experience of many years has taught us that a small quantity of plaster dropped into the hill with the seed corn is an effectual remedy. It may be used also in the following manner, when it becomes as effectual against the crows as against the worms: Soak the corn a few hours in water, then drain off the water and stir in dry plaster until every kernel is coated with it. The crows do not like plastered corn, and will soon leave it. Plaster also is as effectual in keeping the wire worm from potatoes. They are apt to attack potatoes in moist soil. A small handful of plaster in the hill will ensure smooth-skinned potatoes, free from the scarifications of the cut worm. The remedy is simple, cheap and effectual.

**CORNELL UNIVERSITY.**—This institution seems to be popular with the wealthy men of New York, perhaps on the principle that to those who have shall be given. Hon. William Kelley of Rinebeck, and two other good friends, as we learn by the *Ithaca Journal*, have given it \$42,000 in cash. This will be applied to the library. Mr. Gerrett Smith has also made a very handsome gift of scientific works to the University.

**HEREFORD CROSSES.**—A few weeks since our cattle market reporter noticed a superior lot of steers raised by Mr. F. W. Stone, of Guelph, Ontario, and sold at Cambridge by Mr. J. C. Hamilton. A correspondent of the *Country Gentleman* who saw them at home, but after they had been sold,

says that the Hereford cross on grade and common cattle is becoming very popular. Mr. Stone informed him that the butchers are always glad to get these grades at extra prices. They have very thick backs, and their flesh is firm and rich-flavored. Those at Cambridge were sold at the highest price paid that week for any cattle, to W. E. Gowing, and we understand that their offal was only 28 per cent. of live weight.

**SALE OF PERCHERON HORSES.**—At the late sale by the Massachusetts Society for the Promotion of Agriculture, at the Buzzy Farm in West Roxbury, the following stock was disposed of by auction:—

Stallion Orleans, 10 years old, imported in 1864 by the Society, for \$700 to A. H. Seabury of New Bedford; stallion Napoleon, 5 years, old, for \$1000 to W. A. Woodsworth of Boston; imported mare Empress, 10 years old, in foal to Napoleon, for \$630 to Francis Dame of Boston; a three-year-old filly, from Empress by Orleans, for \$450 to the same; a 2-year-old, filly out of Empress by Conqueror, for \$380 to the Society; the mare Sultana, in foal to Orleans, for \$110 to J. H. Stone of Boston; a yearling filly, out of Sultana by Napoleon, for \$360 to S. Boyd of Boston, and a gray mare by Conqueror, owned by Mr. T. J. Coolidge, for \$500 to Dr. Burnett.

#### AGRICULTURAL ITEMS.

—The State of Maine still owns 768,481 acres of "settling and timber lands."

—One load of grain, amounting to 100,000 bushels, was sent down the Mississippi from Dubuque, Iowa, the other day.

—Washington Territory boasts of an immense cranberry marsh, yielding one hundred thousand bushels in a single crop.

—A correspondent of the *Prairie Farmer*, who kept his hogs on floored pens, cured a habit they got into of biting each other by feeding them "stove coal."

—It is estimated that one-fifth of the meat supply of Paris is veal. At the commencement of the present century the price of veal was half a franc a pound; it is now three times as much, or one and a half franc.

—F. Copeland, of West Dedham, Mass., sowed a "liberal" mixture of two parts of lime and one of salt on a cultivated field filled with sorrel, and has also used it on a mowing field, and completely killed out the sorrel.

—The Commissioner of Agriculture has prepared for publication a valuable work on the Pleuro Pneumonia, or cattle disease, to be illustrated with micro photographic illustrations of the diseased parts of the animals.

—At a late meeting of the Lexington, Ky., Farmers' Club, Dr. Spurr said he had noticed recently that his hogs were getting sick, and from circumstances, he is convinced that their sickness was caused by sleeping in wet straw. He divided the herd, placing some of them in a distant lot where

they could make beds in dry ricks of straw, and they are now healthy and vigorous. Dry dust and chaff about the stables are about as injurious to hogs as is the wet straw.

—To make a mare own her colt, J. L., in the *Rural New Yorker*, says:—"Take some milk from the mare and rub it on the colt's nose; then let the mare smell it, and she will own her colt at once."

—An item recommending bells on sheep as a protection from dogs, is met by the *Ohio Farmer* with the remark, a neighbor of ours had his sheep chased by dogs when five or six cow bells were borne by the flock.

—The *California Farmer*, "to show what our climate is for sheep raising," says a new thing among sheepmen is reported from Mercer County. A flock of 1300 grade Cotswold lambs, dropped in January and February, have been sheared, yielding an average of 2½ pounds, some few gave 5 pounds.

—The *Northwestern Farmer* says that John Tomlinson, Esq., of Shelby Co., Indiana, fattened \$1,200 worth of pork on potatoes last fall, and pronounces potatoes a cheaper food for hogs than corn. He cooked his potatoes, and the hogs were exceedingly fond of them. It is well known that the potato is rich in starch, and that is the chief element of fat. New England farmers discovered the value of potatoes for fattening hogs long ago.

—H. I. Kimball, Esq., of Atlanta, Ga., has offered to place in the hands of B. C. Yancy, President of the Georgia State Agricultural Society one thousand dollars to be used as special premiums as follows:—\$500 for the largest and best yield of cotton on five acres; two hundred for the best wheat crop, and two hundred for the best grass crop, both on five acres; and one hundred for the best collection of mineral from Georgia soil.

—At a recent meeting of the American Institute Farmers' Club, N. Y., Clarkson Tabor, of New York city, in reply to a correspondent calling for the heaviest beef ever killed, said: "Reunion," sent here in 1866, and fattened by T. H. Tripp, of Dutchess county, weighed 3,795 pounds, and dressed 2,575 pounds. I have been nine years in the live stock market, and I never saw a larger animal, and there is no tradition of a heavier one among our New York cattle dealers."

—The members of a Farmers' Club in Madison County, Ill., took the agricultural statistics of sixteen sections of one town, comprising 10,240 acres. On this land there were 1783 acres of corn, with an average yield of a little less than 37 bushels per acre; 3290 acres of fall wheat, producing nearly 17 bushels per acre. The average yield of oats was a little less than 40 bushels; Irish potatoes nearly 100 bushels; hay one and a half tons. There were over 10,000 apple trees, producing less than one bushel each. There were only 188 milch

cows and 273 sheep on the whole tract, while 2815 hogs were reported. There were 52,618 rods of fence.

—A correspondent of the *Maine Farmer* says that in sowing grain, we commence at one corner of the piece of land that is to be sown, step off three paces, stick up a stake, sow across the piece, step off three paces, set down the pail or basket, step off three more and stick another stake, shift hands and sow back and forward in this manner. If the ground is mellow we can keep our distance by the tracks. Always throw the grain with the wind and down hill if we can.

—A correspondent of the *English Journal of Horticulture* says that he has never found any covering for small seeds equal to short grass mown from the lawn. This is strewn over the seeds to about half an inch in depth, and then the usual watering is given. It soon shrivels and becomes light, so that the plants come through it freely. The birds never attack them, and the crops never fail.

—At a late discussion on making hay, by the Herkimer County, N. Y., Farmers' Club, Mr. Burdick asked if a poorer quality of hay had not been made since the introduction of the mowing machine, up to the time of the introduction of the tedder. The members were decided in their opinion that such was the case. They all believed that the hay, as it lay after being cut by the machine, did not cure as well as when cut by the hand scythe and spread with a fork. Hence they all considered the tedder indispensable where the mowing machine is used.

#### EXTRACTS AND REPLIES.

##### CROPS IN PENOBSCOT COUNTY, ME.—NEW YORK FRUIT TREES.

The crops in this section are looking finely. Grain and grass are about ten days ahead of their usual time. Wheat did well with us the past year, and this spring there was an unusual breadth sown. Our fruit in bloom promised greatly, but the heat of the first few days of this month has caused a bad blight.

There have been some agents here from Rochester, New York, with fruit trees, or rather soliciting orders for them. I wish to ask if such trees will be hardy here? There is a great difference in climate between western New York and Eastern Maine. These agents are obtaining many orders for trees, but I am afraid that we shall be the losers.

*Springfield, Me., June 15, 1870.* EAST MAINE.

REMARKS.—The success or failure of Western New York trees will depend largely on the manner in which the trees have been grown, dug, packed and transported, and on the care with which they are planted and tended. There have been many complaints of trees from this section failing to grow and failing to prove true to name. We should prefer trees raised nearer home, and by those more directly responsible to the buyer. And it would seem that the success of

tree peddlers in disposing of stock produced at so great a distance ought to induce people in places where they are sold to supply the home market. Inferior stock is often disposed of by irresponsible peddlers.

##### GRASSHOPPERS, WHERE DO THEY COME FROM?

Noticing, recently, the small white clusters upon the grass, looking much like spittle, and often called here, and by some supposed to be, "snake spittle," a friend called my attention to the fact, as he maintains, that each one of these clusters contain an embryo grasshopper. To verify his statement, he took several of them in his hand, and opened them, and disclosed the insect to view, which was apparently a young grasshopper. This may be new to some of your readers, as it was to me, and if true, grasshoppers will be plenty in Vermont soon. These clusters have been thought to be poisonous to cattle. If this view of the origin of this insect is correct, I would like to learn more about it. Prof. Agassiz, I saw it stated, once lectured for an hour on this subject. I wish he or some one would tell the readers of the *FARMER* all about the matter.

*Essex, Vt., June 21, 1870.*

REMARKS.—Though all troubles may not spring from the ground, most of our varieties of grasshoppers do, being hatched from eggs deposited there by the mother insect. A few, however, lay their eggs, like the canker-worm grub and caterpillar, on the twigs and branches of trees. But these foaming fellows are not grasshoppers in the ordinary sense of that word. Here is a picture of one of these chaps. There are at least three varieties in Massachusetts. Some of the books call them *Aphrophora*, which being translated means spume-bearers.



Within a few years past this class of insects have multiplied alarmingly in some parts of New England, and seriously injured the hay crop. We know of no subject better worthy of an hour's lecture than that of these snake-spittle, frog-spittle, frothy, spumiferous pests.

##### ORCHARD, WITCH, R. I. BENT, AND KENTUCKY BLUE GRASSES.

Will you please to inform me what Orchard grass is? Is it called by some Witch grass, or Quack grass? And how will it compare with Herd-grass as to value for feed? Would it be a good kind of grass to seed land to that you intended to use for pasture? What is Rhode Island Bent grass and Kentucky Blue grass? How do they look when growing, and what kind of a head do they have as to shape? How do they compare with Herd-grass and Red-top for pasture feed? GEO. C. BIDWELL.

*Rockingham, Vt., 1870.*

I wish to know if Orchard grass makes good hay for sheep. I have some that has come up in bunches about my farm. It grows quite rank and coarse, being about a foot taller than the other grasses; it is early, being full in the blow the fifteenth of June. Is it good to sow with clover? What kind of a sward does it form? Is it bad to plough and cultivate when we want to plough it up? I should think by the way it works in, it would not run out very easily. C. F. LINCOLN.

*Woodstock, Vt., June 20, 1870.*

I have noticed Rhode Island Bent grass seed quoted in your price list. Please inform me as to

its use; where and when should it be used? Will it take the place of herdsgrass? Herds grass seed is so scarce and high that a substitute is desirable.  
Newbury, Vt., 1870. READER.



ORCHARD GRASS.

Enclosed you will find a specimen of grass that appears to be working into my fields. Can you give me its name, and something about its value and character?  
N. C. LUTHER.

Attleboro', Mass., June 21, 1870.

REMARKS.—This is the Orchard Grass, or Rough Cock's Foot—*Dactylis glomerata*. The above illustration is copied by permission from *Flint's Grasses and Forage Crops*, a book that ought to be in the library of every Farmers' Club at least. We also copy from this work the following description of the Orchard Grass: Flowers in dense clusters; stem erect, about three feet high, in good soil sometimes five feet; leaves linear, flat, dark green, rough on both surfaces, which, with the fancied resemblance of its clusters to the foot of a barn-

yard fowl, have given it the common name in England of Rough Cock's-Foot. Root perennial. Flowers in June and July.

Mr. Flint says it makes an admirable mixture with clover, as it blossoms about the same time that the red clover does, but on account of its early ripening it should not be mixed with herdsgrass or redbtop. A Pennsylvania correspondent of the *Country Gentleman* sowed about four acres with orchard grass, clover and timothy. The first year the new grass made a small appearance, the others took well and he had a good crop. The second year there was a good deal of orchard grass mixed with the others, but it was hard and wiry before the clover and timothy were fit to cut. The third year the orchard grass was ripe long before the other grass was fit to cut, and the crop was unsatisfactory, the seed was disseminated in other fields by the manure, where it was standing in bunches, and the writer said he should be glad to be rid of it entirely. This shows the importance of understanding its habits and character, and of proper management.

Another correspondent seeded eight acres of pasture with orchard grass, redbtop and timothy. The orchard grass was two weeks ahead of the other, but he had a fine pasture.

Mr. A. B. Allen of New York has had thirty years' experience with orchard grass. He says it should be sown *entirely alone*, on clean ground, in good tilth, and so heavily that it will occupy every inch of the soil. Then no grass will pay better, either as pasture or for hay. But for hay it must be cut in early bloom. It makes the earliest and latest pasture, and is the most enduring grass he knows.

Some farmers in Kentucky claim that eighty acres well set in orchard grass, and divided into three lots, will feed more cattle than one hundred acres of the best blue grass. Sometimes when the weather is warm and rainy it grows in Kentucky nearly or quite two inches in twenty-four hours.

Mr. X. A. Willard says in the *Rural New Yorker* that "wherever we have seen orchard grass it has given abundant satisfaction. A few years ago we saw on the farm of A. A. Mather, Esq., Burlington, N. Y., seven acres that had been down four years, having been seeded at the rate of two and one-half bushels per acre. The average yield for the four years was stated by Mr. M. at fully four tons to the acre, two crops being taken each year. It stands the drought well." He also suggests its use where daisies abound, as it ripens early, and grows so luxuriantly as to crowd them out.

The *Practical Farmer* says, "an orchard grass sod on being ploughed up is always found to be black and rich. It is a meliorator and improver of the soil."

A field sown with it more than twenty years ago, and which we see every summer, still yields a fair crop of this grass. All stock like it. Sheep, it is said, will pass over every other grass to feed upon it.

The seed weighs only twelve or fourteen pounds per bushel. Early in the spring is considered the best time to seed.

The Rhode Island Bent grass we suppose to be the common redtop of our fields and pastures. If so, our correspondent can judge of the propriety of using it instead of herdsgrass.

The Kentucky blue grass is regarded by Mr. Flint as identical with our June grass; the difference between its growth and popularity in the two sections being in the soil and climate.

#### TALL MEADOW OAT GRASS.

The bunch of grass left at our office last week by C. Clark, Esq., of Stoughton, Mass., is the Meadow Oat Grass, or Tall Oat Grass, described and figured on pages 127 and 128 of Mr. Flint's "Grasses and Forage Plants." It is the Ray grass of France. It is often found on the borders of fields, woods and pastures. After being mown it shoots up a very thick aftermath. It is of an early and luxuriant growth, and has been recommended for soiling. It has been cultivated to some extent in New England, and when once naturalized it grows spontaneously on deep sandy soils.

#### CANADA AND THE STATES.

It is some time since I have written anything for the FARMER, but being in this place on a visit for a few days, and always feeling interested in agricultural matters, and enjoying much the writings of others in the FARMER, I have thought I would just write a few lines, not that I expect to do that justice to its pages that many of my superiors can.

I left home in Eaton, Compton Co., Canada East, last Wednesday. Our season there, after a very mild winter, was, through the months of April and May, very dry, and most of the time cold. After this month commenced the weather became quite warm, but still so dry that we began to fear that there would be a short crop for the husbandman. But on the night of the seventh it commenced to rain, which so refreshed the earth that all agricultural crops bid fair to be as good as the farmer can expect, except the hay crop; that must be far below an average, not altogether in consequence of the drought, but more from the effects of the thaws and sudden changes of the winter, which caused much grass to be winter killed, especially on our richest or most valuable land. Since the rain, the weather has been more or less cloudy and cool. Our season is about two weeks earlier than usual. The state of the crops, as noticed on my way here, as well as at this place, is much the same as in Compton county, Canada, which is some eighty miles further north.

This town, Lunenburg, is said to be one of the most stony towns in the State, but the soil seems to be very strong, and produces bountiful crops of grass and all kinds of English grain. It has been settled about 100 years, and yet retains many of the names and descendants of its first settlers, who seem to be wedded to the land that gave them birth. It is an agricultural town in every sense. Cattle and horses, potatoes for starch, and butter are its chief products for market, and its people seem contented and happy. The scenery here is most grand, lying as it does on the west side of Connecticut river, and extending back in high ridges of land. These high hills are cultivated to the very tops, and from them is seen the valley of

the river, and at the southeast the principal peaks of the White Mountains stand out in all their grandeur and beauty, and the snow that still remains on them gives them a cold yet bright and dazzling appearance.

I must say, Mr. Editor, that I like the country of my birth much better than this section, and I sometimes think it quite strange that people will settle on such rough and stony land as some parts of these New England States are made up of, when such fine, easily cultivated land can be obtained in the section of Canada where I reside. I have travelled considerable in different parts of New England, but I have never yet seen any part of it that will, in my estimation, compare with that section of Canada East, contained in the counties of Stanstead and Compton. And I think now, notwithstanding the duties that we have to pay to sell our stock to American buyers, with the less amount of taxes we have to pay, and with our superior farming land we can make and save more money than our American neighbors. If any unprejudiced person will pass from New Hampshire or Vermont into the counties above mentioned, I think they will see quite as much thrift and more taste than in their own States.

I have written the above without any desire to injure the feelings or prejudice the minds of any. I have always been a friend of the people of the United States, for I believe their prosperity enhances ours, and vice versa. HIRAM FRENCH.

Lunenburg, Vt., June 13, 1870.

#### PICKING PEARS.

The "Flemish Beauty" is the variety best adapted to this climate, and I think it is the only one that is perfectly hardy. It stands our cold winters as well as an apple tree. It is a great bearer, grows large, and is good for the table, and very good for cooking, as it does not break up so badly as many kinds. But I commenced to write about picking. Downing says this variety should be picked before it is quite ripe, for if left to ripen on the tree it loses its flavor and becomes insipid. These are not exactly his words, but the same in substance.

Having two small trees that bore full, I followed his directions, leaving a few to ripen on the trees. The result is exactly contrary to the book. Those left on the tree were very fine, while, those picked first were juicy and eatable, to be sure, but very flat. What is the experience of others?

Bloomfield, C. W., 1870.

GRANITE.

#### TWIN CALVES.

Though I am not able to answer positively the question of A. S. Hathaway as to whether "twin calves make as good cows as those not twins," I do know that we have in our yard a four-year-old cow which we consider a superior animal whose mate was a bull. My advice to any one having twin heifers would be wait and see, as I am disposed to consider the reports alluded to a hoax.

Brookfield, Vt., June 10, 1870.

C. B. FISK.

About twenty years ago, I purchased two twin heifer calves. They proved to be the best cows I ever owned. JOHN BEATTIE.

Grafton, Me., June 20, 1870.

#### "THE AMERICAN IMPROVED BEET."

I have been out this morning at work in my beet yard, and as I labored, I bethought myself of what had appeared in your columns in regard to this beet. I obtained my seed of Mr. Rollins Lane of Cornwall Vt., about three years since, and have cultivated them quite extensively since that time; having now about three-fourths of an acre, all up and looking finely. I have disseminated the seed

widely among the farmers of this vicinity, so that there are several acres under cultivation the present season. I regard them altogether ahead of all other root crops. I have never seen but one person who has grown this variety from seed obtained elsewhere than the town mentioned above. This was a gentleman from Braintree, Vt., who, after a careful examination of specimens, avers that he has raised the same from seed purchased of seed growers. May it not, then, be raised in other localities besides this?

Enclosed are a few seeds which, though rather late in the season, will if sown soon, sufficiently mature to give you a good idea of the variety.

Brookfield, Vt., June 11, 1870. C. B. Frisk.

REMARKS—The seeds were received June 20, and immediately planted. We shall be glad to receive information in regard to the mode of cultivation adopted by our correspondent.

### COMBING WOOLS.

To speak candidly, we consider the *climate* of England better fitted than ours for a rapid and economical development of mutton sheep. There they can have green feed (grass or turnips) off the ground most of the year—not scorched by our long dry summers—not locked up and rendered inaccessible by the frosts and snows of the severe winters of our Northern States. The artificial advantages are also even more in their favor in England. The high price of mutton, the inexhaustible demand for it, the accessibility to markets, the necessity of obtaining manure for grain crops, &c., &c., probably render sheep about or nearly as profitable there as cattle, without taking the wool of the former into account.

Suppose that, owing to natural or artificial circumstances, or to both combined, England can now raise long-wool cheaper than the United States, does that prove that the United States are not fitted to its production.

1. We are yet to learn that long-wool sheep (Cotswolds, Leicesters, Lincolns, &c.) are not, under the same treatment, or we should rather say under correspondingly good treatment, as healthy here as in England. They will not bear herding together in large numbers, or severe climatic exposures, or neglects of any kind here, nor will they in England.

2. We have not a particle of doubt that their mutton, when properly fattened, is as good here as in England.

3. We believe that under good management their wool is as heavy to the fleece and of as good quality here, in every respect, as in England.

4. It is probably true that the demand for mutton, and the all-important consideration of manure in England, renders them more indispensable there; but they now yield a handsome profit here on mutton and wool, to say nothing of the extra one of raising them to sell for breeding purposes. The latter advantage will, of course, diminish as the country fills up with them; but with a supply

properly graduated to the demand, they will always remain profitable while the present wool tariff stands. This would seem to be absolutely inevitable. The relative consumption of mutton is constantly increasing. Our systems of husbandry are steadily improving, and both the necessity and advantage of utilizing manures are being better understood and acted on. Combing wool manufactures are rapidly increasing among us. We believe that the time will come when long-wool sheep will be regarded, throughout extensive regions of the United States, as essential an element to the success of mixed and convertible husbandry as they are in England. They are as essential on the rich producing grain farms, as the Merino is on the grazing farms to be found in every State, and on the broad natural pasturages of the South and West.—*Dr. Randall, in Rural New Yorker.*

### TREATMENT OF BREEDING EWES.

As I have bred Leicester sheep for several years, and have carefully studied their habits, wants, &c., I will endeavor to reply to inquiries for information pertaining to the feeding of Leicester sheep at about lambing time. My idea is that all breeding animals, especially sheep, should be handled and fed with that thing in view long before the lambing time arrives. To begin, I would say have your ewes in good condition in the fall when they come into winter quarters, and then immediately take the ram from among them, as a great many rams, when they get into a small yard with the ewes, will chase and hunt them, which is not only injurious to the ewes, but very bad for their lambs, frequently causing abortion. Next, feed them carefully and regularly; do not allow your feeder to rush suddenly into their yard, making them nervous and wild, but let him approach them cautiously for a few days at every feeding, when they will get accustomed to him and he will be paid for his extra care and trouble. Also their feed should be regular as to time, quantity and quality, and not feed one morning at six, another at seven, and then at eight o'clock, but let the hour be the same every day, whether it be six, seven or eight, and then your sheep will not be worrying and waiting for it, as I can assure you that sheep know when feeding time arrives as well as we know when dinner time comes, and will not be easy until they get it.

If sheep are not in high condition when winter sets in, a little grain morning and night, (say half a pint to each sheep per day,) will be good for them; also some roots at noon are excellent. A mixture of oats and corn is my choice, and they should be of good quality. As lambing time approaches roots should be reduced and grain increased, as too many roots are apt to cause too much milk, which is not so desirable until after the lambs are two

or three weeks old, when the roots can be increased again. At lambing time be sure and make no changes, but feed the same amount, as also the same kind of grain at each feeding. I have seen very bad effects at that time from over-feeding, as also from changing from one kind of grain to another.

At lambing time, above all things be sure and keep your sheep quiet, and it should be the work of one person only, who understands his business, to see to them, as the ewe sometimes needs a little help in lambing; and the lamb, in its first and second nursing.—*Jurian Winne, in Country Gentleman.*

#### POOR AND GOOD TOOLS.

Every man and team on the farm costs me at least \$750 a year; and I question if one farmer in a hundred duly appreciates how much he loses from having poor horses, and in not keeping them in vigorous health and in condition to do a maximum day's work. Do not many of us from having inefficient horses, poor ploughs, dull harrows, rusty cultivators, shaky wagons, and other imperfect implements and machines, lose from one-third to one-half the whole cost of man and team? And besides this, do we estimate how much we lose by getting behind with our work from these and similar causes? I had an old moving machine that I got with the farm that "for the sake of saving it" I used for two years. Directly and indirectly I have no doubt that machine cost me \$1,000! It cut just as well as a Wood's or a Buckeye, but it was a one-wheel machine with a wooden cutter-bar. We split the bar and had to repair it; then we broke the knife and had to take it to the blacksmith shop to have it welded. He "burnt" it, and broke it again. Then I sent to New York for a new knife. This cut off the finger of the only man who knew how to operate the machine and laid him up for several days. The consequence was, we did not get through haying until after wheat harvest. And you can imagine what kind of hay I had to feed out the next winter. Now I have two new mowers that a man cannot break if he tries; and in looking back I can hardly believe that I was ever so foolish as to waste time in tinkering an old worthless machine.—*J. Harris, in Am. Agriculturist.*

#### SUBSOILING.

I have seen a great deal in your paper on subsoiling, but your correspondents acknowledge that they have very little experience in the matter. According to one of them the farmers of Maine have only to provide themselves with a subsoil plough and go into the co-operative system to renovate their exhausted soils. Believe me, these revolutions in agriculture cannot take place thus rapidly. I have had considerable experience in subsoiling, and I never saw it have the slightest effect either in the present crop or improvement of the soil, unless accompanied with underdraining, except in isolated cases. For instance, the lower part of a field that has been constantly under the plough accumulates, by washing, a large quantity of rich soil that has been thoroughly exposed to the atmosphere. On such a soil the writer has seen the subsoiled land clearly defined in the next grain crop. One can easily imagine that clay land naturally underdrained, as underlain with plaster, rock or coal mines, would be benefited by the subsoil plough, but under ordinary circumstances the writer believes that the attempts to renovate a worn out soil by these means without underdraining, would be both a waste of time and money. The writer has been constantly employed in both draining and subsoiling for the last seven years and consequently can speak somewhat advisedly.—*Cor. Maine Farmer.*

GLYCERINE AND YOLK OF EGG.—The Philadelphia *Journal of Pharmacy* has made known a formula for a preparation which is likely to prove valuable for external use. Four parts, by weight, of yolk of egg are to be rubbed in a mortar with five parts of glycerine. The compound has the consistence of honey, and is unctuous like fatty substances, over which it has the advantage of being easily removed by water. It is unalterable, a specimen having laid exposed to the air for three years unchanged. Applied to the skin, it forms a varnish which effectually prevents the action of the air. These properties render it serviceable for broken surfaces of all kinds, particularly erysipelas and sore nipples, and for cutaneous affections, of which it allays the itching.



THE

# NEW ENGLAND FARMER



DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

SEPTEMBER.



SOME persons live long in a short time, while others live beyond the allotted three score years and ten, whose days appear to them as but a span. "How short the month has been!" exclaims one, whose mind has been fully occupied in works of benevolence, in revealing the mysteries of science, and observing the wonderful operations of nature about him. Such a mind has had no heavy moments,

but, buoyant and elastic, has risen from hour to hour into some unexplored regions of truth, pushing aside the annoyances in its way, and expanding with the healthful acquisitions which are fitting it for the skies.

"How long the week has been!" is the responding utterance of another, whose time has been frittered away without labor, or the pursuit of any ennobling object which would impart to it life and vigor. All the works of the Creative Hand show unceasing activity.

The sea recedes but to return again: when it rests it rots; as in the expressive language of the "Ancient Mariner:"—

"The very deep did rot; O Christ!  
That even this should be!  
Yea, slimy things did crawl with legs  
Upon the slimy sea."

The winds circle the globe, bearing nourishment in their breath, and sustain life in all animated beings. Rivers run to the sea, and there, eliminated by the ever-working sun, seek the skies again, and pour their rich treasures again and again upon the thirsty earth. So must it be with man. The inactive mind sinks first into indifference and then to inanity.

It has always seemed to us that "The Seasons," coming each in their allotted time, afford the clearest evidence of the consummate wisdom of the Creator. The wants of God's children, mental and physical, are adapted to the Seasons, and the Seasons to them, else there would be no harmony in them. It was left for man to notice the changing character of each Season, and make a further division into Months, whose peculiarities are as interesting, if not as grand as those of the Seasons themselves.

To the occupied mind, the Months fleet past us so swiftly, that, though we never mistake them while they are present with us, yet the moment any one of them is gone by we begin to blend the recollection of its features with those of the one which preceded it, or that

which has taken its place, and thus confuse them together until we know not "which is which." And then, to mend the matter, when the whole of them have danced their graceful round, hand in hand, before us, not being able to think of either separately, we unite them all together in one imagination, and call them the Past Year, as we gather flowers into a bunch, and call them a bouquet.

"Now this should not be. Each one of the sweet sisterhood has features sufficiently marked and distinct to entitle her to a place and a name; and if we mistake these features, and attribute those of any one to any other, it is because we look at them with a cold and uninterested, and therefore an unobservant regard."

In order to really enjoy the Months, we must be strongly impressed with the peculiarities of each—the weather, atmospheric phenomena, the coming in and going out of plants, animated life about us, in our domestic animals, in insect and bird-life, and the changing sounds which proceed from them at the different stages of their existence. We must "pay equal devotion to each in her turn; the blooming *May* and the blushing *June* disdain the vows of these votaries who have not previously wept at the feet of the weeping *April*, or sighed in unison with the sad breath of *March*. And it is the same with all the rest. They present a sweet emblem of the *ideal* of a happy and united family; to each member of which the best proof you can offer that you are worthy of *her* love, is, that you have gained that of her sisters; and to whom the best evidence you can give of being able to love either worthily, is, that you love all." This should be the manner in which we should regard the Months. They will pass rapidly, to be sure, but will instruct us as they pass of our own and their immortality,—immortal, because ever renewed, and bearing the seeds of their renewal within themselves.

"These, as they change, ALMIGHTY FATHER, these are but the varied GOD! The rolling year is full of THEE."

#### SEPTEMBER EMPLOYMENTS.

O sweet September! thy first breezes bring  
The dry leaf's rustle and the squirrel's laughter,  
The cool, fresh air, whence health and vigor spring,  
And promise of exceeding joy hereafter.  
—George Arnold.

In another column we have spoken of some of the things which go to make September a pleasant month. Now let us call up some of the more severe and practical duties which devolve upon us at this time. A modest suggestion cannot harm the most skilful and careful cultivator, and a walk just taken over the farm prompts us to mention several things which are always best done in September,—some, indeed, which are only appropriate then.

*Sowing to Grass.*—As the grass crop is a leading one with us, it is important always to give it careful attention. Lands that are to be devoted to grass next year may be stocked to great advantage early in September. Plough and pulverize until the soil is fine; it will richly repay to do this thoroughly. Do not go over more ground than you can work into good tilth and manure with some liberality with fine manure. Grass seed is slow to take, even on a tolerably rich soil, but where it can find a particle of well-rotted manure, it will germinate freely, take root at once, and go on to flourish unless choked by weeds or parched by drought. It is more profitable to get a ton and a half of hay on an acre than on an acre and a half. There is less cost of ploughing and all after preparation, and less in getting the hay. The top dressing should never be omitted. Herdsgoass and redtop are not easily winter-killed, and clover seed may be sown on late snows in the spring. A peck of herdsgoass and from three to four pecks of redtop are commonly used; some use only two or three pecks of redtop. Six to ten pounds of clover are usually employed in spring sowing.

*Weeds.*—Cut up the rank weeds that skirt the edges of corn or potato fields, and from every other place where they are growing, together with all other refuse vegetable matter, and place them in a heap. Overhaul occasionally, and allow the whole to gain a degree of heat that will certainly kill every seed of a plant which it contains. What is left after fermentation, mingled with fresh stall manure, will make a good compost for top-dressing.

*In the Garden,* in the latter part of the month, take up and pot such plants as it is

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—Official returns received at the Bureau of Statistics show that during the month of April there was exported from the port of New York fish spawn to the value of \$15,340. There were also exported to France during the same month silkworm eggs valued at \$660.

intended to keep in the house. Collect the bulbs of dahlias, tuberose, amaryllis, gladioli, and such others as are desired to be saved. These should be placed in a dry room, away from frost. Gather seeds of annuals that have not already been collected, marking their varieties distinctly, and place them where they will not contract moisture.

If there are pear trees in the garden or on the farm, give them attention. All pears, we believe, ripen best away from the tree. To know when to take them off, and just how to treat them, is the point to be gained. Different varieties ripen at different times, extending from July to mid-winter. When gathered, they should be laid away in masses, as if laid on shelves singly they shrivel and are worthless. They have no oily matter in the skin, as apples have, and soon lose their juices by evaporation. In order to ripen them fully they should be taken from the box, or whatever packed in, a few at a time, and laid on the mantelpiece or other shelf, where they will become yellow and delicious in a few days.

Mr. John Gordon, of Brighton, Mass., who cultivates the pear largely, lays a woollen cloth on the bottom of a box, then a layer of pears, and so on until the box is filled. In this way they turn yellow, and come into fine condition for market. As they are needed, they must be ripened off as stated above. The culture, preservation and ripening of pears must be learned chiefly by experience.

*Harvesting Indian Corn.*—We have come to the conclusion, by the aid of careful experiments, that the best way to harvest Indian corn is to cut it up near the roots and shock it as soon as the kernel is fairly glazed over, and is somewhat hard.

1. It is less work than it is to cut the stalks or "top it," as it is called, tie them in bundles and bring them out of the field, as it must be done, by hand.

2. According to experiments made in England in harvesting small grains, the wheat which was cut two weeks before it was fully ripe gave the most flour and of the finest quality. We can see no reason why there would not be a similar condition with corn. When cut in that stage it has reached its growth, the ear and kernel are fully formed, the leaves have begun to wither, and action between the roots and soil has probably nearly or quite ceased.

But, as in the case of the wheat, nature's effort is to perfect the seed, and the juices of the plant go to complete that process.

3. Although it may seem improbable to those who have not tried it, it is nevertheless true, that it is easier to husk corn cut up at the roots than where the tops are cut off, if care is taken to load the butts all the same way, and keep them so in unloading. That is, keep the butts of several shocks the same way, and then of several more in another direction, if more convenient in loading. In this way there will be no entangling among them.

4. When cut up at the ground the fodder is much better than when left standing later. Rain does not penetrate the shocks much, and they come to the barn with a rich green and pleasant fragrance.

5. And lastly, when cut up and shocked, there is no danger from frost, and consequent losses by it.

*Muck.*—We would urge upon the farmer once more to lay up a store of this manure. By its liberal use he will increase his crops, permanently improve his farm, and raise money to pay taxes, purchase carriages, pay for school-books, clothing, groceries, and many other things which are essential in the family.

Finally, we suggest that it is an excellent rule to do all kinds of work in the fall that will facilitate business in the spring, and that it is the favored time to make general improvements.

**CHEESE FACTORIES IN ILLINOIS.**—A correspondent of the *Chicago Journal* gives a list of 111 cheese factories in the counties of Kane, M'Henry, DeKalb, Cook, Dupay, Boone, Kankakee, Lake, and Winnebago, all of which are in the northeastern part of the State. The total number of cows given in this list is 33,580, valued at \$50 each. Total capital invested, \$1,679,000. Amount of cheese made, 16,093,000 pounds. Total value of cheese made, at 14 cents per pound, \$2,253,020. The pasturage of this section is excellent, and an abundance of pure water is afforded by the tributaries of the Fox and Rock rivers, and numerous never-failing springs. Probably other portions of Illinois are well adapted to the dairy business, and we see no reason why the factory system will not be extensively introduced into most of the northern part of the great West.

LAMOILLE VALLEY, VT., CHEESE FACTORY.—D. L. Field, Esq., the agent of this factory, situated at West Milton, Vt., furnishes us with the following statement of the business for the month of May. Work was commenced on the third day of the month with about 300 cows, which number was increasing during the month to some 500; from which 239,563 pounds of milk were received during the month, which made 25 107 pounds of cheese. It took 9.541 pounds of milk for a pound of cheese. The average price at the Factory for the month was 13.864 cents per pound. The cheese was sold on commission, by Gardner Murphy & Co., Boston. The maker is H. B. Jones.

*For the New England Farmer.*

#### THE GARDEN IN SEPTEMBER.

This month brings to us another change of the seasons. Germination and growth are now succeeded by the ripening processes. We are now to harvest and enjoy. But this is hardly all. The prudent, thoughtful gardener will provide for his earthly blessings, by performing his part towards securing another season's growth. Considerable judgment needs be exercised, at this season, in saving and storing seeds, vegetables, planting for a continuance, providing suitable material to be converted into nourishment of future growth, &c.

Seed-beds are now to be prepared for the growth of winter salads, and for spring use; also, for starting some kinds of spring vegetables. A large amount of spring labor with hot-beds may be saved by giving a little attention during this and the succeeding month to the growing young plants of the more hardy vegetables that are most in demand in early spring. Once well started an inch or two high, they may be pricked out in cold frames during October or November, and, properly treated and cared for during winter, they will be ready to transplant and grow as soon as the frost is out of the ground and it can be cultivated. To plant seeds for growing plants to winter over, select a warm, moist place; dig the ground over thoroughly with the digging fork, working in plenty of well-rotted manure; rake and fine the surface for a nice seed bed; then sow the seed in drills six inches apart, or if not to be transplanted this fall, a foot apart is better. Spinach may be sown in beds of any shape, rows a foot apart; cover the seeds lightly and roll well. Plants for wintering should not be allowed to get too large, or they will run to blossom and seed, when transplanted. If liable to grow too large, repeated transplanting during the fall will check growth. Lettuce, cabbage and salads of different kinds,

constitute the principal plants for wintering in cold frames.

As soon as the crops are matured and ripe, they should be gathered and the ground cleared, and at any leisure opportunity, needed improvements can now be made, more thoroughly and leisurely than in a more busy season. All should have some pride of appearance, some ambition to improve on the past and the present. Efforts to accomplish this may interest some younger member of family to take a greater interest in rural pursuits. Judicious improvements will add to the value of the estate, though their cost may not be immediately realized in pocket money. The grounds of few country residents furnish all the fruits and vegetables that they might produce, or which the family needs. Yet how often do we hear, especially in relation to fruit trees, some such remark as "it takes them so long to grow I shall not live to eat of their fruit," and hence no trees are planted, no garden provided.

BEANS.—Gather as they ripen, selecting the very best for seed, and put in a dry place. Shell when dry, and clean and assort thoroughly. Limas that may still be green are excellent for winter, picked and dried in the pod, to be shelled as used.

BLACKBERRIES.—Remove unnecessary old and weak canes, reserving the strongest for next season's fruiting.

CABBAGE, CAULIFLOWER, &c.—Keep late plants well hoed, and sow seeds for plants for cold frame.

CELERY.—Earth up as frequently as once in two weeks; always doing it when the plants are dry. Earthing when the plants are damp from any cause, causes them to decay, rust, &c. Dirt scattered into the heart produces similar effects.

CORN.—Save the earliest, largest and best ears from healthy, prolific stalks, for seed. The kernels shaved off from the cob may be dried, and when properly cooked, next winter, will give a most welcome dish.

CUCUMBERS.—The vines have mostly done bearing, except it be late planted for pickle; these should be kept close picked. Save seed from the ripe ones; cut them in halves lengthwise, scrape out the seeds and centre with an iron spoon, into a pail or tub. If but few, mash and wash out; if more, let them stand, covered, in the sun and they will ferment and separate, the seed settling to the bottom, when they must have water added and washed out, drained, spread and dried well.

ENDIVE.—Hoe and give liquid manure, treating similar to lettuce; gather and tie the leaves for bleaching.

GRAPES.—Unless there be danger of frosts, it is better to let them get fully ripe before gathering. In gathering, use the greatest care in detaching the bunches and in handling, to preserve the bloom and beauty.

**MELONS**—Few will be left fit for eating after the 10th, unless carefully protected. Seeds may be saved from the fully ripe ones, washed and dried.

**PARSLEY**.—Seed may be sown to produce for next spring's use.

**PICKLES**.—Use the small cucumbers for pickling in vinegar or for salting; packed in a tub, a layer of coarse salt and a layer of pickles, they will make their own brine and keep an indefinite time if they are kept under brine by weights. A few will soften on top, these must be thrown out. We have kept them thus year after year. Have some on hand now that were salted three or four years since, sound as ever, and keep them in the cellar.

**SQUASHES**.—Pick winter squash before any frost, for a very light touch often defeats their keeping. Pack them away in a dry place free from cold. Handle them with the greatest care.

**TOMATOES**—Green tomatoes make nice pickles, put down in sharp vinegar with green peppers, spices, &c. Make ketchup of ripe ones, can, &c., for winter use.

Gather and save all seeds, as they ripen; sweet herbs, &c., as they come to maturity. Let nothing be wasted; what cannot be marketed or used may be made use of for the compost heap which should receive constant liberal additions.

W. H. WHITE.

South Windsor, Conn., 1870.

#### BEEES IN AUGUST.

Great care should be used this month not to tempt bees to robbing; leave no honey where they can get at it, and do not open hives to expose the combs while bees are flying, for this is almost sure to make trouble when honey is scarce in flowers. See that all stocks are strong and have a fertile queen.

Queenless swarms should be united to one having a fertile queen or treated to brimstone now, for if left to themselves they must soon either be robbed or devoured by worms. The same may be said of all weak swarms.

In this vicinity we have had a very poor season for bees, and I have similar reports from several other localities. Here, black bees that cast swarms as well as the young swarms will most of them, I fear, need more honey than they will have to carry them through the winter.

Italians have been more successful. Not only are their store combs well filled but they have made a good surplus. Five stocks in my yard have stored three hundred pounds of honey in boxes,—an average of sixty pounds each.

Buckwheat usually yields a large supply of honey, and in sections where it is cultivated is a great help to light swarms. Although the honey obtained from it is of inferior quality

and not very saleable in the market, it answers every purpose for the bees in winter and as it blooms after most other sources of honey are gone, would probably pay a large profit if sown near apiaries, for its honey alone. So profuse is the yield from this plant that the swarming fever is frequently revived and swarms issue during its bloom.

J. H. C., of Temple Mills, asks about the utility of so many drones and how to manage them. When a single colony is isolated far from other bees, as is frequently the case, probably the great number of drones would not be objectionable, but when several are kept in one yard, either usually has enough for the whole. The drone is the male bee and the queen leaves the hive to meet them in the air for fecundation. At this time no eggs or brood is left in the hive from which another queen can be raised, and her loss would be a total loss to the colony. Hence it is desirable that she should make as quick a trip as possible and not remain long in the air exposed to the many accidents that might befall her. Drones are great consumers and the less there are more than is actually necessary, the better. A strong colony will have some drones in summer but what they can raise in a piece of comb as large as one's hand seems to satisfy them as well as half a hive full. In moveable comb hives all the drone comb can be removed but about that amount and worker comb fitted into its place. This puts a stop to raising so many drones, and the colony is made much more prosperous thereby.—G. W. P. Gerrard, Plymouth, in *Maine Farmer*.

#### WILLOW FENCE.

In giving a description of Mr. D. Whitfield's farm, near Pontiac, a correspondent of the *Michigan Farmer* says, the first thing that took my attention was the willow fence. Its beauty and its thriftiness was quite an attraction; and on examination I found it was a living protection against cattle, sheep or hogs. This fence has grown up so rapidly that the shoots were strong enough for stakes. These were put in from two to three feet apart, and the smaller shoots were wattled between them. The stakes all grew, sending out their thick shoots, and the larger layers in the wattles followed the example. There are enough shoots now on this hedge to furnish a great number of farms with sets, and it can be trimmed every year into any shape that suits the owner, supplying sets by the million, and there is now a great demand for them. He has other hedges coming on, and he intends to fence his whole farm as fast as it can be conveniently done. This is the best and most rapid growing fence I have yet seen, and I have no doubt will be a great acquisition to the agricultural community. As the stakes grow in size, the hedge stiffens and grows in strength.

### WOOLEN MANUFACTURES.

According to reports and statistics the grinders of wool have been "marching on" at a pretty good pace since 1862, whatever may have been the progress of the growers of wool. The number of mills that make carpets has increased to about one hundred, and they supply the market with ordinary qualities and several mills are now making the finer grades, which have heretofore been imported from Europe. On cloths and cassimeres there are more than three hundred factories; on shawls, about twenty-five; flannels, thirty; blankets, forty-five; hosiery and knit goods, one hundred and fifty; on balmorals, worsted goods, &c., the increase has been very great. In fact, there is no branch of the woolen manufacture, says Mr. Morrill, except that of fine broadcloths, in which entire success has not been attained, and the immense supply required in the country is almost wholly provided at home. Of the "cloths and cassimeres" imported, reaching about six million dollars in value yearly, nearly all is broadcloth. Imported "shawls" reach less than two million dollars in value; "carpets," about four million; and "dress goods," chiefly of worsted, and worsted with cotton or silk, go to the large sum of fifteen million dollars in value.

In some remarks in the *Rural New Yorker*, on the report of Mr. Morrill, Dr. Randall says, "the extent of the present possession of the market for fine woolens of every other description than what are distinctively known as dress broadcloths, is best illustrated by a list of nearly three hundred factories, which, but for its length, we would give in full; represented in the New York market alone, all engaged on cassimeres, coatings, beavers, tweeds, repellants, ladies' cloakings, and other like fine goods, all wool or cotton warp, and which were, until recently, nearly all imported. The distinctively fine goods are almost all the growth under the tariff since 1861, and the market of the United States, now grown to three times the measure of 1860, is held by this domestic production so nearly exclusively that the proportion of foreign goods entering into it is scarcely distinguishable. For the first time in the history of the trade, the market is really supplied with a domestic production

of mohairs, alpacas, Italian cloths, &c.; delaines having been abundant for some years previously. We assume, therefore, that the tariff on woolens is effective and valuable, as it was designed to be, in developing at home the enormous industry that must be engaged in the manufacture of woolens to supply our markets. Further examination in almost every other class of woolens would show the same progress. Knit goods almost completely supply the field at home; and the growth since 1862 is to about three times the value then produced. Shawls of all sorts, other than mohair or camel's hair, are no longer imported in any considerable degree. Blankets, both of the finer white sorts, including carriage and traveling blankets, as well as all coarse Indian blankets, are also not imported to any amount, while the domestic production has reached large aggregates. Bearing in mind the enormous importation of all classes of blankets formerly existing, the value of the protection which secures this industry will be felt."

All this may at first sight afford little consolation to the wool grower in the present depressed condition of his business; but on second thought, may we not hope that, as our manufacturers succeed in furnishing our market with cloths, our wool growers will eventually furnish the wool for these cloths? On the basis of the agreement between grower and manufacturer, may not this hope grow into a demand?

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### ANALYSIS OF FODDER CORN.

In the course of some strictures in the *Rural New Yorker* on Dr. Loring's condemnation of green corn stalks as fodder for milch cows, Mr. E. W. Stewart gives the analysis of green corn, by J. H. Salisbury, of New York, and of Wolf and Knapp, German chemists, whose tables are used by Prof. Johnson in his book on "How Crops Grow."

Mr. Salisbury made the most thorough examination, chemically, of the Indian corn plant in all its stages, from six inches high to maturity, that has ever been made by any chemist. These separate analyses of root and stalk, and leaf, and tassel, and silk, and husk, and ear, clearly showed that the whole plant, previous to earing, is accumulating the materials with which to perfect the grain.

This is the grand aim of nature—the perfection of the seed.

Just before the formation of the ear—the best time for feeding it—the general average of these analyses (calculated without water), show this green corn to contain of

Sugar and extract. . . . .	35.00
Matter obtained from fibre by a weak solution of potash. . . . .	12.00
Dextrine or gum. . . . .	6.04
Albumen and casein. . . . .	7.96
Woody fibre. . . . .	39.00
	100.00

Remarking on the result of his analysis, Mr. Salisbury says:—"The plant, during the tasseling, owing to the very large percentage of sugar and extract, with the respectable quantity of albuminous matter and dextrine, which the stalk, leaves and sheaths contain, must afford a very palatable as well as nutritious fodder."

The analysis of the German chemists was made of green corn in the latter part of August. Their analysis (calculated without water) is

Albuminoids or flesh formers. . . . .	6.20
Carbohydrates or heat and fat producers. . . . .	61.24
Crude woody fibre. . . . .	23.36
Ash. . . . .	6.20
	100.00

This, says Mr. Stewart, does not look as if green corn was a crude, indigestible, innutritious substance,—the meanest fodder that was ever given to a cow. He shows that it differs but little from turnips or beets, according to analyses.

The analysis of Hungarian grass or millet, which Dr. Loring recommends as a substitute for fodder corn is given as follows, to compare with that of the corn stalks:—

Albuminoids or flesh formers. . . . .	15.95
Carbohydrates or heat and fat producers. . . . .	43.74
Crude woody fibre. . . . .	33.33
Ash. . . . .	6.96
	100.00

On this showing, it is claimed that the chemists agree with the practical farmer, that green corn stalks, previous to earing, furnish a valuable fodder.

**SHEEP RAISING IN AUSTRALIA.**

A correspondent of the San Francisco *Bulletin* furnishes that paper with a long article on this subject from which we condense the following:—

Sheep farmers are better known in Australia by the name of squatters, for the same reason that squatters are called by that name here, but with very different results. Owing to no

more favorable circumstances, backed by their industry, economy, and indomitable perseverance, they have as a class risen from comparative poverty and obscurity to wealth and power, and are now the moneyed aristocracy of Australia.

A large "run" or station is one great object aimed at by the squatter, as he finds that a large one can be managed almost at as little expense as a small one. Five thousand sheep would be considered the very smallest number to begin with, and this only by one or two young men putting their means together who have been learning the business three or five years on some large "station." The average stations would number 50,000 sheep, while some run to 500,000, and in one or two instances to 1,000,000. Superior stock is a cardinal virtue with the Australia squatters. To obtain the pure Spanish *merino* sheep is his chief end as a successful squatter. Many squatters make it a specialty to import, breed and sell these splendid sheep, and none are more successful.

Sheep, in South Australia and Victoria, yield an average of about 3 lbs per fleece. New South Wales being a warmer climate, yields about 2 3-4 lbs; and Queen-land, which is still warmer about 2 1-2 lbs. But what the sheep of the two former colonies gain in weight by the moderation of the climate, the two latter make up by the additional fineness of the wool in consequence of the climate being so much warmer.

There are in the four Australian colonies about 10,000,000 sheep; these produce an average of at least 2 3-4 pounds of wool each, making 27,500,000 pounds in all, to be shipped to the London market annually. And taking the average price in the London market at 40 cents per pound, it would net \$11,000,000. Notwithstanding these large results, we are confident that they are only the beginning of future increase and wealth in those colonies. As the stock becomes purer they will become more valuable in every respect.

The squatter calculates that the increase from his ewes and other profits should pay the annual working expenses of his "run" or "station," which expense averages about fifty cents per sheep, and that the wool should be his net profit. That being so, the squatters of these four colonies have an annual net income of \$11,000,000.

—Two enterprising Yankees have just started a drove of horses from Los Angeles, Cal., for the eastern world. They are to be driven 850 miles to Salt Lake, and then put upon the cars for the East. They cost the Yankees about \$20 a head. If this venture succeeds, an unlimited supply can be had from the same quarter; one single ranchman having 3000 more to sell. It is but a few years since droves of horses were taken across the plains from Illinois to San Francisco.

## EFFECTS OF PLASTER ON THE SOIL.



WHAT effect has Plaster, or Gypsum, on the soil, after having been used for many years? Will it exhaust the soil? If so, can fertility be restored by other agencies? In N. Brunswick, not far from Fort-Fairfield, there is a mountain of gypsum of superior quality. This rock is taken to our mills and ground, and is used quite extensively as a fertilizer by the farmers of Northern Aroostook, producing great results, increasing the crop of grass and grain two or three fold. Yet some abstain from using it, fearing it will ruin their land in the end.

Lyndon, Aroostook Co., Me., 1870. H. D. C.

REMARKS.—The question asked in the opening of this note is of too much consequence to be answered by one or two brief remarks. Plaster has become an article of importance for agricultural purposes. Hundreds of tons are annually used in the vicinity of Boston on various crops, but especially for clover, and potatoes. We have seen old pastures covered with a luxuriant growth of white clover, by a simple application of ground plaster of about fifty pounds to the acre. And this has occurred where scarcely a head of clover had been seen before for many years. Scattered upon potatoes before covering the seed, it keeps off worms, prevents decay, and essentially proves the crop in other respects.

In order better to understand how, and to what extent, plaster affects the soil and the crops, its composition should be clear to the mind.

As we understand it, plaster or gypsum, is lime in combination with sulphuric acid, or what is familiarly known as oil of vitrol.

The efficacy of plaster will depend much upon the *kind of soil* to which it is applied. On clayey soils, which are stiff and impervious to the rains, the plaster would be retained for a long time without being much affected; while it would operate beneficially on soils that are light, dry, and sandy, or open, as they soonest admit the rain water which dissolves and conveys it to the roots of the plants.

In some cases, plaster will not produce any effect, on account of the soil being already sufficiently supplied with it, or the soil may be deficient in other substances upon which the plaster must act in order to make it productive. As an illustration, we may add that red clover requires several substances to perfect its growth, and among them potash. If this is lacking, the others would lie inactive, so far as the clover is concerned, and no clover would grow.

We have observed that different writers ascribe the fertilizing properties of plaster to different qualities. While Baron Liebig gives it to the fact that it possesses the property of fixing the ammonia in the rain water, Davy ascribes it to the sulphur which it contains, and Chaptal, to its regulating the solubility of salts in the soil. Dr. Muse, of Maryland, many years ago started the theory that the chief efficacy of plaster arose from its tendency to produce phosphoric acid.

It seems to be clearly ascertained now, however, that "while it acts directly as nutriment to a certain class of plants, it also acts indirectly by fixing the ammonia contained in the atmosphere, and in the dew, rain and snow, and thus furnishes additional food of a stimulating nature to the same plants."

It has been stated by some that leaves of plants serve not merely as lungs, but as mouths also, absorbing the food supplied by the atmosphere, just as the fine fibrous roots collect the food supplied by the soil. This seems to be proved by the fact that plaster acts more beneficially upon clover when its leaves are fairly expanded, than it does when applied directly to the soil.

In order to be clearly efficacious, the application of plaster must be alternated with animal manure; otherwise, the fertility which it produces will not be sustained, and in a few years of repeated plastering, the product will descend lower than before. Therefore, it should not be too often repeated upon the same soil, as most soils require a change in manures, as well as in crops, once in five or six years.

We are glad our correspondent asked the question, because we observe a tendency to make a too free use of a good thing.

SUCKERS from the base of fruit trees are most effectually removed when in full leaf.

## EXTRACTS AND REPLIES.

## CHEESE FACTORIES.

Will you or some of your readers give me some information regarding cheese factories. We live in a good dairy town, but on account of help being so scarce we think the labor might be done cheaper at a factory. What we want to know is the capital required for a hundred cows, the usual way of conducting factories, &c. H. M. FALES.  
New London, N. H., June 27, 1870.

REMARKS.—No one can expect success in a cheese factory, or any other factory, or, indeed, in any business,—even in milking a cow,—until he learns how by experience. Still some general idea of the business may be obtained from books, and papers and speeches. In the first place, Mr. Willard, who is authority in these matters, says that his experience shows that a cheese factory with less than 300 cows will not pay expenses. Still there are quite a number in the country with from 100 to 250. He puts the cost of buildings for a factory at \$3000 to \$10,000. Machinery for factory with 600 cows at \$1200 to \$1500. Skilful workmen command high wages,—men from \$800 to \$1200 and board for the cheese season, as superintendents; women are sometimes paid \$100 per month; ordinary skilled help, less, but still good wages. Four or five miles he considers as far as milk should be carried, and puts the average distance in New York at not over one mile and a half. About ten pounds of milk is allowed for a pound of cheese. Large factories charge three-fourths of a cent a pound for manufacturing and care of cheese till sold. Smaller ones charge one cent, and very small ones two cents a pound. Some of the factories claim the whey as a perquisite; at others it is delivered to farmers in proportion to the milk furnished; in others it is fed at the factory to hogs belonging to those who furnish milk; and recently, butter is made from the whey at a few factories.

Mason's Factory, Richmond, Vt., with only 80 cows; Hill Factory, Middletown, Vt., with 100; Valentine's, Timmouth, Vt., with 125 cows, are mentioned in the last report of the American Dairyman's Association. Perhaps some one connected with these factories will answer more fully your inquiries. We should be very happy to publish such information.

## METHOD OF GETTING HAY.

By a little more careful reading of my article, on "A method of getting hay," "Inquirer" will see that I did not *advocate* the method, but was really as much of an "inquirer," as Inquirer himself. I was disappointed that the editor did not make a few remarks on the subject. I shall try the experiment only on a limited scale, and with care.

I would state the man's name alluded to in my first article, were it not for the fact that I alluded to his personal circumstances, which are not to be thus advertised. This allusion, and the one concerning his stock, were not made as arguments for the method, but as reasons why I thought we might properly investigate the subject.

His time of cutting hay is not as late nor perhaps as early as some. I think he finishes haying before the 4<sup>th</sup> of July. He has grass which yields from one to two tons per acre of hay, and enough to keep (as he does) eight or ten head of stock. The looks and smell of his hay are all right.

The hay being cut with a machine, no spreading is required nor many workmen. What he does in the forenoon, besides turning, I don't know. I presume it would hardly be necessary to do needless work in order to keep the time occupied. If so, a game of "odd-or-even" might answer the purpose, and be less wearing than heavier exercise. However, perhaps Inquirer will see that the afternoon work is not so great as would seem. What is mowed Monday, P. M., is not raked—it only *lies*. Tuesday, P. M., it is raked and got in, and more hay mowed for Wednesday. I have always cut my hay in the forenoon, and *raked, cocked and trimmed* in the afternoon,—the hay cut the day before being raked and secured,—notwithstanding which, we of course admit, the work is more irregular than by the old way.

I have an article cut from a FARMER of July or August, signed K. O. in reply to remarks of S. Edwards Todd, before the American Institute Farmer's Club, New York city. Mr. Todd argues that hay which heats in the barn becomes mow burnt, dusty and mouldy. Mr. K. O. has repeatedly put scarcely wilted hay in the mow or stack, cut when in full blossom, and mentions instances, with good success. He refers to a man who houses all his hay the day it is cut, and has the best, judging from smell and looks, anywhere seen. K. O. advocates cutting hay when entirely free from external moisture, and housing when scarcely wilted, and seems to advocate the doctrine that a pound of sap is less injurious than an ounce of water. He thinks it better adapted for milch cows than for team feed; for the latter he would probably cure more. I have lost the paper containing my article, but believe I made a little mistake in this: I think the man I spoke of gets his hay in, and does his mowing *afterwards*, as a too early mowing would cause the hay to blacken with dew. All hay ought to be got in, if not lit before, soon as possible after noon, and if the time occupied is not too long, the machine can do a good piece of work then. I would be very thankful to the editor for his opinion on the subject, as I am as much in need of enlightenment as our Essex county friend, who will please bear in mind that K. O. and others not only consider it unnecessary to dry out much of the sap from grass, but consider that the heating of hay in the barn, caused by the sap, not by water, helps make the hay.

JOHN.

Franklin, Mass., June, 1870.

REMARKS.—This whole subject of making hay was very fully discussed in these columns last winter in the reports given of *Farmers' Conventions* in this State, Maine, New Hampshire and Vermont.

Our own practice in curing the grasses is very nearly that which our correspondent describes above as his practice. We cut the grass just at night or in the morning; wilt it as thoroughly as we can until one or two o'clock, then cock and put caps on. The next day open after the dew is off, turn twice before 2 o'clock, then get in. This course is for favorable weather.

In making clover, cut as before stated and wilt, then carefully gather into cocks, put on caps and let it remain two nights even if the weather is favorable. Open the cocks, shake out heavy

bunches, turn once, then get it in. Under this treatment, the heads and leaves adhere, the stems are not brittle, but made, "cooked," as it were, and retain their valuable juices.

A new mode among us, is that of cutting the grass, allowing it to wilt for a few hours, and then packing it away from the air as much as possible.

We have no more doubt that hay is preserved in this way, than we have that it is preserved in any other way. It is testified to in every direction, and barns full of such hay, as sweet as a nut, may be seen by those who will take the trouble to go to them.

This process requires that a pretty large amount of hay shall be placed in a compact form, and in a great measure excluded from the air. Few of us have such conveniences. Our barns are divided into many spaces where currents of air come and go at will. But because we have not so cured hay ourselves, we do not think that it cannot be done. The evidence placed before us at the Convention in Maine, last winter, was perfectly convincing that hay is successfully preserved in that way, and can be by any of us who have conveniences for so doing.

#### FRUIT TREES GNAWED BY MICE.

Having suffered very much from the effects of mice for several years, I would like to ask the readers of the FARMER how to prevent mice from destroying our apple trees, by eating off the bark in the winter? Will tar, painted over the bark late in the fall prevent it, and if so, will tar injure the trees?

I tramped the snow all around them last fall, and put chip manure around the trunks in small sharp piles, eighteen inches high, but neither had any effect. I have lost, the last two years, nearly one hundred trees, some of them very valuable. Answers to the above questions will be thankfully received.

HIRAM FRENCH.

Eaton, Compton Co., P. Q., June, 1870.

REMARKS.—This subject was discussed in our columns last year, but no specific remedy was suggested. Offensive matter applied to the tree, if harmless to the bark, is liable to be washed off by rains and snows. And we much doubt whether any other means of equal cheapness and efficacy can be suggested better than plenty of cats and a good mound of earth. Let one or two or more mother cats range the orchard during the fall,—cats that are dependent on their own industry for the support of families,—and the mice census will show a great decrease by the time the snow comes. And then, late in the fall, clear away the grass and weeds from around the trunk and if the soil affords tolerably easy digging, throw up a pile around the trunk of clear earth at least eighteen inches high, and if the snows are not much deeper in Canada than here, we think the trees would be pretty safe from the mice. If the soil of the orchard is hard or rocky, a cartload from the near-by bank will answer for several trees.

Tar might answer, but we should fear it would injure the trees. When applied to prevent the ascent of the canker worm grub, paper or cloth is

generally first tied around the trunk. A paint of soot and milk, compositions of tobacco, sulphur, assafetida, hen or pigeon manure, with mud or clay to give body and tenacity, are recommended by some book-farmers. But we have had no experience with them.

#### STAR-NOSED MOLE.

As you seem to be authority on insects, perhaps you can tell me what animal the enclosed skin came from. My cat caught it in my cellar. Its fur is something like a mole, but its teeth were like a cat or weazel. I never saw anything with such a nose before. The feelers were eighteen in number. None of my neighbors who have seen it can tell me what it is.

We are having uncommonly warm weather here now. Corn looks nicely. Early sown grain is doing well, while that late sown looks very poor. No one estimates the hay crop any more than three-fourths the usual quantity. LEWIS BEAL.

North Fairfield, Me., June 25, 1870.

REMARKS.—The skin came from a star-nosed Mole—*Condylura cristata*, of the books. The American Cyclopædia says the star-nosed mole of North America has the end of the nose surrounded by 22 movable fleshy filaments, radiating in the form of a star, which serve as delicate organs of touch; feet five-toed; tail moderate, thinly haired.

This variety of the mole is quite rare in this part of New England. Yours is a larger specimen than most of those we have seen described, and perhaps from old age or some casualty had lost some of its feelers.

#### SUCCESSFUL EXPERIMENTS IN HAYING.

Mr. BROWN:—You remember some twelve years ago you had the honor to act as one of the Trustees of the State Reform School at Westboro', and, with one of your associates, had the principal management of the farm. You saw fit to employ me to execute your wishes and direct the farm work as best I could. The great meadow of blue joint had always been a trouble and was considered of little value, except for a litter. It was always left for the last work of haying, when the grass would be lodged, tough and hard to cut, and still harder to eat. With your permission, I cut it in the early part of June, and again in September, with so much success that our example has been followed, to the present day, and the old, worthless meadow now affords the State a large amount of excellent fodder. Cutting twice has not injured, but improved it. The present superintendent told me yesterday, that he measured and found some of the grass six feet long.

Now I own a little lot of the same kind just below. Most of the State's hay is in the barn, and all of mine, and in what I call the *best order*.

I took my men at first to tell you how I cure my hay. I don't like smoky hay; but the less drying the better, if it can be kept bright. I had a few tons of old hay left, and I thought it worth more than the high price of last spring for me to keep. So we began cutting the meadow, and with little, say half drying, began to cart it home and put a layer of the old hay, and then one of the new, with a small sprinkling of salt; then old hay and new, and so on to the end. The benefits are less risk of bad weather, saving of time, and greatly improves the hay.

Now, friend Brown, I am almost seventy-two years old. An accident to my foot has laid me aside and made me a great sufferer for the last six months. My life is barely spared. I can just hobble a little on crutches; yet, *perhaps*, my experience may do some one some good, and if you think so, this is at your disposal. If you will call and look at my hay, and see how bright and cool it is, and don't say it looks full of promise for a full pail of milk next winter, I will take you into my carriage and carry you all over the State farm (*you open the gates for us*), back to supper and give you a box of strawberries for the good woman. Your friend,  
ELMER BRIGHAM.  
Westboro', Mass., June 20, 1870.

REMARKS.—It gives us pleasure to hear from our old friend again, but mingled with regrets that his activity is somewhat lessened by a painful accident. But impeding his locomotive powers, does not seem to check the activity of his mind and observation. We very well remember the wide meadows, and our anxiety that they should become sources of profit, instead of the home of frogs and almost worthless grasses. That accumulating years may sit lightly upon our friend, and a clear faith and calm serenity of mind cheer the pathway of his life, is our heartfelt and sincere wish.

#### HORSE FEVER, WITH DESTRUCTIVE CHANGES IN THE BLOOD.

I have a horse, which on being turned out to grass, swelled up all around the throat and jaws, and remained so a few days; after which the swelling left the throat and settled into the lower part of the head, filling the mouth very full and hard, so that she eats with great difficulty. She had the horse distemper last winter. Do you think it the effect of that remaining in the system, or has she eaten poison? She is apparently well in every other particular. She eats as much as she can, but grows poor. Her eye is bright and clear.

If you can inform me in regard to this complaint, you will confer a great favor on a poor boy who works hard and is unable to lose the value of the horse.

A. C.

Woodstock, Vt., June 24, 1870.

REMARKS.—From the frequency of such cases, this year, in horses that have had the distemper, we incline to the opinion that the trouble in this case is the result of the distemper, and we refer our correspondent to an article by Prof. Law in the FARMER of May 7. In addition to which we copy from Dr. Law's answer in the New York *Tribune*, to an inquiry in relation to the treatment of a horse which was, we judge, in about the same condition of that of our Woodstock correspondent. He says, when the tongue and pharynx are affected, as in the above cases, it may be occasionally sponged with a lotion of one part of muriatic acid mixed in 15 parts of water, and applied by means of a sponge firmly tied to the end of a whalebone staff; or in place of muriatic acid, a solution of an ounce of carbolic acid in a pint of water may be employed. Similar lotions may be applied with active friction over the swellings when they appear externally. Stimulating febrifuge medicines, such as two ounces of sweet spirits of niter, may be given thrice daily to support the

animal in its great prostration, and for the same reason one drachm of iodide of iron and four drachms of powdered gentian may be given daily. Half-drachm doses of carbolic acid, given twice daily, have appeared to be of benefit in counteracting the zymotic changes in the blood. The diet throughout must be nutritious and laxative, and special manifestations or complications of the disease must be combatted as they appear. Thus, colic, bleeding from the nose, bowels, or kidneys sweating of blood from the engorgements in the skin, cracks and unhealthy wounds in the bends of the joints, mortification of the skin in patches, imminence of suffocation from swelling of the nostrils, engorgement of the larynx, or lungs, &c., have to be promptly met in different cases."

#### POKE AND HELLEBORE FOR THE CURRANT AND CRANBERRY WORM.

Mr. Ormsby, in your last issue, gives an account of his successful use of a decoction of Poke root, in exterminating the currant worm. We have no doubt of the truth of his statement.

In your remarks following his statement, you say that "white hellebore, carbolic acid, and preparations which have been used, are somewhat costly, and some of them rather dangerous poison." Now I wish to inquire if the American Hellebore, which is sold at the shops under the name of White Hellebore, is not the same thing as Indian Poke, Poke root, and Swamp Hellebore? There can be no doubt about this. So that whatever danger attaches to the use of the Hellebore, attaches to the use of the Poke root. The change of name, we take it, will not alter the nature of the thing. A very small quantity of the powdered Hellebore or Poke root is sufficient. With a half pound of it, dusted in the morning, from a tin box, with a lid perforated with holes, we completely expelled the first crop of worms from a long row of currant bushes. Now, June 25, a new crop of worms is beginning to appear. We shall repeat the same treatment.

Tell "Farmer's Daughter" to try powdered Hellebore on the cranberry maggot; or if she prefers, a decoction of Poke root.

R.

Concord, Mass., June 25, 1870.

REMARKS.—The common Poke or Garget, with dark-purple juicy berries—*Phytolacca decandra*,—which we supposed Mr. Ormsbee used, belongs to a different order of plants from Indian Poke, or Swamp Hellebore,—*Veratrum viride*,—from which the American Hellebore is made.

#### TOBACCO.

The tobacco crop has seldom been in so forward a state as it now is at this season. Ten years ago we had many growers who contended stoutly against transplanting before the middle to the 25th of June, but I notice that these same growers are very apt to set earlier now, if the plants can be obtained in season. The present year has been a very favorable one for the production of plants. In fact the effort was to get the land fitted for the plants, rather than to wait for the plants. About the same amount of land is planted to tobacco as last year, perhaps a little more. The amount grown in Western Massachusetts, is about all that can be conveniently grown here, unless we contrive some way of increasing the amount of manure. Where commercial fertilizers are used too freely, the leaf is not so good; it does not handle as well,—feels harsh and stiff.

We finished setting the 9th of June this year. In 1867 we did not begin to set until the 13th, and finished the 27th of June, and the part set last was cut August 26th, lacking one day of two months, and was a fine crop.

We have had very little trouble so far this year, from black worms; but we must not crow until we get out of the woods. It isn't too late yet for the pests to cause us much difficulty.

In hoeing I do not care to disturb the roots of the plant much. I have sometimes thought that some men injured their crop more by hoeing and digging so close to the plant, than they would have done to let it entirely alone, except simply removing the weeds. I am in the habit of sowing about 500 pounds of Peruvian guano to the acre, at the time of the third hoeing, and think it pays well for the outlay. **TOBACCO GROWER.**

*Whately, Mass., June 26, 1870.*

#### MULCHING TREES IN FRUITING.

An article in your last paper from the *New York Tribune*, on "Mulching bearing Fruit Trees," reminds me of a fact which I have intended to communicate for your paper.

Last year, in a pasture where some colts were, a sweet apple tree was in full fruiting. The fruit being of higher value because of scarcity, I desired to save the wind-falls. It was upon quite dry ground, and much of the fruit usually fell off early; although it was a fine-flavored apple which would keep until mid-winter. I had heard reports of their keeping until nearly summer.

There were grey birch trees in part of the same pasture, and to save the apples from the colts birches were cut in August and hauled whole and put under the apple tree, enough to bar back the colts. Drought did not seem to affect the apples; but they kept on growing, and stuck to the tree. Very few indeed fell off, even when there was severe wind. About the first of October it was difficult to pick them off, they adhered so firmly. They had also grown much larger than ever before since the tree came into my possession. They kept finely during winter, and in this month (June) I have eaten some of them, still in excellent flavor. This is to me very suggestive, and I pass it to you for the **FARMER**.

The grass grew under the birches and rotted there, keeping the surface of the ground moist. Will not others try it? **A. G. C.**

*Lee, N. H., June, 1870.*

#### TIME TO CUT OATS FOR FODDER.

As I have four acres of very promising oats, which I shall cut for fodder, I wish you would tell me at what stage of their growth they should be cut.

I have been in the habit of cutting my grass too late, but have been mending this year, by cutting when it is getting well into blossom; and I have been thinking no better time can be had to cut the oat crop, or Hungarian grass, barley, millet, &c. **A. J. CARTER.**

*Woonsocket, R. I., June 24, 1870.*

**REMARKS.**—Our rule has been to cut oats for fodder just as the grain is formed, and before it will show any "milk," as it is termed, by pressing it between the thumb nails. But the clean straw that is sometimes left in the crib has led us to think it was not cut early enough.

#### FOOT DISEASE IN CATTLE.

I have had several cows that were affected, I think, like friend D. K. W.'s cattle, mentioned in a late number of the **FARMER**. I have succeeded in

curing mine by a single operation of cleaning the foot by scraping with a stick, so thoroughly as to make the blood run quite freely. To make the animal stand still during the operation on the hind feet, I chain it to a post, then put another chain around the leg above the gambrel joint; two men can then take hold of the chain and hold the limb sufficiently still for a third man to clean the foot. **T. B.**

*Haydenville, Mass., June 22, 1870.*

#### KING BIRDS DO KILL BEES.

Experience teaches me that king birds do destroy bees. I have killed several of them lately, and on opening their stomachs found in each from six to a dozen bees. I have also watched them and seen them catch bees when flying about.

Our crop prospects are quite flattering here in the Connecticut valley. Corn is looking well, and is forward. Some farmers have already commenced haying. **GEORGE A. RUSS.**

*Hartford, Vt., June 25, 1870.*

#### AGRICULTURAL ITEMS.

—D. McMillan, of Xenia, Ohio, recently sold sixty-nine cows and bulls of pure blood Short-horns for \$53,326; or \$902 on an average. The cows averaged \$1040, and the bulls \$483.

—The cost of fencing a quarter section of land in California is more than five times the amount charged by the Government for the land, owing mainly to the scarcity of timber.

—A correspondent of the *Prairie Farmer* mentions the loss by a neighbor of 150 nice Leghorn fowls by feeding them ground bone, purchased for that purpose. It is supposed that there was something poisonous in the bone.

—The *Canada Farmer* says the Provincial Board of Agriculture of Nova Scotia have decided to import \$10,000 worth of pure-bred stock by the 20th of September. It will consist of horses, Short-horns, Ayrshires, Devons, Herefords, Alderneys, sheep and swine.

—A lady correspondent of the *Ohio Farmer*, after having tried a great many processes for preserving eggs, finds the best way is to grease them all over thoroughly and keep them in a cool place, but not damp. Place the eggs after greasing, small end down. The French rub eggs with fresh butter. The Russians pack them in crocks small end down, and pour melted tallow over them.

—Young fruit trees or shrubs which were transplanted last fall or spring will thrive better and are less liable to suffer from the effects of moving when the ground, as far as the roots extend, is mulched with salt hay, straw, long manure, or charcoal dust. When the last material is used from a peck to half a bushel to each tree will be enough spread evenly around the body of the tree.

—At a late meeting of the Little Falls, N. Y., Farmers' Club, Judge Graves of Herkimer, stated that he soiled a horse from early in July until the grass ceased to grow in the Fall, from one-eighth

of an acre of land. The land was in good condition and was seeded to orchard grass. Each morning while the dew was on he cut enough to last until the next morning. Besides the grass, he fed but one peck of oats a day.

—Joseph Harris, Esq., in his "Walks and Talks on the Farm," in the *American Agriculturist*, says: "No matter what branch of farming we discuss either theoretically or practically, we are brought back to the old, old story, that, as a basis of successful operation, we must have dry, clean land. Everything must be directed to this one point. We can do nothing without it; we can do everything with it."

—Charles Carlisle of Woodstock, Vt., writes to the New York Farmers' Club that he experimented last year with ashes on corn, to which he applied a shovelful of rotten manure in the hill. Fifty hills were left without the ashes; a handful being put with the manure on the other part of the field. He weighed the product on the fifty hills unashed, and a corresponding number of hills with the ashes. The gain on the part ashed was estimated to be equal to a bushel of corn for each bushel of ashes used. He asks, is it not possible that the corn is benefited by the mixing, if we cover with the mellow soil to receive the liberated ammonia?

—Strips of zinc half an inch wide and two and a half inches long, written on with an ink, made of six grains of sulphate of copper, mixed with one ounce of water; dissolve and add three grains of sal-ammoniac and twenty drops of sulphuric acid, all to be had of an apothecary, is said by the *Germantown Telegraph* to be the best style of fruit-tree label that he has found during twenty-five years experience with labels of many different styles. Copper wire, No. 17, 18 or 19 must be used for fastening the labels upon the trees, and be cut of sufficient length to allow for growth of the tree. Such ink if well made and put on will last twenty years.

**BOG-MEADOW HAY IN NEW ENGLAND.**—In one of Mr. Greeley's articles in which he is telling the readers of the *New York Tribune* what he "knows of farming," he says, "Fifty years ago, I judge that the greater part of the hay made in New England was cut from sour, boggy land, that was devoted to grass simply because nothing else could be done with it. I have helped to carry the crop off on poles from considerable tracts on which oxen could not venture without miring." Mr. Greeley spent his boyhood in New Hampshire and Vermont, the same States in which we learned much of the little that we know of farming; but we cannot agree with him in this estimate. In the sections with which we were acquainted we should estimate the proportion of hay from sour, boggy land would not exceed one ton in twenty-five of the whole amount cut. The hill sides which were then productive in clover, herdsgrass and redtop, are in many cases now overgrown

with weeds, bushes and wood, and the farmers who, fifty years ago lacked barn room for their upland hay, are now compelled to resort to the sour, boggy land for the coarse fodder which was then considered hardly worth cutting.

#### AMERICAN DAIRYMEN IN ENGLAND.

From a letter dated Longford, Eogland, May 30, 1870, written by Mr. C. Schemerhorn, one of the American cheese-makers who have gone to England to introduce the factory system there, and published in the *Utica Herald*, we make the following extracts:—

After my brother arrived he took charge of the factory at Derby, and I struck out for Longford, 10 miles west of Derby, where the other factory was under way, which was completed in a short time, and commenced operations the 5th of May. The building is a new one, thirty-two feet by ninety and two stories high; make-room sixty feet long. It has the drop floor and gates in the vats, saving the labor of dipping the curds by hand. There are twenty-five patrons, and I am making twenty-two cheeses a day, ten inches deep and pressed in a fourteen inch hoop. I have now in the curing room upwards of 500 cheeses in number. It astonishes all to see how fast they accumulate. It is more than was expected. I color the cheese some, and use Nichol's fluid extract of annatto, which takes the preference in this country, and ought to in America. It is free from sediment, so there is none to settle in the bottom of the vat while the milk is coagulating, to leave a streaked color in the cheese after curing. This annatto cannot be shipped in baskets, but comes in kegs or casks, and is a paste before preparing, and is the pure annatto, while it has to be reduced to a great extent to allow shipping in baskets. It takes but a small quantity to color a large amount of cheese or butter, and gives the best shade desired.

England is suffering for rain. The grain is backward on this account, and unless rain comes soon it is anticipated the crops will be light. The grass has not suffered as much, although crops in some sections are turning brown and are getting dry.

Saturday, the 21st, was the warmest day of the season. Thermometer stood at 83°, while the 22d, in the afternoon, it stood at 58°. The sky is generally cloudy, smoky or foggy. In the evening the light of the sun fades away slowly. A few evenings ago I was reading at 9½ o'clock in the twilight, while in the winter time I have been told darkness commences at 3½ o'clock in the afternoon, especially in London, which is a very smoky city.

The cattle here are good size, and chiefly short-horn. After being in the dairy for three or four years they are fatted for beef, (that is, in this section.) They fat very quickly and make good beef. England cannot pro-

duce enough beef at home. A large quantity of meats come from Australia, prepared there and shipped here. This section was visited by the cattle plague several years ago, but not so much as other sections, although some dairies of forty cows were attacked with it, and they were all slaughtered to get rid of the disease.

The cattle here now are troubled with the foot and mouth disease, which is extremely contagious. The cows first show signs of it by a very quick decline of milk, smacking their lips and drooling from the mouth. The tongue and the mouth are covered with large yellow blisters, which break after a couple of days. The eyes are dull, and the flesh hot. The animal dislikes to eat on account of the soreness of the mouth. Occasionally the breaking out is on the feet, and the hoofs drop off at times; (when the sheep have it, it most generally deprives them of the hoofs.) The best remedy is gruel of wheat bran mash (some put salt in the mouth) and grass cut fine. The better condition you can keep the animal in the sooner it will recover. After an animal has had it once it is likely not to have it again for several years.

#### TO BREEDERS OF HORSES.

I am induced to write a few lines in answer to the frequent inquiry which is made by letter and otherwise, as to the influence of unsoundness in sire or dam, especially of the dam, upon their produce. I am aware that the subject has been treated of often, but fails to be considered in the proper light by breeders among us.

My experience and that of others with whom I have conversed, is that more than half of the mares bred are quite unfit to produce first class progeny. I believe more care is taken to select sires, but if a mare has been a good one or not, and has become foundered, or spavined, or wind broken or otherwise unfit for market, men believe that something is saved to breed from such animals, and expect to be repaid for the physical disability under which the dam is laboring, by reproducing a foal liable to the same weakness which caused the injury to the dam. And these injuries become fixed types, as the strain upon the animal economy is greater in any given direction through a series of generations. Thus dams are selected which have broken down, and are no longer suited for active labors or the turf.

This course pursued for ten years longer as it has been for the last ten years in Maine, and we may bid good bye to the profit and pleasure of breeding the best horse that goes to market. You who spend five years of care and necessary expense to raise a colt fit for the harness, ask yourselves whether you are willing, when selling an animal, to take a doubtful note for his value. There is as much reason in that, as in expecting an animal con-

stitutionally defective, to give you a satisfactory progeny. I am not speaking at random, or discussing physiological science, but offering a warning which careful investigation in my own practice has made certain. I can point out to any person who desires to make observation, a large number of mares of constitutionally light muscle, which have almost invariably produced colts that have broken down. And this is more seen when the breeding of the mare is so good, (with the exception of the difficulty in question) as to admit of her determining the general characteristics of the progeny.

Another point is also of much importance, to those who wish to breed to a given qualification. Many men expect to breed a trotter by coupling a mare which has no lines of fast blood in her pedigree, with a fast horse. Experience proves that this is rarely done at the first cross, but may be done by two or three in-crossings. Therefore it is necessary when we wish to breed speed, that the dam and sire, both be found in a line of speedy animals. To effect this, I cannot but urge in-breeding much more than is now done, especially the second generation to the grandsire, and the second generations to others, whenever it is desirable to intensify or increase any characteristic.

Will not some of our young breeders take up this suggestion in in-breeding, and give the public the advantage of their experience.—*T. S. Lang, in Maine Farmer.*

*For the New England Farmer,*

#### MEDICAL TOPICS.

BY A MEDICAL MAN.

The diseases of most frequent occurrence in the latitude of New England, during the months of July, August and September are Diarrhœa, Cholera and Dysentery:—Of these we purpose to write briefly, and in the order here indicated.

##### Diarrhœa.

This term literally signifies a *flux* or looseness occurring from any portion of the body; but as commonly employed, it denotes a morbid frequency of the discharges from the bowels, the dejections being at the same time liquid, or morbidly soft, and frequently otherwise altered in character. When the dejections consist of feces not much changed in character, but simply liquid or semi-liquid, the diarrhœa is said to be *fecal, feculent, stercoraceous* or *simple*. When, from the yellow or green color of the discharges, bile is supposed to be present in larger quantity than usual, the affection is called *bilious* diarrhœa. When the matter discharged is very watery, consisting mostly of serum, the diarrhœa is called *serous*. When the dejections consist principally of undigested food, we have a case of *lienteric* diarrhœa. When the discharges are chiefly mucous or slimy, the diarrhœa is said to be

*catarrhal* or *dysenteric*. When the matter dejected contains fat or oil in considerable proportion, the disease is called *adipose* or *fatty diarrhœa*.

Diarrhœa may be a symptom of inflammation of the intestines, or of certain diseases of the bowels incident to consumption, typhoid fever, or some other disease; it may be an element of cholera, dyspepsia, and certain cases of colic; or, it may be what doctors call an *idiopathic* disease—that is, a disease of itself—a primary disease—in which case it is usually the result of the action of undigested food, or else of the depressing and relaxing effects of extreme heat.

The treatment of diarrhœa should vary according to the circumstances of individual cases. If the affection be *symptomatic*, that is, if it be only a symptom of some other disease, the parent disease or *primary affection* must be attended to *first*, for there is little use in efforts made to stop the *effect* while the *cause* is suffered to continue. Nevertheless, in this form of diarrhœa it is not only useful, but absolutely necessary, sometimes, to administer anodyne and *astringent* medicines for the purpose of relieving pain and checking the discharges, although the effect be not permanent. Among the various remedies employed for this purpose, opium and its several preparations occupy the front rank. One fourth of a grain to two grains of opium; or, ten to forty drops of laudanum; or, a teaspoonful to two table spoonfuls of paregoric; or, five to fifteen grains of Dover's powder; or, one eighth to one fourth of a grain of morphia, are the usual doses for an adult; for children, the doses must be greatly lessened, and in proportion to the age. As a rule, however, these articles are not safe remedies for domestic or family use, and, with the exceptions of paregoric and Dover's powder, should never be employed except as prescribed by a competent physician. The safer remedies for common use, are tannic acid or "tannin," gallic acid, white oak bark, blackberry root, kino, catechu, logwood, cranesbill, or some other one of the many valuable astringents which have a place in the *Materia Medica*.

But anodynes and astringents, such as opium, tannic acid, oak bark, etc., should be used only as *palliatives*, except in cases in which the discharges are produced or continued by debility and muscular relaxation. If irritation caused by improper food has occasioned the trouble; if the discharges are produced by an effort of nature to rid the system of a redundancy of bile, or some other offending material; or, if the diarrhœa be an element of active inflammation of the bowels, such things as we have mentioned should be used cautiously, if at all; and in many cases they are quite inadmissible. The transient diarrhœas caused by overloading the stomach, improper food, a redundancy of bile, &c., do not, as a rule, require much medicine. Rest, with abstinence

from food and drinks for twelve, twenty-four or thirty-six hours, will generally effect a cure. If the contents of the large intestines be not expelled spontaneously, which may be inferred from the entire absence of solid matter, a cathartic of Epsom salts, rhubarb, or castor oil, may be administered with advantage; or the following preparation, which is a favorite with many, may be employed:—Take of powdered rhubarb one ounce; saleratus, or bicarbonate of soda, half an ounce. Mix, and steep a teaspoonful of the powder in a gill of hot water for half an hour; then strain, and add sugar to suit the taste—also a little essence of peppermint or cinnamon. This dose should be repeated every hour, until it operates as a cathartic. Other mild cathartics may be used instead of those mentioned, if preferred. After the intestines have been thoroughly cleared, mild astringents and anodynes may be employed, if the disease continues.

If active inflammation of the bowels be present, or if the diarrhœa be dependent on or connected with ulceration of any portion of the alimentary canal, or if it be a complication with any organic disease, the case should be placed in the care of a skilful and judicious physician.

A proper attention to diet is important in all cases of diarrhœa. During the first day or two all food should be avoided, or nearly so; and when taken it should be composed of such articles as are most easily digested. Rice meal gruel, farina gruel, arrow-root gruel, wheat flour gruel, milk with bread, crackers or rice, and sometimes tender meat, such as chicken, lamb or beef, may be taken without injury. A moderate quantity of food, taken at short intervals, is generally advisable, rather than a full meal once or twice daily. Drinks should be taken sparingly. A little rice water; an infusion of good black tea, or of raspberry, or strawberry leaves; bread or barley coffee, or even good Java; iced water in small quantities;—these are the best drinks, in most cases. Sometimes a little old cider, port wine or brandy may be taken without harm, and even with advantage; but inasmuch as it is difficult to obtain pure wine or brandy, it is safer to let them alone. Much benefit has sometimes been experienced from wearing upon the abdomen a compress of *dry flannel*, or a *wet compress* of cotton or linen cloth, covered by a dry girdle or bandage.

THE BEE MOTH.—Now is the time to be on the look out for the moth-worms. During the next two or three months they breed fast, and every one destroyed now will save you the trouble of destroying hundreds a little later in the season, and besides, save you much loss. The best time to get rid of them is in the morning, when they will be found generally upon the bottom board of the hive. Do not neglect it.—*Agriculturist*.

### A JUNE VISIT TO AN OLD FARM.

Beauty of the country—Rural tastes of a friend—Farmers' Convention in N. H.—Farm of G. W. Lane in Derry—Old friends in council—Stone walls, miles of, and ditches—An orchard waked up—Cabbage, m. k., &c.—Exhausted soils revived—Value of example.



RIDE across the country in the "leafy month of June" must be a pleasure to any lover of nature. But taken in such a June as this, when heat and moisture have given a luxuriance of foliage and flowers rarely witnessed, the careful observer will realize an entertainment and instruction entirely surpassing what is usually found in fashionable haunts.

These outward attractions were greatly heightened by the presence of a neighbor and friend, the Hon. JOHN S. KEYES, late U. S. Marshal for the District of Boston, who loves nature and riding as well as old Izaak Walton did "virtue and angling." He finds infinitely more satisfaction in prying into the ways of the wonderful nature about us than into the ways of rogues who operate to deprive the government of its just dues, or who imperil its safety. So with steeds that seemed to enjoy the travel, as we did the cool air and charming scenery, every mile of the way offered topics which were interesting and instructive to discuss.

At the *Farmers' Convention*, held at Manchester, N. H., last winter, Mr. G. W. LANE, of Derry, in that State, took part in the discussions, and attracted attention by referring to the magnitude of his farming operations, as well as by their diversity and their nature. This led me to make many inquiries, and the conversation ended by his extending an invitation to myself, to JOSEPH S. ABBOTT, Esq., of Concord, whose fame as a coach builder is well known wherever coaches are run, and to the Hon. J. D. LYMAN, then Secretary of the State of New Hampshire, and the gentleman who has offered in the New Hampshire State

Society, and paid the \$100 premium on corn, and now offers a like sum for the present year. My friend made up the quarto, all farmers, and working more or less with their own hands.

Mr. Lane purchased what is well known in all that region of country as the "Old Gen. Derby Place," and which is a very beautiful estate. It stands on an eminence overlooking the country for a circuit of at least fifty miles in every direction, bringing into view the ocean, in clear weather, the Monadnock, Kearsarge, Ragged, Wachuset and Unconoonak Mountains, and from the cupola of the house, the spires in about forty different towns.

The farm consists of some 250 to 300 acres, having a heavy, granite loam soil, full of springs, and originally plenty of stones. The latter have been removed to a considerable extent, and large quantities of them laid up in substantial balance walls, so that now there are between four and five miles of stone walls on the highways.

There are one and a quarter miles of ditches, which are excavated three and a half feet deep by the same width. In the bottom of the ditch—which is all what is called *hardpan*—a duct is formed of substantial stones, leaving an aperture about eight inches square; this is covered with shavings, coarse straw or brush, as compactly as it can be conveniently made, then with small stones for a foot or more, and finished off by returning the earth which had been thrown out, rounding up the surface as much as it is supposed it would settle.

The effect of this drainage upon the soil he describes not only as clearly perceptible, but quite remarkable. An apple orchard which had borne only the most meagre crop of indifferent fruit for many years, brought a bountiful crop of fair fruit the year succeeding the draining. Some of this fruit, now on hand, June 30, is sound, crisp and juicy. He imputes the change to the drainage, as no tilling of the soil had taken place, if we understood him correctly. Quite as beneficial a change was manifest on all the crops, he said, as on the apple crop.

On the 25th of September last, in passing the farm, I noticed a field of cabbage which seemed from the carriage to be excellent. Mr. Lane informed me that he sold this crop about the middle of April last, after keeping

them through the winter, set out in the ground and covered with leaves, straw and brush. The field contained seven acres. This year he expects to raise 20,000 heads.

On one and a fourth acre he got last year 32 tons of rutabaga and mangold wurzel. He keeps 32 head of cattle, among them 25 cows; sold last year 3,630 cans of milk; will increase it this year to 4,000 cans; cuts about 80 tons of hay, which quantity he will probably double in a few years, if his operations are successful.

Mr. Lane states that after purchasing the farm, his neighbors told him that the land was all exhausted by a long process of annually taking off crops in the fields and grazing the pastures, and that they must be very light hereafter until a thorough process of tillage and manuring had been gone into. "But," said he, "this land where those teams are ploughing brought a heavy crop of cabbage last year with only a fair dressing of manure; it was kept entirely free from grass and weeds, and when the cabbages were harvested, the land was clean and froze up so." He stated further, that on a portion of this land he had just cut a fair crop of grass, although nothing had been done to the land after the cabbages were taken off! Upon hearing this statement, I left the party, went off to where one of the teams was ploughing, and found that there was no sward, but the red top was eighteen inches high, and clover in considerable luxuriance, and took samples of each to the other visitors. "This is the land," said Mr. L., "that was pronounced exhausted, but was exhausted like a drowning man, because it couldn't breathe. Now that I have let the breath of life into it, see what it will do!" And it was wonderful what it was doing.

One of his heavy operations since the snow went off is the pulling up of bushes and young trees by the roots over an extent of forty acres! This was done by ox-power, and done so thoroughly as to bring the whole into a fine tilth by the usual ploughing and harrowing. A portion of this land is to be devoted to cabbage, mangold and rutabaga; another portion, and the seven acres where the cabbage grew last year, to barley, which is to be sown early in July.

It does not seem to me that the barley crop

will be perfected before frosts will overtake it; but he states that sixty days of favorable weather will bring it to perfection. He will put in sixteen acres of it.

These operations cannot be indulged in without the outlay of capital which few farmers can command; but they are examples of great value to all farmers. If they prove injudicious, they can avoid them; if successful, they can imitate them, and find a profit in so doing. They should be carefully observed by all who can occasionally see them, so that they may avail themselves of their lessons, either in avoiding or imitating. To me, they confirm the opinions I have long entertained in regard to the importance of thorough drainage, and of high culture in what we undertake.

#### HARVESTING SMALL GRAINS.

The season for harvesting the small grains, rye, wheat, oats and barley, and the importance of cutting them at the proper time to secure the best results, have not been fairly considered by most farmers.

This is important, whether the crop is to be used as hay or for the grain; both will be materially affected by the condition in which the crop is when cut.

There has not yet, in this country, we believe, been any thorough and reliable experiments made, in order to ascertain the condition of grain which has been cut at different periods of time, or when the grain was in different conditions. To do this so as to be reliable would not only incur cost of time and money, but the aid of very skilful manipulation, such as few persons among us at present possess.

In a discussion on "the influence of the time of cutting on the quantity and quality of the produce of hay and grain," Johnston, in his *Elements*, expresses a decided opinion that the period at which both hay and grain are cut materially affects the *quantity* and *quality* of the produce.

All farmers have noticed, perhaps, that when radishes are left long in the ground they become hard and woody. The same natural change goes on in the grasses which are cut for hay. So it is with grain, both as regards the straw and the grain they yield. The *rawer* the crop is cut, he says, the heavier and more nourishing the straw. That is, we suppose, after the straw has nearly attained its growth; for it is not to be supposed that straw half grown would be as nourishing as that which had come nearly to perfection. Within three weeks of being fully ripe, the straw begins to diminish in weight; and the longer it remains uncut after that time, the lighter it becomes, and the less nourishing.

On the other hand, he adds, the ear, which is

sweet and milky a month before it is ripe, gradually consolidates—the sugar changing into starch, and the milk thickening into the gluten and albumen of the flour. As soon as this change is nearly completed, or about a fortnight before it is ripe, the grain of wheat contains the largest proportion of starch and gluten. *If reaped at this time, the bushel will weigh most, and will yield the largest quantity of fine flour and the least bran.*

At this period the grain has a thin skin, but if left uncut, the next natural step in the ripening process is to cover the grain with a better protection—a thicker skin. A portion of the starch of the grain is changed into woody fibre, precisely as in the ripening of hay. It is clear, therefore, that the quantity of starch would be lessened, while the thicker skin would give a larger weight of bran or husk, and a decrease of flour.

After going through many experiments in the laboratory, in addition to facts gathered elsewhere, Johnston says that "theory and experience both indicate about a fortnight before it is fully ripe as the most proper time for cutting wheat. The skin is then thinner and whiter, the grain fuller, the bushel heavier, the yield of flour greater, its color fairer, and the quantity of bran less; while at the same time, the straw is heavier, and contains more soluble matter than when it is left uncut until it is considered to be fully ripe."

It is said, also, that early cut oats are heavier per bushel, fairer to the eye, and usually sell for more money. A week before full ripeness, however, is the utmost that is recommended in the case of oats.

Barley cut in the *striped* state is also thinner in the skin, sprouts quicker and more vigorously.

There are one or two other things to be considered. Where it is intended to feed the straw of these grains to cattle, the early cutting is still another matter of importance. The straw, then, if well cured and housed, is better than meadow hay, and scarcely second to much of the English hay.

Early cutting also lets the sun in to the young grass, and greatly aids its getting established so as to resist the influence of the winter.

A more careful attention to these matters would result, we think, in a very considerable saving to our farmers.

#### NEW ENGLAND AG'L SOCIETY.

The Premium List of the New England Agricultural Society for their Seventh Annual Exhibition to be held in the City of Manchester, N. H., on the grounds of the Manchester Riding Park, September 6-9, 1870, has been issued. The general arrangement is about the same as last year. The first premiums on cattle are the same now as then, while the second and third are generally reduced. There is also a marked reduction in prizes offered for fat cattle and sheep,—a branch of farming that it seems to us just now to deserve

encouragement from the New England Agricultural Society. Very little attention we believe has been given to the subject by the managers of agricultural associations. The state of the meat market and the impoverished condition of our soils, suggest to our minds the expediency of drawing out the experience of the few individual feeders scattered over New England, who have been successful in this business, and who would probably respond to less premiums than are offered to the trainers of trotting horses. We are glad, however, to notice that the fast horse is not quite as prominent on the prize list as heretofore. Two years ago the "Premiums for Trotting Horses" amounted to \$6,550; one year ago to \$3550; while this year only \$2250 of the Society's funds are announced as "Special Premiums for Trotting Horses."

Any person who does not receive a copy otherwise, can have one forwarded by mail on application to Col. Needham of Boston, or Col. George W. Riddle, of Manchester, N. H.

WOOL ON THE PACIFIC COAST.—W. Holly, Esq., Secretary of the woolen Manufacturers Association of the South and West, while on a visit to California, writes at San Francisco to the *Western Rural* that the Pacific coast is a Paradise for wool growers who understand their business. The extraordinary yield of wool, and the rapid increase of stock, without the expense of winter feeding or liability to loss by disease, offer great inducements to capital and enterprise. As compared with last year, statistics show an increase of nearly 3,000,000 pounds, and the condition of the wool this year is very much improved over that of former years. The difference is fully 15 per cent., cleaner than last year; the staple is good, strong, and healthy.

On his way to California, Mr. Holly had a personal interview, at Salt Lake City, with Brigham Young, who expressed great interest in the operations of the "Woolen Manufacturers' Association of the West and South," and signified his intention to contribute samples of wool and specimens of cloths manufactured at his mills, and also promised to encourage his people to follow his example. There are seven woolen mills and two cotton mills in Utah Territory.

The amount of this year's clip of wool in California and Oregon is estimated at 19,830,000 pounds.

THE ST. ALBANS, VT., BUTTER MARKET.—Mr. O. S. Bliss, Secretary of the Vermont Dairymen's Association, in a communication to the *Country Gentleman*, says that there is no market association or organization at St. Albans, but simply a coming together of the people, originating chiefly in the fact that the Vermont Central Railroad, several years ago, adopted the plan of running refrigerator cars for butter one day in a week from St. Albans. Previous to that time most of the butter was bought by agents who went about the country from house to house, but as farmers were

often unwilling to dispose of their butter at the price offered, it was frequently agreed that more should be paid if others got more at St. Albans. The home trade was thus gradually transferred to St. Albans, and Tuesday became market day. As many as four hundred, seldom less than two hundred, farmers' teams are now in town on that day, with both butter and cheese.

### WE BROTHERS BROWN.

BY HIRAM RICH.

We sing no songs of camps or kings,  
We write no love-lorn story;  
We lead no conquering column on,  
Yet we uphold its glory.  
High, brothers, high,  
The banners fly and fly—  
We brothers brown—  
We two bare hands.

In many a port the hatches fall,  
The ship is full and ready—  
The craven reef is just a-lee,  
Look lively, lads and steady.  
Sway, brothers, sway,  
Haul and belay, belay—  
We brothers brown—  
We two bare hands.

In forests deep, awaiting us,  
The keels to be are growing—  
The sea has never sa la enough,  
The winds are ever blowing.  
Swing, brothers, swing,  
The axes ring and ring—  
We brothers brown—  
We two bare hands.

The prairies roll and bloom and lure  
As were the world one meadow;  
The clouds are only looms that drop  
Their rippling wafers of shadow.  
Sow, brothers, sow,  
The grain will grow and grow—  
We brothers brown—  
We two bare hands.

The sea is kind; throw net and line,  
It cannot we'll deny us,—  
There's always need upon the land—  
The winds were made to try us.  
Pull, brothers, pull,  
Our nets are full and full,—  
We brothers brown—  
We two bare hands.

We sow and pull, we swing and sway,  
We whirl the wheel of Labor,  
We bring the day when king and king,  
Will be but man and neighbor,  
Sing, brothers, sing,  
Our song shall ring and ring,  
We brothers brown—  
We two bare hands.

*For the New England Farmer.*

### THE ILLINOIS CORN CROP.

BY JOHN DAVIS.

Ploughing for corn usually begins after the spring small grains are in,—say from the middle to the last of April, in Central Illinois. It is mostly done with two horses, to a common cast-steel, twelve or fourteen-inch plough, by a man or boy walking in the furrow, holding the handles and driving the team. It is not uncommon to see three horses driven abreast to a plough cutting fourteen to sixteen inches.

Much of the ploughing is done, also, by gang-ploughs, attached to a pair of wheels, turning two furrows, and drawn by four horses. The driver sits on a seat above the ploughs, managing them by means of a lever, and driving the team with two or four lines. This manner of ploughing is coming much into use and produces good results. Some of the gang ploughs are so arranged that one plough may be placed behind the other, thus forming a trench or subsoil arrangement. This is a very valuable feature, as it is impossible to work our Illinois prairies too deeply.

After corn ground is broken, it is usually well harrowed, and then marked off with a three-runnered sled or marker, into rows not quite four feet apart. The planting is done by a man and a boy, with two horses and a two-rowed corn planter, travelling at right angles to the above-mentioned marks. The furrows for the corn are opened by a pair of sharp steel-shod runners, under the weight of the boy who sits on the low front seat and works the dropping lever. The corn is covered by a pair of wooden wheels which carry the driver and the principal weight of the machine. The boy dismounts at the end of the row, to arrange the stake which measures the width of the rows and guides the driver on his next return trip. The machine is turned by the driver and team. The boy re-mounts and two more rows are planted. Twelve to fifteen acres are thus planted, in the best manner, in a single day.

Double or two-bladed shovel ploughs, single shovels and turning ploughs drawn by one horse, are mostly used in cultivation. There are devices for coupling two ploughs together, of each of the above sorts, either with or without wheels, to be drawn by two horses. Some of these devices are very excellent, doing good work economically.

There are many patent cultivators also, drawn by a pair of horses, managed by a man or boy either on foot or riding. These usually have four blades, or ploughs of various shapes, making four furrows at a single through.

In good mellow soils, promptly attended to, these cultivators are valuable, but in negligent, careless hands, much bad work is done. Soils, compacted by rains and becoming weedy, need careful ploughing to throw the dirt into the hills, to cover the weeds, before they get too large. If this is not done at the proper time the crop is seriously damaged, as it would be impossible to clean out by hand hoeing the large crops generally planted. The hand hoe is never used, and where the crop is properly managed is never needed.

I will here say that ploughing is usually done better by men on foot, than by persons riding. This is especially the case if the ploughman is disinterested "hired help."

If the corn crop is designed for cattle feed it is cut, during September and October, just

above the ground and set on end in round shocks. There it stands till needed in the winter.

It is then hauled on sleds or wagons and scattered on the ground among the cattle. Hogs follow the cattle and get a good living as scavengers. But hogs are not fattened for market in this way.

If the crop is designed to make pork, a portion of the field is fenced off for a hog lot, where it can be readily supplied with water, and the hogs turned into the standing crop. The remainder of the corn is jerked from the stalk, hauled in wagons and scattered among the hogs as they require it. This fattening process commences in August or early September, and should be completed by cold weather. At any rate, not later than the middle of December.

Good thrifty hogs fatten very fast on new soft corn, during the usually fine weather of our long western autumns.

The best hogs used for this wholesale management are grade Berkshires, and similar hardy breeds. They should be from fifteen to twenty months old at the end of the process; should have fallowed cattle the previous winter, and lived on clover and the small grain stubble field through the summer. They should consume the kitchen and other slops and offal, with a little corn from time to time during their early days.

Our best beef cattle are grade short-horns, and should be sold in spring or early summer when full four years old. They are often turned off sooner, but it is not considered the most profitable. Some of the graziers and feeders have experimented largely with Texas cattle a few years past. They did it on the principle that "cattle is cattle." The experiment, however, is seldom tried twice by the same man. It is readily perceived that there is a "vast difference in cattle." Burnt fingers are splendid reminders in such cases, and the lesson is seldom forgotten when learned through heavy losses. These old ways of using up the corn crop are gradually giving place to a direct sale of the crop, for shipment to the markets of the country.

On this plan it is husked from the stalk in the fall and thrown into temporary cribs and covered from the weather. Here it awaits the convenience of the owner to be hauled to the railroad station or boat landing. It is then shelled by steam or horse power, sacked and shipped; sometimes by the farmer, but oftener by men who deal in grain as a business.

The harvested confields, containing the stalks, husks and refuse or neglected corn, is depastured through the winter by cattle and other farm stock.

*Box 50, Decatur, Ill., June, 1870.*

—A horse is fond of hay, and he chews it better when he has not a bit in his mouth.

## EXTRACTS AND REPLIES.

### SALTPETRE, AND TURNING IN GREEN CROPS.

I was highly interested in your editorial concerning saltpetre.

I experimented somewhat on a compound, meant to be a perfect fertilizer—*i. e.*, to contain all the elements of plant food, last year,—and am still doing so this year. It contains saltpetre or salnitre, (crude nitrate of soda). Also nitrate of potash;—is not the latter also saltpetre? I suppose it is nitrogen in one of its forms, reduced to, or confined with, a salt or mineral substance—potash—as the former is nitrogen combined with the salt of soda. Bone, gypsum, and salt, (chloride of sodium) were also contained in this manure. As far as I have experimented, it seems to be proving satisfactory. Instead of costing me only five cents a pound, however, saltpetre cost me \$9.50 a hundred in Boston. Nitrate of potash cost 12½ cents a pound.

If there is any form in which it can be had at a rate much lower than I paid, or any place where it could be thus had, I would like to know it.

Used above, it would (would it not?) cause a growth of vegetation of a rank nature, but lacking silica; and grain thus raised would lodge, just as a strip in a fine acre of wheat on my place, manured from the barn cellar, lodges, while the rest, fertilized with this compound, ashes, bone dust, &c., alternately, stands upright. (Thanks to Mr. Henry Poor's advice for the wheat.) It would also cause the exhaustion of the other elements of plant food from the soil. How have you been in the habit of using it? Must it be dissolved? If so, how should it be applied? In combination with an absorbent, or in a liquid form? In the latter way, an H. H. D. on a wagon, with a hole near the bottom, and a furrowed board to cause the liquid to spread out in different directions, would be a cheap mode of facilitating the business. Or can it be applied dry, broadcast, and dissolved by rain? I have a field of grass land so far from any barn as to make it inconvenient to cart manure, which I want nearer home, to it. I shall top dress it with *something* this fall, and for this reason, make these inquiries.

What would be the difference in the effect of nitrate of soda, and nitrate of potash? Contrary to the rule, I used wood ashes in my compound.

What kind of a fertilizer would old bog hay, ploughed in, make?

A neighbor of mine sowed the different parts of a field, last year, with buckwheat, and with oats, and ploughed them under for a fertilizer; he then sowed to winter wheat. The wheat looks by far the best where the oats were turned in. I have heard it stated that buckwheat had a poisonous nature to other crops following it on the same soil, and for this reason it was condemned as a green fertilizer.

Several years since a prominent nurseryman and farmer near Philadelphia, advanced the opinion that the southern field pea was by far the best green manure crop that could be raised, especially on light soils; that it exhausted the soil but little, obtaining a large part of its nourishment from the atmosphere. I think the pea is also fitted to draw the inorganic element from the soil in a more crude state than many other crops. A market gardener told me he could get as good results from ground bone as a pea fertilizer, in a crude state, as after it had been reduced to a finer condition with sulphuric acid—and that this was the case with few crops. The coarse particles thus appropriated would become sufficiently refined by passing through the vegetable organs of the pea vine, to fit them for food for any other plant.

Bone is peculiarly adapted to fertilize the pea

crop; and if the cost of the seed be not too great, it would seem to be a good crop for the purpose. The great objection to clover is, that without high manuring, it takes until the second year to get a crop, while it would seem that two crops of peas might be raised and turned in the same year. The objection to oats would be, I suppose, that they draw too heavily from the soil, and not enough from the atmosphere. The name "southern field pea," seems to indicate a variety grown in the south as a field crop—probably for hog or cattle feed. Then there is the Canada pea, sowed sometimes with oats—the question might arise, what is the value of this pea, with or without the oats, for a green fertilizer? Probably the southern pea, like southern corn, makes a larger growth than the northern varieties. How about winter rye for this purpose? I should like to hear the opinions of the editor in regard to this question of green manuring.

Perhaps other crops than wheat would follow buckwheat, as well as oats. JOHN.

*Franklin, Mass., June, 1870.*

REMARKS.—Nitrate of potash is, as you suppose, saltpetre. The experiment with it to which you refer was made before the war, when saltpetre cost much less than at present.

Used alone, it would probably have the effect upon crops which you indicate,—greatly increasing their size at the expense of strength and firmness. Wheat, on clay loams that are highly manured, sometimes entirely fails to produce grain, but has a heavy growth of stem and leaves which fall to the ground.

In using saltpetre, we get it as fine as we can conveniently by pounding and sow it broadcast. In the experiment referred to, 160 pounds of saltpetre were used, and the same number of pounds, per acre, of plaster.

In reply to your question, "What would be the difference in the effect of nitrate of soda, and nitrate of potash," we would say that there is much more of potash in the composition of most vegetables, than of soda. Hence they are more hungry for potash than for soda, and obtain what they need from nitrate of potash. Nitrate of potash contains a larger quantity of nitric acid than does nitrate of soda; hence there is more nitrogen furnished for vegetable use than there is from nitrate of soda. In other words, nitrate of potash is more immediately active, and furnishes a larger quantity of what vegetables most need.

Old bog hay, ploughed under, a little at a time, would probably enrich a soil so as to enable it to produce abundant crops, after the process had been continued for some years.

There are several other points touched upon by our correspondent, all of them of interest and importance. We hope others will note and remark upon them. With regard to manuring by green crops, we have often spoken encouragingly. By this process any of our lands may be made productive. Whether this can be profitably done, will depend upon a variety of circumstances, which would require considerable space to discuss. But that our "scrub oak" lands and pine plains may be redeemed, we cannot doubt when, to-day, people

are making some portions of the desert of Sahara to blossom as the rose.

Upon the whole, we are inclined to think the clover is to be the great renovator in preference to any plant yet used, in restoring exhausted soils to a state of fertility.

#### FOOT ROT IN CATTLE.

In the autumn of 1868, I went to the pasture to look after and salt my cattle. Missing a fine steer from my herd, which always came at my call I searched about and soon found him lying down and unable to rise,—one foot being in the condition described by your correspondent, D. K. W.

Having a small can of kerosene oil with me, I saturated the foot with it thoroughly and left the animal in the pasture. I returned again the same day to note effect of, and to repeat the application. Three or four applications cured the foot, and the steer did well.

Several cattle belonging to my neighbors and acquaintances have since been similarly affected, and I have recommended applications of kerosene oil, and with unvarying success. JOHN DURANT.

*Brookfield, Mass., June 29, 1870.*

REMARKS.—The carboline, or carbolic acid, contained in the kerosene oil, was undoubtedly the curative principle in this case, as its use is recommended in this disease. In behalf of D. K. W., and others, who may have cattle with this disease, we thank Mr. Durant for his statement.

#### BLOOD WART ON COLT.

I have a two-year-old colt that has a wart on the inside of the hind leg just above the gambrel joint. It is about three-fourths of an inch in diameter, and is what we call here a bloody wart. If you can tell me how to cure it you will much oblige. *Dudswell, Can., July 4, 1870.* J. C. LASSELL.

REMARKS.—As warts left to themselves generally disappear when their time comes, a great variety of applications have the credit of cures. Caustics are often used. Pare the wart down to the quick, then with a feather, small brush, or a stick broomed or roughed at the end, apply the caustic, being careful not to touch any part but the wart. Yellow Orpiment wetted with a little water, is recommended by Dr. McClure; butter of antimony, or nitric or sulphuric acid by others. Dr. McClure says that the Yellow Orpiment will cause considerable inflammation, but in a few days the wart will drop off, leaving a healthy sore, which soon heals. If the whole wart does not come off on the first application, a second must be made. We have known a little of the butter of antimony being applied three times a day until the roots of the wart appear to be dead. After the wart is exterminated, a lotion of one pint of rum, half pint water, one ounce of aloes and one-fourth ounce of myrrh, pulverized, and mixed, is recommended by a correspondent of the *Rural New Yorker* as a wash to be used three times a day on the sore.

Prof. Law, the Veterinary Lecturer of the Massachusetts Agricultural College, recommends tying a stout hard cord round the neck of the wart as tight as you can draw it. If you succeed in cutting off all supply of blood the wart will drop off

in about a week. If not, apply a second cord in the same way round the diminished neck of the tumor.

#### CULTURE OF FLOWERS.

I think I do not hate flowers. I rather love an orderly flower garden, or the beauties in a hot house, or good specimens upon the window seat. I admire, in a degree, the zeal displayed by the busy house-keeper who with all her cares, never forgets the thirsty soil in the box where stands her favorite plant.

But my wife is rather enthusiastic in her love for flowers, and the catalogues of flower seeds and bulbs have by the illustrations and descriptions brought a large variety to her acquaintance. Her lady friends also have plants that are propagated by slips; these have been brought home and put into dirt in boxes, bowls, pans, hanging pots, &c., so that the windows are filled, the stands, tables and writing desk loaded.

Our winters are so severe that nearly all plants are banished to the cellars during that season, but early spring causes them to appear again. This spring soon after they began their growth they were badly infested with lice. My wife wished me to smoke them out. Now it makes me sick to smoke. Shall I kill myself to kill the little bugs? I think not.

Then new dirt must be had to sow seed in. I turned that job over to my little boy who with his little wheelbarrow and shovel prospected in every direction,—here for sand, there for black loam, hither and yon for manure, ruck, scrapings of the barnyard, &c. But the best seemed to be the remains of a compost heap. This, however, soon began to show signs of animal life. Little white worms, a fourth of an inch long, that would curl themselves up, then suddenly open and dart an inch or more; tawny ones, half an inch long and capable of growing longer; a species of wire worm; ants, little light red fellows, very busy digging pits and tunnels, appeared in the mass. As it was likely that the diet of worms was vegetables it was desirable to destroy them; so several pans were filled with dirt and put into the stove oven to bake. In this way the soil was prepared for the seeds, which were sown and covered over with sand to prevent the surface from hardening, so the delicate sprouts could burst from the tiny seeds.

Then what anxious watchings for a show of spring vegetation! What debates whether it were weeds or flowers that were appearing to view. After several day's doubt in respect to the character of one specimen it was triumphantly declared to be a plant, because there was a bug on it! As the plants grew the number of boxes, basins, pans, bowls and cups increased; small bits of green were transplanted and gradually hardy kinds were exposed in the open ground. Still for a time the cold nights rendered occasional protection necessary. One morning after a lengthy search I found my hat out in the garden over a plant. Probably, however, the beauty of summer and fall will more than repay the labor and care of the spring. Let us hope so!

If corn received such care a hundred bushels per acre would doubtless be the result. J.

#### CROPS, COLLEGE, THEORY AND PRACTICE IN THE CONNECTICUT VALLEY.

Nearly all the crops are looking finely in this vicinity. Corn, wheat, oats, tobacco, broom corn, grass, (excepting old fields) are promising more than an average yield. Other sections near, complain that grass is light, corn small and potatoes smaller. It is possible we are blessed and in a state of grace, in consequence of the Agricultural

College being located in our district. One great—not peculiar—benefit we have already received in the shape of a prediction or promise. One of the students of the college says, "Wait a few years, and we will tell you how to raise fifty bushels of corn to the acre on your plain lands." This fellow must be brother to the one who tells us how to milk a cow properly, by directing to "take hold of the teats, and with an uplifting of the hand, and a pressure, and a down pulling, imitating the sucking of a calf, you will draw the milk." Now real farmers, those who make farming their business, are just tired of such *telling*. If we need aid, it is in *showing* us how large crops can be raised at a profit. We are heartily sick of these advisers, these talking and writing farmers, whose whole knowledge of the business is derived from books. These professors, these doctors, these merchants, these priests, whose experience consists in seeing other men work, or, like Ex-President Fillmore, who, when in the field with the workmen, bound one bundle of wheat, and ever after felt and said, "I too am a farmer," assume to be competent to criticise and advise in all departments of farming. The agricultural papers are doing a good work in teaching the farmer that his profession is an art and a trade; that it must be acquired by hard work; that theory alone will not make a man a farmer; that doctors and politicians, and professors of chemistry, are not as competent to advise the farmer, as are experienced farmers themselves. They are learning through the agricultural papers to have confidence in themselves and in each other, and not to be dissatisfied with their profession. H. S.

Leverett, Mass., July 4, 1870.

#### HAY CROP IN BARRE, MASS.

The farmers in this region who have well manured their grass fields,—and there are many here who have them under high cultivation,—are realizing large crops of hay this season, fully equaling that of former years; while on the other hand, those that have paid too little attention to their manure heaps fall behind the average hay crop this year. It is really marvelous that even some of our intelligent farmers who are shrewd and observing in other respects, neglect the study of this important branch of agriculture—I mean the subject of manures—and depend more upon the *extent* of their meadows, than the manner of their cultivation. In this respect this class might well take pattern from the English farmer or of our city vegetable farmer, whose seven acres, or less, yield a comfortable subsistence for a family. It is easy to fancy how awkward such a farmer would feel, if by some sudden transposition of the enchanter's wand he could be plumped down bodily with all his household goods, on a western prairie farm covering thousands of acres, into which the good fairy had thrust in the seed, and was now bearing immense waving fields of wheat.

CALEB RUSSET.

Barre, Mass., July 4, 1870.

#### OX WOUNDED BY A MOWING MACHINE.

I have an ox that was cut with a mowing machine about ten days since. The wound is some three or four inches above the fetlock, and the cord is apparently about half cut off; being cut more on one side of the leg than the other. A mass looking like proud flesh about the size of an English walnut projects from the wound. The leg is some swollen. The ox walks, but is very lame. At first I closed up the wound, and put on a tarred bandage, which after about three days I took off and applied cold water, then a liniment of myrrh, camphor gum and alcohol. In

about five days the leg began to swell. I then applied a strong liquor, quite hot, of wormwood and smartweed. It is not as sore nor swelled so much. But what to do for that cord, I don't know.

JUSTIN S. MONTAGUE.

Woodstock, Vt., July 12, 1870.

REMARKS.—We doubt whether anything can be done directly for the cord, further than by aiding nature in its efforts to outgrow the wound. We should advise you to get Dr. Boynton or some other physician to examine the ox. Advice based on such examination would be far more reliable than any that we can give from a mere description. Flies, dirt, &c., should be kept from the wound, and perhaps the wormwood and smartweed wash is about as good as any that can be used. Of late carbolic soap is recommended for this purpose. Your efforts should be directed to assist nature in her efforts to heal the wound, rather than to find any infallible "cure."

#### DRAINING.

Information is wanted in relation to underdraining land that has a tight, pan subsoil, which holds water late in the spring; is smart, powerful land, will produce large crops of grass, corn, or grain, when the season is not too wet. Now, what I want to know, is, will it pay or be profitable to make drains across this field or up and down, (as the land caets sufficient for the water to run either way,) and lay stone drains and fill in with small stone, of which there seems to be plenty on and in the ground?

I have had no practical experience in draining land; all I know is what I have read in agricultural papers. I do not want you to tell me that tile are best for drains, for there are none made in this place or near here, and to bring them on the railroad would be too expensive.

I might answer some of the numerous questions that have been asked in the FARMER the past year, but I will wait and see what you say in relation to my drains.

JOHN L. JONES.

Ripley, Maine, 1870.

REMARKS.—On such land as you describe, there is no doubt in our mind that it would be profitable to drain by the use of stones. To make a sure thing of it, we would advise that the work be done in a thorough manner. Judge French, in his excellent work on "*Farm Drainage*," says:—"In clay or hard pan, such a drain [stones] may be made durable, with proper care, but it must be laid deep enough to be beyond the effect of the treading of cattle and of loaded teams and the common action of frost." A drain between three and four feet deep will be more sure to carry the water freely and will be much more permanent than one laid a foot or more less.

It will be well, too, to consider which will be best, to form a duct of six, eight or more inches of stones of considerable size, in the bottom of the ditch, cover with flat stones, either in a triangular duct or the square culvert, then put on shavings or hay, and fill to the surface with earth; or fill over the duct with small stones a portion of the way to the surface, and finish with earth.

Our own opinion, based upon some experience, is, that the small stones would be injurious rather

than beneficial. They would allow a pretty free passage for the water to carry down with it sand and fine soil, which would gradually fill the duct and afford fine nestling places for moles. The moles are busy people, frequently passing up and down from the stones to the surface, and thereby leaving numerous holes where the water can run down in volume during showers, and take the earth along with it.

On the contrary, if the duct is covered with turf, shavings or straw, and then the ditch filled with earth, the water could not rush down through it, or fall in drops, but when the soil is filled with all it could hold, would gently and gradually pass down through the pores of the soil by its own weight, into the duct, without disturbing the earth above it.

With regard to the *course* in which the drains should run, we think they should be up and down; that is, in the direction of the general slope.

Drains put in the hard pan, between three and four feet deep and twenty feet apart, will probably remain good for fifty years—perhaps a hundred—and, with judicious treatment in cultivating, the field will produce double the value in crops than if it remained undrained.

A considerable portion of the expense of draining is repaid by the increased value of that portion of the soil which is trenched. When a field is treated alike in all its parts, with manure and pulverization, the lines of the drains will show double the crops that are produced on other portions of the field. This is the result of a fine root bed, giving the roots ample room for extending themselves and finding the food they need. Thus you have our say in relation to your drains. Probably we could have written more intelligently were we better acquainted with your land and its surroundings. In closing, we must put in our claim for the fulfilment of your implied promise about answering questions that are asked in the FARMER. We have no doubt of your ability to do so. Why should you not do it then? The idea that ministers, lawyers, &c., should do the talking and writing for farmers is all wrong, as is also that other notion that by writing anything to be printed, a common farmer is liable to be laughed at for trying to be smarter, wiser or more learned than his neighbors. Why shouldn't farmers talk and write about farming?

#### IRISH FARMERS.—YANKEE EXODUS.

An Irish correspondent stated some weeks since in the FARMER that his countrymen are superseding Yankees on our New England farms. This fact is very noticeable in this region, which has a good reputation for grazing and mowing lands. The Irishman "works out" as a laborer for some years, until he has acquired five hundred or a thousand dollars, which he invests as part payment for a small, snug farm and stock, and before long it is paid for. The exceptions are rare in which this class do not make thrifty, provident, and honest men,—good citizens who are really a great accession to the community. They rear

large families—the great prevailing sin of the ‘murder of the innocents’ is to a great degree unknown among them, and they are well instructed in the great principles of freedom. As your correspondent, above alluded to, did not assign the causes why many of our young men leave the farm, it may not be amiss in this connection to briefly state them as they occur to the mind of the writer. Many are dissatisfied with the quiet hum-drum life of the farm, a feeling too often engendered, we apprehend, from the cheap, sensational works of fiction too much affbat. Others are tired and sick of the many hours of farm labor required; of the utter lack of improvement everywhere visible,—the scraggy walls and fences, &c.; while others, stimulated by a purer and higher ambition, carve out a new destiny on the Western prairie, carrying New England thrift and enterprise with them, giving character and tone to the new country. It is not impossible that the time is coming when the avenues of railway travel will open communication to that extent between the East and West, which shall make mechanical pursuits paramount here, and agricultural products the principal business there, just as we see in cities particular branches of business cluster in the same neighborhood. CALEB RUSSET.

*Barre, Mass., July 4, 1870.*

#### WHEAT OR RYE FOR GREEN FODDER.

I have reserved a piece of ground on which I intended to raise a crop of winter rye, to cut green, for milch cow feed in spring. Now I would like to inquire what kind of a substitute winter wheat would be?

The soil is so rich that it would produce heavy straw, but the grain would be light, and the straw lodge, if not early cut.

I believe it is usually the case that the richer the grain, the richer the stalk, from whose juices the former obtains much of its material.

Thus, sweet corn fodder is sweeter, better, and more nutritious than any other.

If there be no particular objection, I shall sow the piece with some of both rye and wheat, putting in very early. I have a piece of my own now, looking finely, with plump heads of ripening grain. JOHN.

*Franklin, Mass., July 1, 1870.*

REMARKS.—We have never fed wheat straw in a green state to cattle, and cannot, therefore, speak from actual experience. No reason occurs to us why winter wheat would not be a good substitute for rye. The sowing of both wheat and rye will be an experiment worth trying. Let us know the result.

#### YOUNG TURKEYS DYING.

I wish to inquire the cause of the death of young turkeys. They live and are smart until about six weeks old, when they droop and die. At first I thought it might be lice, but conclude it is not. I have given them every thing I could think of, but to no purpose. If you or any of the poultry men can tell the cause and remedy you will confer a favor on a reader. J. G.

*South Berwick, Me., July 11, 1870.*

REMARKS.—Will our correspondent, “A Farmer’s Wife,” of Hyde Park, Vt., reply to the foregoing inquiry, as many other turkey raisers are every year troubled in a manner similar to that described by “J. G.” The cause, we have little doubt, is in the nature of the turkey. Mr. Bement, in his work on Poultry, says, at two periods of

their lives turkeys are very apt to die; first, about the third day after they are hatched; and, second, when they throw out what is called the “red head,” which they do at about six weeks old. The latter is a very critical period in the life of a turkey—much more so than the period of moulting. A shower, even in warm weather, or damp ground, will often carry off half a large brood. The food should be increased at this time, and rendered more nutritious by adding boiled eggs, wheaten flour, bruised hemp seed, or a few bruised beans.

Mr. H. A. Sumner, of Brandon, Vermont, in an article in the *FARMER* of June, 1867, says that young turkeys should not be allowed to ramble until the dew is off, be returned to the coop nights, and not allowed out on rainy days.

#### STRAWBERRY CULTURE.

It is my intention to start in the strawberry business, and would inquire through your valuable paper, which is the best time to transplant the plants,—whether in the fall or spring; and also, which kind of berry does the best on sandy soil in Southern Massachusetts? If transplanted this fall should I be able to get any fruit next season from the plants so set? Is it best to mulch strawberries in the spring to keep the sand from the berries during rain storms? T. H. M.

*New Bedford, Mass., July, 1870.*

REMARKS.—The spring is usually supposed to be the best time to set strawberry plants, though we have been successful in setting the plants early in August. If dry weather follows, they must be plentifully watered, especially if on sandy land. In field culture, there would be less risk in spring setting than in August.

It is not usual to take much fruit from the plants the first year, as it is supposed to be more profitable to let the plants get thoroughly rooted before they produce fruit.

The Wilson’s Albany is said by one of our largest cultivators to be “the best for market and the poorest for the table!” When thoroughly ripe, however, it is spirited and excellent, although still too acid for some tastes.

It is a good plan to mulch the plants, as it not only keeps the fruit from the ground, but keeps the soil moist.

The strawberry plant will bear high manuring, and be all the better for it.

#### BUTTER MAKING AND PIG GROWING.

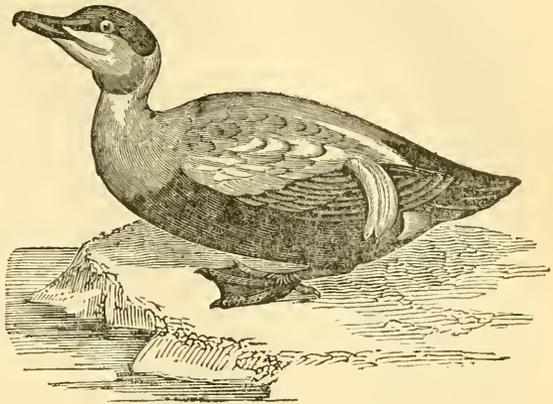
I would like to inquire through the *FARMER*, of some good butter maker, if it is best to wash butter, when it comes very hard and can be worked without the use of water, so as to get all the buttermilk out before putting the salt in, and if best to finish it that day, or let it stand till the next; also, whether small pigs will do best on thick or thin food. C. M. T.

*Island Falls, Me., June, 1870.*

—It pays well to clip over pasture land with a scythe at coarse places left by the cattle, and cart and stack near stables for bedding.

### THE EIDER DUCK.

Among the Sea Ducks that visit the bays and inlets of the New England coast during the fall and winter months, the Eider is distinguished for the remarkable softness of its down and the beauty of its plumage. They breed in Labrador and are seldom seen south of New York. Mr. Samuels, in his book on the Birds of New England, says the prevailing color is white, the under surface and sides of body, hinder part of back, rump and tail black; wings white on both surfaces, except the quills, which are black. The nest is placed on the ground, under a bush or tuft of grass, and is lined by a thick layer of down which the female plucks from her breast. The down of a nest, though bulky enough to fill a hat, rarely weighs more than an ounce. They fly rapidly and generally near the water, and are expert divers and remain a long time under water. They are shy and difficult to kill. The flesh of the young and females is said to be well flavored, but that of the males is tough and fishy.



on the care of stock, he says:—It requires one-fourth more food to winter a cow if she come to the barn in a poor condition. At no other season of the year is so much care needed as in late autumn and so little care exercised. Frosts affect the grass to such a degree that it is not a good plan to keep cows in the pasture without additional food after the first hard frosts. Barns should be warm and well ventilated, and by so constructing them as to secure these two conditions a large amount of food will be economized.

**TRIAL OF AN AMERICAN STEAM PLOUGH IN BOSTON.**—Most of the readers of the FARMER will remember the illustration of the Standish Steam Plough that we published last year, (Monthly, page 428.) This plough or rather cultivator, was invented in California, where two of them are now in use. The machine that was recently tested in South Boston was made in this city under the superintendence of the inventor, Mr. P. H. Standish. The *Advertiser* says that the results of the trial here were quite satisfactory. The machine was easily directed by two guiding wheels in front, and moved over the ground making the dirt fly, and completely breaking up the ground to the depth of eight inches. The principle seems to be a correct one, and though this trial showed some slight defects, they can be easily remedied and another trial will be had at an early day. The power of the engine was thirty horse.

### WHITEWASH THAT WILL NOT RUB OFF.

It is not only a common, but a very wholesome practice, to use whitewash. It preserves wood work, renders it disagreeable as the habitation of insects, and promotes health. Thousands of dwellings are made cheerful by its presence on the ceilings of their rooms, and even the walls are often indebted to it, where paper and paint cannot be afforded. It is cheap and easily applied.

The outsides of barns are sometimes whitewashed, and leantos and horse stalls are quite frequently covered with it, and are kept clean and wholesome by its use.

One objection to it, as commonly used, is that it rubs off easily when touched, and spoils the Sunday coat or best hat. It is annoying to go into church, or through the street, with broad lines of white drawn on one's back, to say nothing of spoiling the cloth. To prevent all this, if the wash is to be used indoors, mix half a pailful of lime and water, take half a pint of flour and make a starch of it, and pour it into the whitewash while hot. Stir it well and make it ready by thinning it for use. A little glue will answer the same purpose. If for out-door work, add a little salt and boiled rice, made thin. Scarcely a particle of the lime can be rubbed off when prepared in this manner.

**FALL CARE OF STOCK.**—The *Maine Farmer* gives an abstract of Mr. Willard's Lectures at Orono, on dairy farming. In closing his remarks

## PESTS OF THE FARM.



EGION is their name and voracious are their habits. They come unbidden, in endless varieties and forms. They attack everything, animal and vegetable; the hens and the currants, the hogs and the roses, the horses and the grain, the cattle and the grass, the sheep and the beans, the dogs and the potatoes, and, thanks to their greedy appetite, they devour each other when they find nothing else to do.

Now that the currant worm is taking a nap, or passing through some of the forms which insects so readily assume in order to continue their mischief, we have another, which for bulk, destructive habits and ugliness of appearance, surpasses all that have come yet. He may be found on the outer twigs of the elm, willow and perhaps other trees. Herding in groups, like the deadly sirocco or typhoon, he destroys every thing he passes over. In outline he is black and as ugly as sin, and resembles a large oak log stuck full of steel points a foot in length, though not, perhaps, quite as big as a large oak log! But it is easy enough to imagine him so.

Harris calls the butterfly from which the ugly looking fellow proceeds, the *Antiopa* butterfly, and says their caterpillars live together in great numbers on the poplar, willow, and elm, on which the first broods may be found early in June. They are black, minutely dotted with white, with a row of eight dark brick-red spots on the top of the back. The head is black and rough with projecting points; the spines, of which there are six or seven on each segment, except the first, are black, stiff, and branched, and the intermediate legs are reddish. When fully grown they measure an inch and three-quarters in length, and appear very formidable with their thorny armature, which is doubtless intended to defend them from their enemies. It was formerly supposed that they were venomous,

and capable of inflicting dangerous wounds; and within my remembrance many persons were so much alarmed on this account as to cut down all the poplar trees around their dwellings. This alarm was unfounded; for, although there are some caterpillars that have the power of inflicting venomous wounds with their spines and hairs, this is not the case with those of the *Antiopa* butterfly. The only injury which can be laid to their charge, is that of despoiling of their foliage some of our most ornamental trees, and this is enough to induce us to take all proper measures for exterminating the insects, short of destroying the trees that they infest. He has sometimes seen them in such profusion on the willow and elm, that the limbs bent under their weight; and the long leafless branches, which they had stripped and deserted, gave sufficient proof of the voracity of these caterpillars. The chrysalis is of a dark brown color, with large tawny spots around the pointed tubercles on the back. The butterflies come forth in eleven or twelve days after the insects have entered upon the chrysalis state, and this occurs in the beginning of July. A second brood of caterpillars is produced in August, and they pass through all their changes before winter."

The only means which we have found of destroying this caterpillar is by climbing the tree and cutting off the twigs upon which they are collected, and then crushing them under foot. But then there is altogether too many of them to render this operation an agreeable one. Will some one try carboline, or a shock of lightning that can be sent broadcast among them, and tell us how to apply it.

We certainly have a busy time of it in these parts, in checking the inroads of our visitors from going too far. We have here the parseley caterpillars, the pea-weevil, the plant-lice, pear, peach, apple, and locust borers, the June moth that riddles the apples, the curculio who destroys the plums, skippers, jumpers and joint-worms, gad-flies, dor-bugs, and drop-worms, saw-flies and fire beetles, squash-bugs, bee-moths, frog-hoppers, pear slugs, gnats and mosquitoes, to say nothing of the millions of bark-lice which attack the fruit trees, and as many more which prey upon the domestic animals!

No wonder that we are an industrious people.

It is something like the old Roman mode of punishing a criminal, who was placed in a cistern into which water was continually flowing. He could pump it out, keep his head above water and live. So can we, by the aid of science, carbolic soap and white hellebore, keep the wolf from the door!

What will come next? Who can tell? Do inform us at once, and tell us how many heads and legs and harpoons the critter carries, and whether he can be captured or demolished by anything less than a mortar or a "swamp angel."

#### AGRICULTURAL ITEMS.

—One hundred thousand pounds of cheese are sometimes shipped from the little depot at Wellington, Lorain County, Ohio, in one day.

—The *Prairie Farmer* cautions people against using currants and gooseberries from bushes to which poisonous substances were applied for the destruction of insects.

—It has been stated by some one curious in statistics, that the whole amount of grain raised in New England each year would not supply its inhabitants six weeks. Would its production of meat furnish a larger proportional supply?

—To destroy burdocks and other troublesome plants, the *Rural New Yorker* says, cut close to the ground with a sharp hoe, and apply a few drops of kerosene. The plant so treated will never "put in appearance" again.

—In laying stone wall on sandy land, you can begin to lay the stones at the surface, says the *Maine Farmer*; but if it is clayey, you will have to dig and fill in cobble stones to lay your largest stones upon, if you wish to have them stand, so as to give your grandson no trouble.

—The *Poultry Bulletin* says that carbolic acid has proved very effective in preventing and destroying vermin and in purifying the air about poultry houses, and asks may not the excessive use of carbolic acid in close proximity to eggs destroy their fertility?

—After ten years' experience with hay caps, a correspondent of the *Maine Farmer* says no one is well equipped for haying without them. Hay but partially dried, put up and capped may stand through a long storm and receive but slight damage. But he regards the horse pitch fork as something to be let "severely alone."

—In reply to the questions how much corn will be sufficient for fattening steers, averaging 900 pounds at the start, from November 1 to April 1, and how much ought they to gain during those five months, a correspondent of the *Western Rural* replies, cattle of the above weight will consume from fifty to sixty bushels of corn, and if properly

fed and sheltered should take on from 200 to 250 pounds apiece.

—It is very common for a certain class of agricultural writers to charge farmers with being behind the times, and loth to adopt modern improvements, &c. But *Forney's Weekly Press* says unwillingness to adopt new implemen's cannot be charged to farmers generally. It thinks no class has been more ready to adopt every useful implement, and cites the change from the implements used twenty years ago, in proof of this statement.

—The editor of the *Germantown Telegraph* does not believe that the English sparrows lately imported to this country destroy the worms that infest the shade trees of our cities. He says, of the five hundred sparrows set at liberty in the public squares of Philadelphia, we do not know how many remain, or what has become of them. Their numbers were at least not increased last year, nor were the worms diminished through their efforts. No one has yet been willing to solemnly affirm that he actually saw one of these birds eat one of these worms.

NORTHAMPTON, MASS.—The Hampshire, Franklin and Hampden Agricultural Society has issued its programme for its fifty-second annual cattle show and exhibition, at Northampton, October 6 and 7. This society proposes to pay at the rate of 12 cents per mile for travel on premium cattle driven ten miles or more; and six cents per mile on those driven more than five and less than ten miles—the same competitor to receive only one travel. Travel may also be allowed to unsuccessful competitors, in case they appear deserving. The conditions of entry are calculated to draw out valuable information from successful competitors. Elnathan Graves, Williamsburg, President; A. P. Peck, Northampton, Secretary, and Delegate to State Board; H. K. Starkweather, Treasurer; J. H. Stebbins, Deerfield, A. T. Judd, So. Hadley Falls, A. Wright, Northampton, J. Parsons, Southampton, Executive Committee.

For the *New England Farmer*.

#### CHEESE FACTORIES.

I note Mr. H. M. Fales' inquiry about Cheese Factories, in your last, and your editorial comments on the same. Mr. L. N. Brown of New London, Oneida County, N. Y., will cheerfully answer the specific inquiry of Mr. Fales, and I cannot at this moment think of another whose experience so well qualifies him for that duty. He has been an extensive manufacturer, is a dealer in supplies, and has superintended the erection of a large number of factories, nearly one hundred,—the past season.

A large fund of valuable information may be found in the "Transactions of the Vermont Dairymen's Association" recently issued. It is furnished free to members; and

persons paying their membership for next year previous to the annual meeting in October, can have this year's volume free. Terms of membership \$2, per annum. Life membership \$5. Secretary's address, Georgia, Vt.

Now a word in regard to your comments. The time was when it was believed that a large number of cows was necessary to make the factory system profitable, and milk was hauled several miles to some of the earlier establishments, but it was soon found that there are more elements of expense than was at first recognized, and not the least of these is getting the milk to the factories. As a result, smaller establishments are becoming more popular, and in the old districts, factories for 200 cows are becoming more common than for more; indeed, several of the large establishments have adopted the system of making up their cheese in branch factories and hauling them together to the main house for curing and sale. Expert cheese makers are much more numerous than formerly and persons may be employed to run a small factory at more reasonable rates, and it is questionable whether it is not better economy to run a factory for 100 cows than to haul the milk more than a mile and a half.

But there is still another view to be taken of this subject. The universal trait of the American character, that of all adopting the same specialty at a time, which has so often brought our farming population to grief, is to be guarded against. It is true that there is a large increase in the consumption of cheese, and we hope to see it go on, believing it to be one of the most desirable articles of food for most persons; yet the increase in the consumption of butter more than keeps pace with it, and it will be a long time before cheese will come to be considered the absolute necessity that butter is. Cheese will sustain and build up the animal system and butter will not; but butter has so large a place in our system of cooking and eating that very few persons stop to ask about the absolute economy of using it as compared with cheese or anything else. It does not follow because a party has invested his money in a cheese factory that he is obliged to make cheese when he can make butter more profitably; but a cheese factory that has cost some \$4000, standing idle is a sort of an eye-sore in a neighborhood, and we happen to know of some such even now; and, although we make no pretensions to prophetic visions, we venture the prophecy that there will be more such, unless they are so reconstructed as to fit them for making butter.

Were we situated just as Mr. Fales and his neighbors are, we would, without delay, erect a *butter factory*, and make such an article as would enable us to command the very top figures in Boston Market. With such market facilities as they can command and a well established reputation, which they can soon ac-

quire, for making the very best article, they may depend upon much better returns than from cheese.

If it is deemed desirable to work up the skimmed milk instead of feeding it to pigs, they may rely on finding a ready sale for "skimmed cheese" at remunerative rates, although of course at not quite the full price of whole-milk cheese. More information on the subject of butter factories may be found in the Vermont Transactions, heretofore alluded to, than in any other publication extant.

O. S. BLISS.

Georgia, Vt., July 12, 1870.

*For the New England Farmer.*

#### MOWING, AND THINGS.

Since a portion of the grass must ever be cut with the hand-scythe, I will give such instructions as have been found to be valuable by one born sometime during the last century, and who can still grind, whet and swing a scythe to a charm.

**IN GRINDING**, bring the scythe as near to an edge as possible, but be careful not to turn the edge, for this not only wears the scythe rapidly, but renders it impossible to secure a first-rate edge until another grinding.

**WHETTING**.—Do not strike, nor bear on hard, for in that way you will draw the end of the whetstone directly across the edge, and wear a notch in the stone where it strikes the scythe. I can always tell whether a mower keeps his scythe in good order, by looking at his whetstone. Whet only sufficient to bring a keen edge, which must be determined by frequently feeling with the fingers. The whetstone should be of fine, sharp grit, and one that will not glaze; kept in good shape by frequent grinding. The Talcose stone is first-rate for an occasional whetting.

**HANGING**.—For my own stature, which is five feet eight inches, I find that two feet six inches from the heel to the lower thole, just right, and the tholes should be eighteen inches apart. For smooth land, the scythe should be three feet nine inches; shorter for lodged clover and rough ground. The point should be set three feet five inches from the upper thole. A long scythe, with the point brought pretty well in, strikes the grass with more of a drawing cut, and consequently cuts it off easier. Let the *point* of the scythe be twisted down a little; this will tend to make it hug the ground better than it will when the heel hangs equally low.

**THE MOWER**.—A tall man, other things equal, has an advantage in mowing, as height gives him power in the swing of the body. Let him straighten up at every clip, carry his right foot a little forward of the other, with the feet well spread apart, and shod with shoes without heels, to prevent sore toes; or, what is better, if he can, go barefoot. Do not mow much before breakfast, and be careful and not

get waterlogged in a hot day. Milk porridge, hot or cold, is excellent to lean upon; so is butter-milk and bonnyclabber, reduced with one-third water and sweetened with sugar; avoid molasses and water.

**THE CLIP.**—In carrying back the scythe, raise it well above the ground, dropping it in flat when the middle is just parallel with the body, and with a gentle sway of the body carry the clip, raising the heel of the scythe as it passes the centre, and turn the point under the swath, bringing it well back. In mowing, the breathing keeps tally with the clipping, and therefore let your motion be slow, so as not to interfere with your natural breathing. This is very important.

**OPENING HAY.**—The practice of many to wait until the dew is off and the ground warmed, is erroneous. By opening as soon as the sun is fairly shining, the hay, by the time the dew is off, will be well warmed on the top; turn it over then and you will see nothing of dew underneath, and will have gained from one to two hours start in the drying, by early opening.

**TUMBLING AND PITCHING**—It pays well, in time and ease, to tumble the hay well. Roll it compact, and in no larger rolls than can be easily lifted with the fork. Do not drive too near the heap; leave room so that you can stand directly between the load and the hay; then, instead of fussing around, gathering scatterings and fixing things, place the fork on the top, a foot beyond what was the centre of the windrow, and press it to the ground, then you will lift in the best shape for both pitcher and loader. For the second fork full, strike right for the other half of the tumble, leaving the scatterings untouched for the third fork full. Though this is the easiest and the quickest way to load a tumble of hay, not one pitcher in fifty will thus "pitch in" without fussing around to get the scatterings at each fork full; when, if these are all left for the last, they are generally gathered by one fork full and in less time than is occupied at each end of the tumble. PHINEAS FIELD.

*East Charlemont, Mass., July 9, 1870.*

*For the New England Farmer.*

#### **NECESSITY OF DRYING GRASS IN MAKING HAY.**

I have been a constant reader of your paper for more than three years, and find many valuable things, and some humbugs. I never before wrote a sentence for a paper in my life, and may never do it again; but it being a rainy day so I cannot work at haying, I have been looking over your last week's issue. I see the discussion is still going on about the proper time to cut hay, and how to cure it. I thought it had been discussed so much and tried so often that most farmers had become convinced that grass put in the barn would not make good hay.

One man says the secret is in storing it solid in the mow. Now I will give you a little of my experience in cutting hay. This is the fiftieth year that I have cut hay, and the forty-eighth that I have had a stack of cattle to take care of. I have found it very important to have hay got in the best possible order. The best hay that can be got for cows in milk, for calves or almost any stock that has no provender, is that cut and cured as my grandmother did her herbs. This however can be done only where there is little hay and much barn room. Cut before it is in full blossom, after the dew is off, on a bright day; spread thin in an airy place, and turn each day until thoroughly dry.

As to the secret of solid packing, I have cut and stacked large amounts of hay that could not be got to the barn until sledding. I have made stacks all the way from five to thirty hundred pounds in a stack, and have found that hay in a five or ten hundred pound stack will save well when it is so green that it would spoil in a thirty hundred pound stack. Just so in the barn. Hay put on a scaffold and not trodden will save when so green that if put in a bay and trodden solid it would spoil. In a bay where hay is injured by heating, that where the man stands most that mows away, will be most injured.

Two years ago I put into a bay 24x17 feet, some eight tons of hay that was cut when in full bloom, with a machine, after the dew was off; raked and put up before the dew fell at night; opened the next day, turned and got in in the afternoon. At the same time I had about two tons that had had the sun only one day, but as it looked like a storm, I put it on top of the other. As there was no storm, I immediately filled up the mow with well made hay—some sixteen tons in all. In September following, I pressed it, commencing on top, with the later cut hay. The bales weighed from 350 to 380 lbs. each. When I came to the hay that was put in green, the bales went from 340 to 310, and the hay at the place where the person stood who mowed away, was turned to a very dark color and was matted together. When I came to the early cut and thoroughly cured hay, the bales went from 380 to 410 pounds. No two days of July sun that ever shone in Maine would make hay so light as that put in so green as to go through a process of heating in the mow.

To have good hay, it should be cut when in full bloom or before, and well made. For working horses or oxen that are fed freely on provender, the seed should be pretty well matured, as early cut hay will make them too loose.

Let him who advocates putting grass into a mow, kill a fat hog in September, cut it up before the animal heat is out of it, pack it in a barrel without salt or brine, and head it up tightly, and if he can show good pork in

March, I may believe that grass will turn into hay packed solid and close in large masses.

S. H. FARNSWORTH.

*China, Me., July 12, 1870.*

#### THE DAM'S RELATIONS WITH DIFFERENT SIRES.

A notion in regard to the effects of a first impregnation of domestic animals has been promulgated, mostly I think by English theorists, in which it has been gravely announced that a blood mare or heifer first impregnated by a scrub, is forever thereafter rendered impure or no better than a grade; that no offspring from them, however pure the subsequent sire, is to be relied on as pure.

In America we have an unanswerable demonstration of the utter fallacy and falsehood of any such theory, in the fact that the mule breeders of Ohio, Indiana, Illinois, Missouri, Kentucky and Tennessee, where the great bulk of the supply is bred, breed their mares indiscriminately to jacks and horses, changing them first to one and then the other as the market demand for either horses or mules may dictate; in thousands of instances taking the first foal from a jack, and following immediately by a horse. This system is annually practiced in the regions I have named, is there carried out this very year, and has been in full practice for the last fifty years in nearly every township in all those States; yet we have the very first practical breeder to report to the agricultural press that any mare has been damaged in the least, in her availability to breed perfect colts from a horse.

I can establish, by legal testimony, in any court of law, that a mare in Kentucky has produced twins at one birth—one a perfect mule, the other a perfect horse; and to descend to individual cases, my neighbor has this spring as fine a smooth, clean-limbed, evenly-colored, nicely-bred filly, as ever was foaled, from an old blood mare that has produced 15 mules in 17 years' breeding, without ever having been bred, except in the last instance, to a horse. I have myself bred as many as ten colts in one season, from mares that had been used by myself exclusively in mule breeding previously.

In the early days in mule breeding in Kentucky and Virginia, the practice generally obtained with the most careful breeders, of breeding even blood fillies for the first time to a jack, and the practice even now in Kentucky, is very common, and it is a practice worthy of attention. The foal of a jack is generally smaller than from a horse, and better adapted to the first breeding of a filly; and a filly at two years old is as available in breeding a mule as she would be at three years old from a horse, and to-day thousands of the best and most successful brood mares used for colt breeding, were first bred to a jack and produced a mule.

Let the practical mule breeder in all the country I have named, who has damaged his mares as horse breeders by breeding mules, speak out through your columns, giving his name and residence and the experience of his whole vicinity. I venture the prediction, Mr. Editor, that no such man can be found.—*Anthony Killgore, in Country Gent.*

WHAT THE SOIL IS TO THE FARMER.—For the husbandman the soil has the paramount of importance that is the home of the roots of his crops and the exclusive theatre of his labors in promoting their growth. Through it alone can be influence the amount of vegetable production, for the atmosphere and the light and heat of the sun are altogether beyond his control. Agriculture is the culture of the field. The value of the field lies in the quality of its soil. No study can have a grander maternal significance than the causes of fertility and barrenness, a knowledge of the means of economizing the one and overcoming the other, a knowledge of those natural laws which enable the farmer so to modify and manage his soil that all the deficiencies of climate cannot deprive him of suitable reward for his exertions. The atmosphere and extra terrestrial influences that effect the growth of plants, are indeed in themselves beyond our control. We cannot modify them in kind or amount; but we can influence their subserviency to our purposes through the medium of the soil by a proper understanding of the characters of the latter.—*Prof. Johnson's "How Crops Feed."*

#### FENCES IN EUROPE.

Americans who give us sketches of their travels in Europe, often speak of farming sections in which there are few or no fences. But it appears from the following statement of a correspondent of the *Country Gentleman* that the absence of fences is far from universal:

In some parts of Europe the live stock is cared for by "tenders" and dogs; but in England it is not so, as the "open-field" parishes in England were reduced to a very few before the writer left that country; and, so far from any "open-field" system being desirable, in every instance where enclosures took place and hedges were planted in the vales, or walls built on the hills, and the owners had their property all within "ring fences" and subdivided too for the tenants, there the value of the land was enhanced far above the cost of apportioning and fencing. In no country in the world are there such fences as in England, and most of the living ones pay for themselves—the wood cut out, selling (for firing) at more than pays the scientific "hedger and ditcher." The writer of this article had the hedges around twenty-three fields cut

one winter, the former tenants having neglected to have them cut and laid for many years; and this was done by an agreement in writing with several hedgers and ditchers, who agreed to cut and lay the hedges properly and clean out the ditches, for the wood which would be left after they had watted sufficient in to remain strong enough to keep stock from rambling, and they did well by the job and made good work; while the mud, &c., thrown out of the ditches, after sufficient had been thrown on the banks among the roots of the hawthorn stumps to make them the better, was hauled and mixed up with gas lime and other heavy matter, making compost enough to dress heavily more than 100 acres of the greensward. These hawthorn hedges are good fences, when kept cropped off with shears or hooks annually, around arable land, and they are splendid fences around permanent grass fields, when "cut and laid" every ten years; and when they are about from eight to fourteen feet high, there is nothing shelters a country like them.

The dairying districts, the grazing and the ploughed portions of the country, are all, but in a very few cases, fenced with the hardy hawthorn. On light hilly tracts of land, such as the Cotswold Hills, &c., there are stone walls, because the subsoil is not favorable for making good hedges.

#### USELESSNESS OF AG'L MACHINES.

When all disputed questions are settled; when every man agrees perfectly with every other man in everything; when variety is no longer the spice of life, what a spiceless, flat dish agricultural and every other "life" will be! And yet some people condemn agricultural papers, and all scientific investigations, because every question is not settled, every doubt removed, all variety merged into a dead certainty, and somebody authorized to say to every other body, "This is the way, walk ye in it." These reflections were suggested by reading an article in the *St. Johnsbury, Vt., Times* on the proper time and best manner of curing hay, which closes with the following hit at modern hay-making machinery.

Farmers have been shamefully defrauded by vendors of machinery for haying. Much of it is worthless; to a small farmer, all of it. There are none but those who farm upon an extended scale, that can afford a mowing machine. On large fields, it is true, they work well with such as know how to use them, but even here where men depend upon hired help, they are of little or no value.

As much hay can be cut down in the forenoon as can be raked and carted in the afternoon; but they argue that men allowed to

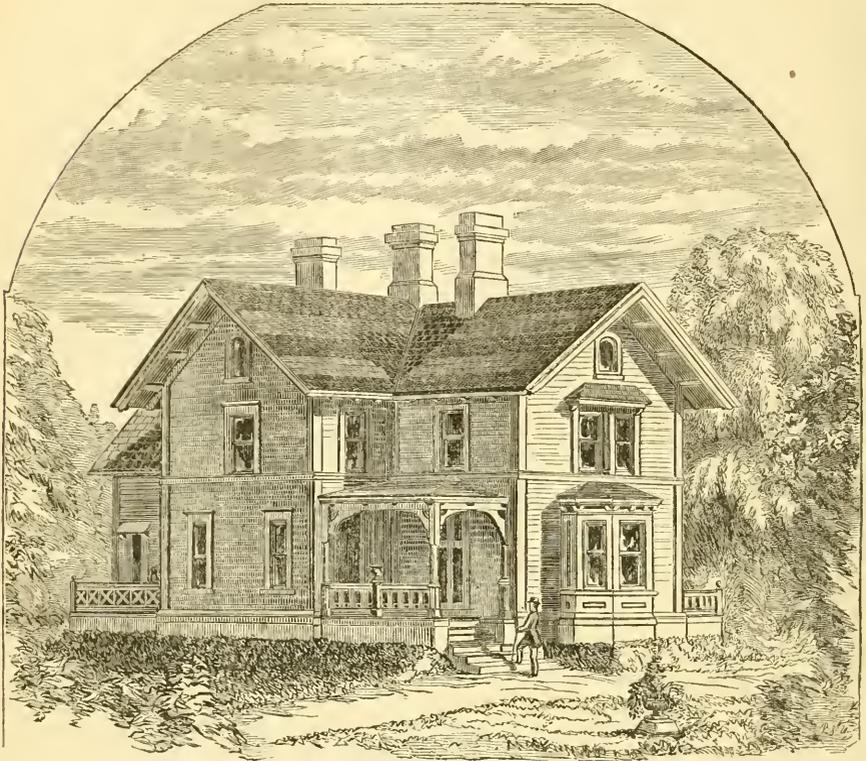
shirk and rest in the forenoon will take hold sharp in the afternoon. I can't see it. I have tried both ways, and my experience is that work can never be satisfactorily accomplished unless everything connected with it bears the impress of business, live, energetic business. A man that is lazy in the forenoon will be lazy in the afternoon. Again the machine mows too much, and hay is left in every conceivable shape at night. Men that finish haying early always leave things in a tidy state at night, if the weather looks ever so fine. It costs \$125 every three years for a machine and the interest on it. It takes hay and grain to keep a pair of horses in the barn, and the worst of it is—and we can cite numerous instances—men that would have their hay out of the way in three weeks' time by the old method, are four and five by the new.

Horse rakes and tedders are only worse than mowing machines. By the time hay is fairly in the barn now-a-days, it is robbed of all its natural fragrance, everything that makes it pleasant and agreeable to the nostrils and stomach of the dumb beast. It is trodden into the earth, broken, bruised, dusty, dirty and commingled with every species of filth imaginable. The only real argument in favor of any of these implements is, they tend to clean our fields. I know nothing of horse-fork. Don't want to.

**NOBLEMEN AT WORK.**—Few of us have any idea of the fondness of the English aristocracy for real hard work in their gardens and grounds. Earl Vernon, formerly President of the Royal Agricultural Society of England, would work all day, hoe in hand, with his laborers, and as hard as any of them. The writer of this paragraph has seen his nephew for hours, axe in hand, thinning out his own plantations; and once saw him with the Duke of Wellington, both together with a cross-cut saw, cutting down a large Buttonwood.

These reminiscences are called up by an American correspondent who recently visited Mr. Gladstone, the English Premier, at his home at Hawarden, and who found him hacking away a Beech fourteen feet in circumference. He takes great pride in his ability to do hard work, and believes, the correspondent says, that physical exercise induces a good appetite, and that this again reacts on mental vigor.—*Gardener's Monthly*.

**NOVEL HORSE COLLAR.**—An important improvement in the manufacture of horse collars has just been devised by a Philadelphia mechanic. The collar being stuffed with elastic cork, is light in weight, and adapts itself to the shape of the animal as readily as if it was moulded. It is highly elastic, does not chafe or gall the neck, and the cork being a non-conductor, injury from the heat is prevented.



[Entered according to Act of Congress, in the year 1870, by R. P. EATON & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

## RURAL ARCHITECTURE.

BY GEO. E. HARNEY, Cold Spring, N. Y.

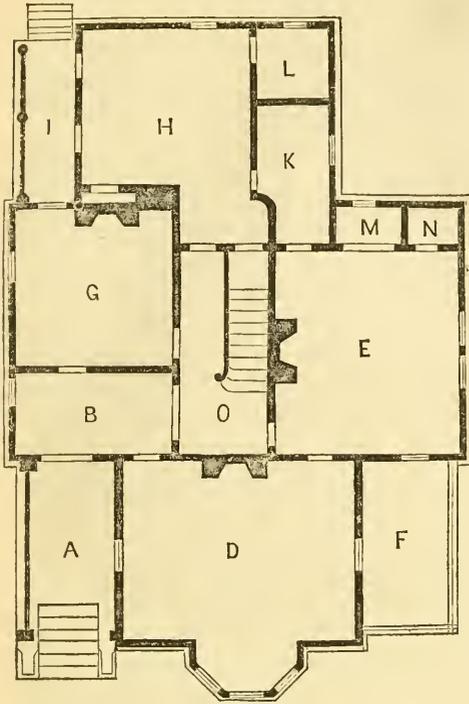
DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

### No. 5.—A HOUSE FOR A PHYSICIAN.

A design similar to the one here presented has just been finished in Morristown, N. J., for a physician; but the plan is equally well adapted for any family requiring the given amount of accommodation. It is located on a village lot, on one of the principal streets, and stands back about thirty feet from the front fence, and a drive way passes along the left-hand side to the stable, in the rear. From this drive way a path branches off to the front steps.

The entrance is sheltered by a veranda, A,

eight feet in width, and the double doors of the entrance open into a large vestibule, B. An arch separates this vestibule from the staircase hall, which is C, measuring eight feet by about seventeen; it contains stairs to the chambers and cellar. D is the parlor, measuring fifteen by nineteen, and having a pleasant bay window projecting from its front. At the right is a balcony or terrace, F, reached by means of a casement window, and on the left is the veranda, which is also reached by a casement window. E is the dining room, fif-



Ground Plan.

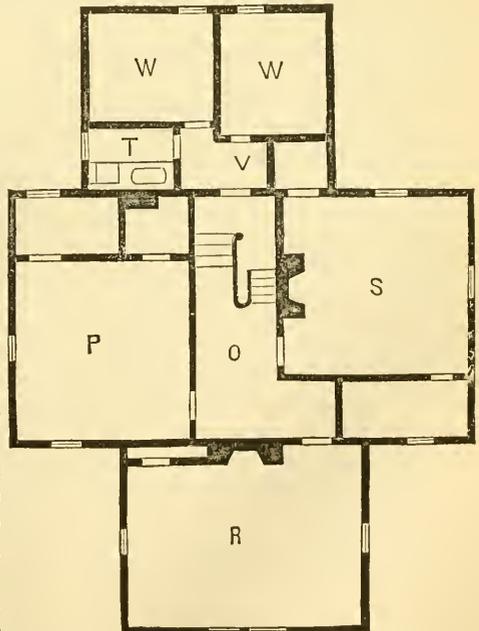
teen by seventeen, communicating with the hall and the parlor, and also opening upon the terrace, F. It has a recess, M, for a side-board or a seat, a china closet, N, and is connected with the kitchen by the large pantry, K, which measures about six feet by twelve, and is fitted up with shelves and cupboard. The kitchen is fourteen by fifteen feet. G is the doctor's office, thirteen feet square, which may be used as a library under ordinary circumstances. L is a large store-room fitted up in the usual way, and I is a back stoop or entrance way to the kitchen. The rooms in the kitchen wing are not so high as those in the main house, and the rooms over the kitchen are reached from a landing in the staircase. These comprise a bath room, T, fitted up with tub and water closet, and two small bed-rooms, W, W, for children or servants.

O is the main hall of the second story, from which the attic stairs rise in continuation of the main flight, though narrower. P

is a chamber, thirteen by fourteen, having a dressing-room and a large closet opening from it. R is a chamber over the parlor, and of the same size. S is fifteen feet square, and has a dressing-room attached, as well as a large closet.

The third, or attic story, is in one large room, though there is ample space for three good chambers, which will finish about eight and a half feet high.

The first story is ten feet and eight inches high, and the second nine and a half. There is a cellar under the whole house, with a stone wall and a brick underpinning. The first floor is raised about five feet above the grade, and below the brick work is a banking surrounding the whole cellar wall. The house is of frame, boarded and clapboarded, and filled in with bricks, and the roof slated. The finish is simple throughout, but the whole house is a thorough and substantial piece of work. It was built by contract, at a cost of about six thousand dollars, which may be varied somewhat, depending upon finish, and comparative cost of labor and materials.



Chamber Plan.

### DRYING EFFECT OF PINE AND FIR TREES UPON SOIL.

One of the clear evidences of a healthful progress and prosperity in rural life, is the tendency among our people to *ask questions*. No man seems contented with his present success, however complete and gratifying that may be. The sculptor will not rest until he makes the marble under his hands breathe; nor the physician, until he can take you entirely into pieces, and put you together again just as good as ever. The manufacturer of the cloth we wear, is not satisfied by clothing us in the finest wool, but ransacks the world for some finer and softer material, so that we may soon expect to see a suit made of thistle's down, or the fur from a fly's foot. And the *farmer*, too, has become inspired. He is not now satisfied with turning over the furrow because it makes the hoeing easier, but inquires,—“What else is going on in that clod? What are the frost and rain doing there? What office does this sand and these pebbles perform? How came the bone that Carlo buried in the garden ten years ago, a complete network of roots? Why was the wheat crop in the old lime-kiln lot three times as large as we ever raised in any other field? Why have pines covered the lot where white oaks, were cut off three years ago?”

These, and many similar questions, come from farmers now, with an evident desire to know more of the wonderful operations which are constantly going on in the things which they see and handle in their daily labor.

Many, very many questions are asked, that no one is wise enough to answer; but at the present rate of research, many of them will be answered, and those answers will enable the farmer to increase his crops, and at the same time lessen his labor. At one time the question was put, “Can wool and cotton be spun by machinery?” Mills for the manufacture of all sorts of cotton and woollen cloths, answer the question affirmatively, and they have hushed the cheerful hum of thousands of spinning wheels around the domestic hearth.

Constant observation, thought and research, added to industrious habits and frugal lives, are what elevate us as a race, and it is as much a duty to exercise these powers and to progress as it is to be faithful in any other respect.

Reading the following article upon the *dry-*

*ing effect of fir trees upon soil*, suggested the remarks already made:—

“A remarkable instance of the effect of pine trees on the soil in which they grow has been published in the ‘*Woods and Waters Reports*’ of the north of France. A forest near Valenciennes, comprising about eighteen hundred acres of scrub and stunted oak and birch, was grubbed up in 1843 and replaced by Scotch firs. The soil, composed of silicious sands mingled with a very small quantity of clay, was in some places very wet; it contained two or three springs, from one of which flowed a small stream. The firs succeeded beyond expectation, and large handsome stems now grow vigorously over the whole ground. It was in the early stages of their growth that the remarkable effect above referred to was noticed. The soil began to dry, the snipes that once frequented the place migrated to a more congenial locality; the ground became drier and drier, until at last the springs and the stream ceased to flow. Deep trenches were dug to lay open the source of the springs, and discover the cause of the drying up; but nothing was found except that the roots of the firs had penetrated the earth to a depth of five or six feet. Borings were then made, and six feet below the source of the spring, a bed of water was met with of considerable depth, from which it was inferred, the spring had formerly been fed. But in what way its level had been lowered by the action of the firs could not be determined, and is still a matter of speculation. But the fact remains and may be utilized by any one interested in tree culture. For years it has been turned to account in Gascony, where the lagoons that intersect the sandy *dunes* have been dried up by planting the *Pinus maritimus* along their margin. Hence we may arrive at the conclusion, that while leafy trees feed springs and maintain the moisture of the soil, the contrary function is reserved for spine or needle-bearing trees, which dry the soil and improve its quality.”

*For the New England Farmer.*

### SOME CASES OF BAD FARMING.

In travelling through several of the adjoining towns within the last two months or so, for the purpose of purchasing tobacco, I have been somewhat surprised to see in what a thriftless way some farmers conduct their operations. Perhaps some one better posted in these matters, could state them better than I can, but as I live where the saving of manure is one great object, the wastes of this article alone would afford a theme for an article.

But there are other ways in which thriftlessness is demonstrated. I saw cows last fall standing out in the cold storm, curled up on the windward side of a stone fence, or out-buildings,—shivering, pinched, sorry looking creatures,—and I have often wished that their very humane masters might have had a berth beside them. Then again they have been noticed trying to fill themselves on the frozen grass that they could pick on the already closely fed mowing lots. One day noticing a man endeavoring to keep the half starved cows back in the mowfield, I had the impudence to ask him what benefit he supposed the cows were getting from eating such old frozen

stuff as they were endeavoring to gather? He replied, "Well, I don't know, but I thought that they would pick up part of their living out there." But what possible good can it do them? Said I, It seems as though you would have to give each animal a good dose of salts, along with such feed, to ever get it though them. It don't pay to keep cows in that way, my friend. In order to make good sweet butter, good rich wholesome food has got to be furnished them, with a good warm, comfortable stable, fresh pure water, and kindly care.

And then, to think of the damage to the mowing land, to have it browsed all the fall, and then because of the open winter, to feed it all winter too!

And please bear in mind, that where cows are allowed to roam around and browse, the young cattle and sheep are treated in the same manner, and often the colts, if the farmer has any. In my estimation, the loss is, first, in the animals themselves, for they will not grow, or certainly not much; they come out poor in the spring, and will not begin to grow until the first of July or thereabouts, and the milk and butter is poor in quality, and small in quantity. Secondly, the manure, that might have been accumulated if the stock were stabled, is nearly lost. And, thirdly, the damage to the mowing lots is no inconsiderable item. Unmanured mow lots should never, in my opinion, be pastured. When will such farmers learn wisdom?

Then in some yards the manure is all exposed to the bleaching process—exposed to rains, winds and washing. It seems as though cheap sheds could be constructed where no better or more permanent covering can be had, and thus much waste saved. Where practicable, cellars should be made for the purpose of storing the manure accumulating upon the farm. One cord of manure taken from such repositories is actually worth two cords of these waterlogged heaps, thrown as they too often are, directly under the eaves, so as to make sure of a more thorough washing and drenching. Yet, would you believe it, Mr. Editor? I can point to at least *one* such specimen of thriftlessness in a prominent member of a Farmers' Club, not over a hundred miles from the famous "Wapping Farmers' Club" place of meeting. I really hope that a hint of this kind, will prove sufficient to stir up the members of this famous club, to an exhibition of better husbandry in their midst. We that are in the habit of preaching so much, and *so well*, ought to practice what we profess, or the world's people will turn up their noses at us.

Then another almost infallible sign of thriftlessness is seen in the case of a farmer who has abundance of wood on his own land, but so manages as to have only a small load of green wood hauled up at a time, and only chop it as it is wanted for immediate use. Likely

enough when he gets out of bed he has to run out and chop in, and split off a few sticks from the *log*, before he can start the fire, or leaves it to be done by the boys, or worse than all by his poor wife.

But hold on, this theme is inexhaustible, my paper is more than full, and I will stop where I am.

FRANKLIN COUNTY.

No. Hatfield, Mass., March 3, 1870.

REMARKS.—This article was accidentally crowded into a back corner of the copy draw; but its publication now, though not on time, is perhaps more seasonable than it would have been in March. The horse had been stolen, and locking the door then would do little good. Now is the time to begin to make ready to avoid the mistakes, errors, and bad management exposed by 'Franklin County.'

*For the New England Farmer.*

#### MUTUAL BENEFIT ASSOCIATIONS.

Nearly all the professions and different occupations of mankind have long had organized associations for instruction and mutual benefit. The legal profession has its bar meetings for the purpose of consultation, advice and mutual study of technical points of law; the medical profession has its medical society, and meetings in which the different modes of practice are discussed and dangerous cases of diseases are considered; the clerical profession has its associations and convocations, in which the interests of the church are considered and the best means of advancing Christianity are discussed; and so on through the catalogue,—all appear to be connected together in their efforts to advance their several interests, as a class. Even the common people of our country towns associate in lyceums for the purpose of intellectual improvement, by means of debate, lectures, &c., and associations of mechanics and artisans exist all over the country.

Farmers, however, have heretofore formed an exception to the general rule, as our County and State Agricultural Societies are too general in their organization and objects to be classed as mutual benefit associations. Farmers' Clubs appear to be better adapted to the purpose, which it is to be hoped will soon become the rule, rather than, as now, the exception.

The questions very naturally arise, are they a source of improvement and benefit to their members, and if so, why are they not more generally organized? Regarding the first part of the proposition, there could scarcely be a doubt that benefit is derived from such associations. In the first place it is supposed that all persons so associated are reasonably intelligent farmers, and engaged in agricultural pursuits; and in the second place, that each

individual member, while engaged in his avocation, pursues a course peculiar to himself, and in some respects unlike all the others. Now at the club meeting, as any subject is presented, each individual will of course relate the results obtained from his peculiar system of cultivation. It follows, then, that the best possible results in that vicinity are made known, and as a matter of course, each individual having learned the process by which the superior result was obtained, will be likely to adopt the same course as nearly as circumstances will allow, not only in respect to a single crop, but to all farming operations. Here, then, is an exchange of experiences; a commerce of practical facts, and no person will attempt to deny that an exchange of ideas, whether relating to agriculture or any other subject, promotes mental improvement.

Again, it is a self-evident fact that practical experience is the most valuable, especially to the farmers; and in the farmers' club there is, so to speak, a fund of really practical information, garnered from innumerable sources, from which each member may draw something for his own benefit.

Much benefit may also be derived from the club exercises, in a social point of view. It is a fact to be regretted that as a general rule farmers, in consequence of the isolation occasioned by their occupation, are less social than most other classes, and if any method can be adopted whereby this evil, which certainly is an evil, can be eradicated, it should be deemed an important consideration as affecting the well being of society in general. The more intelligent the farmer, the better prepared is he to understand and apply the principles of agriculture, and in fact the advancement of the age demands that the farmer should be a thoroughly educated man, and the greater the amount of information that he receives, the more susceptible is he of receiving. At the present time, book farming, as it is called, is growing more popular. Now, what is book farming but pursuing the methods of others that have proved successful and have been recorded in print?

Then why are not farmers' clubs more generally organized? One reason which undoubtedly might be given is, that in most cases the farmer feels that his whole efforts must be put forth in the cultivation of his crops and the general management of his farm. This arises from a sort of morbid state of intellect, perhaps partly the result of severe labor. This ought not to be so. There is no farmer that cannot, if he chooses, easily spare an hour or two each week for the improvement of his mind, especially if he keeps a close eye to business, and looks well to it that every thing requiring to be done should be done at the proper time. Twice, yea thrice as much time as an attendance upon agricultural meetings require, is lost from not attending to what requires to be done at the proper time and place.

And, not unfrequently, the same men who would be the first to declare that they could not spend time, when asked to attend an agricultural meeting, or to help form a farmers' club, spend one, two, and even three evenings in a week in the grocery or post office. It is undoubtedly a fact, that all great reforms have been brought about by agitation, and that too, when at the outset, obstacles appeared almost insurmountable. Now, as what man has done, man can do, let the agitation of the subject of farmers' conventions or clubs be continued until the day shall dawn when agriculture shall be acknowledged to be, as it truly is, the most healthy, the most honest, and the noblest occupation that has ever engaged man's attention.

W. H. Y.

Massachusetts, 1870.

#### BUTTER MAKING.

From the abstract in the *Maine Farmer* of two lectures on butter making, delivered by Mr. Willard, in his late course of lectures at the Maine Agricultural College, we copy the following, which may afford some hints to farmers who wish to improve the quality of their article of their productions:—

In one quart of cream there are from 13 to 15 ounces of butter. Mr. Horsfall states that a good cow fed on grass will yield one pound of butter for a quart of cream, and that when his cows have been fed on rape cake and other substances containing oily particles, their milk has yielded from 22 to 24 ounces of butter for a quart of cream. The first portion of cream that rises is rich in butter. About 60 degrees is the temperature at which cream should rise. All utensils used in butter making should be thoroughly cleansed. Good cream is often spoiled in the churn by a taint left in it from imperfect cleansing. The cream should be agitated regularly. If the churning is carried on too rapidly the butter will be made and unmade, and if too slowly the particles of butter will not be set free. The best temperature at which butter is made is 55 degrees. The most desirable condition in which butter exists is that of a waxy consistency. It is then easily moulded into any shape. It is not always necessary to taste butter to determine its quality. Its smooth, unctuous feel indicates its richness of quality, its nutty smell indicates a good flavor and its bright glistening cream-colored surface indicates its state of cleanliness.

When the butter has formed and has been taken out of the churn, it should be thoroughly cleansed from buttermilk. The less the butter is handled the better. Warm hands, however clean, are apt to impart a taint. A butter ladle should be used in all the manipulations. A spring-house should be used whenever convenient. Cream should be churned

rather than whole milk. The quality is of the highest importance and should never be sacrificed to quantity. Poor butter does not pay. The milk should be set at a temperature of 62 degrees and never above 75. When spring-houses are not convenient, the Jennings pan can be used, which is a pan for receiving the milk set in a larger pan containing water. The cream should be taken from the milk before old and sour. Butter which has been churned quick will not keep well as there is not a complete separation of the caseine cells. If the butter was entirely free from caseine, salt would not be required.

The time of churning should be at least from 30 to 40 minutes. The butter-makers of Orange County, who make one of the best articles in the world, churn from 45 to 60 minutes, using the common churn which is regarded as the best. The Chester County, Pa., manufactories make the celebrated Philadelphia butter which sells at \$1.00 per pound. In Orange County, instead of a shallow pan for setting the milk, they use a deep pan, with a tunnel-shaped skimmer for taking off the cream. The point in favor of a deep pan is, that the tough surface is prevented from forming on the surface of the cream, there being less surface exposed to the air.

Butter is oftentimes spoiled by smoke. Potatoes, herbs, roots, &c., should not be placed near milk. Soft woods are bad for firkins. Ash contains an acid which is deleterious in its effect. White oak is good. Dampness of the nature of mould should be avoided in the milk room. Pans should not be placed, the one above the other.

#### Butter Factories.

In butter factories a barrel and a half churn is used. Into this churn 50 quarts of cream are put and then diluted, with cold water in summer and warm in winter. The quantity used being from 16 to 30 quarts at each churning. Ice should never be used unless the temperature rises above 64 degrees. Eighteen ounces of salt will be sufficient for 22 pounds of butter unless wanted for keeping, when a little more should be added. To prepare the firkin for the reception of butter, soak it in cold water, then in hot water and then again in cold water. It should then be filled with butter and strong brine poured on. Washing the butter removes the caseine and consequently secures butter that will keep. Butter should be stored in a dry cellar, free from other articles which might taint the butter.

#### Skim-Milk Cheese.

There is more profit in butter and skim cheese than in making whole cheese. When skim-milk cheese is to be made, all of the cream is not removed when wanted for churning. The morning's milk should set twenty-four hours and the evening's twelve hours. To make skim-milk cheese, raise the milk in the vat to a temperature of 82 degrees. Add

sufficient rennet to coagulate the milk in 50 or 60 minutes, then cut and break the curds; after they have subsided, gradually raise the temperature to 96 degrees, stirring the curds meanwhile. Then withdraw the whey and remove the curds, after which manipulate as with whole milk curds. It is found that twenty-eight pounds of milk will produce one pound of butter and two pounds of skim-milk cheese. The average quantity of milk, however, required to make one pound of butter is twenty pounds. If the skim-milk is to be used to make cheese, it should not be allowed to sour.

#### Analysis.

Buttermilk, as examined by Berzelius, contains cheesy matter 3.4, and whey 92. Cream of average quality yields 24 per cent. butter. Analysis of cream give water from 74.46 to 61.67, butter from 18.18 to 33.43, caseine from 2.69 to 2.62, milk sugar from 4.08 to 1.56 and mineral matter from .59 to .72. Nine pounds of milk on an average will make one pound of cheese. The whole milk should be churned, if at all, at a temperature of from 60 to 65 degrees. There is more labor in churning whole milk than there is in churning the cream.

#### Color.

One market requisite for butter is that it have a good golden yellow color. Butter from hay has a light color. Butter is largely colored with annatto for market. To color butter in late fall and spring, feed upon early cut hay, carrots and oat and corn meal, and no artificial coloring will then be needed. Carrots give a rich yellow color to the butter. Annatto when used is put into the cream in order to color the butter.

#### Little Things

Have much to do in dairy management. Due attention must be given to pasturage, to the cows, to milking, to setting the milk, to churning the cream, to working the butter and to packing and storing. Cream readily takes up odors and consequently should never be allowed to stand in the kitchen where culinary operations are going on. The food upon which a cow is kept influences the time of churning and the quality of the butter. Milk produced from food rich in nitrogen produces cream which does not require so much time in churning as the cream from milk produced from food wanting in nitrogen. When neither grain nor meal is fed to cows, the cream must be churned at a higher temperature than when the cow is fed upon food rich in nitrogen. If milk is allowed to freeze and thaw or to fall to a low temperature while setting for cream, butter cannot be so speedily brought. It should never fall below 50 degrees. Potatoes may be fed in fall and early winter, but grain or meal should be added with good hay the latter part of the winter. Butter is often spoiled by imperfect washing, giving it a mussy look and a lardy taste.

The term grain as applied to butter implies a waxy appearance. Butter which has a good grain can be drawn out. When the grain has been injured the butter will indicate a greasy appearance. In working butter, it should not be ground against the tray, as the grain will thus be destroyed. The buttermilk should not all be worked out at once. In salting, one important point is to get good salt. The salt should be kept in a dry atmosphere. The flavor of salt is very much affected by the manner in which it is kept. The best of butter will invariably be injured by poor packing. In factories where gilt edged butter is made, especial care is taken in packing the butter. A cellar used for storing butter should be used for nothing else.

These things may seem small but they invariably influence the quality and consequently the price of butter. A good article commands a good price, and it will pay to regard all the minor details of butter-making as worthy of attention, as on them depends the value of the product.

#### CASH VALUE OF A LABORING MAN.

We find the following article in the *South Home*, credited to a "Northern Exchange:"—

It is often remarked of persons who do not possess any property, and who depend upon their daily labor for support of themselves and families, that they are "worth nothing" financially speaking. This language is generally indulged in by men in the community who style themselves business men, and who get rich off the necessities of other men. Let us examine the question financially, and see if their assertions are correct.

Last year the price of common labor averaged \$1.50 per day. Admitting that the laborer received \$1.50 per day, and it required the whole of that sum to support his family, nevertheless we contend that the laborer was worth in cash to his family the sum of \$7989.

The amount he would receive for one year's labor, at \$1.50 per day would be \$475.60, which amount would be the interest at six per cent. on \$7989, which latter sum would be the cash value of the laboring man to his family.

The cash value of the laboring man to the community is much more than the above-named sum, as labor is the only true wealth to any country. Without labor our forges, furnaces, woolen mills, and indeed manufactories of all kinds, would cease to be. The music of the loom and shuttle would be silenced forever. Our national and other banks would close their doors, and our most enterprising merchants take in their signs. Without labor civilization would recede, and the bat and owl would soon occupy the crimson chambers of our would-be business men.

Let the laboring men of the United States realize their true position. Let them reflect

that labor is honorable—that labor is wealth. Let them remember that they are a power in the State—that to them this great Government is indebted for all it possesses of liberty, glory, grandeur.

"Let them not only reflect" that labor is honorable, but let those who look down on the humble laborer and mechanic reflect for one moment before they speak in terms of disparagement of the "hewers of wood and drawers of water." The custom is too prevalent in the community of making remarks in a sneering manner of the great industrial class of our people, leading youths among us to think that honest industry is not honorable, be it what it may. That time has passed, and the South is too poor to indulge in such sickly nonsense; she needs labor of all kinds. Honest, industrious mechanics and laborers are the wealth of States, and until they are encouraged and fostered, our people cannot be prosperous. It is not the cash value alone by which he enriches the place of his residence but he adds by his labor to its material wealth; no country or nation that commands the respect of the world, but what that respect was gained through the skill of her mechanical population. Then let all classes, more especially the rich, respect and incite their children with the true theory of life, that labor is honorable, and if in after life misfortune should overtake them, willing hands will be put forth to earn their support.

**BEES AND FRUIT BLOSSOMS.**—E. Gallup, in *Western Pomologist* says that "the facts of the case are, that instead of the bees injuring the fruit blossom or crop in any case whatever, they are an absolute assistance. So much so, that in the immediate vicinity of an apiary in some seasons, there will be an abundance of fruit, whereas in localities where no bees were kept, there was comparatively little. Bees are a great assistance in fertilizing blossoms that otherwise (or left to nature) would not become fertilized, and the clover or buckwheat patch that produces the most honey, produces the most seed, invariably. The honey in the blossom, if not taken out by the bees and other insects, would be dried up by the sun or washed away with rain, consequently would be a dead loss; but if we have bees to gather it, it is so much gain, not only to the owner of the bees, but to the fruit grower and the farmer."

**EARLY CALVES.**—A correspondent of the *Country Gentleman* says:—There is a good deal more depending on an early start than is generally supposed; yet every farmer who has raised stock must be aware of the advantages attached to a calf or a colt born in March or April, over one not coming into existence till June. The early young animals become strong against their first winter, and

go through the cold spells without the check those that are younger or tenderer receive, and having gained a good clear start, they will never lose it, and it is the same with lambs, pigs, and young poultry. How attentive to this matter should those be who possess highly bred stock, for if it is worth consideration with good common stock, it must be of immense importance to those who breed animals coming to be worth as many thousands as the average grades are hundreds. In England the winters are very much milder than in the Northern States; yet this is seriously studied with every variety of live stock, for the first winter is the most critical period of agricultural animals' existence, and when the young stock is brought to grass at about fourteen months old, plump and fat as they can be, to be perfectly healthy and growing, there is an end to all anxiety concerning them."

#### NEW PUBLICATIONS.

AN ADDRESS on the Natural History and Pathological Osteology of the Horse. Delivered before the Annual Meeting of the Connecticut Board of Agriculture at Middletown, January, 1870. By N. Cressy, M. D. Illustrated. Hartford: Chase, Lock & Brainard, 1870.

What is known of the horse in its *paleontological* lineage, as gathered from remains in the Miocene and Drift formations, is here given, in connection with its more modern history, as introductory to an essay on the diseases of the bones of the horse.

*Ringbone, Splint and Spavin* he regards as only different names of the result of the morbid process of bony growth, called *exostosis*. By this word is meant any bony growth or tumor which affects the *periosteum*, another hard word which means, according to the dictionary, a fibrous membrane covering or investing the bones, and which seems to be as necessary to the health of the bone as the skin is to the health of the flesh. He says, in a case of acute *exostosis*—or ringbone, splint or spavin—where it is primarily developed without any hereditary predisposition on the part of the immediate parentage, this disease usually occurs as the result of an injury, either from a blow or a strain. An inflammation follows, and an extra quantity of blood, laden with salts of lime, is brought to the part, and thus the periosteum (or bone skin) and the surrounding tissues is thoroughly congested. Eventually the phosphate and carbonate of lime becomes deposited within the periosteum at the seat of injury, and a hard, unyielding, bony tumor is the inevitable result. All of these affections may be developed from similar exciting causes, or from an inherited constitutionality. And as a remedy to alleviate the suffering and control the progress of the disease, I would earnestly recommend a preparation of Colorless Iodine Liniment that I have used for several years with marked success in human and veterinary practice. Cases of hereditary ringbone that

appear early in a colt need no treatment, for their only cure consists in hastening the *anchoylosis* of the joint, which, of course, forever obliterates the freedom of motion there, by soldering the two articulating bones together in firm osseous union. Even with such a cure the creature ceases to limp, because the impaired motion of the joint that caused such excruciating pain in walking has been destroyed.

#### TWIN HEIFERS.

Our correspondent who inquired some weeks since whether there was any good reason for the idea prevalent in his neighborhood that twin heifers were not reliable as milch cows, and those other correspondents who replied that they had had good success with such animals, will read the following statement from the veterinary editor of the *North British Agriculturist*, with interest:—

Calves born as twins, when of the same sex, breed as regularly and readily as those which come at a single birth, and often inherit the fecundity of their parents. When, however, a bull and heifer calf come together at one birth, the heifer, in a large proportion of cases, never breeds. Such animals, spoken of by old Roman writers as *Tauræ*, are popularly known as free martins, and often assume masculine characters, are short and rough-like about the head, but seldom have any appearances connected with their generative organs sufficient to account for their not breeding. A few of these martin heifers do, however, breed, but probably not more than two out of every eight or ten. Bulls born along with heifers do not seem to labor under any disadvantage in procreating their species. It has been stated, but without sufficient evidence of fact, that the martin heifer is more likely to breed if she happens to be born before instead of after her twin brother.

TO USE THREE HORSES ABREAST.—As it is becoming quite common to use three horses now instead of two, perhaps it would be an advantage and a saving to some of our young farmers to tell them how to hitch up three horses, with an equalizer that, instead of costing five dollars for a patent article, can be made for a few cents. I take a piece of two by four, or two by five, scantling and bore first a hole *near* each end, as I would for a double-tree; but the piece need not be over nine to 12 inches long; then bore a hole one-third of the length from one end and two-thirds the length from the other end, and attach the piece by a clevis and ring to the plough clevis, the *longest end up*; then hitch my middle horse to the top, and the team to the bottom end, or short end of the equalizer—using a long doubletree for the team, long enough for a horse to work in the middle. By using this simple device, a saving can be made of five dollars, and the equalizer is, I claim, better than any other, for the simple reason, that it brings the team nearer the nose of the plough beam and consequently nearer the work.—*Western Rural*.



#### THE CAT BIRD AND CHEWINK.

Of all the birds which inhabit our woods and pastures none are better known than the Cat Bird and Chewink, or Towhee, as the latter is often called. The Cat Bird had a bad name with the associates of our boyhood. It was accused of killing bees and robbing other bird's nests, and was consequently persecuted and abused by us as an enemy and outlaw. We believe that this treatment was unjust, and that this poor bird was the victim of calumny, suspicion and slander,—a misfortune which is by no means confined to birds. We now regard him as a friend to the farmer, and his kitten-like mew is more musical to our ears than when we regarded it as the cry of an adversary that challenged our slings and shot-guns.

Mr. E. A. Samuels, who has carefully watched this bird and studied its peculiarities, makes no

allusion to these vicious habits, and we presume that it has been wrongfully accused.

That the boys of the present day may better understand the habits and character of the birds that sing such songs and pipe such notes as their Creator has fitted them for, and which feed on insects injurious to vegetation, we present the above illustration of the Cat Bird and Chewink, with a description of both, copied by permission from Samuels' "Birds of New England."

Of the Cat Bird he says:—

This very common and well-known bird arrives in New England about the first week in May,—in Maine, perhaps about the 15th of that month. It is distributed abundantly throughout these States, and its habits are well known. During the mating season, and

indeed through the greater part of the summer, the song of the male is heard in the woods, pastures and gardens at early morning, and sometimes through the day; and, although most persons describe it as being harsh and uncouth, it is really very pleasing and melodious. It is a sort of medley, like that of the Brown Thrush, but not near so loud; the bird usually perches on a low tree, where, standing nearly erect, his wings slightly expanded, and his tail spread beneath him, he pours forth his notes sometimes for half an hour at a time. In addition to this song, he, in common with the female, has a plaintive note almost exactly like the mewling of a cat; and the specific name of *felivox*, given it by some authors, is much more descriptive and appropriate than that of *Carolinensis*, which is neither descriptive nor proper.

The alarm-note is a rattling cry, like the sound of quick breaking of several strong sticks; it is perhaps well expressed by the syllables *trat-tat-tat-tat*, uttered very quickly. I have noticed that this bird, as do many others, prefers the neighborhood of thickly settled districts, even a home in their midst, to others of a wilder character; and, when travelling through the deep forests, I have invariably found, that, when these birds became abundant, a settlement was near.

Soon after mating, the birds build: this is from about the 20th of May to the first week in June. The nest is usually placed in bushes and shrubs, seldom more than four or five feet from the ground; the location is often in the deep woods as in the fields or pastures. It is constructed first of a layer of twigs and sticks, on which is built the body of the nest, which is composed of strips of grape-vine bark, fine twigs, leaves, and straws; it is deeply hollowed, and lined with fibrous roots and hairs, and sometimes fine grass. The eggs are usually four in number, sometimes five: their color is a bright, deep emerald green, and their form generally ovate. Specimens do not exhibit great variations in measurement from the dimensions of a nest complement of four collected in Thornton, N. H., they are as follows: .95 by .67 inch; .95 by .66 inch; .93 by .67 inch; .93 by .66 inch. Two broods are reared in the season, seldom three in this latitude.

About the middle of October, this species moves in its Southern migration.

Mr. Samuels' account of the Chewink is as follows:—

This beautiful and well-known species, although common in Massachusetts and the other southern New England States, is rare in the three northern. It begins to grow scarce in the northern districts of Massachusetts; and, before we have passed fifty miles beyond its northern limits, it is very rarely seen. It makes its appearance about the 20th of April, the males preceding the females by a week or

ten days. As soon as the females arrive, the pairing season commences. The male perched on a low limb of a tree or high bush, chants his pleasing song, sometimes for half an hour at a time: this song resembles the syllables, *tow-hee 'che 'de 'de 'de 'de*, uttered at first slowly and plaintively, and quickly increased in volume and rapidity of utterance. He has also a sort of quavering warble difficult of description. If he is approached, he watches the intruder, and, after ascertaining his business, utters his note *tow-hee*, and proceeds his search among the fallen leaves for his favorite food of worms, insects, and seeds, which he is almost continually scratching for among the dead vegetation.

About the second week in May, the birds commence building. The locality usually chosen is in low, thick woods, or in thickets of briars and bushes near streams of water, in which places this species is most often found. The nest is placed on the ground, usually beneath a bunch of grass, or in a pile of old brush and fagots; it is constructed of fine twigs, leaves and grasses, and is lined with fine leaves of grasses, and sometimes a few hair-like roots.

The eggs are usually four in number. Their ground color varies from grayish to reddish-white: this is covered, over the entire surface with fine dots and points of reddish-brown: in some specimens these dots run into each other, and form small blotches. The average dimensions of a great number of specimens in my collection is about .94 by .76 inch. When placed beside an equal number of the eggs of the Brown Thrush, the eggs of this species appear much paler, and with a more roseate tint; otherwise, except with regard to size, the two species resemble each other much.

In New England but one brood is usually reared in the season. I have found nests with young in June and August, but generally the first brood leaves the nest too late for another to be brought out before the early frosts. About the middle of October, the old birds and their young, in small detached flocks, leave New England on their southern migration.

WHEAT TURNED TO CHESS.—A writer to the *Dixie Farmer* vouches that a person in his neighborhood has exhibited this season, wheat and chess growing from the same root. The bunch or stool on exhibition was carefully taken up, and all the soil washed from the roots, so as to give every one that examines, the opportunity of judging for himself. The stool, or bunch, consists of six stalks—three of them wheat, and three chess—all of them tolerably well-developed. No one that has seen this stool, or those exhibited by the same friend last summer, has a remaining doubt of the assertion that, under certain circumstances, wheat frequently turns to chess.

## EXTRACTS AND REPLIES.

## FANCY BUTTER.

Will you please give us a chapter on "*Fancy butter?*" Tell us all about the making, packing, marketing, &c., and explain why it sells in the market so much higher than the best New Hampshire and Vermont butter. W. J. HENDERSON.

*Ryegate, Vt., July 12, 1870.*

REMARKS.—We publish on another page an abstract of what Mr. Willard told the students of the Maine Agricultural College about butter making. This gentleman, in addition to what practical knowledge he may have gained in his own dairy, has spent much time among the best butter makers in this country and Europe; has even, we believe, visited the dairy of Queen Victoria, with its porcelain and its marble equipments, and we suppose he has told all that he can tell—not all that he knows—about butter making. There are secrets in this as in all other arts that can never be told,—they can only be learned. One man may know how to chop wood; another man may know how to set type. But what good will the telling of either do to one who never swung an axe or picked up type? We apprehend, however, that most of those who desire information upon the subject of fancy butter are making the same mistake that one Capt. Naaman, of the Syrian host, committed when he got into a rage because the prophet simply told him to "wash and be clean," when he expected to be bid to do some "great thing." Mr. Willard suggests few great things. "Little Things" are words which head his closing paragraphs, and we do not think he would be offended were these words to be used as a caption to the whole of his two lectures. "Small sands the mountain make, moments make the year, and trifles life," and little things, we suppose, have much to do with the quality of butter; little things out doors and little things inside; little things which imply a fancy farmer and a fancy dairy woman,—one can do little without the other.

But fancy prices depend on the freshness of the article as well as its intrinsic quality. The gilt-edged butter must be made near the consumer. It must be delivered often. The maker must have a reputation. "Mr. So and So makes *our* butter!" Just now it must be made from milk of Jersey cows, and if they cost from \$400 to \$1000 apiece the butter, you know, will be all the more fancy, all the more gilt-edged.

The best dairies of New Hampshire and Vermont do obtain prices which are decidedly "fancy" compared with those which are ordinary article commands. This is done in the first place, by producing a reliably good article; and, in the second place, by taking some pains to reach those who are willing to pay a good price for a good article. We know of dairies whose products are engaged at some ten cents a pound more than the ordinary price of what is called in market good butter.

This, we fear, is not such a chapter as our correspondent asks for, but perhaps it will serve as an introduction to the confession which we are obliged to make, that we are unable to answer his questions squarely and fairly. We shall be very happy, however, to serve as a medium for any one who can satisfactorily reply.

## RUSSIAN WHEAT—VETCH OR TARE.

I have just cut a small patch of wheat from seed imported from Odessa, Russia. I found several plants like the one enclosed. Will it be a pest if domesticated, or is it already so? I never saw anything like it. The wheat was sown the last of August; it made a very good growth, but became badly beat down soon after heading, and never recovered. After I thresh and clean the grain I may announce the result. H. COLMAN.

*Woodville, Mass., July 15, 1870.*

REMARKS.—The plant was received in good order, and is doubtless one of the many varieties of vetches or tares common in Europe. The seeds are nutritive and are used in the same way as peas,—in fact it is one of the *leguminosæ*, or pea family. It does not seem suited to the climate of the United States, or rather our ordinary field peas and beans do better. Though called a "tare" we do not think there is much danger of its becoming a troublesome weed. We shall be glad to receive further particulars of your experience with the Russian wheat.

## AFTERBIRTH.

Will you please to inform me through the FARMER what is the effect on a cow, of eating the "afterbirth," or "cleanings?" As is well known, there is a propensity in most, or all cows, to do this. A fine young cow (five years old) of mine, did this filthy deed on calving, about ten weeks ago. She has not suffered any harm from it as I can see. She has always before been troubled with swelled bag, but not this year. JOHN.

*Franklin, Mass., 1870.*

REMARKS.—When the ovum or germ cell of the female is impregnated by contact with the sperm cell of the male, it becomes developed into a sac containing the fœtus and a liquid called the amniotic liquor, in which the fœtus floats, attached by the funis or umbilical cord to the placenta, a soft spongy mass, consisting of fleshy cells and blood vessels. The placenta is attached to a portion of the inner face of the uterus by a membrane filled with blood vessels, through which nutriment is conveyed to the growing fœtus. The placenta and sac enlarge and thicken with the growth of the fœtus, and when the latter is fully developed and ready to be born, the former has become a large mass consisting of fleshy cells, blood vessels and tough membranes. During the process of delivery the placenta becomes separated from its attachment to the uterus, and in a healthy labor passes away soon after the fœtus. The contractions of the muscular coat of the uterus, called labor pains, generally cause a rupture of the sac containing the young, which consequently escapes and first passes away. Sometimes the placenta or

afterbirth, is not completely separated from the uterus until after the fœtus has passed, and consequently is detained for a time, longer or shorter.

Cows almost universally have a propensity to eat the placenta immediately after it drops away, if they can get at it. Whether this is owing to a saltish taste of the liquor, or for some other instinctive purpose is not known. They will also lick the entire surface of the calf, apparently to cleanse it, but probably because they like the taste of the slimy liquor in which it has been immersed and which adheres to the new born animal.

We have never known the eating of the cleaning to do any injury. Perhaps it operates as a cathartic, and thus gives the animal a relief which she feels that she needs. Cows and oxen, and even horses, will often eat salted meat and fish when they can get at them, and seem greatly to enjoy them, and we have never known any injury result. They are supposed to do this on account of the salt they contain. The amniotic liquor is said to contain a peculiar acid, which may possibly gratify the taste of the cow.

PITCH PINE NEEDLES.

Everybody knows how valuable are most leaves for manure, but I was always taught that pitch pine needles were poisonous to vegetation.

Some years, owing to the pressure of fall work, I have been unable to save as many leaves as I wished, until they had so decomposed as to be got only with difficulty.

I have been tempted to store the needles, as I can get them with the greatest ease and despatch, whenever the ground is bare; but owing to early teaching, have not yet done it. One argument urged against the needles is, that vegetation where they lie is always scant; but it seems to me that this must be in consequence of the form of the needles, which causes them to lie so compact and in such bodies as to prevent the plants pushing through.

A year ago last spring I raked some needles from a strawberry bed. I then ploughed an adjoining piece for a new bed, and in one place ploughed in the soil a lot of the needles. Right in this mixture of half needles, half loam, some of the plants were set, and to my astonishment, produced much larger plants in top and root than elsewhere. Still the needles may have a certain poisonous nature, to which some plants may be susceptible of injury. Or the needles might have been more beneficial as a loosener of the soil (it was all loose soil) than injurious as a poisoner. Please state whether it would be well for me to store them for manure in winter?

If there is anything poisonous, it is probably in their pitchy nature. If not injurious, I would like to use all I could, and get them rotten in my manure heap.

J. E. BLAKELY.

REMARKS.—We have always supposed that the needles or leaves of pine were of little value as a fertilizer, but have never made any careful trial of them, and cannot answer our correspondent's inquiries from personal knowledge. The soil from which pine trees grow does not seem to be as well fitted for the growth of other vegetation, as that on which hard-wood trees grow and shed their leaves. Prof. Johnson gives a variety of tables of analyses in his book entitled "How Crops Grow,"

and perhaps the following extracts from them will afford some information. One hundred pounds of Red Pine leaves, when burned, gave 4.69 lbs. of ashes; same amount of Oak leaves gave 4.90 lbs; Beech, 6.75 lbs. The per cent. of several of the constituents of the ash of these several leaves is given as follows:—

	Potash.	Soda.	Magnesia.	Lime.	Phosphoric Acid.	Sulphuric Acid.	Silica.	Chlorine.
Pine . . .	1.5	—	2.3	15.2	8.2	3.8	70.1	—
Beech . . .	5.2	0.6	6.0	44.9	4.2	3.7	33.9	0.4
Oak . . .	3.5	0.6	4.0	48.6	8.1	4.4	30.9	—

We should have little fear of any poisonous effects of the needles, composted as proposed, but as more than two-thirds of the ash of pine leaves are silica or sand, and of other leaves less than one-third; and as they also vary in potash, lime, &c., as indicated above, we should not expect that pine leaves would help the manure as much as oak or beech leaves.

CABBAGE WORMS.

I find the green worms are eating my cabbages very badly. I think there must be some insect that deposits nits on the cabbage leaf, especially on the under side. The worm is very small at first, but grows larger as it eats the cabbage. I read in your paper once that the eggs of a butterfly produced the worm. I think this cannot be so as it would require a greater number of butterflies than I ever saw to leave so many nits as I find on my cabbages. I have to pick the worms off and kill them every few days, or they would eat my cabbages all up. Now if you know of any remedy to get rid of them, please let it be known through your valuable paper, for it is a hard task to pick them off by hand when they are as plenty as they are this year.

H. D. U.

Monroe, N. H., July 12, 1870.

REMARKS.—Nearly all the caterpillars or worms which infest vegetation are the young of butterflies or moths. Each female butterfly lays from two hundred to five hundred eggs or nits. At this rate a few of them would be able to give a cabbage patch a good sprinkling of nits in a short time. In the article to which you refer the destruction of the butterfly or moth was recommended. Perhaps the remedies used for currant worms would operate with those on cabbages. If you have fine slacked lime, try a sprinkling of that on the leaves.

LAME COW.

Will you inform me what I can do for a lame cow? She was pricked in the leg, back of the gambrel joint, by a calf's muzzle last spring. It made her very lame. I bathed it in cold water, and she got over it. In the course of a week or two, she was lame again. I commenced bathing, and in two or three days she was apparently well. About a week ago she became lame again; this time I have used both cold water and a strong brine to no effect; it swells and is inflamed about the joint, and still grows worse. I think the injury was on the cord.

L. H. C.

Middleboro', Mass., July 6, 1870.

REMARKS.—Probably the wound extended through the skin into the cartilage, and most

likely there will be an abscess, which at the proper time, may require opening. You had better poultice at present.

#### A SICK COW.

I have a four-year-old heifer. She calved early in May, gave a good mess of milk for a while, but the last few weeks has gradually fallen off in her yield, and continues to daily. She is also very poor; her appetite is good, always seeming hungry. If you or some of the readers of the FARMER can inform me of what would benefit her, through its columns, I should be very grateful. J. T.

*Braintree, Vt., July 4, 1870.*

REMARKS.—This description does not enable one to decide what is the matter with the cow. One thing, however, is certain:—her food does not nourish her,—either it is not digested, or the proper organs do not take up the nutriment. Give her sulphate of iron, pulverized, one drachm, rubbed with ginger, one teaspoonful once a day. Some internal organic disease may have taken place.

#### AGRICULTURAL HORSE RACING.

Right glad was I to see that noble protest against horse racing at our agricultural Fairs, in the FARMER of July 16. Since the introduction upon our Fair grounds of the race course and the machinery, more or less complete, of the sports of the turf, I have had only one mind as to their final result,—which is that they will ultimately prove the subversion and ruin of our "cattle shows" and farmers' festivals, if not held in check or entirely excluded. Exactly what course to pursue under the circumstances I do not assume to advise. But this much I may say, the great object, the polar star,—agricultural progress,—must be kept steadily in view. Amusement and diversion should not be excluded, but the aim and goal must be the social, moral, and professional improvement of farmers. However efficiently and judiciously our Fairs may be managed, unquestionably there will be those who will find occasion to grumble and criticize. But with a firm purpose to encourage a healthy competition in honorable industry and superiority in productions, and at the same time to discourage every thing that tends to excite ambition to get a dollar without earning it squarely and fairly, we fully believe that our agricultural associations may do much to encourage and benefit farmers, and to show them and others that agriculture can stand alone and even walk without the leading-strings of any jockey club.

*Farmington, Me., July 18, 1870. O. W. TRUE.*

#### SIGNS OF THE WEATHER.

The writer has been a close observer of signs of the weather for a number of years past, which are far more reliable than any barometer, he thinks, ever invented. All indications of rain are said to fail in a dry time. With such exceptions, the following rules are quite reliable.

1. The state of the weather during the last quarter of the moon, is a fair sample of what it will be during the remaining three-quarters, whether wet, changeable or dry.

2. When the spiders spread their nests on the grass so that they are visible in the morning with a heavy dew upon them, though a heavy vapor or fog may hang over the hills and not in the valleys—ominous of storms—yet the insect has shadowed forth with unerring instinct a fair day, though sometimes slight showers may fall. Some other

habits of this cunning and intelligent creature are equally interesting, which cannot be noticed from want of space. Who has not, when travelling through a wood in the morning, in summer time, felt a tiny line drawn across his face, that was the highway bridge of the aerial traveller. At other times they will gather up the corners of their web, and like the aeronaut suspended from a basket will sail through the air to a new field of operations.

3. A heavy fog on the hills and little or none in the valleys, is often a fair indication of rain, although not perfectly reliable.

The following observations copied from the "Farmer's and Mechanic's Manual," are claimed to be reliable, which the writer has not fully tested to his satisfaction.

1. The nearer the time of the moon's change, first quarter, full, or last quarter are to midnight—from 10 P. M. to 2 o'clock, A. M.—the fairer will be the weather during the seven days following.

2. The nearer to mid-day or noon the phases of the moon happen, the more foul or wet weather may be expected during the next seven days. The space of this calculation occupies from 10 o'clock, A. M. to 2 P. M. These observations refer principally to summer, though they affect spring and autumn nearly in the same ratio.

*Barre, Mass., July 4, 1870. CALEB RUSSET.*

#### PROTECTING TREES FROM MICE AND BORERS.

In the winter of 1868-9 I lost sixty beautiful young apple trees out of my orchard of 180 trees, in consequence of the mice gnawing the bark. In the fall of 1869 I procured a roll of builder's tarred paper, cut into pieces 1½ feet by 2½ feet. I then coiled one of these papers around each tree, leaving a space of about two inches all around the tree, so that the atmosphere could circulate freely between the tree and paper. I then tied a small twine around the paper at the top and bottom to hold it in place. At the same time I placed about two bushels old chip manure about each tree, so that the first freezing weather in November fastened the manure to the paper, rendering it stiff and steady, thereby making a complete fortification against the little intruders.

Last April, after the snow was gone, I removed the papers and found every one of my trees that I had thus papered in a perfectly healthy condition and untouched by the mice. There were thirty trees in the same orchard which I did not paper, eight of which were completely girdled and killed by the mice. OSMYD SMITH.

*Smith's Mills, P. Q., July 11, 1870.*

Last fall, before the snow fell, I wound my young trees with felted paper, put as high as the snow was likely to fall. It was tied on at the top and bottom, also in the middle, with wool twine. All my trees thus protected came through the winter and spring uninjured, while those in by-places not protected were destroyed. Some of my neighbors did the same with like results. I had two apple trees in my fruit yard six inches in diameter, standing near a fence north of them. A severe north snow storm, the 16th of March, banked the snow up to the limbs of these trees. I directed my man to tread the snow down hard around them. He did it well; but when the snow melted away we found that the little hungry mice had girdled the trunk completely for eighteen inches above the ground. I have banked them up high with earth and they are bearing full this season, but I think they will die next season.

I have succeeded in keeping the borer from my apple trees for the last twenty years, by applying charcoal dust from old coalpit bottoms.

J. N. SMITH.

*West Addison, Vt., July 12, 1870.*

## GOING ON TO A FARM.

Will you please to give your opinion, whether a man with only \$500 could get a living at farming, allowing he should attend to his business? There are a number here with about this amount of capital, that think of moving back into the country and locating near each other, that they may assist one another in cultivating the land. Perhaps some of your readers can give us their experience in this matter.

T. E. P.

Newburyport, Mass., July, 1870.

REMARKS.—We second the motion that this question be referred to "some of our readers." We have so often tried to express our opinion about the probable success of village and city people in farming, that we should much rather print the experience of those who have tried it, than to repeat our own views. As a general rule we think it is not advisable for men to change either business or location. The process of acclimation which change of location often implies, and of apprenticeship and adaptation which is inevitable in entering upon a new business, are neither pleasant nor profitable. Many village and city people who get a little book-farming knowledge into their heads, overlook the fact that farming is a trade, and entertain a vague notion that almost anybody can run a farm and do it up in much better style than is done by the old do-as-their-fathers-did farmers. If our Newburyport friends belong to this class of "progressive farmers;" if they propose to engage in farming before learning the trade; if they never swung an axe or pulled a hoe or worked a pair of sheep shears all day long; if they have never known how heavy a bushel basket full of potatoes is late in the afternoon after having toted them to the cart steadily from early morning; if their wives have had no experience in butter and soap making, in trying lard or filling sausages, in taking care of poultry, lambs and pigs, then our advice is most emphatically expressed by just four letters—d-o-n-t!

But perhaps T. C. P. and his friends were brought up on farms and have learned the trade by a regular apprenticeship. If so they do not need our advice. They must know that some people succeed at farming, and some do not; and that like causes in their own case will produce like effects. Failure or success depends on the man, not on the business, whether on a farm or in a shop.

## SURPRISE OATS.

I have just cut a piece of oats of which I send you a small package. The stalks are the product of one single oat. The seed came from the Patent Office three years ago, and a few farmers beside myself have them in my immediate neighborhood. I used one and a half bushels per acre, as I supposed, but found after sowing I had a little over an acre and one fourth. They are plenty thick. I shall probably get from fifty to seventy-five bushels from the piece. Last year at thrashing they weighed forty-five pounds a bushel, being altogether ahead of the nasty looking black Norway in weight, color, yield and every particular. The stalks sent are about the average length of the piece. The drought here has caused the grain on the lower branches to blast, as you will per-

ceive. I think with a favorable season and well fitted ground the yield would be large. These grew on a side hill on rather light soil. Some of my neighbors, on heavier land, have a larger growth than mine.

Y. Z.

Rutland, Vt., July 23, 1870.

REMARKS.—The stalks received, seven in number, are over five feet in length, and are certainly very handsome specimens, both as to straw and grain. We suppose it is the variety known as the Surprise, which some say is identical with the New Brunswick. The Surprise Oat has been well spoken of by many who have grown it.

## HENS WITH SCURVY LEGS.

Can you, or any of your correspondents, tell the cause of a sort of a warty or scaly substance that grows on my hens' legs? Is there any remedy?

Ossipee, N. H., June, 1870.

REMARKS.—We never heard anything of this disease until the large foreign breeds were introduced; and we suppose they are still more liable to it than other breeds. It is generally supposed that the disease is caused by damp, foul apartments, and want of proper care, but we understand that flocks that have good attention have suffered of late. A correspondent of the *Rural New Yorker* says that fowls that show any symptoms of scurvy legs should at once be separated from the others and placed in warm dry quarters. Give them plenty of wholesome food, and as often as once a day some animal food. Wash the legs with a weak solution of sugar of lead, in the morning, and anoint them with clean lard, mixed with ointment of creosote, just before they go to roost. Keep them from wet. Others advise to wash the legs with kerosene oil; anointing with salt grease.

## FEEDING BONE AND OYSTER SHELLS TO HENS.

In one of the late Boston agricultural papers there appeared a statement of the loss of a large number of hens in consequence of feeding them with ground bone, supposed to have been poisoned in some way.

Having had experience in raising poultry, I am led to remark for the information of new beginners, that bone or oyster shells should never be mixed with meal, or anything else, when given as feed. Bone and shell must be kept entirely separate from all other feed, and made accessible to the fowls, all the year round, and they will, of themselves, eat just as much as is needed, but not a particle more. Shell is generally preferred by fowls, and should be somewhat coarse. The way I adopt to supply these articles is to use a box about six inches square and eight inches long, for a dozen hens. If it stands out doors the roof ought to slope in order to shed the rain. Take out about one-third of the width of one side—the top part—and have a partition in the middle to separate the two kinds.

S. B. S.

Boston, July 21, 1870.

## REMEDY FOR SCRATCHES.

Take a piece of alum as large as a chestnut, dissolve it in half a teacupful of boiling water; add a tablespoonful of saleratus, and a teacupful of strong vinegar, and use warm. I have found this to be an excellent remedy.

T. ROBY.

North Sutton, N. H., 1870.

## PLOWING IN CLOVER.

I see in the FARMER allusions in regard to ploughing in clover for manure. I would like to inquire the best method of doing it. I have heard that out West when the soil gets exhausted they plough and sow on plaster and clover seed, and plough in a crop of clover. How would it work to plough a piece of land in the spring, and sow on plaster and clover seed? Would the crop get up large enough to plough in the first year? J. M.  
*Westminster, Vt., July, 1870.*

REMARKS.—If sown quite early, on land pretty rich and moist, we think there would, ordinarily, be a good crop to plough under the same season. The ploughing in a crop of clover has become quite common in New England, as a manurial agent, and we think will become general among progressive farmers. It ought to be tried in various ways, and at different seasons and reported, so that all may have the benefit of experiments made.

If ploughing under clover, or any other green crop, will enrich the soil, it would seem that every farmer might keep his land in good condition if he would be careful not to crop his mowing fields until the roots of the grasses are exhausted, so as not to afford a crop worth ploughing under. We must plough more frequently, and while the land is in condition to bring a fair crop to be mingled with the soil and have a visible effect upon it.

Where land will bring a second crop of grass of a ton to the acre, that is frequently ploughed in, and the land sowed to grass again at once, or left for hood crops, small grains or roots the next season.

We have great confidence in the utility of ploughing in green crops, and hope the practice will become universal among our people.

## MASSACHUSETTS AG'L COLLEGE.

With the annual examination of the classes, which took place on Tuesday, August 2, the third year of instruction in the Massachusetts Agricultural College closed. Another class, which will be added September 8, at the commencement of the next term, and another year of study and instruction, are still wanting to put the institution in full working order. Is this always remembered by those who are looking for immediate results, and inquiring what has been accomplished by the College? Next year, for the first time, the usual "Commencement" exercises will be held; then the first "rotation" of study and of classes will be completed.

Many farmers adopt a system of cultivation and cropping which requires four years or more to complete the course. In such case, would it be just to base an opinion of the benefit of the rotation system on an observation of the results of the first two or three

years' cropping? We admit that men do sometimes thus judge, and that diverse views are expressed, for instance, of the profitableness of the corn crop, which is usually the first one in the imperfect system of rotation practiced by New England farmers, without due consideration of its connection with, or influence on, the several crops of oats and grass which follow. And in like manner, some are disposed to form an opinion of the benefits of an agricultural college by the results of the first year or two of an incomplete course.

The *Amherst Record* says the late examination was well attended, many strangers from out of town being present. The examinations were held in the chapel, which was decorated with green. The mottoes, "Practice with Science," "Progress with Prudence," were displayed very tastefully over the platform. The young men acquitted themselves well. The examinations were conducted in the usual style by questions, the student being required to turn and face the visitors. The following studies included the course in which the classes were examined: Geology, Veterinary Science, Surveying and Drawing, Agriculture, History, Chemistry, and the Selection and Care of Farm Stock. The latter was conducted in the yard adjoining the farm barn, and the students were, in turn, called upon to point out the different parts of the animal under consideration.

During the evening a levee was held at President Clark's residence, at which members of the Board of Agriculture, Trustees of the College, the Faculty, and students and invited guests were present.

Wednesday morning, at half past eight o'clock, the students were exercised in infantry tactics, under the direction of Captain Alvord, the officers of the different classes taking turns in handling the company. The movements of the company were well executed. The students are hereafter to be drilled in artillery practice, a section of artillery having arrived for that purpose.

The number of students is not far from a hundred, but not so large as stated in last winter's report to the legislature, several being obliged to leave for different reasons.

—Many of the farmers of Orleans County, Vt., are saving grass seed this year.

## Ladies' Department.

From Hearth and Home.

### MEASURING THE BABY.

We measured the riotous baby  
Against the cottage wall—  
A lily grew at the threshold,  
And the boy was just as tall!  
A royal tiger lily,  
With spots of purple and gold,  
And a heart like a jewelled chalice,  
The fragrant dew to hold.

Without, the bluebirds whistled  
High up in the old roof trees,  
And to and fro at the window  
The red rose rocked her bees:  
And the wee pink fists of the baby  
Were never a moment still!  
Snatching at shine and shadow  
That danced on the lattice-sill!

His eyes were wide as blue bells—  
His mouth like a flower unblown—  
Two little bare feet, like funny white mice,  
Peeped out from his snowy gown;  
And we thought, with a thrill of rapture  
That yet had a touch of pain,  
When June rolls around with her roses,  
We'll measure the boy again.

Ah me! In a darkened chamber,  
With the sunshine shut away,  
Through tears that fell like a bitter rain,  
We measured the boy to-day;  
And the little bare feet, that were dimpled  
And sweet as a bubbling rose,  
Lay side by side together,  
In the hush of a long repose!

Up from the dainty pillow,  
White as the risen dawn,  
The fair little face lay smiling,  
With the light of heaven thereon—  
And the dear little hands, like rose-leaves  
Dropped from a rose, lay still,  
Never to snatch at the sunshine  
That crept to the shrouded sill!

We measured the sleeping baby  
With ribbons as white as snow,  
For the shining rosewood basket  
That waited him below;  
And out of the darkened chamber  
We went with a childless moan—  
To the height of the sinless angels  
Our little one had grown!

For the New England Farmer.

### FLOWER GARDENING FOR SEPTEMBER.

"If we could open, and unbend our eye,  
We all, like Moses, should see  
E'en in a bush, the radiant Deity."

Surely in all God's works we can trace the imprint of his Divine Hand, and in our gorgeous flowers He grants to us a slight glimpse of the glories of that city beyond the sun, whose light was never seen on land or sea! Our garden beds are at the bright of their beauty and glory, now—but soon the cold hand of King Frost will rob them of all their grace and loveliness. *Asters*, *Zinnias*, *Petunias*, *Verbenas*, *Geraniums*, *Gladioli*, and all the Lily tribe form a mass of dazzling brilliancy. We are greatly indebted to Japan for her contributions to our list of garden beauties. The first Japan Lilies were brought over in 1850,

by Dr. Siebold; he had also collected many other rare bulbs. The packing cases containing them arrived at Antwerp during the storm of a revolution. They were deposited in a warehouse—afterwards used as a barrack for a troop of French cavalry, and the glorious *Japan Lilies* were all that were saved out of the wreck, the boxes being broken open, and their contents scattered. Prof. Lindley, describing one said, "the diamond bouquets, the queen of Spain's jewels, and even the far famed, priceless Koh-i-noor itself, must pale their ineffectual fires, when compared with this gorgeous flower." It is perfectly hardy, will stand our coldest New England winters unprotected. At first it was treated as a stove plant, but it did not thrive; now it grows in great luxuriance in the open border. It is a gross feeder, requires much stimulant to produce its flowers in rare perfection. *Lilium Auratum*, or *Golden Banded Lily* is much more beautiful, because with its beautiful form, and coloring, it also possesses the most delicious fragrance, perfuming the air, and delighting the senses. As yet, a high price is asked for this gem of the Lily tribe, but as it is easily propagated, both by offsets and seeds, it will soon be offered at so low a rate that all lovers of flowers can revel in its glories. *Gladioli* are a very popular flower, and high sums are asked and received for "novelties." Already the species number above a thousand, and each year, by careful hybridization, more are produced. The bulbs should be stored after the leaves are killed by the frost, in a dry frost proof cellar or closet.

The handsomest flowers of *Asters*, *Zinnias*, *Stocks*, *Balsams*, and all annuals should be tied up, to preserve the seed, taking care in all cases, but the stocks, to select those that bloom apart from the single varieties. With a little labor, and close attention, a lady may save her seed for the ensuing year, and be as certain of good varieties as if she depended upon the seedsman. But the largest and first blossoms of the *Asters* must be saved, picking off all the smaller flowers, so as to throw all the strength into the one designed for seed. With *Zinnias*, select the most perfectly double flowers, and mark with twine or yarn. Verbena seed can be saved, and thus a good supply secured for another year. Seedlings blossom much more profusely than plants raised from cuttings. Mr. Snow of Chicopee, Mass., makes the raising of seedlings a specialty, and his beds are a dazzling mass of beauty. Double flowers produce few if any seed. Stocks are always raised from seed saved from the single flowers. It is well to leave but two or three roots among the double flowers, so as to have them fecundated from them, rather than from the inferior flowers of the single species. *Double Pinks* produce but few seed which must be saved with care, and they will usually blossom true to the parent stock.

Keep your garden neatly, in this month; do not grow careless of its appearance, but prune, stake,

water and weed with an untiring hand. Cut off the perished blossoms whose seeds are not desired; cut off the rose buds whose glories are departed; trail the straggling vines, and tie up the rampant branches.

Perennial and biennial plants that have been raised from seed, can now be transplanted to permanent situations. Select thereof the largest growth, transplant in rainy weather—or after seven o'clock, P. M., and with a small ball of earth adhering to the roots of each plant; water carefully, and the plants will soon take root, and in the following summer flower luxuriantly. All fibrous-rooted plants that may have overspread into a large tuft should be cut off into the desired size.

Almost all perennials may be now increased by dividing the roots. Fleshy rooted plants like *Frazinellas*, *Irises*, *Peonies*, etc., can now be taken up—their roots parted, and planted again, they will become well rooted before winter—and will produce stronger and finer flowers the ensuing summer. The reason why so many perennials die out, is that they are allowed to increase until they are fairly choked to death. They should be transplanted every two or three years.

At this season, we should strike cuttings of all desirable house plants; if it has not been done previously, set about it directly. Verbenas can be easily propagated by sinking small pots in the ground, and pegging a runner into them, covering it tightly with sand. Bedding out Geraniums can be *tongued*, it is said, and roots will be sent forth. Select a strong vigorous shoot—and cut a slanting slit two thirds through just below a bud or hinge, the plant will endeavor to heal the wound by sending out minute white roots; as soon as two or three appear, separate it from the parent stem, and plant in rich soil.

*Dahlias* were once the most highly cherished flower of the gardens, but like all things else their day is of the past; but the *Boquet* or *Dwarf Dahlias* are exquisitely beautiful; they are smaller than most of the *Asters*, and each petal is perfectly cupped. They make most charming pot plants; we have one entirely covered with mauve-colored blossoms deeply tinted with chocolate. *Exquisite* is unsurpassed in beauty by any of the "bouquet" class. It is of a rich golden yellow hue, and its petals are tinted with scarlet. This species is worthy of the attention of all amateur florists.

They are not equaled by any other flower for vases or baskets.

The *Double Geraniums* are brought to a high standard of perfection. We possess three of them, all in the fullest bloom, and they far surpass all other plants. Any one can grow a geranium; they need plenty of sunshine, a strong, rich soil, and not much water; their succulent habit fits them to endure our hot, dry summers.

"*Andrew Henderson*" is of a glorious scarlet! These delicious novelties were originated by Lemonis, the prince of geranium cultivators in France. And he deserves the thanks of all lovers of the beautiful for his numerous contributions to our gardens. S. O. J.

#### DOMESTIC RECEIPTS.

**OXFORD DUMPLINGS.**—Mix well together the following ingredients: Two ounces of grated bread, four ounces of currants, four ounces of shred suet, a tablespoonful of sifted sugar, a little allspice, and plenty of grated lemon peel. Beat up well two eggs; add a little milk, and divide the mixture into five dumplings. Fry them in butter a light brown color, and serve them with wine sauce.

**RUSK.**—Take one-half pint of milk, three eggs, one large teaspoonful of butter, two tablespoonfuls of sugar, one-half cup of yeast; mix as batter (not too thin;) set in the sun until light; then knead into a loaf; pull off pieces of equal size; roll in the hands; put them in an oven close together; let them raise and when they have done so, wash them over with egg and sugar, beat together. Bake as quick as possible.

**BOILED RAISIN PUDDING.**—Half a pound of flour, half a pound of bread-crumbs, half a pound of raisins, three ounces of sugar, two ounces of citron, four eggs, half a teacupful of milk, a little nutmeg and ground ginger, one teaspoonful of brandy. Chop half a pound of kidney-suet very fine, add it to the bread-crumbs, with a little grated ginger and nutmeg; the raisins stoned, the sugar pounded, and the citron cut into slices. Mix it all together, and then stir with it the beaten eggs, the milk and a tablespoonful of brandy. Beat the mixture well together, and boil it in a floured cloth four hours and a half.

# THE NEW ENGLAND FARMER

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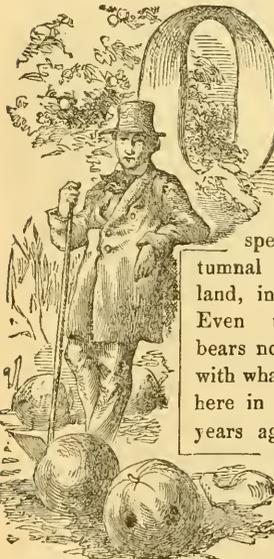
MONTHLY.

SIMON BROWN, { EDITORS.  
S. FLETCHER, }

## OCTOBER FANCIES AND FACTS.

"When all the gay scenes of Summer are o'er,  
And Autumn slow enters so silent and sallow;  
And millions of warblers, that charmed us before,  
Have fled in the train of the sun-seeking swallow.  
The blue-bird forsaken, yet true to his home,  
Still lingers and looks for a milder to-morrow;  
'Till forced by the horrors of Winter to roam,  
He sings his adieu in a lone note of sorrow."

—Wilson.



OCTOBER, in New England, presents some of the most charming scenes ever presented to the eye. Thomson, in the Seasons, speaks of the autumnal foliage in England, in glowing terms. Even that, probably, bears no fair comparison with what we always see here in October. Many years ago, Dr. Dwight, then President of Yale College, asked an intelligent Englishman of taste,

while admiring with him this autumnal foliage near New Haven, why the poets of England ever used the terms *brown*, or *russet*, in their descriptions of autumn, and received an answer to this effect: "*Because they never saw any*

*other; such a scene as this never blest their vision.*" Descriptions of some of our autumn scenery, which were perfectly just, would scarcely be credited by the English people. With us, the coloring is not only infinite in its shades, but glistens and sparkles in its gorgeous profusion.

To notice this in perfection, however, one should travel by team through a region diversified by hill and valley, so as to see the foliage of the oak, beech, maple, hickory, birch, &c., interspersed with the pine, hemlock, spruce and hackmatack. Then, on the hill-sides and hill-tops, or on the edges of the charming meadows that so beautifully contrast with the higher lands, the sun may be seen lighting up entrances to the woods with a splendor that reminds us of some grand cathedral, with its burning lamps, pictures, statues, and other works of art. We must see it when the morning sun breaks mildly from the east and first touches the leaves on the tree-tops, pencilling them with unnumbered charming colors. So in the fervid noon, when the unshadowed sun pours fiercely upon the forests and kindles up a carnival of colors; or, amid the soft haze of the setting sun, when its feeble rays give a world of softer, but not less impressive and beautiful coloring. The full glory of the forest cannot be realized from a single point. We must see it on hill and plain, in the sweet meadows where the brooks meander and babble, and in deep gorges among the mountains.

So, early *October* is the time to travel, when boughs are bending with fruit and apples drop in the stillest hours. Leaves begin to let go when no wind is out, and swing in long waverings to the earth, which they touch without sound, and lie looking up, till winds rake them, and heap them in fence corners. When the gales come through the trees, the yellow leaves trail, like sparks at night behind the flying engine. The woods are thinner. The days are calm. The nights are tranquil. The Year's work is done, and walking in gorgeous apparel, she looks upon her long labor, and her serene eye saith, "It is good."

So the *October* days entice us into the open air. There is health in it, if we will but exercise and freely drink it in. The woods are full of beauty. The brooks sing in the valleys, and all nature invites the invalid, the pleasure-seeker and the man of business, out into the elastic and invigorating air.

"There pours a glory on the land,  
Flash'd down from heaven's wide portals,  
As Labor's hand grasps Beauty's palm,  
To vow good will to mortals;  
The golden year brings Beauty down,  
To bless her with a marriage crown,  
While Labor rises gleaming  
Her blessings and her meaning."

*October*, however, is not only a pleasant month for sight-seeing and visiting, but for performing many duties of the farm, which ought not to be postponed to any other day.

*Poultry*.—When Thanksgiving comes, it is pleasant to go to the poultry-house and find something there to grace the dinner-table, around which our kindred and friends are to assemble and help us enjoy the bounties of the year, and to be grateful for them. This cannot be done in a week or a month before that time comes, but must be attended to now. See, therefore, at once, that the poultry is well fed on a *variety* of food, has convenient roosting-places, clear water always near, and that the stronger ones do not torment the weaker.

*Pork*.—A hog will probably grow much more in *October* than in *December*, on the same amount of food, as hogs are frequently kept. No animal enjoys more a clean, dry, and warm bed. If flies molest him, he will roll in the mire to keep them off, because he has no hands to brush them away. If the sun pours its burning rays upon him, he will do the same, in order to get cool. If his apartments are consistent with his nature, and he has ac-

cess to light at will, a dark place to sleep in, and a dry bed to lie upon when he prefers them, he will usually appear with a clean dress on, and have the appearance of a very orderly and tidy animal. His growth will be profitable, and his flesh as sweet and wholesome as any that we use, and indispensable in one form or another in the culinary department.

To secure this, swine must be properly tended in *October*. The small potatoes, early pumpkins, and windfall sweet apples should be boiled, salted a little, mixed with meal or boiled grain of some kind, and fed to them regularly twice or three times in twenty-four hours. They should have also cool, clean water once each day. The only danger with pork made in this way is, that it is so excellent that persons are apt to eat too much of it.

*Draining* and the *Muck* heap must not be forgotten. With regard to the first, it is important that something of it should be done every year wherever it is needed. It is better to do it in rather a small way, because it can be better managed in case of storms, or anything that occurs to call attention away from it. Find first the outlet for the surplus water, then the amount of fall, and the best course for the ditches. A little study of engineering, if one is not accustomed to the work, will generally enable the operator to go on correctly.

With regard to the *muck*, it is always well to collect it when water is low on meadows and swamps. It does not hurt by keeping, and is really a *valuable manure* in itself. Lay up stores of it, then, whether it be *October* or *July*, if you can consistently with your other work.

*Ploughing*.—No better time can be found for reclaiming swamp lands—the best lands we have in *New England* when thoroughly reclaimed, especially if we can control the water which flows through them. On those where the peat is quite coarse and the whole very porous, if the water is taken away too far below the surface, the soil will soon become too light and dry, so that in a hot, dry season, the crops upon it will fail. In such a case, the ditches should be so arranged as to be closed by a dam and a gate, and the water kept back to within twelve or eighteen inches of the surface, or near enough to keep it always moist.

So on uplands. The cool and invigorating

October air is friendly to the team, and the weather will be sufficiently warm perhaps to bring on fermentation of the sward turned under, and thus prepare it as plant food for the next spring.

*Apples.*—Save the apples. The crop is abundant this fall. A little cider is wholesome to persons of a bilious temperament, and especially to those subject to inflammatory rheumatism. But only a little—half a pint per day, perhaps. Owing to the scarcity of apples for several years past, good vinegar can hardly be found. Now is the time to fill the old vinegar casks. All the vinegar that can be made from good cider may be sold at a profit. Late made cider is best for all purposes. Do not gather winter apples too early. Slight frosts will not hurt them while on the trees. And though leaves are falling, and the flowers are fading, we will go on cheerily, and sing,—

“The Spring, with sun and rain,  
Shall call them from the hill and vale  
To bud and bloom again.”

#### WHITE WEED.

On going over his mowing fields, the observing farmer will now notice numerous fresh and vigorous stocks of the white weed. Having been cut off when the grass was cut, they have now thrown out fresh leaves in abundance, and are probably taking firmer root than ever. Is it not now a good time to exterminate them, or, at least, to check their growth so that they shall not completely overrun our fields?

Let us, one and all, make a vigorous attack upon them, some in one way and some in another, hoping, that in the midst of numerous experiments, some means of destroying them will be found.

In examining the roots of white weed, we have found them in a mass near the surface of the ground, entirely unlike those of the dock and chicory, which penetrate the earth from one to two feet.

Now, if the leaves were cut off with a sharp hoe, and a handful of gas-lime thrown upon the surface, would it not completely kill the plant? And if not the gas-lime, some other cheap and virulent substance? Gas-lime may be had at the gas-works in cities, or wherever gas is made, and with small cost, excepting that of transportation.

We have no knowledge that experiments of this kind have ever been made, but it seems that something of this nature may be cheap and effectual. We hope that many will try something of the kind and report to us the results.

In most plants, such as those named above, where the roots go deeply into the ground, it is doubtful whether any application to the surface

would destroy the plant; still, gas itself kills trees wherever it reaches their roots, and the gas-lime must be equally destructive. The chicory roots are rather slender and long, and throw out very few lateral roots, so that a rain might wash the gas-lime down this single root and destroy it.

If this substance should be efficacious, it would prove of great value to the farmers of New England. There will be no need of hunting for the white weed, for wherever they grow they are perfectly visible now, and will be again in the spring if not destroyed.

On fields nearly covered with them it would be best to plough and cultivate, but where they are introduced in patches, a man might go over two or three acres in a day and cut and dose them.

#### BEES IN SEPTEMBER.

This is a month of comparative leisure with bees. There is but little done now more than perhaps to change about their stores to some extent in the hives, so that it may be most convenient in winter. Bees, in all well managed apiaries, will be peacefully enjoying their well-earned treasures, and the quiet movements, and the gentle humming about the doors of their houses, speak only of content and happiness.

Bees require but little attention now more than to guard against robbing, and but few operations should be performed upon them, the less the better, at this season. Such jobs as transferring from common to movable comb hives should not be done now under any circumstances; my experience would not warrant transferring bees thus, later than the first of July. If bees are to enjoy the fumes of brimstone, it is time now; but the man who suffocates his bees in the fall for their honey, will sooner or later be troubled with bad luck, depend upon it; while he who is willing for them to share the fruit of their labor with him, that is, who uses a desirable hive understandingly, will succeed, and his bees will grow more and more prosperous each year, as his stock of knowledge of their habits and requirements increases.

We must learn to profit by the experience of others in this as well as in other branches of business; and the careful reading of good practical books on the subject cannot fail to be both interesting and instructive, and well worth the necessary expenditure to procure them. I would especially suggest that beekeepers look into this matter of hives more, and before another season comes, provide themselves with something better than the old-fashioned box-hive. A good working, movable comb-hive is very desirable, and quite important to people who would keep up with the times in bee-keeping, and these hives cannot be objected to by any one aside from the needless expense of the frames if they are not to be worked.—*G. W. P. Gerrard, Plymouth, in Maine Farmer.*

### CURING SOWED CORN.

It is a laborious task to cut by hand several acres of heavy sweet corn. My neighbors find it almost impossible to gather the shocks into stacks, or mow, and prevent spoiling. Besides, standing in the shock in the field through very much wet weather, as we often have in the fall, greatly lessens its value. My plan is to prepare the ground well, sow early, and roll after sowing; let it stand until it begins to ripen. Here is the main point of success. When the lower leaves begin to turn yellow, the saccharine matter begins to turn to sugar, and then there is *less water to dry out*, and the corn is of much more value. The ground being rolled smooth, you can cut with a machine close to the ground; let it lay four or five days in the sun, then rake with a horse rake and cock up, allowing it to remain in cock two days, when it can be hauled with as much dispatch as the same amount of timothy hay. With the aid of one man and boy we hauled off, last fall, three acres in one day, putting into small stacks and mow, and it kept as bright as needs be. We have practiced this plan for several seasons, and have never lost any.—*Rural New Yorker.*

*For the New England Farmer.*

### THE GARDEN IN OCTOBER.

The season's labor in the garden is now nearly closed; what remains, is to finish gathering and storing late crops, which should not be put off a single day after fully mature and ripe. In this section we had a very wet winter and spring; the winter was mild; spring cool, which delayed planting and vegetation till late, when all at once vegetation seemed to burst forth with a bound, and with rapid, unabated strides came to an early maturity. Early fruits and vegetables are found very good, and much richer than in a more moist and variable season. But the continued drought cut them short, and was quite unfavorable to later planted crops, and considerably abridging the succession of fresh, crisp vegetables from the garden. Should this abridgement teach us to prize a good garden more highly, and incite in us to improve on former practices, the lessons of the season will not be without avail.

Slight frosts injure the keeping qualities of many fruits and vegetables. All such should be gathered and securely stored before frosts occur. Cabbage and some like crops are not injured by light frosts, but hard freezing affects even the cabbage; but usually we do not have such freezes till into November. Aside from gathering and storing the crops, there is much that may be done in the garden to enhance next year's profit, such as annihilating weeds, turning up new subsoil—especially on all heavy or clayey soils—to be amended by the action of frosts, &c., of winter.

**ASPARAGUS.**—New beds planted out this fall of roots or seed, will be so much done towards spring work. The deeper and richer the beds are made, the greater will be the growth of top. For garden culture I believe the roots should not be set nearer than eighteen inches, and for field culture two feet—four feet is near enough for the best growth. Cover the crowns not less than four inches deep, and then mulch with manure after the ground freezes. "Connover's Colossal" is said to be the best, and a real giant in growth.

**BEANS.**—Gather any that ripened before freezing, if such remain, shell and dry, and then store in a dry, cool place; haul up the poles, and store under cover for another season.

**BETS.**—These are injured by the least freezing, and should be gathered and stored before any freezing weather. Any remaining should have their tops pulled off; after being pulled, be dried a little, packed down in sand and stored in the vegetable cellar.

**CABBAGE.**—Keep them growing as long as safe from hard freezing. The cabbage hardens up and matures the head considerably after cool fall weather, unless already mature, when they should be gathered, as they will crack and commence a new growth unless pulled. Keep the cabbage and cauliflower plants, sowed for wintering, cultivated and protect, or remove into cold frames upon the advance of freezing weather.

**CELERY.**—Remove decaying leaves, and finish up the earthing and blanching processes, preparatory to removing the winter's supply into the cellar before frozen in.

**COLD FRAMES.**—Have these in readiness for immediate use, as wanted. Recollect these are frames similar to hot-bed frames, only the glass is laid on more nearly level, and the bed constructed without manure, and are used for protection, not for forcing.

**GRAPES.**—Where grapes are designed for wine-making they should be thoroughly ripened on the vines. On my vines I have this season found the *Procris Americana* quite plenty, and as early as the last of June the larvæ were full grown. These I caused to be destroyed as soon as discovered, so that they damaged my vines but little, and I think there were none left for another season; so, if my neighbors have done their part, another season will see them "beautifully less." The Satellite Spinx also made its appearance, but for all I had a very nice crop of Delawares, Concord and Hartfords.

**INSECTS.**—Aside from those on grapes, we have had a worm on strawberry vines which has damaged them considerably. I have failed to discover them in any previous season. This worm is the larvæ of the strawberry Saw-fly—*Emplytus maculatus*. In *Hearth and Home* for September 3, Prof. A. S. Packard, Jr., has an article describing this insect, in which he says they are readily distinguished from

caterpillars in that they have "a greater number of feet (twenty-two) than the young of butterflies and moths, which have, at most, eighteen pairs," and for which they are sometimes mistaken.

**LETTUCE.**—Seed may still be sown in cold-frames. Remove that sown last month into the frames just before severe weather, or it may be protected with clean litter that will hold snow to help protect; but it should not be used where water will be liable to stand and freeze.

**PARSNIPS.**—These are best left in the ground through the winter to freeze and sweeten. A few may be packed in sand in the cellar, if wanted for winter use.

**SPINACH.**—Thin out the young plants where necessary, and give slight protection before hard frosts. This is best wintered same as cabbage plants.

Do any trenching, draining, &c., needed, and do not forget to add to the compost heap everything that can be converted into plant food. Manure, good seed and culture are the three essentials to growing vegetables or any crop.

W. H. WHITE.

South Windsor, Conn., 1870.

For the New England Farmer.

#### WORMS IN HORSES.

A writer in the FARMER wishes to know "what will destroy worms in horses." Having tried other remedies without success, I gave my horse, more than one year ago, two doses of linseed oil, one pint at a time, on succeeding mornings, and he has not been troubled with them since. Try it. Writing of worms reminds me of a fact related to me recently.

#### Shall "Worms Destroy this Body?"

A relative, having occasion to take up the bodies of two children buried about three years previous, found the coffins in a good state of preservation, but, on opening them, discovered the corpses to be only a mass of crawling, small, white worms, one-half inch or more long! As the coffins were perfectly tight, it is a question where the worms originated,—in the body, or from germs in the air inclosed in the coffin.

#### Hair Snakes.

A young man found, last week, a hair snake in his milk pail, and wondered where it came from. I told him there must be a cricket in the pail. He turned off the milk and found the cricket, as I said. These snakes come from crickets.

#### An Egyptian Plague.

The present season will be remembered, not only for the hot weather, but also for the plague of flies. Having tried various remedies offered by the fly physicians, and the matter growing no better, but the worse rather, I set up the old-fashioned fly trap with much better

success. Every clap of this *mitrailleuse* brought down scores and hundreds at once, but perhaps the usual crowd of mourners or substitutes will follow. These pests have been so annoying to cattle, that in some instances I have noticed the skin had cracked open and was peeling off the fore legs of some cows.

#### About Coloring Butter.

Butter-makers who are not so fortunate as to have a supply of that "meanest of fodder,"—as Dr. Loring calls it—sowed corn, find it necessary, (on account of the drought,) if they would receive the best price for their butter, to color it. This is commonly done by the use of carrots, but some use annatto. The latter is used by all cheese-makers in the manufacture of cheese, and in a conversation with Mr. X. A. Willard, who is high authority in dairy matters, he said, since the demand was for yellow butter, there was no objection to the use of annatto for coloring butter, provided a pure article was obtained and used in right proportion. Why should it injure butter any more than cheese? "Annatto," says Mr. Willard, "is made from the seeds of a plant which grows in Brazil. The pure article in mass is of a dark red color, not brickly, but of a clearer shade. It has a taste and smell like the extract of licorice. The dark, black looking should be avoided."

For three ten-quart pans of cream, take a piece of annatto about the size of pea, dissolve it in a little warm water, and pour it into the cream when you begin the churning. Those who try this method with success will not be likely to grate carrots longer. A writer in the *Rural New Yorker* say, "Carrots contain large quantities of nitrogen, and the use of them for coloring butter is *very dangerous*."

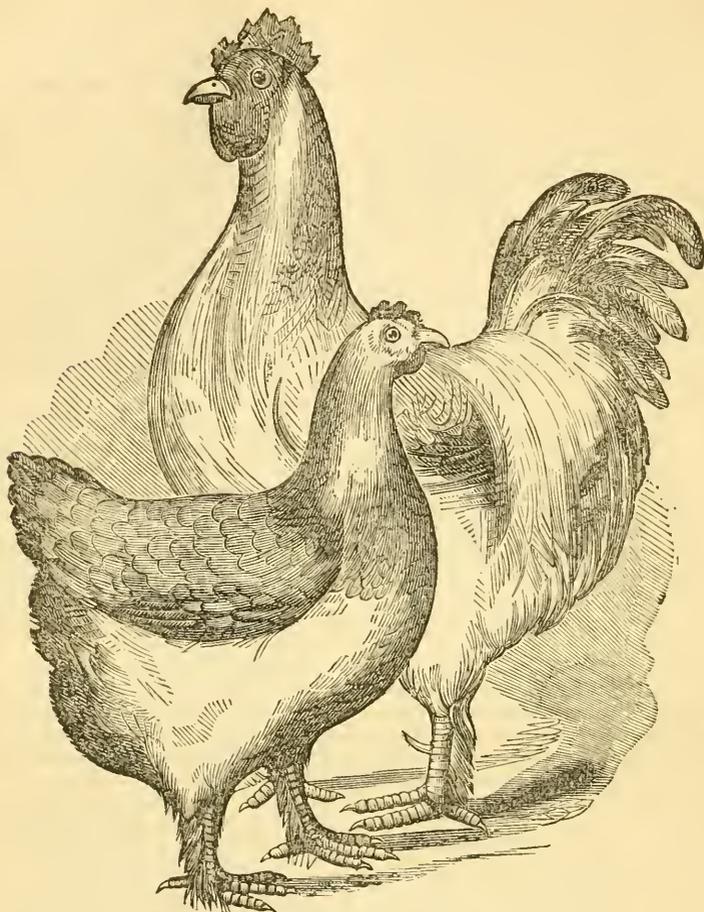
#### Dairy Prospects.

The drought being so severe and general over the whole dairy regions, dairy products must advance in price. If farmers will hold their butter and cheese till cool weather, they will realize better prices than they have received for some years,—at least, so thinks

Essex, Vt., Sept., 1870.

Roy.

**VITALITY OF SEEDS.**—In some remarks on this subject, the *Ohio Farmer* says, a gentleman, upon whom we can rely, tells us that in early times, there was a wagon road through a certain piece of thick hemlock woods, in Ashtabula county, over which hay was drawn from one farm to another. Afterwards, this road was abandoned and shut up, and forty years later the forest cut down; and as soon as sunlight came upon the earth here, a beautiful growth of timothy came up the entire length and breadth of the old road. It is stated that people acquainted with this circumstance generally believe that the hay seed scattered there nearly a half century before retained its vitality.



LIGHT "BRAHMA" FOWLS.

The fine stock of Chinese poultry, of which the above illustration gives a very good general idea, on account of its great size and uniformity of characteristics in color, form, and approved good qualities, is now being largely bred all over the United States and in England, and is deservedly popular.

We have published annually, for some years past, a detailed statement, by James Buffington, of Salem, Mass., of the expense of keeping a flock of Brahmas, and of the income from the sale of eggs and chickens. Not long since we also published an article, by our intelligent correspondent, A. W. Cheever, entitled, "The Brahma Fowls—Why I keep them and how I manage them," which shows the appreciation of these fowls by practical poultrymen.

The large prices which both the "light" and "dark" varieties commanded at late poultry exhibitions in New York, and at Worcester, Mass., are further evidence of the continued popularity of this race of domestic birds, and it is claimed for them that of all the Chinese varieties these are the hardiest, the best layers, and the heaviest at maturity. They lay large eggs and a good many of them; but they are generous feeders. The hens are excellent mothers, and the chickens rear easily, though they at first feather slowly.

After alluding to the unsettled question of the origin of the Brahmas, Mr. Wright, the author of an English work recently published in this country, entitled, "The Practical Poultry Keeper," says:—"But one thing

is certain: ever since this magnificent breed was introduced, it has steadily become more and more popular, and is now one of the most favorite varieties. To prosper thus in the absence of any poultry 'mania,' a breed must have real and substantial merits."

From the same work we copy the following description of the breed:—"Their most marked peculiarity is in the comb, which is totally different from that of any other variety. It resembles *three* combs pressed into one. In a first-class cock, the effect is such as would be produced were a little comb, about a quarter of an inch in height, laid close to each side of his own proper comb, twice as high, the centre one being thus higher than the others. Each division of the comb ought to be *straight* and even, irregular or twisted combs being serious faults in a show-pen. In the hens the comb is very small, but the triple character should be equally evident, and the formation is quite plain even when the chicks first break the shell."

#### IMPROVEMENT IN CURING CHEESE.

We copy from the *Utica Herald* the following notice by our correspondent, L. N. Brown, of Edmeston, N. Y., of an improvement in the process of curing cheese, which he thinks may be advantageously adopted by all cheesemakers. He says:—

While travelling among the cheese factories in Madison County, recently, I visited the Smith Valley factory. This is a fine factory and managed by Mr. Gritman, a man of sound experience, who has had charge of it for the past three seasons. Mr. Gritman's dairy is uniform in character, and the cheese are all very fine; in fact, this is the only factory that I have visited this year that did not show the effect of tainted milk.

One feature in the management of this factory is worthy of notice. This is leaving a press cloth on the ends of the cheese while curing. The cloths they used were square,—I would prefer round ones. After the bandage is drawn on, place on the end a round cloth the size of the cheese, then a square press cloth as usual. Put on the hoop and turn the cheese, then place another round cloth under the follower. When taken from the press, leave the round cloths until the cheese goes to market. These are then taken off and cleansed in boiling whey, which renders them fit for future use. The same cloths will answer for years.

The following advantages result from this plan: The cheese require no grease. They are free from cracking. They do not adhere

to the counters. They take much less rubbing and care than they would if treated in the ordinary way.

#### NEW PLAN OF SETTING MILK.

The present season I have adopted a new plan of setting milk for butter, which I think is a very great improvement on the old method, and one which, I think, as it comes to be better known, will be in general use. The method is this:

Each milking is put into a single tin vat, made of the heaviest cross tin. The vats are 28 by 40 inches and 14 inches deep, with a one-eighth inch wire around the top, and handles at each end. These vats set into water-tight wooden boxes, with an inch space on the bottom and three inches on the sides for cold water. I use water from a well at a temperature of 48°. If one has running water it would save labor. Five vats are necessary, and with this number milk can be kept 48 hours and have one vat ahead ready for use, or 60 hours if skimmed just before using. The wooden boxes are of clear inch pine, painted inside and out, the vats painted on the outside. I am milking 20-cows and heifers, and find that they seldom fill the vats over eight inches deep; so I conclude that vats the size of mine would do for a 20-cow dairy, as I have learned that cream will rise as well when the milk is 10 to 15 inches deep, if kept at the right temperature. My tin vats cost \$4.50 each, my wooden ones \$3; total cost, including painting and metal faucets for drawing off the water, not quite \$40.

Now for the advantages: it is much easier straining the milk; is not over one-third the labor to skim and wash the vats; the butter is of better quality. (I have not seen a "white cup" thus far;) and when the mercury is up among the *nineties*, as it has been for weeks together this season, more butter can be made. On this latter point I cannot yet speak definitely, but if I only make as much as by the old method I shall be well satisfied. It pleases the women. There is not a stack of 30 to 50 rattling tin pans to be skimmed, washed, scalded, and aired, but a single pan which can be skimmed, emptied and ready for use in 20 minutes.

In this neighborhood there are four dairymen, owning 120 cows, using these vats, and others will do so next season. There is no patent—no farm rights to be paid for—and all who choose can use them—*J. S. W., St. Lawrence Co., N. Y., in Country Gent.*

—The Spaniards have a maxim that a man is ungrateful to the past generation that planted the tree from which he eats fruit, and deals unjustly toward the next generation, unless he plants the seed that it may furnish fruit for those who come after him.

## IMPORTANCE OF HOEING.



AFTER the farmer once begins to get the hay crop, that business is apt to take precedence of all others. The crops which ought to be hoed, and which have been tended with care up to this time, are neglected, and they become foul with weeds, some of which are likely to go to seed and thus infest the soil for many years to

come. In addition to this evil, the surface of the soil becomes hard and crusty, so that the fertilizing action between the soil and atmosphere is greatly interrupted, and, consequently, the growth of the crop is retarded.

Soon after haying, the small grains require attention, and thus the corn, potatoes, and root crops are too much neglected.

The labor of destroying weeds on the farm, through an ordinary lifetime, is, in the aggregate, immense. Like the rolling stone of Sisyphus, which always went back again the moment he got it to the top of the hill, so it is with the weeds. One crop begets another, and new kinds are introduced, until our soils are crowded with spurious plants which are a burden and a plague.

The farmer cannot afford to let them grow among his cultivated plants, because they exclude light and heat from them, and in a general way impoverish the soil.

There are several ways by which we may greatly prevent their increase. The first is by the most thorough destruct on of them *this* season. Even at the postponement for a time of some other things, do not allow a weed to ripen, and thus increase its kind.

In order to succeed in the destruction of weeds, we must not rely too much upon the hoe. Where they have become rank there is nothing so efficient as the hand. Tear them out by the roots before the seeds are matured sufficiently to germinate, and then it will be safe to throw them into the hog-yard, or under the cattle or horses in their stalls. If the seeds are formed, and would probably sprout under favorable circumstances, throw them into heaps, and burn them when dry, or allow them to pass into a high degree of fermentation; high enough, at any rate, to de-

stroy the vitality of the seeds, without regard to the value of the plants as manure.

In using the hoe, we generally go forward, and many of the weeds are pulled out of the soil, brought towards us, then trodden into the loose earth, and are thus in condition to grow again. Fields are sometimes seen covered with a dirty growth of various kinds of weeds, hoed out in cloudy weather, where one or two roots only, perhaps, were buried in the soil, and just enough to keep the weed alive. The second hoeing is more expensive, and vastly more disagreeable in such a field, than the first was.

Some implement should be used that will lift the weeds out of the soil and drag them a little on the surface before leaving them. In this situation the sun will wilt them, if the day is clear, so that they will not revive. They are then of some value to the soil.

For this purpose, the Wheel Hoe is an excellent implement. It not only leaves most of the weeds on the surface, but the operator can run with it close to rows of plants where they are in straight lines, and can accomplish more work and *do it better*, than three men can with common hoes.

Another mode of preventing an increase of weeds, is, to cut grass where white weed and other obnoxious plants are mingled with it, before the weed seeds are matured. This will be the best course, even at the expense of some loss in the grass crop.

Thousands of acres in New England are overrun with sorrel, white weed, dock, or some other weed, where they are allowed to stand until one-half of their seeds are so far matured as to grow again when applied to the land, mingled with manure in the spring.

Most farmers collect a heap of materials through the summer and autumn to be used as a top-dressing. This heap is likely to consist of a variety of green plants, sweepings of the barn, loam, muck, and all quickly decomposing materials that can be obtained. There is danger lurking in such a heap, and it is better to let it pass into a high degree of fermentation, by an occasional moistening and turning over, than to run the risk of sowing millions of seeds, to throw up millions of obnoxious plants. The loss of manure by undue fermentation will be trifling compared with the damage done by sowing the seeds of rank, troublesome and worthless plants.

For the New England Farmer.

#### COST OF A SMALL CHEESE FACTORY.

The following article has been kindly furnished us by Mr. L. N. Brown of West Edmeston, N. Y., at our request. It not only answers the inquiries of our correspondent, H. M. Fales, but will be read with deep interest by all dairymen. Mr. Brown's experience as a practical cheese maker, and his extensive acquaintance with building and furnishing Cheese Factories, entitle his opinion to due consideration. The *Morning Herald*, published at Utica, N. Y., says "Mr. Brown has planned and furnished more factories than any other man in the State."

MR. EDITOR:—According to your request I will briefly answer Mr. H. M. Fales, in regard to the probable cost of a small cheese factory. The tendency now is to small factories. They are built less expensively than formerly, and mostly by stock companies,—the patrons that furnish the milk taking most of the stock. For 100 cows, a building 60x26 feet, with 16 feet posts, making it two stories, would be required. Take 24 feet from the lower story for a "make room," leaving the remainder and the upper story for "curing rooms." The upper story should be partitioned the same as the lower. The 24 feet room over the make room should be plastered and furnished with stoves suitable for curing early and late cheese. The cost depends upon the price of lumber and labor, which differ in localities. A rough, substantial building which will answer in every respect in most localities, would cost \$1000. If finished with paint, &c., \$1300. It could be furnished with vat, tank, presses, hoops, scales, &c., &c., for \$300, making in all \$1300 for rough building, and \$1600 for the finished one.

For 200 cows, the same sized building would answer. For vat and fixtures, \$500, making in all \$1500 for rough, and \$1800 for finished building. This is the size of many that were built in this State this season.

Stock companies are formed by those interested taking one or more shares, which may be \$50 or \$100 each. A committee is chosen by the share holders, who superintend the building of the factory, hiring the help, &c.

A dairy of 100 cows can be managed by a man of experience, without additional help, who could be hired at from \$2 to \$3 per day and board. For 200 cows he would want an additional hand, which might be a woman, and inexperienced.

The question is often asked, How many cows must a factory number to pay? For an individual to build a factory to work up milk for others, at \$2 per hundred, which is the common price of making and furnishing the cheese all boxed and ready for market, he

would want 300 cows or more to make it a paying business. As with an individual, so with a stock company, to make the stock pay good dividends. But by the plan given, the farmers build the factory themselves for the purpose of working up their own milk, which is a great saving to them over the old way, both in *expense and quality of cheese*. If the price named above will not pay as good interest as is just to the stockholders, the price of making should be advanced. As the patrons are the owners of the factory, they can always fix a price that will do justice to all parties.

I have used various kinds of apparatus. For small factories, I fully agree with Mr. Willard, whom you justly quote as "authority in these matters" that the "Oneida" or "Ralph Vat" is the best in use.

Those desirous of building, will find T. D. Curtis's "Hints on Cheese Making" valuable. It gives measurement of presses, &c., and much information in general. It will be sent by mail by addressing "Utica Morning Herald, Utica, N. Y." Price 60 cents.

L. N. BROWN.

West Edmeston, N. Y., July 30, 1870.

For the New England Farmer,

#### MEDICAL TOPICS.

BY A MEDICAL MAN.

##### Cholera.

The term *Cholera* signifies an affection attended by vomiting and purging. If the matters ejected consist of undigested food, or of bile; and if the case occurs independent of any epidemic influence, and is evidently a mere effort of nature for the removal of offending substances from the system, it is called *sporadic cholera*, *bilious cholera*, or in popular language, *cholera morbus*. If the disease prevails as an *epidemic*, that is, if it affects many persons at the same time and in the same neighborhood, and if there is a tendency to collapse, with violent and painful muscular contractions or cramps, &c., it is called *epidemic cholera*, *spasmodic cholera*, *Asiatic cholera*, &c. If the subject affected be an infant, and if the disease be caused by dentition or teething, or by indigestion, impure air, &c., it is called *cholera infantum*. But we will describe these three varieties of cholera more particularly.

##### 1. Sporadic Cholera, or Cholera Morbus.

This affection usually comes on suddenly, although it may be preceded by a sense of weight or uneasiness at the stomach, with nausea and occasional choleric pains. The attack occurs much oftener in the night than in the day time, and is ushered in by vomiting, which is speedily followed by purging, and these continue to recur in quick succession, or simultaneously, until relief is obtained. Severe pains, like those of spasm or cramp, often attend the act of vomiting, and in severe cases

the spasms of the muscles of the abdomen, feet and legs are very distressing. Hiccup is an occasional symptom. The pulse is more or less accelerated, small and feeble. The skin is cool or cold, and is sometimes covered with clammy sweat. The voice is feeble, and sometimes lost, and there is anxiety, restlessness, and a sense of exhaustion proportionate to the violence and duration of the attack. This disease runs a rapid course, the patient generally recovering. Occasionally, however, a state of collapse comes on, and death takes place within a few hours from the date of the attack.

The causes of sporadic cholera are various. An elevated temperature, doubtless, has some agency in causing it, for it occurs much more frequently in hot weather than in cold, and prevails most in warm climates. Children, youth and middle-aged persons are more liable to this affection than are those in advanced life, and males are more often attacked than females. Unripe fruits and vegetables, uncooked or improperly cooked food, and an immoderate indulgence in the use of cold drinks of any kind, are the most common exciting causes; but it is probable that in some cases a special cause is involved, the nature and source of which are not known. The treatment of this affection should vary somewhat, according to the particular circumstances of each case. If there is reason to suppose that the stomach contains undigested food, the vomiting may be encouraged by administering large draughts of warm water or a moderate dose of ipecacuanha, or some other mild emetic. Usually, however, the contents of the stomach are expelled by the first acts of vomiting, and an emetic is not called for. The object now is to arrest the vomiting and purging, and also the pain; and the most effective remedy for this purpose is opium, or some one of its preparations. One-fourth of a grain of opium, or ten to twenty drops of laudanum may be given and repeated every half hour, until relief be obtained; or, what is better, half a grain of sulphate of morphia may be placed dry upon the tongue, immediately after vomiting. If this be quickly rejected, a second dose should be given without delay; and if a second and third dose be rejected, the administration by the mouth should be abandoned, and a teaspoonful of laudanum, mixed with a little starch, thrown into the rectum, to be repeated every half hour until the vomiting and purging ceases. The injection of a solution of morphia under the skin is at present, a popular practice among physicians, and a very successful one too.

A highly important part of the treatment of this disease consists in withholding from the patient all liquids, with the exception of a tablespoonful of ice water occasionally, or, what is better, a small piece of ice. If spasms or cramps occur, brisk frictions with hot dry flannels

should be resorted to. Great care, as regards diet, will, in most cases, be required for some time after the disease has been arrested. The food should consist of the lightest and most easily digested articles.

## 2. Epidemic, or Asiatic Cholera.

This disease seems to have originated in India, and to have prevailed there for a long period. It commenced its march from Bengal in 1817, and during the fifteen years following, it traversed nearly the whole of the known world. It visited the American continent first in 1832, and again in 1834. In 1847, it began its march a second time from India, and again travelled over the greater portion of the world, visiting the United States in 1849, '50, '51, and '52. Since then it has occasionally prevailed to a very limited extent.

The development of epidemic cholera is, in most cases, preceded by diarrhœa, more or less severe; but this is not always so. The disease is characterized by vomiting a watery liquid, free from any admixture of bile; by copious evacuations from the bowels of a thin liquid, resembling rice-water, and by violent and painful muscular contractions or cramps of the abdominal walls, feet, legs, and sometimes of the arms, hands and face. If relief be not obtained speedily, a state of collapse comes on, in which the pulse at the wrist becomes extinct, and the blood stagnates in the veins, giving a purple hue to the fingers, lips, face and surface of the body generally.

This variety of cholera is exceedingly fatal; but few of those who suffer from collapse recover, death taking place, usually, within a few hours from the advent of the disease. A special cause is, doubtless, essential to the production of Asiatic cholera; but this special cause, whether it be a contagious or an infectious material, does not, in most cases, produce it independently of other agencies. Intemperance, improper food, want of sleep, over-exertion, depressing emotions, filthy apartments, an obstructed perspiration, &c., are powerful exciting causes in a large majority of cases.

The treatment of this affection is divided into that which is proper during the premonitory diarrhœa, and that which should be adopted after the occurrence of the attack. To check the diarrhœa, opium, laudanum, and morphia, as recommended for cholera morbus, with the addition, perhaps, of tannin, kino, or some other astringent, are the best remedies. If the diarrhœa be not arrested, and the disease becomes fully developed, the same remedies should be continued, with the addition of stimulants, such as camphor, ammonia, brandy, &c.; and if collapse comes on, external warmth, by means of hot blankets, or bottles of hot water placed near the body, and the application of mustard to the chest and abdomen, should be resorted to as auxiliaries to the treatment above recommended.

### 3. Cholera Infantum.

This is a disease of infancy and early childhood, the subjects being chiefly between the ages of four months and two years, or about the period of the first dentition. It prevails as an epidemic in all the large cities during the season of the greatest heat. In the country, it generally occurs in a sporadic form, although it sometimes becomes epidemic. It generally begins with a profuse diarrhœa, the discharges being very thin and light colored, green, or yellow. The stomach soon becomes irritable, and rejects every thing that is taken into it. Great languor and prostration come on speedily, and extreme emaciation takes place rapidly. The tongue is covered with a white, slimy mucous, the skin is dry and harsh, the pulse is small and quick, the head and abdomen are hot, while the extremities either retain their natural temperature or become morbidly cool. There is great thirst, but whatever liquid is taken is quickly rejected. In most cases there is considerable fever, especially towards evening, and the child suffers more or less pain, as is indicated by fretfulness, low moaning cries, frequent change of posture, drawing up of the knees, and occasional acute screams. The abdomen is often somewhat enlarged, and tender to the touch; and occasionally the patient becomes delirious. Death sometimes occurs within twenty-four hours of the first appearance of the disease, but in a majority of cases the sufferings are more protracted.

The causes of this affection are a heated, confined and impure atmosphere acting directly on the skin, and indirectly on the mucous surface of the stomach and bowels, assisted, oftentimes, by over-feeding or improper feeding, and these causes are rendered more effective by teething.

The treatment of cholera infantum should consist in placing the patient in a clean, dry, and well-ventilated room, upon a mattress or a folded blanket laid upon the straw bed; in covering the body with a soft, dry flannel; in administering a warm bath once or twice a day, to be followed by gentle friction over the whole body with the hand or a soft, dry flannel; in dividing the gums, if they are swollen and hard; in giving very small quantities of iced water, or of cold, mucilaginous drinks; in improving the character of the secretions by small doses of aromatic syrup of rhubarb, or equal parts of tincture of rhubarb and chalk mixture; and in supporting the strength by a weak punch of brandy and milk, with or without sugar, as the stomach will bear it best. When the vomiting is persistent, physicians frequently give small doses of bismuth and pepsin, in equal parts; and if the disease becomes chronic, tannin, oak bark and other astringents may be employed. The diet should consist of boiled milk, with or without wheat or rice flour, as may best suit the case,

boiled wheat flour, arrowroot, and such like articles.

*For the New England Farmer.*

### USE OF MUCK AND DRY EARTH.

Since I last wrote to you, I have often been prompted to give some bits of my experience, as from time to time I have perused the columns of your excellent paper, but pressure of other matters have prevented, and it is quite possible that all concerned are as well or better off for my silence. It occurs to me just now that you may not be so crowded through the busy hay season, as you are at some other times, and feeling like writing, though my gun is not loaded for any particular game, having almost forgotten the various topics that have been presented from time to time, that I wished to have my say about, I will begin with muck.

Many farmers are interested in the muck question. I have dabbled in it some for several years, keeping my hog yards, which are in the barn cellar, under the horse stable, supplied with it the year round, putting in as much of it dry, or partially dry, as possible. I also use it for my cattle yards and for bedding stock, &c. For this purpose it is necessary to have it quite dry, and I have found it difficult to dry it while it lays on the ground, even though the land is dry. I believe it pays to build a floor raised a few inches from the ground beside the pit from which the muck is to be taken, and shovel it first on to that when the weather is pleasant. It will dry much faster than if it remains where it can absorb moisture from the earth.

I am confident that we do not take so much pains to save the liquid dropping from our cattle as we ought to. If we cannot procure muck or leaves and mould from the forest, sawdust will make an excellent substitute, provided we do not throw the manure out to be washed by storms before we apply it to the land. The last autumn was wet and winter set in before there was much chance for getting leaves, and I found it very convenient to use sawdust. My manure was in very fine condition to apply to the land. Spring opened early giving farmers a chance to commence spring work about the middle of April. Consequently the crops were generally got in in good season, and for once we have been able to get our hoeing done so as to commence haying in June. The prospect now is that we may get our hay this year before it is so hard that the cattle cannot eat it comfortably.

Farm crops all look well. Corn especially is forward and of heavy growth for this time of year.

I see by looking over my scribbings that I have neglected to mention one place where I am very particular to use dry muck, and that is the vault of the privy. Since it has been demonstrated that such places can be kept

wholesome by the use of dry earth, that can be gathered so easily in dry weather on our country roads, and in just the proper condition to use, it seems to me that our corn fields may be greatly benefited from this source. When people once try the experiment I am sure they will never abandon it, but will conclude that it is better to save carefully everything that will increase the fertility of our farms than to buy fertilizers, paying more than we can get out of them.

W. I. SIMONDS.

Roxbury, Vt., July 10, 1870.

*For the New England Farmer.*

### SWELLED JAWS AND THROAT IN SHEEP.

MESSRS. EDITORS:—It is not an easy matter to give a definite or satisfactory answer to your "Subscriber's" inquiry from *North Haven, Maine*, in regard to the mortality among sheep in that locality, from what he terms "swelling of the jaws and throat." The account given of the symptoms of the malady is quite too limited to admit of anything like a clear or intelligent conclusion upon the question.

The only answer which, under the circumstances, can be given, as I conceive, is to state, in the briefest possible space, the general facts in regard to those diseases which attack those parts of the sheep's system, with such directions about treatment as have been found most beneficial in judicious hands, and leave your "Subscriber" to infer for himself whether the difficulty to which he alludes comes into this catalogue, or whether some new form of disease may be manifesting itself among the flocks in his locality.

In the first place, then, swelling is the result of inflammation, and inflammation about the jaws or throat of the sheep is almost always confined to the loose (cellular) *tissue*, which lies immediately beneath the skin, between and around the muscles, and which forms the framework, like honeycomb to the honey, of all the fatty portions, or to the *glands*.

But an inflammation of the cellular tissue alone is an occurrence so rare, and so harmless in its results when it does occur, that it may be left out of this account entirely. In all probability then the seat of the disease to which the gentleman refers is in the glands about the mouth and throat of the sheep.

Whenever inflammation attacks the glandular system in any part of the animal organization, it usually spreads with great rapidity. Just what the mischief is that is thus wrought in the system, whether by this sudden interference in the natural working of the glands some effete matters by being retained in the system act as poison, or whether by this rapid inflammation a portion of the glands suppurates, and thence sends out pus to work its results in the organization, no man can tell. Whatever the nature of the disease, or whatever the

agencies through which it works, it seems to generate a poison, from the effects of which the animal generally dies speedily. I have seen several instances among sheep, and recently one case of the same nature in a horse.

The fact that the animal dies, is about all the definite and certain knowledge we have of the matter. Hence the best treatment to be applied to such cases, is the question which most interests the flock-master.

When the animal is first attacked, you notice a disinclination to feed, or, if it tries to eat, it is with difficulty. Hay is only partially chewed, and falls from the mouth. The food is *mumbled* rather than eaten. The jaw is moved as though each motion produced pain. The eyes grow dull, and the animal finally refuses to try to eat.

If you examine the patient, you will find the parts between the jaws and underneath the tongue have become swollen. This soon extends down upon the sides of the neck, and finally up upon the sides of the head and face.

In twenty-four or thirty-six hours, if the wool is opened, the skin will be found to be discolored, mortification has commenced, and the animal is soon dead.

Now, if the patient was a man, the treatment would be plain and simple. Warm applications to the swollen parts, and tonics and good food for the stomach. But with a sheep little can be done, and generally because we do not find out the mischief till it is too late to cure, or even palliate the malady. There can be but little doubt that the disease is contagious among sheep, and probably among horses, though it is not what is generally known under the common name of "horse distemper." The first thing to be done then is to take the animal away from the flock as soon as it is attacked, and *keep* it away in another barn, if possible, the farther the better and safer for the rest. Give it plenty of fresh air and sunlight; shear the wool closely from the affected part; make a hop-poultice, and spread it upon a cloth long enough to reach from the nose down to the brisket, and wide enough to come well up on the sides of the neck. To the edges of this cloth sew five pairs of strings, one to be tied between the eyes and nose, one between the eyes and ears, and three upon the neck. Let this be changed as often as it gets cold. Give a pint of good oat meal gruel, into which you have put two teaspoonfuls of strong ginger and a gill of whiskey, every six hours, and if you lose your patient you will have the consolation of knowing that you have given it the best treatment that experience could suggest.

If a swelling occurs, which is *not* attended by mortification, or which does not result in that, careful search should be made for any abscesses that may be forming about the parts, and when any *soft* spot is found, it should at

once be punctured with a sharp knife. If the abscess be a large one, or there be several of them, apply the same poultice as recommended above, and the same general treatment, modified by the mildness or the severity of the disease.

Hoping that your "Subscriber" will find here, at least, the evidence of an effort to produce something to meet his case, I am, gentlemen, truly yours,  
SHEPHERD.

*For the New England Farmer.*

#### FARMS AND SCENERY IN NEW HAMPSHIRE.

In the hilly town of Guilford, beneath the shadow of Belknap mountains, and overlooking sweet Winnipiseogee, I have pitched my summer tent, or rather domesticated myself for a time within the household of one of the "oldest settlers." On his farm is the foundation of the first log hut built in this locality, and he relates a story of the time when, the fire on the hearth going out, the housewife footed three miles in the wilderness, to the next neighbor, for living brands to rekindle it. Out in the orchard is a small graveyard, containing the remains of grandparents and other relatives. Many of these rough farms have their burial corner, which was established when neighbors were few and far between. Where strangers possess the old homestead or where the young people have deserted it, these burial places suggest painful reflections.

Deserted farms are frequent in this part of the State. The old folks obey the decree of inexorable Time, and the young folks finding farming among the rocks unremunerative drudgery, adopt other employments, or leave for the West or California. These rugged hills have reared a race of men of clear heads and warm hearts and stalwart forms. They go forth realizing the responsibilities of life; examples of endurance, uprightness and independence. They have learned from these eloquent hills the precepts of patience, content and charity—that nothing lives in or for itself—and these teachings follow them throughout life.

To Adolphus Don Carlos and Arabella Daffodowdilly, with romantic and extravagant ideas regarding "love in a cottage," and "summer residences," the cheapness of farms are a constant surprise. The land only is really sold,—the house and out-buildings are thrown in. This farm of 150 acres of pasture, woodland, orchard, and cultivated fields is worth three thousand dollars. That farm near by of eight acres, with a good two-story house and barn was sold last autumn for \$350. Another farm a mile away, containing 1000 acres of which the middle Belknap mountain forms a part, is worth between \$3000 and \$4000. It has a roomy cottage, well kept and painted, convenient barns and shed, surrounded by meadows, maple groves, waving

fields of wheat, corn, &c. But still there are valuable farms in this vicinity. Mr. G. W. Sanders in Guilford, bought nine years ago his farm of 150 wooded acres, bordering on the Lake, for \$18,000. The first year he cut lumber enough to *pay for it*, and the next year as much more. That was, and is still, a profitable farm. The land is the best I have seen in this vicinity. Mr. Sanders evidently understands farming and makes it something more than a drudgery.

I wish there could be a law concerning fences. In no other State can there be worse fences than one finds in this part of New England. Such promiscuous outlines of stone walls—such battered and infirm boards, nailed as if affected by lunacy, to ancient, crumbling supports!—and this in a country where stones grow all the year round. In numerous fields, little heaps of stones are piled a few feet apart, and year in and year out the farmers plough around them and mow about them, when an ox-team with a leisure afternoon could clean every stone into a corner and make the fields more valuable and beautiful. Farmer John could erect his own monument, as some farmers of Princeton, Mass., have done, in walls from five to fifteen feet broad, and level and true. Another unpleasant feature are the old orchards, filled with gnarled and dead-limbed apple trees, a protest against good fruit, cumberers of the soil, blotches on the landscape, and a bad example of farming. The young farmers do not care so much for posterity as did their fathers.

From Belknap mountain, the view of the lake and mountains is more attractive than from Red Hill, where the finest survey of the country is obtained. Standing midway in the curve of Winnipiseogee, from the summit, the enraptured eye sweeps over a landscape hundreds of miles. Northeast we look straight ahead 150 miles. On a clear day, shipping can be discerned in Portsmouth harbor. All the mountains of New Hampshire are comprised in the view, many of them flattened at the altitude of hills from which we observe them. Every one of the White and Franconia mountains can be distinctly counted,—Mt. Washington being ever an isolated feature from every point of observation.

Lake Winnipiseogee is about thirty miles long, one to seven in breadth, and lifts itself 500 feet above the sea. It contains 365 islands, 272 having been surveyed. Some of these are thoroughly subdued by cultivation. Davis' island—where we spent a day with a merry picnic party—contains over eleven hundred acres, which compose two farms. Over sixty years ago, a Mr. Davis gave his reckless scapegrace of a son this island with conditions that he should live on it. It was then heavily timbered and worth a hundred or two. It has been sold several times for \$12,000 although most of the timber is gone. This son died in 1843, aged 79, and is buried in a little lot on

the island, and there also rests his two wives; several of his children are also buried there. His second wife died in Norfolk, Virginia, two years ago, and her body was brought here for burial beside her husband. It is a peaceful little spot—this tiny graveyard! The eternal hills cast their shadows there, and the waters of Lake Winnipiseogee unceasingly lap the shores with soothing murmur, yet quiet and undisturbed they sleep the sleep that knows no waking.

Brown's island close by, is much larger and has a number of farms upon it. A hotel has been kept there, but it is now abandoned, as it did not pay. Just below, the little steamer Chocoma is gliding behind little Diamond island. There is a small house situated on the verge of the isle and this is a hotel. What are the attractions of the isolated and tiny island. I do not know; but fishing doubtless, for Winnipiseogee is monopolized by the finny tribes. Yesterday, the landlord of this lonely hotel was conveyed to Concord for burial. No isolation can preclude the search of Death.

Vegetation is loudly crying for rain. The wells and streams are drying up, and the earth is fairly baked. SUSIE VOGL.

*Guilford, N. H., July 28.*

*For the New England Farmer.*

#### THE PRIZE RING.

The State of Massachusetts and other States of the Union, annually make liberal appropriations to encourage agriculture, horticulture, and the mechanic arts. These appropriations are put into the hands of directors who offer premiums at their discretion for objects more or less remotely connected with agriculture and mechanics.

Every generation grows wiser, and we have a plan to suggest to the managers of our Fairs, which, although it does not present a new subject, presents it in a new relation. The laws of the State prohibit certain practices, as horse-racing for premiums, prize-fighting, cock-fighting, &c., under heavy penalties. But these practices are all connected more or less directly with agriculture, and may be adopted as proper objects for agricultural shows, and thus the penalty of the law be evaded. The matter, so far as it relates to horses, has been settled, and the law has become obsolete.

It only requires a little reflection to see that the prize ring is quite as clearly related to agriculture as horse-racing, and that if introduced on to Fair grounds, it will draw quite as well as the horses, and at much less expense. The prize ring is an exhibition of muscle, endurance and pluck; qualities which all farmers need, and which are to be acquired by training. Surely in these effeminate days, anything that will induce our young men to cultivate muscular power, endurance and courage will contribute much to success in agricul-

ture and mechanics. What would tend more directly to this result than to appropriate a part of the money granted by the State in premiums to those who would come up to time most promptly, and punish their opponents most severely in the ring? This would not only prepare men for hard work and great endurance in the field, but at the same time would cultivate the "noble art of self-defence," and would create a remunerative business for a class of men who should prepare and train the candidate for the honors of the ring. Those men, too, who should win the prizes would doubtless command the highest wages on the farm, and would be the models after which our young men would strive to form themselves.

There is no doubt that the Directors have the same power to make such appropriations as they have for racing and trotting, and we think there are honorable gentlemen in the community, who, from their love of agriculture, would offer premiums from their own pockets to the most successful entries in the ring.

If any person should object to this, let them reflect that it is a leading object with most Boards of Directors to get money into the treasury of the society, and that nothing will attract people like an opportunity to witness contests of muscular strength and endurance. Experience has proved this from the times when the games were celebrated on the Isthmus of Corinth, which brought together almost all the inhabitants of Greece. Here foot races were mixed with chariot races, and wrestling with boxing, both with the naked fist and the leaden cestus.

This national gathering every five years, in Greece, was justified not only for its social and civilizing influences, but because the exhibition of the athletes and the contests in which they engaged tended to improve the breed of men. At any rate, these contests drew immense crowds to witness them, and the same result would undoubtedly follow at our Fairs, were they sanctioned by our Agricultural Boards and thus made respectable. We can think of no way by which our treasuries could be so speedily filled, and we trust our Directors will take the subject into serious consideration.

A class of very active and liberal men who spend their money freely, would then become interested in our agricultural fairs,—a class which have hitherto not given them their patronage. This will tend to make them more popular and extend their influence in behalf of agriculture.

It is the fashion to encourage intellectual culture. Perhaps we are carrying this quite far enough, to the neglect of the culture of the body. There are many reasons to believe that the race of pure Yankees is depreciating, not only in numbers, but in blood and muscle. Not only is the number of children annually

diminishing, but the examining surgeons under whose inspection a large part of our grown up young men have passed within a few years, tell us that but a small proportion of them have sound and vigorous bodies. Now what would tend more directly to improve the breed than a liberal and generous encouragement of the prize ring?

PROGRESS.

*Massachusetts, Aug. 1, 1870.*

#### A WOMAN'S GARDENING.

I have been out looking at my garden this morning (July 7), and it did look so well that I thought I would write and tell you some of the things I saw there; and I take a greater pride in doing so, inasmuch as it was partly the work of my own hands. But now for what I saw in the garden.

I saw tomatoes in blossom, squashes with eight and ten leaves on them, quite large watermelons, cucumbers, citron and muskmelon plants, also a bed of beets that I think cannot be beat around here, being at least one-fourth of a yard high, a nice onion bed, turnips, Khol Rabi, cabbages of different varieties, and everything else that go to make up a well-stocked kitchen garden. As for the flower garden, I think it will compare favorably with almost any other about here. I will now tell you what my part of the work was. My husband thought he could not afford to make a hot-bed, so I did the next best thing. I took quite a large door that I had, and nailed laths around the edge, so that it would hold the boxes on it, and retain the moisture. I then made a great many little pasteboard boxes, and without putting any bottom in them, set them on it, and planted the various sorts of seeds in them; and when they were large enough to set out, I slipped them, dirt and all, out of the bottom of the box without disturbing the roots at all, and so there was nothing to hinder them from growing.

I started all the melons, cucumbers, squashes, cabbages, tomatoes and bell peppers in this way. The beets and onions, parsnips and carrots were sowed in the open ground the 2d day of May, the peas were sowed in April. Everything but the peas I planted myself, and I don't know as I am any the worse for it, unless perhaps I have a little more tan on my face and hands than most people care to have; indeed, one lady said to me the other day, "Why, I would not be tanned the way you are, for all you have in both gardens!" Poor woman, she was neither tan nor any other color, except a dead white, and that is a color I do not fancy, the more so as I carried that color in my own face too many years.

A certain amount of outdoor labor, or exercise, or any other name you have a mind to call it, is just as much a necessity (in my opinion) for a woman, as it is for a man. To

be sure, they cannot do much, but still they should do something for exercise out of doors, and what better can they do, than to cultivate a few flowers, or even work a little in the kitchen garden, if necessary that they should. But almost all the women, seem to be afraid that some other woman will think "she is as tough as an Irish woman" (as a great many are fond of saying), or that she hasn't got ailments enough, or isn't delicate enough, or something else of that sort.

But I will not say too much, for I have been in the same boat myself—I used to think it would be impossible for me to work in the garden as I have seen others, but I must say that since I have tried it, I have enjoyed a greater degree of health than when I staid in so closely, and I really hope that others may be induced to try my remedy for ill health. Now don't say "the remedy is worse than the disease," for you will fail to convince me, for I know by experience that it is not. You will not only enjoy better health, but if you are a lover of flowers, you will reap a rich reward for all the labor bestowed.

In the garden flow'rets, neither scant nor few,  
That bud and blossom, all the summer through.

—A. B., *Monroe, in Maine Farmer.*

TO DESTROY ANTS.—1. Pour, copiously, hot water, as near the boiling point as possible, down their burrows and over their hills, and repeat the operation several times.

2. Entrap the ants by means of narrow sheets of stiff paper or strips of board, covered with some sweet sticky substance; the ants are attracted by the sweets, and sticking fast, can be destroyed as often as a sufficient number are entrapped.

3. Lay fresh bones around their haunts; they will leave everything else to attack these, and when thus accumulated, can be dipped in hot water.

4. Pour two or three spoonfuls of coal oil into their holes, and they will abandon the nest.

5. Bury a few slices of onions in their nests, and they will abandon them.—*Western Rural.*

BARN IN FRANCE.—The barns at present coming into use, are built of brick dove-tailed into each other, no mortar being employed—and the interstices, ample for ventilation, will not permit the entry of vermin. The form of the building is round, two or three stories in height, with zinc roof. I have observed a few days ago, an oat-bin, some two feet high, standing in a corner of a stable, and occupying but little space. It is filled from the top; the cover being secured by padlock. Outside is a graduated scale that marks the quantity of grain daily withdrawn, and forms a perfect tell-tale in the event of dishonesty.—*Paris Cor. California Farmer.*

### FECUNDITY OF WEED PLANTS.

"One year's seeding  
Is seven years' weeding."



WEEDS are undoubtedly designated as a blessing to man. They certainly make labor a necessity, for they are as tenacious of life as a cat that is required to be killed nine times before she is fairly dead!

Few persons are aware of the astonishing fecundity of most of the pernicious weeds which infest our farms.

In some countries, where large landed estates are held by single individuals, and whose incomes are very large, the most pains-taking investigations have been made in order to learn what a single weed plant is capable of doing in the way of propagating itself. We have before us some of the results of these careful investigations, and from which we learn that a single coltsfoot produces from 3000 to 22,500 seeds! The wild mustard, 8000 seeds from a single plant! The chamomile, 40,000; the Mayweed, 45,000; the burdock, 24,000; the red poppy, 50,000; the wild parsley, 6000.

All farmers have noticed the fine gossamer which surrounds the thistle seed which is borne up by the wind and carried aloft like a tiny car. In this way, from a single plant, 10,000 seeds have floated away on downy wings. Then there are weeds whose seed pods burst open with violence, like the common garden balsam, so as to scatter the seeds to a distance, where they will propagate new plantations of their kind. On the other hand, some plants have seeds supplied with delicate hooks to fasten in the soil; others, again, propagate slyly under the earth, as the crow garlic, which produces 700 offshoots a year.

The *Irish Gazette* states that the nodding poppy or cockle plant have lessened the wheat crop in that country by at least a tenth part

of its value, and that "the weeds of Ireland cost nearly *six millions* of dollars a year!"

In England, experiments have been recently made to ascertain the influence which weeds have upon the growing crop. In one instance several acres were sowed; one acre was measured and not a weed disturbed in it, the other six were carefully weeded; the unweeded acre produced eighteen bushels and the weeded acres averaged twenty-two and a half bushels per acre. In another instance, the unweeded acre produced thirteen bushels of barley, and the weeded twenty-eight bushels. A third, with oats, produced seventeen bushels, and the weeded acre thirty-seven bushels!

Should not some legal action be instituted in a matter of so much importance to compel people to abate a nuisance that not only robs us of property, but of strength, and incidentally, of life itself, in many cases! Laws are put in force to prevent the spread of small-pox, and yet, if the toil, waste of strength, discouragement, and annual loss by the prevalence of weeds could all be followed out through their various influences, the weeds would show by far the largest army of martyrs!

Any reform in this matter, to be worthy of the name, will be futile until we can purchase pure seeds with which to sow our fields. The fault in this particular is sometimes with the farmer himself. He foolishly desires to purchase cheap seeds, and finds some seedsmen willing to oblige him. Seeds are thus mixed often for purposes of fraud, as illustrated recently in an article given on a similar subject.

In an examination made and reported to the *Croydon Farmer's Club*, England, it was found that as many as 1,920,000 plaintain seeds were contained in a single bushel of red-clover!

In other experiments, in a bushel of ryegrass there were detected no less than 204,800 weed seeds. In a bushel of clover seed, 312,000; of linseed, 304,640; all this was irrespective of dirt and particles of stone, which make cheap seed by far the dearest.

Let us urge, then, again and again, upon farmers, the importance of extirpating the weeds upon their own lands. It is useless for one to keep his fields clean, while his neigh-

bor's fields are foul and constantly re-sowing all the land within half a mile of them.

In some countries the legislature has interposed its authority for the destruction of weeds. If we mistake not there is a law upon the statute books of Massachusetts in relation to the Canada thistle. By a regulation in France, a farmer may sue his neighbor who neglects to destroy the thistles upon his land at the proper seasons, or may employ people to do it at the other's expense. In Denmark, there is a law to oblige the farmer to root up the corn marigold. In Scotland, there is an old statute which denounces that man to be a traitor "who poisons the king's lands with weeds, and introduces into them a host of enemies."

We need something, not only to compel people to keep their private lands free from weeds, but some provision that the destruction of weeds on the side of the roads should be effected by town or county authorities, and the expense become a common one. At least, *something* may be done in this day of progress to prevent the enormous annual losses occasioned by weeds.

#### EXTRACTS AND REPLIES.

WHEN TO SOW RED-TOP,—WILL IT DO WELL ALONE?—SEED PER ACRE?—STUMP PULLER—HOW TO SWEETEN MEAT TUB,—EELS IN VINEGAR.

When is the best time to sow red-top? Would August be a good time? Will it do nicely alone without other grass seed? I would like to raise it for seed. How much seed must I sow per acre? Would it make a good hay crop, alone? If not what is the best kind of seed to mix with it?

What is the best kind of stump puller for a small team?

What can be done to prevent my vinegar from becoming a mass of minute eels?

How shall I sweeten a meat tub? Would it be a good thing to slake lime in my tub? The tub does not exactly spoil my pork, but it is not kept perfectly sweet, although I have taken great pains to scald and scrape the tub. E. S. PEARSON.  
*South Peacham, Vt., 1870.*

REMARKS.—Red-top seed is frequently sown in August, but if so it should be on quite moist soil. The amount of seed used for an acre differs very much with different persons,—varying from one to five pecks. We always sow one bushel for every acre, and a pretty long experience justifies the practice. A bushel of red-top in the chaff weighs about twelve pounds, and in that twelve pounds it is estimated that there are 80,000,000 seeds, so that if sowed evenly there would be something like ten seeds to every square inch of the ground.

There are many stump pullers; which is the

best we are not able to say. A description of a home-made one by Mr. H. Marsh, of Hudson, N. H., in the *Mirror and Farmer*, was copied into these columns last year, and may be found in the *Monthly NEW ENGLAND FARMER*, May, 1869. It says:—Take three pieces of common joists, put them together in form like the common harrow, letting the tapering or forward ends lap by each other some six inches, making a place for the chain to rest in. Cut off the roots at any distance you please from the stump, place the machine on one side of the stump, tapering end up, hitch the chain on the opposite side and pass it over the machine; then hitch a good yoke of oxen thereto and you will see the stump rise. He has cleared about three acres in this way.

This certainly commends itself by its cheapness and simplicity, as any farmer can make one in a single hour.

As a general thing, when a meat tub has become tainted, it is better to put it to some other use and get a new one for the meat. However, if the taint is only slight, it may be made sweet by dropping shavings into the bottom of the barrel and setting them on fire. They should lay lightly upon each other, and be enough of them, when ignited, to send the blaze all around the inside of the cask, but should not burn long enough to char the wood.

All vinegar, we suppose, has living animals in it; but when the "critters" get so large as to be distinctly seen by the naked eye, in the cruet while on the dinner-table, it certainly is not so inviting as it might be. It is not hard to eat a nice, fresh oyster alive, but to eat a wriggling eel, whose convolutions would stubbornly resist the entombment, might be a more difficult thing to do.

If vinegar is made of pure cider, we can see no reason why it should not be clear. Vinegar is best kept in the attic, wood house, or some place above ground, rather than in the cellar. Freezing does not injure it, as the water contained in it is frozen before the acetic acid is; hence, weak vinegar is made stronger by partial freezing. But to come to the point as to what you can do to "prevent your vinegar from becoming a mass of minute eels," we would suggest that the vinegar be put into a well-tinned vessel, and made to boil for one minute over a strong fire; or, put into bottles, and then into a kettle of water upon the fire and then boiled; this will coagulate the glutinous and mucilaginous matter which all vinegar contains, and may be separated out by straining. If the vinegar is then kept in well-corked bottles it will last good for a long time.

As the subject is one of importance to every family, we give below some of the methods described in one of Schule's essays for preserving vinegar. He says:—

It is a fact generally known that vinegar, of whatever kind, will not keep long, but in the course of a few weeks, especially in the warm temperature of summer, grows turbid; its surface

is then covered with a thick, mucilaginous substance, during which time the acid disappears by degrees, and at last is entirely lost; whence the vinegar must very often be thrown away. Now, in order to avoid this spoiling of the vinegar, five methods are known. The first is to prepare the vinegar very strong and sour at first, by using more sugar or other materials. It is well known that such vinegar will keep for several years; but as few people prepare their own vinegar, most persons contenting themselves with buying it at the shops, there are, of course, but few who can make use of this method.

The second method is, to concentrate the vinegar by freezing; after which a hole is made in the crust of ice which covers it, through which the part that is not congealed is let out, and afterwards put into bottles. This manipulation answers well enough; but nearly one half being lost because that which forms the crust of ice is nothing, for the most part, but water, good economists dislike it.

The third method is, to prevent the access of air by filling the bottles full and keeping them corked. Though vinegar is kept long by this method, it is not much employed, probably because it is troublesome to fill up the bottle with clear vinegar from another bottle every time you have made use of a part of its contents.

The fourth method is, to distil the vinegar, and thus leave behind the impurities. Distilled vinegar does not suffer the least change, though exposed to a warm air for years; but the expense of distilling is often thought too much."

#### CARE AND DISEASES OF YOUNG TURKEYS.

The disease spoken of by "J. G." in the FARMER of July 23, is, as you suggested, one that is somewhat natural to the turkeys, but is generally the result of improper care, in-and-in-breeding, filthiness in poultry houses, too close confinement, or want of proper food.

I do not know any remedy. If I ever had any ailing turkeys they usually died. But I would suggest to "J. G.," and others who may be interested, how these diseases may be prevented, and the turkeys kept in perfect health, so that they will not droop at six weeks old, nor at any other age, from the time they are hatched until they are ready for market.

In the first place, when you select your turkeys to keep over, select the hens from one flock and the gobler from another, between which there is no relation, and from healthy flocks which have not been diseased. Small turkeys that have recovered from sickness are liable to disease again after they are grown, as is also their progeny. Their coops should be moved often while small, and the young turkeys should have their liberty during the day as soon as it is safe to do so, and their place of shelter at night should be kept free from any offensive smell. This can easily be done by sprinkling dry earth or muck on their droppings at least once a week, and an occasional dusting of plaster will be found beneficial to remove any unpleasant odor. This is not labor lost, nor should it all be charged to the turkeys, as the compost thus formed is amply worth all the pains taken, and is the very best for the garden and for corn.

One item more about feeding turkeys. A lady was just telling me about her turkeys. She said, "Some days I feed them, and some days I don't. I had quite a large flock, but have but few now;" and then she said, "how can you make them live, and what do you feed them?" I like to have them fed every day until they are two months old at least. I do not feed them all they can possibly eat at a time. I think they do better to leave them a little hungry, unless they are very small. I do not feed them much corn meal. Buckwheat should not be given on any account. I think it is the worst food they can have. I use mostly shorts, or what we call middlings—that between bran and flour—putting in a little flour or wheat bread, when they are small, mixed with sour milk. If the milk is warmed just enough to drain off the whey, and use the curd, it is better. I find that a little extra pains in the care of turkeys is as sure to pay in the end as it is in anything else, as everything that is worth doing at all is worth doing well.

A FARMER'S WIFE.

Hyde Park, Vt., July 23, 1870.

#### WHEN SHALL I APPLY ASHES?

I have a piece of ground on which corn was raised eight years ago, guano being the only fertilizer used. Since that time the land has not borne any crop, and is now in a low state. I think of sowing it to rye this fall, and using ashes as a fertilizer. At what time shall I apply the ashes—in the spring or fall?

A. S. SMITH.

Mittineague, Mass., June 23, 1870.

REMARKS.—Apply the ashes when the ground is prepared for the rye. Spread them in a dry state, in still, fair, or cloudy weather. Not when raining, as is sometimes recommended for sowing guano.

In reply to a similar inquiry in the New York Tribune, addressed to Prof. Colton, the following statement is made:—

"The latter part of winter or the earliest days of spring would be best for several reasons: 1st. You are likely to have most ashes then. 2d. The rains will soon come and incorporate all the valuable matter in the soil. 3d. You get very soon the value of your ashes. If you put on in the fall, the snows of winter are apt to absorb some of the potash, and chemically decomposing it in melting to throw it off in the atmosphere as an ammonia. Leach ashes are undoubtedly the most economical for the farmer, as by mixing quicklime with his ashes, he gets a good caustic potash for soap, and also improves the ashes for his land. Unleached ashes probably act quickest, and if mixed with plaster are apt to return all their value."

#### SHORT-HORNED CATTLE—SUFFOLK PIGS—POULTRY AND FRUIT.

A walk of an hour over the premises of John S. Emery, Esq., of Wallingford, Vt., satisfied us that he, more than any other man of our acquaintance, is farming upon a high and improved principle, and that it will thereby benefit himself and the community none can doubt. Probably Rutland County cannot produce another instance to compare with this. The full-blood Durhams now owned by him number nineteen. Of course this does not include several that he has disposed of, nor some he has lost. Mr. Emery remembers the truth of the saying that "They that have must lose." The large and commanding appearance of his Durhams will repay the lover of good stock for the expense and time incident to a trip to his place. Among his stock may be seen two cows,

four three-year-olds, three yearlings, and six calves, as fine looking as any equal number that can be found. A yearling bull out of the celebrated "Cavalier," of Thorndale stock notoriety, bred by J. A. Harwood, Littleton, Mass., was particularly attractive. "John" has received several premiums at our county fairs; but this neither flatters nor satisfies him, as he is still enlarging and improving his herd.

His swine, too, are selected with reference to the same great principle, improvement. He has now a very fine specimen of a hog in the shape of a Suffolk boar. Nor does he stop here. His poultry is selected from among the best and most approved breeds in the country.

We do not know of another man who raises so large a quantity and so many varieties of apples, pears, plums, cherries and grapes as is produced on this farm. A VISITOR.

*East Wallingford, Vt., August 2, 1870.*

#### CROPS AND SEASON IN MERRIMAC COUNTY, N. H.

As you appear to have reports of the crops, season, &c., in your valuable paper from almost every locality in New England, I concluded to give you a brief account of them from this point.

It is perhaps a little early to give a definite idea of some of the crops. Our hay is harvested in good condition. Though a great deal less than the three preceding years, and considerable less than an average crop, it is of excellent quality. The grain, as a whole, will be more than an average yield, though uneven on account of the difference of the dryness of the soil and time of sowing. The corn crop is yet undecided in consequence of the drought. It has a good growth, but looks now as though it might be seriously affected on light, sandy land, if not a total failure in some instances. Early potatoes are very light, and late-planted ones will be much lighter if we do not have rain, though undoubtedly we shall in time to save many fields. Apples at this writing promise an abundant crop.

In regard to the season, we have had a very remarkable one as regards the heat and drought. Since June came in we have had it *excessively* h as well as dry, the mercury ranging, with the exception of June 21 and 22, from the eighties to one hundred in the shade. Apples that have fallen upon the ground are apparently baked. At this time, as you pass through our section of the country, and see spring grain a portion of it fit to harvest, the corn-stalks fully grown, and apples most as large as at harvesting time, it really appears like August instead of July. In fact, the heat and drought have so matured the crops and vegetation that it has been a sort of hot-house growth, and we have had nothing equal to it in the last forty years. B. F. C.

*Northfield, N. H., July 28, 1870.*

#### A LOOK AND A THOUGHT.

Nature teaches the observing. Walking about on the 30th of July, there was an opportunity for an observing man to make a note of matters, which, to the workers, are worth studying a little.

Plants have very different powers of penetration, perhaps different faculties for feeding. I observe that some carrots, and some Swedish and some German turnips make very different use of different circumstances.

Part of my ground occupied by carrots was well ploughed; part was thoroughly spaded also with a fork. On the part which was only ploughed and then levelled with a hoe and rake, the carrots stand better, four to one, and are much larger also than on the ground which was so forked as to

be very much lighter. The difference most distinctly marks the line between the spaded and that which was not, and in favor of the latter for the carrots. All was dressed alike.

With turnips it is entirely the reverse. Where I have three kinds of turnips, Ruta Baga, Yellow Aberdeen and Sweet German, the advantage is very greatly in favor of the thoroughly spaded or forked ground, both in the standing and growth.

It would therefore appear as though the carrot did better where the soil was not extremely mellow; but that the soft and tender roots of turnips demand the most mellow condition of the soil.

The destruction of the greater portion of plants by insects, in both cases, was where the plants made the most feeble start. Things for thinking. *Lee, N. H., Aug. 1, 1870.* A. G. COMINGS.

#### SAND FOR BEDDING.

I wish to inquire if you think dry sand is as good for bedding for cows as sawdust? Which, in your opinion, is best for the soil? My soil is rather sandy. I have always used sawdust, as I have not much more muck than I want in my yard and for other uses. The October flood of last year washed up a large amount of sand near my barn. I have used some; it gets very dry, is rather coarse, and I find it takes more of it than of sawdust. I have to go three miles for my sawdust, and pay for it at that. C. F. LINCOLN.

*Woodstock, Vt., 1870.*

REMARKS.—We should prefer the sawdust unless we were preparing composts for low grounds. In that case, the sand would be a valuable dressing. Many good farmers do not think sawdust of much value in the stalls, and of none whatever in the manure. It certainly is a pretty good absorbent, and forms an easy bed for stock of any kind to lie upon. When old, small applications of it may be made every year with advantage. It is supposed by some to be injurious to the soil. Applied in large quantities at once, it probably would kill grass, and render even compact soils too loose and porous.

#### ONE PIG GROWS FASTER THAN ANOTHER.

I have two very fine pigs, three months old,—one a sow the other a barrow. The barrow gains flesh faster than the sow. The latter while eating is in the habit of lifting its nose and pressing it hard against the upper edge of the trough, somewhat as a cribbing horse presses his teeth on the crib. This is something new to me. What is the cause? and what the remedy? A SUBSCRIBER.

*Northwood, N. H., July 30, 1870.*

REMARKS.—This is no uncommon experience in pig growing, as you will probably ascertain by inquiry among the old farmers of your neighborhood.

#### FALLING OF THE WITHERS IN COWS

This troublesome complaint attending many cows just previous to their calving, and which appears to be increasing is, I believe, very much aggravated by their being compelled to lie upon short plank stalls, by which a hard strain comes upon the hind quarters. When once a weakness of this kind is created, it is apt to continue and increase. In this way I believe, the value of many a good cow has been greatly diminished. The writer had a valuable Alderney cow which was very much troubled by this falling, and which he has no doubt was caused by her lying upon a

short stall when big with calf, and the property of a previous owner. For a fortnight before calving, nearly every morning it would be necessary to return this fallen sack. Before doing so, it should be carefully washed with a soft sponge and luke warm water. It may then be returned by raising it with the palms of the hands underneath and gently pushing inwards. If not inflated greatly it will usually slip readily into its place.

A cow big with calf should be carefully treated, and allowed plenty of room, and for some little time before calving kept by herself in a roomy comfortable place. A good farmer or stock breeder will have a place or places fitted for this purpose. Aside from the inhumanity, it is one of the most impolitic and destructive of neglects to allow any domestic animal to suffer for the want of proper attention. Much is yet to be learned on the part of those who have the care of dumb creatures, in the way of securing their comfort.

#### CRUELTY TO SHEEP.

I have just been informed by a perfectly reliable gentleman that a few days since, during the hottest weather, he saw in the town of Westport, four wagon loads of sheep from Nauson Island, having been brought across Buzzard's Bay, and carried some seven or eight miles over a rough road, under the broiling sun, and suffered to remain in this condition in front of the slaughter house, until the next day; having been, as he supposed, some forty-eight hours thus incarcerated. When it is remembered how much sheep and little lambs suffer from the heat even in pastures, it must readily be seen how great must have been their suffering by such unwarrantable cruelty. The earth still groans with cruelty; and man's inhumanity to the brute creation, must cause even angels to weep. Let every friend of humanity exert all his influence for an improvement, for without humanity there can be no true religion. R.

*New Bedford, Mass., July 26, 1870.*

#### PRUNING APPLE TREES.

I wish to know the best way to trim a young orchard. I have one of three hundred trees, sixty-five of which are grafted in the root, and have been set nine years. Some of them cover one rod of ground with the top. How shall I trim these? Shall I cut off the ends of the branches, or otherwise? About one hundred are seedlings, which commenced to blossom this year; the remainder are grafted trees—some four years, some two years from the scion. How should they be pruned and taken care of? How shall I keep the bark-lice off of them? I have some trees that are very lousy. Will dry ashes or air-slacked lime, scattered into the trees when wet, do any good?

BACKWOODSMAN.

*North Montpelier, Vt., 1870.*

REMARKS.—The true way to prune an apple tree is to commence upon it as soon as a branch starts in a wrong direction. That is, if it turns in so as to cross the tree, or if its direction will lead it to cross other branches, take it off as early as possible.

On good soil, nearly every apple tree will throw out more limbs than ought to grow. The cultivator, therefore, must see them often during the growing season, and take away such portions of the branches, white young, as will leave the tree sufficiently open to admit light and air, and to be as evenly balanced as possible. He cannot do this in one year or two, but must bring them into shape in the course of ten or twelve years. He must

look at the tree prospectively; have in his mind's eye all the time just what shape he would like to see when the tree is fifteen years old.

It is not common to head in apple trees; that is, to cut off the ends of the branches. Some of the side shoots of the branches ought to be taken out near their extremities, if the tree is vigorous, which will leave it open to external influences.

It will be a slow and difficult thing to keep off the bark-lice. Quick-lime scattered over the branches might be useful, especially if applied when or soon after the grub hatches out, say from the 20th of May to the 20th of June, according to section and season; but a pretty strong soap-suds, applied with a scrubbing-brush such as the women scour floors with, would be better. A weak fish brine, such as may be obtained at the stores from mackerel barrels, is said to be efficacious in destroying bark-lice, so we are informed. The dry ashes would be excellent for the trees, even if it did not kill the lice.

A few simple rules should always be observed in pruning.

1. Never prune when the sap is running freely, as in March, April and May. But,

2. When the sap has gone up to form bud, blossom, leaf and fruit, and is elaborated into a thicker, gummy substance, and is descending between the bark and sapwood to increase the diameter of the tree. This will take place about the middle of June, and continue two or three weeks, and again after the leaves have fallen in the autumn. Branches cut off at these times will rarely bleed, but soon form a ring of smooth, green bark around them, and heal over rapidly.

3. All branches should be cut off smoothly, and close up to the stock from whence they are taken. If a stump is left, there is no action in it; it never heals over, but soon decays, and the decay runs into the main branch, and checks the vitality of the whole tree.

More trees are injured by cutting them at the wrong season, we think, than by any other cause.

#### RED-HUMPED CATERPILLAR.—*Notodonta concinna*.

Specimens of this caterpillar were recently received from a correspondent in New Hampshire, we believe, but unfortunately the accompanying letter was mislaid. They are something entirely new to our correspondent, who gave a brief description of their gregarious habits, and remarked that they were hideous looking creatures, appearing as though they had a head on each end. We have occasionally found them upon our apple trees, but have never known them in sufficient numbers to cause any serious damage, though they make a clean sweep of the foliage as far as they go. Being an "old acquaintance" we regard them as one of the best dressed and most beautiful caterpillars we ever saw, unless we except the Tussock Moth. With a clean red head and red hump, with bodies handsomely striped with longi-

itudinal lines of black and yellow, black prickles on the back, hinder extremity generally elevated for an extra head, wearing black stockings, social and orderly in their habits, we have always looked upon them as fine specimens of a caterpillar dandy.

Mr. Harris says different broods make their appearance at various times during August and September. The eggs from which they proceed are laid in July, in clusters, on the underside of a leaf, generally near the end of a branch. When first hatched they eat only the substance of the under side of the leaf, but as they grow larger and stronger they devour the whole leaf, from the point to the stalk, and go from leaf to leaf down the branches. The young caterpillars are lighter colored than the old ones. When full grown they measure an inch and a quarter, or rather more, in length. All the caterpillars of the same brood descend at one time, and disappear in the night. They conceal themselves under leaves, or just beneath the surface of the soil, and make their cocoons, and are transformed to moths towards the end of June or the beginning of July of the following year. The moth is of a light brown color. The wings expand from one inch to one inch and three-eighths.

We know of no other way of destroying the caterpillar than that of removing the leaves or branches on which they cluster, sometimes so closely as to cover leaves, small twigs and ends of branches.

#### CANKER WORMS.

I would like to ask a few questions in regard to the location of the canker worm. Where did they cause the most trouble this year? Are they as numerous in other States, as they are in Massachusetts? If so, which ones are they? Have they got into the Western States to any extent yet? ONE INTERESTED.

*Marlboro', Mass., Aug. 8, 1870.*

REMARKS.—So far as we are informed, the canker-worm first appeared in the eastern part of New England, more than one hundred years ago, and for a long time was confined to a narrow territory. They have several times mysteriously disappeared, or nearly so, from certain localities. The cause of their disappearance is not known. Some have supposed that the frost or ice or cold rains occurring soon after hatching, destroyed them. Others have ascribed it to other causes. The canker worm is now more generally disseminated, probably having been carried on trees from infected districts. It is appearing in most of the Western States and Canada; but in none of them is it as universal as in the eastern part of Massachusetts. We cannot give a correct list of the localities in which they have been most destructive the past year. Three years ago they wholly disappeared from some places near Boston; in others, their numbers were greatly diminished. In some of these places they have since increased to nearly their former numbers.

A full reply to your questions would form an interesting article, which we hope some one will write. The canker worm is spreading over our whole country. It threatens the destruction of our fruit and shade trees. Were one-half the loss occasioned by this insect to be caused by fire or flood, the whole population would turn out to save property; but as it is only a worm that does the mischief, men tamely submit to its ravages with a calm sigh of regret.

#### PETITION OF THE ONION AND CARROT,

As heard by an old gentleman of ninety-three summers, while leaning over the fence of a weedy garden.

The undersigned, with good intent,  
Their humble suit would now present,  
And ask your honor, much respected,  
Why is your garden thus neglected?  
What has your little Onion done,  
That he should never see the sun?  
And why your humble Carrot needs  
Be covered thus with giant weeds?  
T'would by the calendar appear,  
Eclipses six there are this year;  
For them an hour's time is plenty,  
But ours outlasts the four and twenty.  
While things are thus, 'tis vain to hope  
To gather but a scanty crop.  
We'll tell a story, now in place,  
And suited to the present case,  
About a shoe, 'twas like to fail,  
And all it wanted was a nail;  
The owner spared the trifling cost,  
And shoe, and horse, and man were lost.  
So if your garden is not freed  
From every bad and noxious weed,  
Your labor proves of no avail,  
And seed and crop alike must fail.  
Thus, as in duty bound, we pray  
You'll grant relief without delay.

ONION & CARROT, BY MNASON,

*Strong, Me., Aug. 6, 1870.*

#### "GOING ON TO A FARM."

Having received benefit from many valuable hints in editorials and correspondence of the "FARMER," I will try to reciprocate by giving an account of some of my experience and the results of my observations among my neighbor farmers, for the benefit of T. E. P. and others.

Judging from the successes and failures in the various cases under my observation, I am satisfied that a young man and wife with tolerably good constitutions, without children or with one or two smart boys that they intend shall do a reasonable amount of work suited to their strength, can succeed better at farming for a series of years than the average of merchants and mechanics, provided they commence under right conditions and requisites.

The husband and wife must pull together, with the one single aim of success; must make up their minds to some real and perhaps many imaginary privations, and to meet discouragements, sometimes thick and fast. They must leave behind all thoughts of cigars, mint juleps, billiards, oyster suppers, kid gloves, fifteen-dollar bonnets, &c. And if they have had no practice either at farming or gardening they must so govern themselves that they can employ a part of their time for the first year or two at some other occupation, and such as

will bring in some money, upon which a tight "purse string" will be needed. All important to them are prudence, economy, industry and *fortitude*.

For this part of the country, I know of no place better for a man with small capital than a farm near some large manufacturing town, large enough to keep a cow or two, a horse and pig, and leave enough land, say from three to five acres, for fruit and vegetables.

An elderly, tough horse, to cost say \$50 to \$75, will do to begin with; a good native cow, at about the same price, will furnish much of the food for the family, and \$5 worth of young pigs make a good machine for turning sour milk and table scraps into pork for the winter, and converting weeds and waste fruit into manure for next crop.

Each year I would buy a moderate quantity of good, well tested fruit trees, bushes and vines—no fancy or high priced ones—making your plan for the entire fruit patch before setting the first tree. Between these may be cultivated low-growing, small leaved vegetables or strawberry plants. For fruit you must wait patiently two or three years; meantime cultivating good annual crops of vegetables for market.

In the vicinity of large factory towns such as we have in Worcester county, I have great faith in the profitableness of early crops of onions, turnips and beets; great pains being taken and reasonable outlay to get them early and of quickest growth.

The vicinity of large seaboard cities, like New York and Boston, is to be avoided by the young farmer of small means. Lands there are high priced. Old, shrewd and experienced gardeners are abundant, and the products of distant States received by steamer, compete with home products. Prices in interior towns average considerably higher, and in fact much of their supplies come second-hand from seaboard cities.

I will, in another letter, give a sketch of the result of my first year as a beginner at farming.

Worcester County, Mass., Aug. 6, 1870. EX.

REMARKS.—We must take exceptions to the remark of our correspondent as to childlessness being a desirable condition for a family that proposes to engage in farming. The fact that the farm is favorable to the rearing and training of children is, in our opinion, the strongest possible argument in favor of farming that can be urged upon all families who are not smitten by the curse of God or their own criminal acts. Especially on such a farm as that proposed by "Ex," children may be regarded as blessings, even on the lowest financial plane of view. Here their little fingers may assist in a great variety of work, and habits of industry may be established of far greater value to them than the inheritance of a portion of the fortunes occasionally accumulated by men in other professions and pursuits.

Contrast the prospects of the young man brought up to idleness, habits of "liberal" expenditure, and the expectation of thousands he never earned and does not know how to take care of, with those of one who, from his earliest recollection, has had a practical knowledge of what every dollar in his pocket costs, and who has been trained and fitted to rely on himself! Which needs our sympathy and our pity? Which will make the man, and which the fellow?

Above all others, the farm is the place for a family with children of both sexes. For a child-

less family, one place is about as good as another. Its course will soon be run. It is an outcast, at war with nature, and unfit for the green fields and the productive soil. Let such meet the oblivion they court amid the brick walls of the city, which but for fresh blood from the country farm would soon be not only childless but manless and womanless.

#### HORSES IN VERMONT.

Wishing to buy a few horses about sixteen hands high, and weighing ten to eleven hundred pounds, I recently visited Windsor County, Vt., and was surprised and discouraged by the style and sizes of the horses of that section. Their Morgan horses, as they are called, are from 14 to 14½ hands high, with plenty of ringbones on their feet, the result of in-and-in breeding, and of using unsound mares, &c. It appears clear to me that farmers would find it for their interest to raise a better class of horses. If they do not do so, buyers of course will look elsewhere for good horses.

August, 1870.

H.

REMARKS.—Whatever may be the facts in regard to the size and soundness of the present generation of horses in Vermont, we suppose no one will doubt that in Vermont, as well as in other States, there has been a marked improvement in speed within the past thirty or forty years. According to Porter's *Spirit of the Times*, a bet of one thousand dollars was made, in 1818, that no horse could be produced that could trot a mile in three minutes. Now an agricultural horse trot at a county fair at this pace would hardly deserve a "premium." What connection this gain in speed has with the loss in size alluded to by our correspondent and admitted by horse breeders, is a question for the consideration of those who would trace cause to effect.

#### ABOUT DITCHING.

I cannot agree with you in your instruction to John L. James, of Maine, in regard to running down the hill in the direction of the general slope, that is, so as to fall more than two or three inches to the rod. I would run my ditches crosswise, commencing near the top of the wet land, three or four feet deep, and if the land is springy, more below may be needed, but none commenced nearer than the level of the bottom of the one above.

If the water from the drains run down the hill steeper than a fall of two or three inches to a rod in length, it is apt to wash, and then the stones will get out of place and settle; then dirt is apt to get in and fill it up. I use cedar poles in the bottom of the ditch, about two inches apart, then cover with stone and cedar bark. Do not use straw, for mice will cut it and clog the ditch.

But different kinds of land may require different kinds of ditches. If there is much water in the ditch, and it must run down where it is steep, I would protect the bottom with two planks, spiked together like an eave-spout. The straighter the water runs in the bottom of the ditch the better; I mean not having it run from one side to the other of the ditch. It will be less liable to wash or clog. I would not recommend having the ditch more than one foot wide at the bottom.

A. L. GILLIS.

South Danville, Vt., August, 1870.

REMARKS.—Our reason for recommending drains to run up and down the slope, instead of cross-

wise, was, that when the descent is steep, the water in the higher strips of land, between the drains, will come out at the surface instead of going down to the bottom of the next drain. It must be remembered that water, whether on the hill-side or in the valley, is always seeking to find its level. It does not conform itself to the side-hill, but seeks to find a level wherever it is.

Speaking of drains *across the slope*, Judge French says, in his "Farm Drainage,"—"Now, looking at the operation of drains across the slope, and supposing that each drain is draining the breadth next above it, we will suppose the drain to be running full of water. What is there to prevent the water from passing out of that drain in its progress, at every point of the tiles, and so saturating the breadth below it? Drain-pipes afford the same facility [and so do stone drains] for water to soak out at the lower side, as to enter on the upper, and there is the same law of gravitation to operate in each case."

Mr. J. Bailey Denton, Engineer of the English General Land Drainage Company, says:—"I recently had an opportunity, in Scotland, of gauging the quantity of water travelling along an important drain carried *obliquely across the fall*, when I ascertained with certainty that, although the land through which it passed was comparatively full of water, the drain actually lost more than it gained in a passage of several chains through it." With a more careful investigation of the matter, we think our correspondent will conclude that we were right in recommending to follow the general slope, be it much or little.

#### NO CANKER WORMS NEAR PINE TREES.

Not long since, I heard a man say that Canker worms would not live among pine trees. The idea was new to me, but on looking around within the circle of my knowledge, I can not disprove it. In a town adjoining Beverly where the canker worm eats very badly, there is a pine tree with two apple trees standing very near it, and while all the apple trees in that vicinity were almost entirely stripped, those near the pine were untouched. I have made frequent inquiries and have not found a man who ever saw Canker worms in the immediate vicinity of pine trees.

Now, Mr. Editor, I wish to know if you, or any of the numerous correspondents of the FARMER have any facts bearing on this subject.

Beverly, Mass., July 29, 1870. L. COLE.

#### HAY AND HAYING IN WESTERN VERMONT.

The hay crop in many places in western Vermont is very light this year. Last year it was so heavy, that one team and machine would mow for two teams to draw, while this year one ox team can draw what two smart horse teams with two mowing machines can mow. Some men have attempted to lay down rules for cutting, curing and storing hay. My rule is to cut, cure, and stow away as fast as possible when the weather is good and the hay in proper condition for harvesting. This year the days are all good hay days. I have the horse rake (the old wooden revolver, the best hay rake ever invented,) follow the mowing machines after the dew is off in the morning (but seldom we have any this season,) draw the hay into the barn green, put in a layer of hay, salt it a lit-

tle, and then put on a layer of oat straw that I stored away last season in good order. I have filled two bays in a barn 52 by 36 feet to the great beams, and I trust my hay will come out bright next winter.

#### ONE WORD RESPECTING LABOR.

The Chinese question is being agitated by politicians, by the friends of humanity and by the producing classes. You have not the space to allow me, neither have I the time or talent, to discuss this question in its broadest sense. I want to see no class of men introduced into this great Republic as slaves, either apprenticed, or otherwise, but would let all come as freemen to better their condition. One thing is true, we cannot continue to produce for the consumer in New England and pay the present prices of labor. The producers must have their hands strengthened or consumers may expect to face starvation. J. N. SMITH.

West Addison, Vt., July 12, 1870.

#### TO KEEP OFF CABBAGE WORMS.

Tell your correspondent "H. D. U.," of Monroe, N. H., who is picking off the green cabbage worm to save his cabbages, to dissolve half a pint or more of salt in a pailful of soap-suds or water, and with a watering-pot wet the leaves every other morning for a week. When there is no rain to wash off the salty sediment from the leaves, if it does not destroy all worms, lice, or insects that trouble the cabbage, his experience will differ from mine for the last fifteen years. s. s. T.

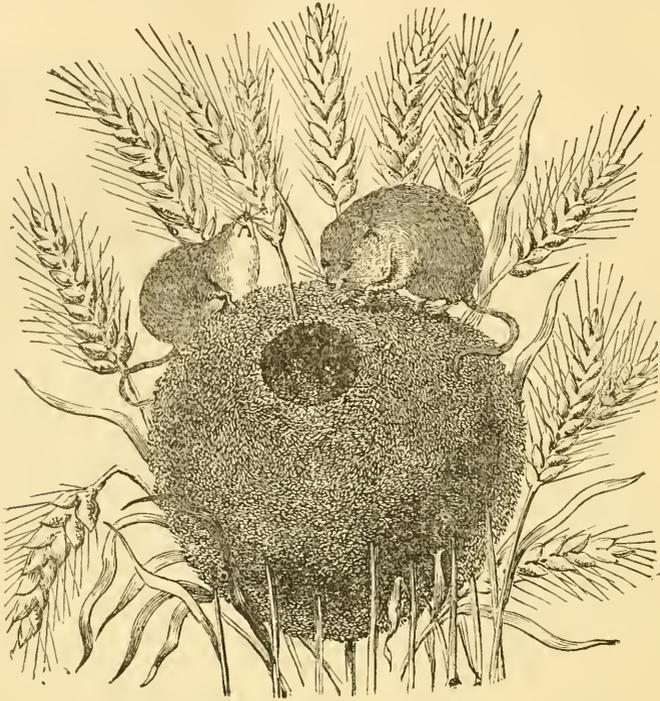
Holliston, Mass., August 1, 1870.

#### TO PREVENT THE SCRATCHING OF HENS.

Take a piece of wire some eight or ten inches long; bend it in the middle around the hen's leg, just above the foot, twist the wire once, leaving the loop hole large enough not to bind or chafe the leg; then spread the two wires so that the ends will be three or four inches apart, and turn down an inch or so of the extreme ends of the wires so that they will catch in the ground. With such a wire on each leg, the hen will not disturb a garden or any place, as they cannot scratch though they can walk with little difficulty. c.

Keene, N. H., July 18, 1870.

QUEEN BEE LOST AND FOUND.—Mr. Wm. Talmage, a highly respectable and worthy citizen of Athens, Ga., who cultivates bees on a small scale, in the garden adjoining his residence, observed that a swarm from one of his hives, was very much agitated, refused to settle, indicated distress by a peculiar buzzing, and after some time flew away to a distance. While trying to discover the cause of their disturbance he accidentally discovered the Queen bee entangled in some grass and weeds in his garden and only attended by a few of her subjects. He relieved her from her critical position and put her under an inverted tumbler on a table in the garden. The faithful lieges who had remained with her continued to buzz around her for a little while, and then some of them flew away in the same direction which the swarm had taken. After a short time the whole swarm returned, rallied round their Queen, peace and happiness were restored, and the swarm easily and comfortably hived.—*Georgia Farm and Home.*



THE HARVEST MOUSE.

In the agricultural books and papers of England this mouse is often mentioned, but we are not aware that it is found in this country. It is only two and a quarter inches long from end of nose to root of tail, which measures about two inches more. The back is of a bright ruddy hue and the abdomen white. The ears are shorter in proportion than those of the ordinary mouse; the head is larger and more slender, and the eyes less projecting. Their food consists greatly of insects, flies being especial favorites, in the capture of which their remarkable agility is most pleasingly illustrated. These beautiful little creatures make their nests, as represented in the cut, among standing wheat, or other grain, or in thistles and other weeds, at some distance from the ground. The nest is a curiosity. According to the description in the book called "Homes without Hands," the nest is made of very "narrow grasses, and woven so carefully as to form a hollow globe, rather larger than a cricket-ball, and very

nearly as round. How the little creature contrives to form so complicated an object as a hollow sphere with thin walls is still a problem. It is another problem how the young are placed in it, and another how they are fed. The walls are so thin that an object inside the nest can be easily seen from any part of the exterior; there is no opening whatever, and when the young are in the nest they are packed so tightly that their bodies press against the wall in every direction. As there is no defined opening, and as the walls are so loosely woven, it is probable that the mother is able to push her way between the meshes, and so to arrange or feed her young."

In this airy cradle may sometimes be seen as many as eight young mice, all packed together like herrings in a box. Being very expert climbers, these mice move among the straws of grain as readily as monkeys do among the boughs of trees. These mice are often carried in sheaves from the field to the barn, where they live and multiply.

### PROFIT IN STOCK FEEDING.

There is a general impression at the East that fattening cattle and hogs at the West is very profitable business. An Ohio feeder states, as the result of experiment, that beef at 6½c. and pork at 9c. per pound, live weight, gave him 55½c. per bushel for corn. An Illinois farmer says that, in his section, they cannot afford to feed corn after the price has reached fifty cents. A farmer in Central Illinois, who is a prudent, careful and economical man, shows by his books that he does not get fair pay for his labor when he sells good cattle at 8c. per pound, live weight.—*New England Farmer.*

There is evidently something wrong in the above statement. In fattening a large lot of hogs—say from one to five hundred head—it requires eight hundred and forty pounds of shelled corn to put on one hundred and fifty pounds of pork. This gives the feeder, at nine cents per pound, gross weight, ninety cents per bushel. In small lots—ten to forty head—the feeder can do much better. Our corn in Kansas costs us, on an average, among the reasonably good farmers, a trifle less than thirty-five cents per bushel. That our readers may judge of the correctness of this statement, we give our estimate. We take twenty-five acres as the basis—about what one man will tend. Rent of ground, at four dollars per acre, one hundred dollars; seed, twelve dollars; labor, one hundred and five dollars; team, seventy-five dollars; total, two hundred and ninety-five dollars. We estimate that it requires seventy-nine days' labor to plant, cultivate and gather twenty-five acres. This estimate we know to be fair; but we also know that there are scores of farmers who do better than this. The average yield we place at forty bushels (not ears) per acre. In feeding cattle, it is difficult to estimate what the exact profit is, from the fact that hogs and cattle are fed together, and rarely with sufficient care to determine the proportion of grain each one gets; but at the prices above stated, we know that our farmers realize from eighty-five cents to one dollar per bushel for every bushel of corn fed to either hogs or cattle. What say you, farmers?—*Kansas Farmer.*

In confirmation of his assertion that there is something wrong in the statements of the three practical feeders cited by us in the brief article above quoted, the editor of the *Kansas Farmer* presents an "estimate," which we copy above in full. To our sense, both the estimate and accompanying remarks have the odor of the office rather than of the field,—of theory rather than of practice. These rose-colored, book-farming estimates of the profitableness of the different branches of agriculture, horticulture, &c., from strawberry raising to stock feeding, are objectionable for several reasons. They mislead, disappoint and discourage the producer, they dissatisfy and sour the consumer, and they discredit agricultural and horticultural reading. We do not doubt that stock feeding in Kansas, as well as in other Western States, is reasonably profitable, when conducted by experienced men, of good judgment and sufficient capital, and we have just as little doubt of the

incorrectness of many newspaper estimates, which lead consumers to feel that the prices they pay for meats are extravagantly and exorbitantly high. When Western farmers pay freight on corn to the Atlantic cities, and sell it here for 75 to 90 cents a bushel, the correctness of the statements of the Illinois and Ohio feeders, that they realize only 50 to 55 cents per bushel, when fed to stock, appears to us more probable than the assumption by the editor of the *Kansas Farmer* that 85 to 100 cents are realized by stock feeders in that State.

Crops at the West and elsewhere are subject to the influence of so many conditions of season, insect depredations and other casualties, that the estimate by the Kansas editor of an average crop of forty bushels of shelled corn to an acre, still further lessens our confidence in his views of the subject. As bearing on this subject, and also on that of the cost of production, we copy from the Illinois correspondence of the *Country Gentleman* the following statement, taking the liberty to italicize a part of one sentence, in which perhaps the *Kansas Farmer* will see "something evidently wrong":—

"If the corn crop of 1870 shall not be of greater proportion and excellence than any since 1860, it will be more the fault of the machinery used to make it than that of the dry summer. Over one-half, perhaps two-thirds, of the whole State where corn has been early planted, then weeded and deeply and well cultivated, there is at present such a stand and earing as has never been seen—no not even in the memorable 1860. The machine planters, which chuck into the soil from six to ten grains in a bunch, the scratching cultivators which truly cultivate the weeds rather than the corn, the sulky ploughs, which straddle the corn rows, but neither plough deeply, stir effectually, nor cultivate closely, all show their unmistakable marks this year. Wherever they have been there you are pretty sure to find spindling stalks, nubbinly ears, and the field yellow up half way to the tassel. There will be a great many magnificent corn acres this year—a great many more acres where the crop will not yield the product of a ten years' average—while for the whole State over I should doubt whether *one-half the whole acreage in corn will come up to an average of five bushels to the acre.* Further, there is every reason to think the crop as to soundness will come up to that of 1867."

—The official returns just received at the Bureau of Statistics show that the total value of condensed milk exported from the port of New York in the year 1869, was \$79,652, of which \$21,870 went to England, \$14,900 to Australia, \$9,494 to the United States of Columbia, \$9,176 to China, \$8,116 to Brazil, \$3,087 to Cuba, \$3,093 to the British West Indies, and \$1,767 to the Danish West Indies.

For the New England Farmer.

### FANCY BUTTER.

EDITORS N. E. FARMER:—Mr. Henderson of Ryegate, Vt., asks for a chapter on "*Fancy Butter*." Your "remarks" are pertinent, but you propose to serve as a medium for somebody else to make farther reply, and we take occasion to do so, believing that the public interest may be somewhat advanced thereby.

The term "*fancy*" as applied in this and many other cases is generally opprobrious, and indicative of the disgust of those who, preferring to educate the public taste rather than to cater to it, are too wise to learn, and too stubborn to conform to the public demand, and who as a consequence, do not receive the highest prices for their products.

It is moreover a relative term, and does not in any two cases indicate the same thing. In our school days we resided a year in Western Pennsylvania, where the "*fancy butter*" of the village was made by a Connecticut woman yeleft "old mother Smith," who was disgustingly filthy, but her butter, the product of a large dairy, was really much superior to the other soap grease sold in the village, and was always in demand at prices considerably in advance of any other.

We happen to know of several dairies in Vermont where the butter is made and packed in conformity to the taste of a purchaser, and consequently brings ten or fifteen per cent advance upon the very best goods sold in the open market, and of course it receives the sobriquet "*fancy butter*."

J. B. Lyman, Esq., of the New York *Tribune*, read a paper before the American Dairymen's Association at Utica last winter on "Marketing Butter," and enforced his remarks by passing around among the audience a sample of "Philadelphia prints," a very famous "*fancy butter*;" but understanding full well the advantage to be derived from comparing the goods with some acknowledged standard, he first exhibited a sample of "good butter" which he had bought at 50 cents a pound, and then the dollar article, and there is not a manufacturer, dealer, or consumer of butter in the land, whose senses are so obtuse that he could not readily comprehend the reason why one should bring twice the price of the other.

That class of people, in one sense happily large, whose senses of taste and smell have become so blunted that they may use anything to lubricate their food, may content themselves with a poor article of butter; but by far the greater part of mankind are always seeking something better, and Mr. Lyman was probably correct when he said—"We have in New York city at least a thousand families who would consume five pounds each—five thousand pounds a week—of just such butter as this; and a price *above* seventy-five cents would not for a moment check their eagerness

to buy." And such families are not confined to New York city, but may be found in every city and village in the land.

If we may judge by the spirit of exultation manifested when a dairyman gets a cent or two a pound more for his butter than his neighbor does, it would be a very great satisfaction to get five or ten cents more which is an entirely practicable feat.

We have not now the time to enter into the details of "how to do it," nor is it necessary, as they are elsewhere available to your inquirer at an expense entirely within his reach.

In general terms, however, the following principles may be enunciated:

1st. Absolute cleanliness must characterize every feature of the business. Bad air, bad water and poor feed, taint the milk before it is drawn from the udder as well as after.

2d. Uniform temperature must be secured for the milk room by the use of water or otherwise. This is a very important matter, sadly neglected by most butter makers, and well understood by but very few.

3d. Care and sound judgment must be exercised, that everything be done at the proper time, and in the best manner. One of the greatest evils of the prevailing system of butter making, is letting the milk stand too long before the cream is taken off. It should never be permitted to become loppered. The appearance and quality of the butter should be uniform throughout the year, and this, though easily accomplished by care, can never be the result of chance, so varying and changeable are all the surroundings in the field and the dairy house.

4th. It is not enough to have made a good article, it must be put up for market in a neat, attractive style, and when a style has been adopted it should never be changed except for the most weighty reasons.

When the producer has satisfied himself that he is prepared to put an article on the market that is creditable to himself, and of such uniform quality as to be always and invariably up to the standard adopted, then, and not till then, should he seek a regular customer who will take all his product at "fancy prices."

We have known persons who lacked the facilities or skill to make a uniformly good article succeed in establishing a good reputation, by judiciously putting only their best goods before their regular customers, and the poorer upon the general market.

We lately overheard an old dairyman reproving a member of his family for wasting time in washing off the outside of a butter tub, saying that it did not make any difference how much mud and — was on the outside, it did not affect the price. It will not always be so, and it is well to begin to reform in that respect.

This is a progressive age, and in every department of human industry radical advances

are being made, and it is the part of wisdom to avail ourselves of all the real improvements.

If a man in Orange County, New York, or in Penobscot County, Maine, has demonstrated by actual and continued sales at a material advance upon the prices commonly received, that he has hit upon a plan of gratifying the tastes of the consumers of his products, thereby loosening their grasp on their purse strings, it is well for others in the same branch of business to investigate the merits of his system at whatever cost, and to adopt so much of it as is adapted to their circumstances. The dairy-men of this country have put millions of dollars into their pockets as the result of just such investigations during the last ten years alone, and the end is not yet.

There are associations of one or another kind, in most of the dairy States for this purpose, but their efforts have been mainly confined to the cheese department. The American Dairymen's Association, however, at its last meeting recognizing its increasing importance, on motion of a citizen of Vermont, voted to embrace hereafter the subject of butter among the objects of their investigation, and it occupies the prominent place in the Vermont Association. O. S. BLISS.

Georgia, Vt., Aug. 1, 1870.

For the New England Farmer.

#### MEDICAL TOPICS.

BY A MEDICAL MAN.

##### Dysentery.

The term dysentery is used to designate inflammation of the large intestine—the colon and rectum—attended with mucus and bloody discharges. It occurs more or less every season, in sporadic form, and during some seasons, and in some places, it prevails as a frightful epidemic. July, August, September and October are the months in which it most frequently makes its appearance, although it may occur at any season of the year.

Dysentery is generally preceded by an ordinary diarrhœa, more or less severe, with feculent discharges. Soon, however, the evacuations change to mucus, commingled with blood. The quantity passed at each time is generally small, but the act of defecation is often repeated, slight discharges usually taking place every hour or two, and sometimes after intervals of a few minutes only. The quantity of mucus expelled is, in some cases, abundant, and forms a jelly-like mass, called in popular language *slime*, and by those are familiar with the preparation of intestines for sausages, they are compared to "the scrapings of hogs' guts." A fluid resembling beef brine, or the water in which beef has been washed, is sometimes discharged in smaller or larger quantities, but this is much more frequent in epidemic than in sporadic dysentery. Fecal matter of a green color is sometimes

mixed with the evacuations, and occasionally round hardened lumps of feces, called *scybalâ*, are expelled. In the course of the disease, the discharges may become purulent—that is, they may contain more or less of *pus* or *matter*; but this is more common in the chronic form of the disease. The inflammation of the rectum occasions a sensation as if this portion of the bowel were filled, and this leads to the frequent desire to defecate, with as much straining as the soreness of the parts will allow. This desire to strain ineffectually is called *tenesmus*, and is, in many cases, exceedingly distressing. The griping or choleric pains, which commonly precede the evacuations are called *tormina*, and these, with the tenesmus, are the chief sources of suffering in this affection.

There is usually some degree of fever present in dysentery, but, in many cases, it is very slight. In epidemic dysentery, however, fever is a prominent feature of the disease, and is commonly typhoid in type. The pulse may or may not be accelerated; the skin may be natural in temperature, or it may be hotter or cooler than natural; the tongue may be coated, or it may present nearly a natural appearance. The appetite is, in most cases, much impaired, or wholly lost. The intellect is usually unaffected, save in those malignant cases which are much more frequent in epidemic than in sporadic dysentery.

The duration of this disease, from the date of the attack to convalescence, varies from four to twenty-one days usually. No age is exempt from a liability to this affection; but in the majority of cases, the patients are under thirty-five years. Males seem to be more frequently attacked than females. Climate and the season of the year, evidently, have much to do in the causation of dysentery, as is evinced by the fact that this disease is vastly more frequent in tropical and warm climates, than in colder ones, and during the latter part of summer and early part of autumn than during any other portion of the year.

The exciting or immediate causes of dysentery may be atmospheric changes, excesses in eating and drinking, indulgence in unripe fruits or crude vegetables, fatigue, &c. But in many cases it is not easy to trace its origin to these causes, nor to any obvious cause; and this fact renders it probable that a special or specific cause is generally involved in the production of this affection. Sporadic dysentery is never contagious. Whether epidemic dysentery is or is not contagious is a disputed question among physicians of the greatest celebrity and possessing the best opportunities for observation.

Many cases of sporadic, and perhaps a few cases of epidemic dysentery, would, doubtless, end in recovery without medical treatment of any kind; yet there is reason to believe that disease is sometimes arrested, that its duration may be frequently abridged, and that the dis-

trussing symptoms may be greatly relieved by judicious medical treatment. It is desirable that, as early as possible, the fecal contents of the colon and rectum should be effectually removed, in order to prevent their continued passage over the inflamed surface or seat of the disease; therefore the first point in the treatment is to ascertain if the bowels have been spontaneously relieved by large and free evacuations at the outset of the disease. If there is reason to believe that accumulations of feces still exist in the bowels, an effective purgative should be given. Castor oil has been in much repute for this purpose; but Epsom salts, Rochelle salts, Seidlitz powder, citrate of magnesia, &c., are preferred by the best physicians of the present day. After purgation, opium, in some form, is the best remedy. A combination of opium and ipecacuanha in the form of Dover's powder, is one of the best opiates in this affection. The elixir paregoric is an excellent remedy for children. Opium, in powder or pill, laudanum, by mouth or by rectum, and morphia, may be administered advantageously, but this should be done by the advice and under the supervision of a competent physician. The subnitrate of bismuth, tannic acid, gallic acid, rhatany, kino, catechu, logwood, blackberry root, white oak bark, and various other astringents, are sometimes used as auxiliaries.

The treatment of epidemic dysentery should be similar to that of the sporadic form, except that more caution is needed in the use of cathartics, and there is a greater demand for supporting and stimulating measures. Quinia, brandy, and opium are the most reliable remedies in the malignant form of this disease.

During the early stages of dysentery, the diet should be restricted to a small quantity of the blandest articles of food. After the first few days, milk, mutton broth, beef tea, &c., may be given in small quantities. It is an object, throughout the disease, to have the food as purely nutritious as possible. Drinks should be used sparingly. Small quantities of iced water, or bits of ice placed upon the tongue may be allowed occasionally, and a little toast-water, rice-water, &c., may be taken at proper intervals.

The patient should be kept in bed, with the knees drawn up, and a wet compress, covered with a dry girdle, or a dry flannel compress should be worn upon the abdomen. Enemas of cold water are often very grateful, and a piece of ice, wrapped in cloth and applied to the anus, will frequently greatly relieve the tenesmus.

*For the New England Farmer.*

#### AN OLD RYE-FIELD--FODDER CORN.

MR. EDITOR:—You will remember that two years ago, when you were at my place, I showed you an old worn-out pasture, covered with moss and hardback, with an occasional

white birch or white pine. At that time we had a consultation as to the best method of improving it. Now this lot was in a worse condition than most worn-out pastures, because years ago rye was raised upon it year after year, without manure, till it would bear rye no longer, then it was turned to pasture, and the last skinning process applied.

This spring I fenced off about half an acre, to which, after ploughing, I applied about three barrels of fresh-slacked lime, which was harrowed in. The ground was then furrowed out into rows about three feet and a half apart, and manured in the furrow. Upon one half of it a small quantity of Bradley's superphosphate of lime was sprinkled. Corn was liberally sown for what Dr. Loring terms "the meanest and cheapest of fodders."

The corn on the part to which phosphate was applied came up first, and grew the rankest. On the 15th of July it was eight feet high. That on which the phosphate was not used was about seven feet high. It entirely shadowed the ground, and was of a very dark, rich color. Now, Dr. Nichols says, corn ought not to be so planted, for if the light does not have free access, it will be yellow, and not near so nutritive.

Ever since a boy, I have known that light is an important element in the production of vegetation. Without it carbon cannot be assimilated, and vegetables grown in the dark are colorless, and consist of little but water. I have also noticed that when manure was not freely applied, plants were very yellow, though blest, in consequence of their small growth, with a bountiful supply of light, while wherever there was a bountiful supply of manure, the plants would be large, many of them, and closely crowded; but still they would be of a very rich, dark green.

The latter was just the condition of my corn, which I find to be a very *cheap* fodder; so that I can agree thus far with Dr. Loring. While others are complaining of being short of feed on account of dry weather, I have an abundance; and I see no falling off on account of the change of feed, or the "meanest" of the fodder. My young heifers are growing as fast, and are in as good condition as when the pastures were at the best. My cows give as much milk, and their condition is equally good. If it was not for this patch of corn, which Dr. Loring designates as the "meanest and cheapest of fodders," I should now have to do as many others are doing—draw upon the haymow. As it is, I have a good supply of fodder till next October, with half an acre of improved pasture upon which I shall put more manure this fall, and sow with rye and grass. The rye I shall mow in June, and feed green, and thus be able to keep more stock, and thereby increase the manure for this or other parts of the farm.

THOS. WHITAKER.

*Needham, Mass., August 6, 1870.*

**TRIAL OF VEGETABLES, &c.**

A part of the grounds of the Michigan Agricultural College is used for experiments, where numerous varieties of any vegetables are planted under like circumstances, and cultivated in the same manner. This affords students and others an opportunity of comparing the growth of different kinds of garden vegetables, &c., under like conditions.

A correspondent of the *Prairie Farmer* furnishes a statement of this year's experiments from which we condense the following:—

*Onions.*—There are eight varieties. The large yellow Danvers, is liked best on account of color. The red Wethersfield yields best. The soil is gravelly, deeply subsoiled, and thoroughly drained, plenty of rich manure ploughed in, and leached ashes on the surface in spring. They yield at the rate of six hundred and twenty bushels to the acre. Such culture will produce large crops most certainly, be the season wet or dry.

*Tomatoes.*—They are raising forty-one varieties this year, a variety of their own origin-ating is preferred.

*Beets.*—They have ten varieties. The best early is dark red Egyptian; best winter is new rough skinned or bark skinned. For market, later, the best is Long Smooth Blood.

*Potatoes.*—Eighty-one varieties. The early Shaw is the earliest variety that is reliable. Early Goodrich has sometimes rotted a little, and does not always yield well. The early Rose is the first to produce potatoes of good size suitable for market, though the quality is inferior to early Shaw. They are trying seeds of wild species from Mexico and Quito.

*Peas.*—Ten or twelve varieties. Best early Terry & Co's Extra early, later, the best are "Little Gem" and "Champion of England."

*Sweet Corn.*—Ten or twelve varieties. Farmer's Club the tenderest; the Mexican, sweetest.

*Lettuce.*—Fifteen varieties. For early, the best is Early Curled Simpson; for late, Persian Curled Crumpled Leaf. Some others grow larger and might suit better for market, but they are tougher and coarser, as the Large India or Giant White Cos.

*Squashes.*—Nine varieties. For fall use, Boston Marrow and American Turban; for winter, Hubbard; for late winter, Canada Crook Neck, as it keeps well.

*Celery.*—Six varieties are raised. For early, Early Wyman; for late, Seymour's Superb White.

*Cabbages.*—They have thirty-two varieties. For early, Early Wyman is recommended; for late, premium Flat Dutch and Winningstadt. The Stone Mason is of good quality, sure to head, and is easily managed.

*Beans.*—Thirty-one varieties of string beans. For early string select Bagnolet.

For shelling early, Royal Dwarf and German Wax; Shelling later, Winter Marrowfat and Red Eyed China. Ten to twelve varieties of pole beans are raised, of which the best are Dutch Case Knife or Giant Wax Podded.

**HARVESTING AND BALING HOPS.**

Much care is required to prepare the crop for market. The first is clean picking; the next is to have them fresh when they are put in the kiln, as they will heat in sacks, if crowded, in four hours in hot weather. If sacked in the fore part of the day, but one box should be put in a sack, the sack spread its entire length on the ground, and no pressure allowed on them. When they are put on the kiln floor they should be spread evenly, and a fire put under them at once, and the heat raised to about 180° Fahrenheit, and remain there four or five hours, when the hops next the floor will begin to dry; then the heat should be slowly reduced to about 160°. When dry enough to turn, which is when the top hops have commenced to get dry, so that they are getting lighter, they should be carefully turned over.

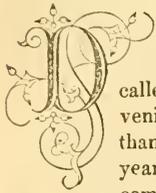
The sulphur should be used (the first of the season) at the rate of about one and a half pounds to forty boxes; but during the last of the season the amount should be increased, as then the hops are not as bright. In using sulphur the steam should be well started on the hops first, so that they are quite damp; then it should all be burnt at once on the stove in a large dish like a dripping pan, that it may burn quick, so that the fumes may be forced through the hops at once.

After turning the hops, the heat should be gradually reduced to about 130°, as they will thereby be rendered tough, and no danger of overdrying or the lupulin being crystallized, which renders it nearly worthless. After being dried so that at least seven-eighths of the stems on the inside of the hops are entirely dry, they may be shoved from the kiln to the cooling floor, and from there (when another kiln full is ready) to the store-room.

In baling, care should be taken that the corners and outside are well packed in the press, that the bale be of good shape, the sewing well done, and the selvaige edges just drawn together, so that the bale will all be of a size. When completed the name or initials of the grower should always be put on the top or bottom side of the bale, so that when standing up it can always be seen. One thing every hop grower should remember—that his hops are always made or spoiled after they are ready to harvest.—*Rural New Yorker.*

**POISON PIPES.**—The *Boston Journal of Chemistry* cautions the public against the use of *galvanized iron pipes*, and says instances of severe poisoning have occurred in consequence of using them.

## MUCK AND ITS USES.



URING August and September there is generally a time when peat, or what is commonly called muck, may be more conveniently and cheaply collected than at any other portion of the year. In August the streams are comparatively low, and, of course, meadows and swamps have less water on or in them, and may be travelled over by teams with safety. All favorable opportunities, therefore, for collecting muck should be improved by those who believe in its efficacy as a manurial agent.

Where muck abounds on lands which are usually overflowed by autumnal rains, it is good policy to throw it up in heaps to be hauled off at a later season, or at any time during the winter. Another advantage in this process is, that the water becomes drained away from the muck, and thus reduces the weight to be carted from one-third to one-half, at least. Good muck, thrown out in August, and overhauled once or twice, will be fitted for use in the cattle stalls, or yards during the winter, or for composting in the barn cellar. When this is thoroughly done, one cord of muck and two cords of droppings from the cattle leanto, will be worth as much as three cords of the latter alone. We have no doubt of this, after a long use of one-third muck mingled with barn manures and a careful observation of results.

The common opinion seems to be that muck is valuable *only* upon sandy land. This is, we think, an error. It may be more valuable on such land than on heavier soils, but its use will increase the amount of crops on any soil,—even on the very meadows from which it was taken. Dig it out, dry it, and spread it over the surface of the same meadow from which it was taken, and a perceptible difference will be seen in future crops. In order that the experiment may be a fair one, spread it where the meadow has not been affected by draining off the water in taking out the muck which is used.

Clay loams, or even compact clays, may be greatly benefited by an admixture of good muck. It will not only supply needed vegetable matter, but exert a mechanical influence, so that, combined, they give a new power to

the soil to produce crops. And this power will not be merely a temporary one, but will be likely to be more permanent in its influence than half as many cords of common manure would be.

On what are called granite soils, that is, the usual uplands of New England, good muck will have a quick, lasting and excellent influence, giving to the land a darker color and a more mellow condition. If used in the garden and well mingled with the soil, the growth of all plants within its reach will be greatly promoted. On their roots reaching it, they will soon assume a darker color, and grow vigorously, frequently outstripping other plants in their immediate vicinity that are not favored with muck.

There is evidence which substantiates beyond all doubt the correctness of these statements. A volume might be filled with it. At present we will refer to only one authority.

Prof. S. W. Johnson, chemist of the Connecticut Agricultural Society, gives an analysis of air-dried peat, and one of well-rotted manure, moist from the heap. The first observation he makes upon these analyses, is, that the peat contains five times as much organic matter, and four times as much potential ammonia as the yard manure. 2d. It contains more lime, magnesia and sulphuric acid than yard manure. 3d. It is deficient in potash and phosphoric acid. We see thus that peat and yard manure are excellently adapted to go together; each supplies the deficiency of the other.

## HORSES IN FLY-TIME.

"A Merciful Man is merciful to his beast"

Every exertion a horse makes costs money to the owner. If he travels ten or fifteen miles a day, regularly, it will cost nearly double to feed him, that it would to feed one who is taken out for a little exercise only.

So it is with him in the stable. If it is light, and the air is confined, flies, in any number, will find him and become his tormentors during nearly all the time of daylight hours. There is no rest for the poor animal. He cannot get away from his tormentors. He pounds the floor incessantly to beat them off, breaks the planks that he stands on, and fatigues himself with constant exertion in trying to protect himself.

The horse does not reason as Esop's fox

did, when the flies tormented him more than the trap by which he was held. A friendly swallow proposed to drive them away, "Oh, no," said the fox; "these, have their fill; drive them away and another hungry swarm will succeed, and rob me of every remaining drop of blood in my veins." So the poor horse stamps with his feet, switches with his tail, and swings his head from side to side, while hungry swarm after swarm succeed each other, until darkness compels them to suspend their voracious attacks. So the horse requires more feed in consequence of this exertion, and will often lose flesh, though working but little and fed highly.

Now all this is unnecessary, and ought not to be so. A little care, and a very little genius, will prevent it all.

Throw open the windows, and hang over them an old piece of carpeting, horse-blanket, or any other cloth that will exclude the light. Keep the stalls dark, but admit light enough before the horse to enable him to see clearly, if possible. In very hot weather, close the doors and windows during the day and open them at night.

In this arrangement, horses will stand just as quietly in their stalls through the hot weather as they do in the winter. They can stand at rest or asleep at will, eat less, and are better able to work than when constantly tormented by flies.

It is a matter of surprise that so many persons—persons who are great lovers of the horse, too—neglect these faithful animals in this particular. They see that they are well fed and groomed; that they are not driven too hard, or suffer from cold, and yet allow them to be *eaten alive* during the heats of summer!

In some neighborhoods, the stamping of horses in the stables may be heard all around during all the long summer days. On some farms the noise is as familiar as the cricket's song in an August evening. A radical change in this matter ought to take place everywhere.

When on the road, or on the farm at work, the horse is in a defenceless condition. He is buckled up, strapped up, and hitched up, so that he can scarcely turn right or left to defend himself, and yet very little is done to protect him from annoyances which some-

times well-nigh lead him to madness. In passing through a piece of wood in a hot day, we have seen yellow flies dart upon the horses in a shower, and in many places where they struck a drop of blood would instantly follow. When reined up by the check so that their heads cannot reach the ground, they sometimes drop upon their knees, and plunge the nose into the soft earth, to drive off some insect whose sting or bite becomes unbearable. All this is allowed, when most of it might be prevented by a few yards of the thinnest cotton cloth, or nets, or grass cloths made for the purpose.

If an "ounce of prevention is better than a pound of cure," we wish the Society for the Prevention of Cruelty to Animals would urge these considerations upon all owners of horses.

The following formula is given in one of the late Dr. Dadd's books, to protect animals against the torture of flies and insects:—

Walnut leaves . . . . .	4 ounces.
Lobelia leaves . . . . .	4 "
Boiling water . . . . .	1 gallon.

When cool, strain it, and add four ounces of the tincture of aloes, and apply a small quantity to the surface by means of a sponge.

#### PEAS FOR PORK-MAKING.

New England farmers have always raised peas for pig-fattening, often in connection with oats. The following good word for peas we find in Mr. Harris' book on the Pig, which, as he served his apprenticeship at farming in England, is probably based on English rather than Yankee practice.

Few things would pay a grain growing farmer better than to raise peas for his pigs. No matter how "buggy" the peas may be, the bugs or beetles remain in the peas until about the first of November; and when the peas are fed out before this time, the pigs will eat peas and bugs together, and there will be but little loss. Nothing makes firmer or better pork and lard than peas, and the manure from pea fed pigs is exceedingly rich. A heavy crop of peas, too, is a capital crop to produce winter wheat. They will smother the weeds, and if sown early, are off the land in good season to allow thorough working of the land before wheat sowing.

If other food is scarce, a few of the peas may be cut in June, as soon as the pods are formed, and fed green to the pigs, and a daily allowance may be fed until the peas are fully ripe. In fact many farmers feed all their peas to the pigs without threshing. But this is a wasteful plan. When the peas are ripe,

pigs will do much better on them cooked, or at least soaked in water twenty-four hours before feeding. And in addition to this advantage, pea straw, when well cured and carefully harvested, is nearly as good for sheep as clover hay, and certainly will much more than pay the expense of threshing. A large farmer in Michigan who has made himself and his farm rich, attributes his success principally to growing a large quantity of peas every year and feeding them to pigs. He threshes the peas and cooks them, but does not grind them, as he thinks cooking is cheaper and better than grinding. The manure from his pea-fed pigs has made his farm one of the most productive in the State.

**TURNIPS.**—The venerable John Johnston, has recently written a letter to the *Country Gentleman*, in which he says, roots can never be raised to a large extent in this county unless wages were as low as in Germany or Denmark. The feeding out enough of roots to fat fifty head of cattle would cost more than would pay at present price of labor. Four quarts of corn meal will do more good to a steer than 120 pounds of turnips, in my opinion. If roots could be fed off with sheep in the field in winter, then I would say raise them. Corn can be raised for less labor, taking feeding and everything into consideration, than roots, and we have also the corn stalks which make excellent fodder if properly taken care of.

*For the New England Farmer.*

**TO MAKE AN UNDERGROUND CISTERN.**

BY B. LIVERMORE, HARTLAND, VT., CEMENT WATER-PIPE LAYER.

Many people have buildings so situated that it is difficult to bring water to them in pipes, or the spring water is hard and not suitable for washing purposes. For the benefit of such I will endeavor to give written directions, by following which they may make the best of cisterns at little expense.

The first thing to do is to find out the quantity of water we need to give a permanent supply. For a common family 40 or 50 barrels is sufficient.

Second, to ascertain the size of a cistern which will contain the number of barrels of water needed in three months. We seldom have three months without a supply of rain to replenish the cistern. To ascertain the number of barrels which a round cistern will contain we have a short, correct, and convenient

**RULE.**—Square the diameter, and multiply the product by the decimal fraction .1865, which will give you the contents, in barrels, one foot deep; multiply this by the number of feet the cistern is deep, and we have the contents of the cistern in barrels and fractions of barrels.

*Example.*—What is the capacity of a cistern in barrels six feet in diameter and six feet deep?

	6
	6
Square of diameter of cistern, . . . . .	36
Fraction, . . . . .	.1865
	180
	216
	288
	36
Contents, in barrels, one foot deep . . . . .	6.7140
	6
Contents, in barrels, six feet deep . . . . .	40.2840

Or forty barrels and a little over a quarter.

*Example 2d.*—What is the number of barrels that a cistern will contain eight feet in diameter and nine feet deep?

$$8 \times 8 \times .1865 \times 9 = 107.42 \text{ barrels.}$$

Third, to locate the cistern. The cistern should be made in the place most convenient for the water to run into it from the eaves of the house, and to the place where the water is to be used or drawn out.

It should be made in the solid earth, and at least four or five feet from the cellar wall.

Fourth, to dig the cistern. The way we begin the digging of a cistern depends upon the way it is to be covered: whether with flat stone or plank, or arched with brick or cement. If it is to be covered with flat stone or plank, we begin with a circle two feet or so larger than we intend to have the body of the cistern, and after digging about 18 inches deep, we then strike a true circle, just the size we wish the body of the cistern to be, and dig perpendicularly and as smooth and true as the ground will allow. After having dug as deep as you wish the cistern to be, and made the sides as smooth as you can, it is ready to plaster. We commence to plaster the cistern by mixing in an old tin pan, water and cement, to the consistency of milk. Hold this pan near the wall of the cistern, and with a shingle, or something similar, flint this cement wash against the wall till it is completely wet. In a short time this will form a crust on the most loose and sandy ground, so that common cement mortar may easily be put on with a trowel. We make the mortar by mixing together cement and good plastering sand, and wetting them with water till it is of the consistency of common plastering mortar.

To put the mortar on the walls we use a common brick trowel, because we can make the plastering on an uneven surface nearer of a thickness than we can with a plastering trowel. We go over the walls where the ground is such that the surface is made smooth with one coat; if not smooth, with two or three coats. Then we make a mortar of clear cement and water and go over as smoothly as may be, and the sides of the cistern are finished.

The next thing is to cover it. If planks are used, we saw them the right lengths, leaving

usually at one side a man-hole to get down into the cistern and to let the water in from the eaves,—18 inches by 21. We make the man-hole at one side of the cistern because we can get it usually nearer the house and more out of the way, and it is easier covering it in this way. After the planks are cut we wet them thoroughly all over with cement, and water to preserve the wood. Place them on the cistern, and point up with mortar underneath the plank.

The next thing is to put in the bottom of the cistern. Get four or five flat stones a foot or so wide, and bed them down carefully with mortar in the bottom of the cistern. These are to rest the ladder on, and to stand on while you are plastering the bottom. These stones should be washed clean, so that the cement will adhere to them. Now scoop out a place that will hold three or four quarts. This is to be used to wash the dirt into when the cistern is cleaned out. Put an even coat of mortar of one half sand and one half cement about an inch thick over the bottom, and finish with a coat of clear cement.

Make a box for the curb around the man-hole, and the cistern is done.

Some ground composed of sand and gravel will not allow the digging to the depth of the cistern without caving and falling in. In this case, I dig as deep as the ground will hold up, and then put on the cement, wash and plaster. Then dig again and plaster—so continue till the depth desired is attained.

In ground where there are stones so large that we cannot make an even surface of wall, we plaster over the uneven surface and over stones which project beyond the surface, and into places in the walls where large stones come out, being careful to get a good thickness over all parts.

To attach a pump to a cistern. When the cistern is within a short distance of the cellar, and the ground is not stony, we bore a hole under the cellar wall to the cistern, and run the pipe through. We make an instrument to bore this hole with by taking a piece of sheet-iron, cutting it about 4 inches wide and 10 long, bending it into the shape of a pod augur, and nailing it on the end of a straight stick. With this the distance of 30 or 40 feet can be easily bored. This saves digging a ditch, and secures the pipe from the frost.

A cistern should not be covered with plank when flat stone can be had; but as we seldom find a stone large enough to cover the whole cistern, we usually place one stone on each side of the cistern, leaving a space about 18 inches wide across the centre, then place thin stones across from one of these large ones to the other, leaving the man-hole open, point up carefully under the stones, make the curb, and cover about 18 inches deep with earth.

A good plank cover will last some twelve years, but when it is old it is dangerous going into the cistern, as the plank may be decayed

and fall in. It is difficult to cover a cistern so that it will be tight and proof against surface water, worms, &c., either with plank or stone.

The best covering is a cement or brick arch, which can be made as tight as a jug to the top of the ground, and is perfectly durable. To arch the cistern with cement or brick, the whole digging, from the top of the ground to the bottom, is of the diameter of the cistern. We plaster the walls as high up as the place where we wish to begin the arch. Above this we cut a groove some 2 inches deep and 8 wide,—thus:—

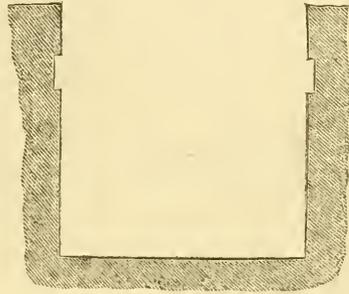


FIG. 1.—Showing the groove in cistern to be arched.

We now embed four flat stones in the bottom of the cistern for four posts to rest on to support a frame to build the arch on. These posts may be quite small. We place two timbers across the top of each two posts, and cut two boards in shape of the arch which will just reach across the cistern 18 inches apart.



FIG. 2.—Form of arch-boards.

We then cut two shorter boards in the same shape to go between these long ones and the sides of the cistern. These arch boards we place across the timbers.

The position of the posts, timbers and arch-boards are shown by the following illustration:—

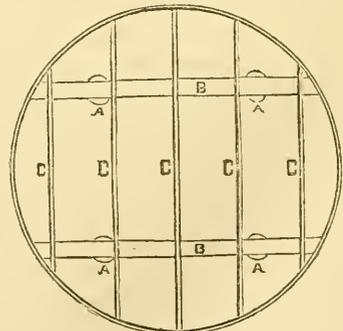


FIG. 3.—The posts are indicated by  $\Delta \Delta \Delta \Delta$ ; the timbers by  $B B$ , and the arch-boards by  $C C C C$ ;—our engraver having put one more arch-board into his cut than Mr. Livermore had in his drawing.—ED. FARMER.

For a cistern six feet in diameter a board ten inches wide is sufficient for the longest arch boards. After these arch boards are placed on, we take barrel staves and nail on to them,—making a roof,—leaving a man-hole. We now make a frame to go around the man-hole of boards about four inches wide. Place paper on the roof to make it tight, so the cement mortar will not get through the cracks. If it is to be covered with cement we make a mortar of gravel and cement, equal parts, and cover it over an inch thick; then mix up mortar or grout, putting in at first twice, then three, and at last four times the quantity of gravel and coarse stone; and place it on with a common shovel till we get the arch about 4 inches thick at the man-hole or top, and 7 or 8 at the walls of the cistern. Let this remain a day or so, and then the bottom can be made.

If a brick arch is to be made, begin at the walls of the cistern, and place the brick on in cement mortar as common arches are made. The brick should be wet before being laid with cement, and cement mortar should be used within fifteen or twenty minutes after it is wet up, consequently the mortar should be made in small batches.

Care should be taken that the cement used in making an arch is of good quality. There is much poor and worthless cement in market, which will not hold in an arch, and one made of such material would be a dangerous thing.

It requires a year or so for cement to harden perfectly, and a cistern made of it does not become water-proof under three or four weeks. When the ground is a firm loam, a good workman will require about a barrel and a half of cement to make a cistern to hold forty barrels, if it is covered with stone or plank. If the ground is stony or of loose gravel, more cement will be required. If the top is cemented, such a cistern will require two barrels of cement.

I know of cisterns made by my father on the foregoing plan over thirty years ago, which are still in perfect order.

*For the New England Farmer.*  
**POTATOES.**

Their Culture in Northern New England.

I take the liberty to add through the columns of your valuable paper, *my mite* to the immense quantity of matter that has been published pro and con the potato in the various agricultural journals during the last few years.

It is probably known to all that this indispensable article of food is a native of South America. It was introduced into the British Dominions in the 16th century, but it came slowly into use, and at this late day it is not much cultivated and used in some of the countries of Europe. Yet it has proved to be, in the United States, one of the greatest blessings bestowed on man by the Creator.

In northern New England the soil is better adapted to this esculent tuber than any other part of the United States. Therefore to my fellow-members of the agricultural profession (for I believe the farmer's vocation to be something besides a merely mechanical occupation) I will give my *modus operandi* in cultivating the potato—both the early and the late varieties.

I select potatoes for early planting from those that arrived at maturation or ripeness first the previous year—taking those of a medium size, about the bigness of a hen's egg, and after thoroughly wetting them, place in a tight box near the stove, or in some warm position where a tolerably even temperature is maintained. Care should be taken that they are wetted every few days to keep the sprouts in a moist and growing condition.

I treated the early Goodrich and Chenangoes in the above manner, putting them to sprout the last of March and planting them the first day of May. The ground previous to harrowing was manured a little, and a half of a pint of the following mixture was put in the hill; one part phosphate (Bradley's) one part gypsum, and five parts leached ashes and hen manure. They were hoed twice, and the last of June I dug full grown but not perfectly mature potatoes. By treating the Climax or Early Rose in the same way they will arrive at maturity from ten to fifteen days earlier.

**Another Method**

Is to mix fine horse-manure, sawdust and loam together, and place alternately layers of the mixture and of the potatoes. If furnished with a copious supply of water, this mode will give the potatoes a more rapid growth before transplanting, but it requires more labor, the horse manure is offensive, and the difficulty of transplanting without injuring the shoots and fibrous roots is very great.

The essential requisites in either of the above modes are water and heat, the former being the moving medium that conveys the nourishment from the surrounding body of the seed to the germ or embryo, and the latter aids germination. Hence the first condition of germination in any plant is an exposure of the seed to moisture.

**General Culture of the Potato.**

The seed should be of medium size, undecayed and uncut. The ground should be mellow and of good fertility; neither too rich nor moist to produce good potatoes. The quality is generally injured by manuring with fertilizers in which animal manure predominates. When such manure is composted with muck, and both are well decayed, the effects are good. A good and cheap fertilizer is made by slaking one cask of lime with water, and then stirring in one bushel of fine salt; if this mixture is moist or mortar-like add loam enough to make dry. Put one half pint in the hill at planting.

Plaster and ashes are good fertilizers. Every farmer should experiment on his crops to ascertain what fertilizers are best adapted to *his farm*. and not rely wholly upon the experiments of others.

In all cases plant as soon as the season will permit, provided the ground is dry enough to work without injury, but beware of stirring the earth when solid—particularly clayey soils—as one year's cultivation of it when not sufficiently dry, requires the combined influence of the frost and sun for five years to ameliorate it enough to bring it to its original fertility.

The hills should be broad and flat with an elevation of sufficient height to allow the potatoes to grow to maturity without growing out of the hills, as the influences of the sun and air injures their quality.

#### Early Harvesting

of potatoes cannot be too strongly urged upon the farmers of New England. Admitting that the potato crop of 1869 amounted to 3,850,000 bushels in New Hampshire, and putting the loss from disease after harvest at one third, which is an under-estimate, the loss amounts to 1,283,000 bushels, or upwards of \$641,500, which might have been saved to the producers, had the crop been harvested before the heavy rains during the early part of October. Many dislike to harvest potatoes when the weather is warm, but after witnessing the bad effects produced by heavy rains during the last and previous years, farmers are becoming convinced that the sun injures the quality less while drying, previous to storage, than the rains that are sure to come at some time during the early part of autumn. It would not be advisable to let them remain exposed to the hot sun a great length of time after thoroughly dry, but remove them to a cool and dry place as soon as convenient.

In a future number I will, if you desire, give some account of the method we have pursued in cultivating *one* variety of the potato without change of seed for thirty years.

*Pittsfield, N. H., July, 1870. DRACOS.*

#### BOARD FENCES.

Such farmers as use posts and boards for fence are aware by this time, that to keep any large amount of it in good repair, requires diligence and no inconsiderable expense. Good suitable fencing boards are now worth from \$12 to \$14 per thousand, and cedar posts from 12 to 15 cents each. This, together with the fact that poorly constructed fences need constant watching and repairing, suggests the importance of putting this material together in the most thorough and efficient manner possible.

In the first place, the posts should be well sunk in the ground, and if they are not more than four feet out of the ground, it is just as well, for a fence three and a half feet in

height is better than one that is higher. Any creature that will jump over a good fence of such a nature, will manage by some means to break out of any enclosure, and is a fit subject for the shambles.

The boards should be no nearer than what is absolutely necessary to keep out the heads of the cattle. A tight, tall board fence is sure to be blown down by the winds of spring where the ground is soft.

Never use a poor board for fence against which cattle or horses run. Lumber should be carefully sorted, and all of an ordinary nature worked into one fence about the pasture for sheep or small cattle. A single defective board may be the means of creating as much damage as though every board in the fence had been of the same kind.

Spikes should be heated in the fire and turned into a vessel of oil while hot, which prevents rusting or breaking. Holes should always be bored through the cleats so as to insure soundness, and much depends upon the cleat, which is far better when not more than two inches wide, being less liable to warp and crack.

The present method of making a hole for the post in the earth with a bar, and then driving with a heavy maul, is far preferable to the old way of digging a hole and tramping the dirt about the post. Many say that it is not so well, and when you ask for their reasons, answer, "because it is done so quick." Judgment tells us that a post driven firmly into the solid earth by the force of a heavy maul in the hands of a strong man, is more fixed than another set by the old-fashioned method of digging.

We have sometimes experienced a little difficulty in satisfying our minds on dry land, but Mr. Ira G. Smith, of this town, informs us that he has discovered a way that works well. He makes a hole with a bar as in any case, puts in the post which fits the hole as near as may be, and then turns about it a quart or two of water, which softens the ground and the post is easily driven "home."

Fence that is built in this way will last upon dry ground until the posts are rotted off, and upon moist ground until the action of the elements and atmosphere have worn out the boards, if a little attention be given each spring to righting up any post that may be inclined by snow drifts or heavy winds.—*St. Johnsbury, Vt., Times.*

—The finest grades of Holstein and Normandy butter are the best in the London market and are worth 147 shillings sterling per hundred weight. Extra Irish butter, a fine grade, is worth in the same market from 108 to 112 shillings. The Irish butter is packed in oaken firkins, while the Holstein and Normandy butter is put up in small packages flaring at the top, similar to the Orange Co. N. Y., pail.

### THE RYE CROP.

**F**ARMERS generally consider the latter part of August the best time for sowing winter rye. If put in at this early period, it has time to germinate, and to root so strongly as to resist being thrown out by the frosts of winter, or to perish by lack of moisture, if the autumn should prove a dry one.

It is too often supposed that any poor, sandy soil is fit for the production of rye. That such land will frequently bring a fair crop of this grain, is true, but that does not prove that it will not be more economical to sow it upon a much better soil.

A soil made up of about 80 per cent. of sand, 18 or 20 per cent. of clay, and two per cent. of humus, (peat,) is as poor as should ever be devoted to a crop of rye. Such lands lack lime in some form, muck and clay, and would be greatly benefited by ploughing in green crops of rye itself, clover, buckwheat or something else of their nature. Where blue clay can be had conveniently, 30 or 40 two-horse loads to the acre would be worth more than a usual dressing of manure. Whether it be clay or green crops, the whole should be most intimately mingled with the soil.

Very fine crops of rye are frequently raised on granite soils, and even on alluvial lands that are not overflowed.

The idea does not yet seem to have taken possession of the farming mind, that living and dead plants contain the same elementary matters—that dead plants afford the proper aliment for living plants,—and that, consequently, the fertility of a soil will be increased or diminished in proportion to the quantity of dung or organic matter which is returned to it, compared with the quantity which is taken from it by cropping.

No complaint is so common among farmers as that of a want of manure; if they had that, they could raise all the usual crops at a profit. And yet, we are not left without the means of helping ourselves in this particular, in a very considerable degree. There are sandy acres within a gun-shot of many a farmer's door that are barren now, and seem doomed to perpetual barrenness in all the future. There are other sandy acres, in similar locali-

ties, that teem annually with rich crops of grass, grain and roots. If such lands can be brought into a state of fertility in one instance, they can in a thousand.

It is important that all lands near the buildings should produce abundant crops. Travel and transportation of manure and crops is then comparatively inexpensive; they are also where they will be constantly overlooked, and thus more likely to be well tended, while the rich surroundings of the buildings will give the farm an increased money value.

A little capital and a little skill is what is required to bring some of these barrens into a fair state of fertility. If the capital is small, begin with an acre, or a fourth of it; plough at any time and sow any seeds that will bring vigorous plants, and when they have attained their growth to the blossoming period, plough them under, never allowing the plants to seed. Continue this through an entire spring, summer and autumn, and so go on, from year to year until the soil will bring a crop of clover, little or much, then turn that under, and the land will probably be in condition to yield a fair crop of beans or corn. The capital thus invested will be chiefly in the labor of man and that of the team, and will not be felt like an investment of money. In this way, it certainly is possible to get sandy lands into a condition of profitable fertility, and perhaps save much cost in travelling off to cultivate distant fields.

Some persons delay sowing winter rye until September, and it often does well seeded early in that month. But old Cato's maxim is a safe one:—"Get in your harvest two days too soon, rather than two days too late."

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### AGRICULTURAL FAIRS.

Now that we have got through the season of College Commencements and School Exhibitions, the "Fairs" are fast approaching. Some idea of the great number which are to be held this fall in all the States of the Union may be formed from the imperfect list we publish of those in New England alone. In Massachusetts there are thirty or more county societies and perhaps a greater number of town and local organizations which hold Fairs. In the other New England States the proportion of fairs to population is probably about the same as in Massachusetts. To the man-

agers of each of these Fairs, and the exhibitors and receivers of premiums, the local reports are matters of great interest. But the proceedings and reports of each Society are so similar to those of all others, that they have comparatively little interest to those in other localities. Before the season is over, these reports will become very tedious reading even to the farmers themselves.

Now it is of very little interest to Mr. X, that Mr. A's trotting horse made his time in 2.30, and Mr. B's in 2.35, or that Mr. C took the first premium for his plate of apples, or Mr. D the second, or that Mr. E took the premium on squashes. But it is a matter of some interest, that there was a good show of horses, and that many roadsters indicated increased attention to their blood and breeding, and that there was a better class of farm stock than was ever exhibited before—that there was a good crop of apples, and that their size and beauty indicated increased attention to their cultivation, and that there were some new varieties of vegetables exhibited, that promise to be a valuable addition to those we now have.

This matter of reporting for the Fairs has become so extensive, and is attended with so much labor, and occupies so much space that is wanted for subjects of more general interest, that it seems that some change is needed in the method of presenting the results to our readers.

If we can devise some plan by which the important features presented at each Fair, and the points which will be of general interest and useful to the community at large, can be shown in a condensed form, and parts of merely local interest left to be learned from the local reports, will it not be an improvement that will be appreciated by all readers?

Most of the State, and many of the local Fairs have some marked features; as, for instance, in Vermont the leading features may be horses and sheep; in Maine, cattle and horses; in Massachusetts, dairy stock and fruit. These features might be brought out and discussed, the progress or failure of the year exhibited, the interest manifested by the people, and the means adopted to promote their leading pursuits spoken of. Other things, belonging to the several Fairs would be, of course, matters belonging to them in

common. These peculiar features would be of general interest. So if any new or special measures were initiated by any society, they would be described and discussed,—as any special premiums, any new implements, new methods of harvesting or cultivating.

The written statements of the takers of premiums usually contain the cream of the reports, and if they could be published, as they should be, soon after the Fairs are held, and the substance of them condensed into a small compass, they would be of great value and interest to all readers of agricultural papers. We should all be interested to know how Mr. A raised his thirty bushels of wheat to the acre; how Mr. B fed and treated his cow that made sixteen pounds of butter per week; how Mr. C managed his fine colt; how Mrs. D made such nice bread, and Mrs. E her "gilt-edged" butter.

Such statements set us all thinking, and comparing these methods with our own and with those of our less successful neighbors. A selection from such statements would be much more profitable in the pages of an agricultural paper, than after dinner speeches, or spread-eagle orations by politicians who flatter farmers for their votes.

The number of Fairs to be reported is annually increasing, and unless we can adopt some condensing process by which facts and thoughts can be compressed into a small compass, our whole paper will be occupied by agricultural reports during several of the autumnal months.

We hope our many correspondents will bear these remarks in mind, and send us only interesting facts, and those for the most part of a general character, omitting in general, lists of names and premiums.

Now that every agricultural Fair is on the line of a railroad, greater numbers than ever will attend them. They are among our established institutions. It is to be hoped they will be kept in the hands of agricultural and public spirited men, and not fall into the hands of jockeys, prize fighters, or politicians, who will manage them for their own private interests rather than for the public good.

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—It is said that Dartmouth College, Hanover, N. H., has received nearly \$100,000 for its Agricultural School. It has bought a farm of 200 acres. There are seven in the agricultural school.

## LIVE STOCK IN OHIO.

The county assessors of the State of Ohio have recently published their annual tabular statement, required by law, of the number of horses, cattle, sheep, hogs, and other animals returned for taxation on the first of April. We copy from the Cincinnati *Gazette* the following statement of aggregates as compared with those of several previous years.

	Horses.	Cattle.	Sheep.	Hogs.
1864	. 633,892	1,438,999	.....	1,616,516
1865	. 678,416	1,244,327	6,365,796	1,455,092
1866	. 633,767	1,268,698	7,038,825	1,817,151
1867	. 691,861	1,426,115	7,555,507	2,365,086
1868	. 710,375	1,521,266	7,688,845	1,812,572
1869	. 704,678	2,492,581	6,272,640	1,455,943
1870	. 704,164	1,521,421	5,052,028	1,720,113

From this it will be seen that in horses there is no increase of consequence, while beef cattle have increased only 28,840. There has been a slight decrease in mules, and a falling off in sheep of 1,220,612. Hogs increased 264,160.

The *Gazette* remarks:—

The consumption of horses and beef cattle during the war was very great, and from this, in addition to supplying the current demand, the State has not yet been able to recover. The annual increase since 1865, it is seen, has been very slow; but it must be borne in mind, that a large number are shipped out of the State every year. The figures do not give the entire production, but merely the number remaining on the 1st of April each year.

The number of cattle in 1861 was 1,902,772. From that year there was a steady decrease until 1865, when 1,244,327 were returned. Since then, with the exception of 1869, there has been a gradual increase, but this year the number is 182,659 less than it was in 1861. This accounts for the dearth of beef, as compared with ante-war prices, and shows that it will require several years yet to recover fully from the effects of the war. The high prices paid for products, and everything else during the war, created the impression, that while two million men were in the field consuming and destroying, the country was increasing in wealth; but these statistics we are exhibiting, show that in actual wealth we have fallen behind, and that the State of Ohio is not up to the position to-day that it occupied in 1860.

The most extraordinary decrease is in sheep. The great demand for woolen goods, and the high price of wool during the war, stimulated the production of sheep, and in 1868 the maximum was reached, when the stock in Ohio was 7,688,845, against 3,934,763 in 1861. The collapse in the market for woolen goods, caused by the termination of the war, and the fall in prices of wool, destroyed the prospects of sheep growers. Ohio farmers have been disposing of their sheep, which have decreased over 1,600,000 in two years, with a continued downward tendency.

In 1861, there were in the State, over six months old, on the 1st of April, 2,242,814 hogs. High prices, consequent upon the war, and good corn crops, stimulated the production, and in 1863 the number increased to 2,765,900. This was the maximum, and since that time there has been an average decrease until 1865, when the minimum was reached, the number being 1,455,943. This year, however, shows an increase of near 300,000 head.

The causes which reduced the supply of hogs differ from those that affected cattle. The supply of hogs varies rapidly, because the number may be so readily diminished or largely increased. Give farmers one or two years' notice, and offer sufficient inducements, and the supply will be equal to any probable demand. This under ordinary circumstances. But for several years the cholera made havoc among the hogs, and so discouraging were the circumstances that farmers largely abandoned the business. This accounts for the rapid decline from 1863. To a great extent, however, the cholera has ceased, and hogs having for two years commanded very high prices, farmers are again giving their attention to the business, and Ohio is now in a condition, if the corn crop turns out as well as it promises, to furnish a large crop of hogs for next winter's market. The returns to the Auditor include, only those over six months old on the 1st of April. Large numbers, therefore, not included in our figures, may be made ready for market by January next.

## BRANCH CHEESE FACTORIES.

In the article on Cheese Factories, by Mr. Bliss, as well as in that by Mr. Brown, of New York, recently published in the *FARMER*, it is remarked that the tendency has been of late to small establishments for manufacturing cheese, and that some of the larger factories, which originally took milk from farmers scattered over a large territory, had already established branch factories to avoid the inconvenience and expense of transporting milk too far. During a recent excursion among the cheese dairies of Herkimer County, the editor of the *Utica Herald* visited a factory which was built by our correspondent, L. N. Brown, Esq., and which has three branches now in successful operation. The *Herald* says:—

The Eagle Cheese Factory is situated on the easterly skirt of the village of West Edmeston, and is one of the best appointed and best managed factories in the State. We believe it is the only factory which has successfully carried out the branch system, which originated with the builder of this factory, L. N. Brown, Esq., who was the pioneer of cheese factories in this portion of the State, and is a man of extensive and varied experience in all departments of the cheese-making business.

The Eagle has three branches, all within easy drive of the main factory. At each of these branches is run one of Ralph's large, self-heating vats, which are admirably adapted to this purpose. The cheese is made under the supervision of the manager, who has his headquarters at the factory. The rennet, coloring and bandages are prepared at the factory, and delivered once or twice a week at the branches, when the cheese is taken from them and drawn to the large curing room. In this way the cheese made at four different places and drawn together and cured in one building are remarkably uniform in size and quality. Without knowing the fact, or looking at the brand, no one would have suspected the cheese which we saw on the ranges of being made at four different places by four different operators. They were firm, meaty and buttery, and contained on their clean faces an assurance of the truthfulness of the assertion of

one of our leading buyers, that he never lost money when he bought the Eagle. The Eagle and branches were making sixteen ninety-pound cheeses a day.

#### AGRICULTURAL ITEMS.

—One California sheep ranch includes 200,000 acres.

—The excursions of the bees to collect honey are variously estimated at from one to three miles each, and they are supposed to make each about ten trips a day.

—Julius Riley, of Anrora, Portage county, Ohio, has two geese that he has had in his possession upwards of forty years. He purchased them about the year 1829, and they were at that time "middle aged geese."

—The Bucyrus, Ohio, *Journal* has measured an honey comb which was four and a half inches through, the cells on one side being three inches deep and on the other side an inch and a half, all one mass of sweetness.

—The editor of the *Horticulturist*, says that he has known quite a number of instances in which old orchards apparently dying out, have been brought back to fruitfulness by the liberal use of wood ashes, in connection with stirring the soil.

—A correspondent of the *Chicago Tribune* mentions a case where cows were poisoned by eating potatoes that had the sprouts on. He says before old potatoes are fed the sprouts should in all cases be removed.

—The crops are suffering severely throughout Cape Cod, in some parts of which no rain has fallen for six weeks except a slight shower, and prospects of the cranberry crop are said to be very poor, owing to the want of moisture.

—The *New Haven Register* says: "What we know about gardening" will be interesting. The "senior" has picked, this season, three cucumbers, two cauliflowers, seven ears of corn, and four tomatoes, which cost him \$4.48 each.

—A Chicago journalist divides the inhabitants of that great hive of population into two classes—those who follow life insurance and those who do not. The latter class, he tells us, is too insignificant to bestow any attention upon.

—Pleuro-pneumonia has broken out among Mr. Dinsmore's imported cattle, at Poughkeepsie, N. Y., and it is feared that fatal results will follow. An Alderney bull, valued at \$1,000 is in a critical condition.

—The General Omnibus Company of Paris employ 10,000 horses. They are nearly all Percheron stallions purchased at five years old. A little over two per cent. died in 1869. Hay and oats are fed. They require shoeing once in about 27 or 28 days.

—The toad, which is an efficient bug hunter in the garden, is said by the *Ohio Farmer* to eat honey

bees with an equal relish, and bee keepers are advised to arrange the lighting boards of the hives in such a manner as not to be accessible to his toadship.

—The negro in Tennessee, says the *Memphis Ledger*, is fast becoming proprietor of the soil he formerly tilled for his master. About 500 negroes own farms in the vicinity of Memphis, and all their farms are well cultivated, while the farms of a great many white men are covered with weeds.

—The leading agricultural periodicals of Great Britain are the *Mark Lane Express*, *The Field*, *Bell's Messenger*, *Farmer's Magazine*, all published in London; *North British Agriculturist*, and the *Farmer* published at Edinburgh, and the *Irish Farmer's Gazette*, Dublin.

—A letter from Claremont, N. H., says: "Such a dry time has not been known here since John H. Warland edited the *Claremont Eagle*, some twenty-five years ago, when he said it was so dry that he had to soak his pig to make him hold swill."

—The Editor of the *New York Horticulturist* says there are enough acres in blackberries to supply Philadelphia, New York, and Boston, and thinks it not wise to advise any more to engage in the business. He thinks there are near one thousand acres in blackberries within thirty miles of Philadelphia.

—An implement maker in France has constructed a species of plough, by means of which the beet bulbs are lifted from the ground and thrown aside by a swinging mold-board, and then topped by women and children who followed the machine. One of these, worked by a man and a pair of horses, will dig about two and one-half acres per day.

—It is stated in the *Oregonian* that a party of French, who had camped at Wilhoit's Soda Springs, killed a deer which was found to be literally alive with trichina. A number of families ate of it before the discovery. The discovery of trichina in venison killed in its "mountain fastness" has created quite an excitement among the hunters.

—The Diehl wheat, which has recently been extensively introduced into Michigan, is said to be liable to sprout and grow in harvesting when the weather is damp and moist, as it has been this year in that State. In some cases, the *Michigan Farmer* says, the shocks on whole fields of forty acres are almost green. Other varieties withstand the weather better.

—Stock from Southern California is being driven over the mountains, whenever practicable, in large numbers, to save it from the drought. Sheep are, for the same reason, being forced into market in larger numbers than usual. It has been decided to reduce a flock of 50,000 in the island of Santa Cruz to 40,000, in order to increase the

chances of saving the smaller number. The reduction will be effected by slaughtering 10,000, making the most of their pelts and tallow, and salting down the hind-quarters.

—From what Horace Greeley “knows of farming” he assumes that the Pine Barrens of New Jersey may be ploughed up and by the application of marl, swamp muck, oyster shell lime, and bone flour, be made to produce “fully sixty bushels of corn, thirty of wheat and not less than three tons of hay per acre.” Can any body wonder that “book farming” is unpopular?

—To preserve a bouquet, a correspondent of the *Western Rural* says: Sprinkle it lightly with fresh water, and put it in a vase containing soap suds. Each morning take the bouquet out of the suds, and lay it sideways in clean water; keep it there a minute or two, then take it out and sprinkle the flowers lightly by the hand with water. Replace it in the suds, and it will bloom as freshly as when first gathered. Change the suds every three or four days. This method will keep a bouquet bright and beautiful for at least a month.

—About the 15th of June a cow belonging to Mr. Wm. Barnell of Swanton, Vt., gave birth to a calf, which in the course of a few days was killed and the milk of the cow saved. It was noticed that the milk was very thin and appeared to have no more richness than ordinary skimmed milk. And yet the cow appeared well, and the cause was quite a mystery. A month afterward, however, the cow had another calf, and since then her milk has been perfectly good.

—To illustrate the remark that there is more gain in time than in cheapness by the use of a good deal of our farm machinery, a correspondent of the *Hearth and Home* says “a neighbor of mine two years ago kept an accurate account of the expense of threshing his crop of wheat. He hired a six or eight-horse thresher and its attendant horses and gang of men. He put in his own men and teams and hired extra help, as most farmers must do at such a time. He fed the lot—horses and men—and his wheat cost him, for threshing alone, twenty-five cents per bushel.”

—The improvement in the crops of Great Britain during the last half century has often been ascribed to the improved modes suggested by scientific and progressive agriculture, but a late number of the *Irish Farmers' Gazette* seems to give the credit to the importation of foreign, and the manufacture of home-made fertilizers. It thinks it questionable whether the annual increase of all the cotton, linen, woolen, and hardware together will balance the increase of produce arising from the yearly application of imported and artificial manure to British soil.

—In reply to a correspondent who expressed a desire for a book containing a full account, with illustrations, of all insects, the *St. Louis Entomologist* goes into a calculation as to the size of such

a work. He assumes there are about 500,000 distinct species in the world. Allowing the description and cuts of each species to occupy a page and a quarter, he demonstrates by figures that 1000 octavo volumes of 625 pages each would be required for the work, making a row of books over 160 feet long, or enough to fill seven book cases six feet high and four feet wide.

### EXTRACTS AND REPLIES.

#### FARMING WITH SIX HUNDRED DOLLARS.

In reply to T. E. P., of Newburyport, Mass., who asks for experience in regard to going on to a farm with \$500 capital, and who wants to know whether he could get a living, allowing he should attend to his business, I will give my experience with about that amount of capital.

Thirteen years ago last spring, I bought a farm of two hundred acres for \$7000. I paid \$600 down, then borrowed \$600 to buy stock and tools. I had fourteen years' pay-day. Besides meeting all payments when due, I have bought fifty acres more land for \$1400, paid down. I am now in debt about \$700, and have a farm worth \$11,000, with stock and tools worth about \$2000. Thus, with a good helpmeet, I have got a living by attending to my business—farming. A. F.

*Bristol, Vt., Aug., 1870.*

REMARKS.—For brevity and conciseness of statement this communication is a model. In the expression, “my business—farming,” is probably wrapped up one of the secrets of his success. Both he and his helpmeet understood their business; had learned their trade; were skilled workmen. We understood the inquiry of our Newburyport friend to be made in the interest of “raw hands,”—of those tired of village or city life and employments, and who had been attracted to rural pursuits by the poetry rather than the prose of farming.

We must take this occasion to invite “A. F.,” as he has now broken the crust, and shown capabilities as a writer as well as a farmer, to dress up other facts of his experience for the benefit of the many who are beginning life under circumstances similar to his own.

#### SINGULAR CASES WITH COWS.

In the *FARMER* of June 18, we published a statement by T. B. Hart, Esq., of West Cornwall, Conn., in relation to a cow which manifested all the usual appearances of one just ready to “come in,” when she refused her feed, her bag fell away, all the appearances alluded to disappeared, and the animal became poor and feeble.

We have since received a communication from “B. D. W.,” detailing a similar case that occurred in North Thetford, Vt., some years ago. In that case the cow was expected to calve in March, in which month her appearances were all favorable, and she was closely watched. About twenty days after her time, her bag began to diminish, and in the spring she was turned to the pasture, apparently in good health and condition, to fatten. In December she was slaughtered, when the bones of

the first calf, and another perfect calf about four months along, were found.

These statements were submitted to a medical gentleman who has furnished the following

REMARKS.—Cases of the retention of the fœtus after completing the full time of pregnancy, in the human subject, have been reported, in which the soft parts have been absorbed, and the bony parts have been retained for years; the mother in the meantime enjoying tolerable health. These were cases in which the ovum was developed in the ovarian instead of within the cavity of the uterus in the natural way. A case occurred in this State some years ago, in which a fœtus was retained some years, and an abscess forming in the side of the abdomen, the remains of a fœtus were removed by a surgical operation. A woman is now living who went her full time,—one child was born and another retained, where it has remained more than fifteen years. She has had tolerable health.

Personally I have known no similar case in any of our domestic animals, but I know no physiological reason why it should not occur in them as well as in the human subject.

The fact of the cow referred to by "B. D. W." becoming again pregnant, while retaining the fœtus, is not without parallel in the human subject. In this case, if the facts are correctly stated, I have no doubt that there was an extra uterine or ovarian impregnation. It is to be regretted that there was not a careful dissection by a competent anatomist, when the animal was killed. There are many interesting facts yet to be ascertained in veterinary practice, which can be revealed only by post mortem examinations.

I hope you will hear again from Mr. Hart.

J. B.

#### MAKING A MARKET GARDEN.

I have about one acre of warm, sandy land, somewhat run down, which I wish to bring up to a fair state of fertility for a market garden, with the least possible expense. Can you advise me how to do it? What fertilizers shall I use, and how apply them, and in what quantity? E. L.  
*Long Plain, Mass., Aug. 10, 1870.*

REMARKS.—For intelligence and shrewdness we presume that the market gardeners of the vicinity of Boston and New York will compare favorably with any business men in the country,—whether manufacturers, mechanics or merchants. Hence it is reasonable to suppose that their system of fitting land for profitable use as a market garden is about the cheapest and best that can be devised, under the circumstances. Stable manure, and a plenty of it, is used by them, with but a small amount of commercial fertilizers. We can give you no better advice than to learn how old market gardeners manage, and then follow their example. The richest and best land only is fit for a market garden. "Run down," "sandy land" cannot be put in condition to compete with old market gardens on heavy rich soil by any homœopathic doses of vest-pocket fertilizers. Even with very liberal applications of stable manure it will require some two years to bring it up to the required state of fertility, admitting the soil to be suitable.

If you are in earnest about making a market garden, we will say plough it pretty deeply and finely early this fall. Next spring harrow it thoroughly, and put on not less than ten cords, not

loads, of stable manure and three "Brighton Artillery" loads of night soil. Plant cabbages the first year, cultivate thoroughly so as not to let a single weed go to seed or become established in the soil. The next year apply not less than six cords of manure, half broad cast, half in the hill, raise squashes, and exterminate weeds again, and your ground will be only in fair condition to begin to raise vegetables.

The NEW ENGLAND FARMER don't know of any cheaper or better way of making a market garden, and perhaps after you have tried the experiment with cheaper fertilizers, and a cheaper process, you will be less surprised than now at our lack of information.

#### TOUGH CHICKENS.

Will the NEW ENGLAND FARMER tell us, in its next issue, why chickens, after being kept on ice for three or four days, are tough and stringy? In the city they are always tender; but here we find them as described above, although bought of reliable farmers. AN EMBRYO FARMER.

*East Wareham, Mass., August 13, 1870.*

REMARKS.—We are suspicious that your "reliable neighbors" rely a little too much on your embryonic condition, and that the tough and stringy chicken flesh that has been kept on ice three or four days, is owing to the fact that the eggs from which they were hatched were laid in an earlier Anno Domini than 1870. The city dealers in poultry are not "embryo" dealers. Educated to their business, they depend on their own judgment and knowledge in buying their goods, and not on "reliable neighbors." They know the difference between a small, old hen and a large, young chicken. It is hardly to be expected that a mere "embryo farmer" should be able to distinguish between the two, especially when offered by a "reliable neighbor."

#### CENTRIFUGAL THRESHING MACHINE.

A thorough trial of the Centrifugal Threshing Machine was made at my barn to-day, in the presence of some thirty farmers, representing all parts of the town, several of them being "old threshers." The unanimous opinion was, that the machine is a complete failure. Wheat, both that mowed and that reaped, was put through in a like unsatisfactory manner,—requiring much time and doing its work in an imperfect manner,—whilst none but a giant could turn it under full feed. Instead of threshing ten bushels an hour, it is doubtful if that number of bushels of wheat could be threshed in a day.

It was stated at the trial to-day, that one firm in Manchester N. H., had orders for nine hundred of these machines, but not one of them can now be sold in this town at any price.

The drought continues to "reign" triumphant. Corn and potatoes are feeling it now severely. Pastures are parched, and cows are failing in milk rapidly. P. C. TRUE.

*Pittsfield, N. H., Aug. 10, 1870.*

REMARKS.—We saw this machine threshing oats at Manchester last December, and watched its operations with much interest. Though well aware that the principle of the old saw "that one swallow does not make a summer" is applicable to machine-

ry, and that many which as models, or on first trial at actual work, give encouraging promise of usefulness, prove in other hands and on further trial, inefficient and worthless; we were led by what we saw of the Centrifugal Threshing Machine to form and express a favorable opinion of it. Favorable accounts of its operation have also reached us from various sources. We are therefore disappointed by our correspondent's account of its trial on his farm. Possibly this failure may be explained and accounted for. We certainly hope so, as we have felt much confidence that this little machine would meet the demand that has long existed for something between the slow process of flail threshing, and the complicated and expensive one of machine threshing, as generally practiced.

#### WORMS IN HORSES.

Will you please inform me what will destroy worms in horses?

G. O. P.

Rockingham, Vt., Aug. 8, 1870.

REMARKS.—Mr. Eli Powers of Brimfield, Mass., wrote to the FARMER last year that he gives poplar bark, cut fine, and mixed with feed. This he finds a perfect cure. Mr. L. H. D., of Cornish, N. H., says the best remedy he ever tried is to give his horses plenty of poplar poles to gnaw at their leisure.

Dr. Law, Veterinary Lecturer of the Massachusetts Agricultural College, says, give every morning, one hour before feeding, three drachms sulphate of iron and two drachms of assafetida; and every night, for a week, throw up an injection of one ounce of turpentine, and ten ounces of linseed oil.

So far as medicine is concerned, we have much confidence in good wood ashes, say a gill mixed with cut feed, every other day.

But here, as elsewhere, an ounce of prevention is worth a pound of cure. Dr. Dadd says "It was customary in former times to give powerful vermifuges for the expulsion of these parasites, but the most rational method of treatment is to impart tone to the digestive functions, by the use of tonics, stimulants, and alteratives." Horses are often confined too much to dry feed. A few potatoes, fed to horses two or three times a week, are considered by some as a sure preventive of worms. Try experiments in feeding first, then dose as you think best.

#### PRUNING—BARK LICE—QUALITY OF FRUIT.

I noticed in the last FARMER (Aug. 20) an inquiry from "Backwoodsman," North Montpelier, Vt., as to the "best way to trim a young orchard;" also "how he should keep off the bark lice."

Your "remarks" as to the true way to prune an apple tree, and in relation to the *time* it should be done, so well agrees with my own experience of several years in rearing a young orchard, that I will not attempt to add anything to your answer to that question.

But in relation to the other question—"how shall I keep the bark lice off?" which question I have

noticed has several times been asked in the FARMER, I will answer according to my own knowledge, having fully tested it. Wash the trees' trunks and branches within reach, with a strong ley of wood ashes, letting the ashes remain in the ley, stirring it occasionally while applying it. Do this in May or June every year. This will serve a double purpose, being good also for the health and growth of the tree, as by analyses the wood of the apple tree is shown to contain a large per cent. of potash. The other part of the remedy or preventive is to put the trees in a *healthy* condition and *keep* them so by proper pruning, cultivation and care in all respects. This requires time and expense, but it pays in the extra quantity and quality of the fruit.

In this connection, let me ask, who that has a cultivated taste cannot readily tell a good apple from a poor one—or one that has been grown on a healthy, cultivated tree, from one grown on a sickly, unpruned, uncultivated, neglected tree, not only by its size and fairness, but also by its much better flavor? The time will come, if it has not already, when purchasers of fruit will be willing to pay prices according to quality, for apples and other fruits as well as for any other article of farm produce. Why should purchasers of apples pay the same price for the same kinds, when really there is so much difference in the *quality*?

E. WYMAN.

East Westmoreland, N. H., Aug. 20, 1870.

#### HARVESTING AND COOKING CAULIFLOWERS.

For the novelty of the thing, I planted this year some cauliflower seeds. They came up well and are doing finely, and I begin to think about the time when they will be fit for use. But neither myself nor my neighbors know how to prepare it for the table, for it never has been raised in this vicinity. Will you, or some of your contributors, please give me the desired information? I should also like to know how to pickle it.

MARY T. STANDISH.

Cliftondale, Mass., Aug. 23, 1870.

REMARKS.—We are glad to hear that you have succeeded so well with your cauliflowers. It is reported that that old joker, the dictionary Johnson, once said, that "of all the flowers in the garden, I love the cauliflower best;" a very pretty way of saying, that of all the numerous varieties of the cabbage family, the cauliflower is the most delicately flavored. If the cauliflower is left out too long after the head or "curd" is formed, it sometimes opens, separates into branches, and becomes coarse, fibrous, strong-flavored, and unfit for the table. It is usually gathered in October, and hung up away from frost. If not fully developed, they are taken up with as much earth as possible about their roots, and reset in earth in a light, dry cellar, or in a box of earth in any light and warm place. Those that have barely blossomed, if treated in this way, will often grow during winter, and afford the whitest and most delicious "flowers."

For cooking the cauliflower about as many ways are practiced as in cooking other vegetables. After trimming off the leaves, let it lie half an hour in salt and water, then boil in fresh water for fifteen or twenty minutes, or until the fork will easily enter the stem. Milk and water is said to be better than water alone. Serve with sauce, gravy, or

melted butter. After putting on the butter it should be covered close.

For pickling, a writer in the *Country Gentleman* says:—"Have a kettle of boiling water, and put in one at a time, with top down, unless the kettle is large enough for more, and boil it until tender. Have ready a jar of cold vinegar, with cloves and mace; drain the cauliflower well, and put into the vinegar while hot. Cover tightly, and it will be ready for use in a week or ten days."

So much by way of book-cooking. Will some of our lady friends give their modes from practical experience?

#### GIRDLING APPLE TREES TO MAKE THEM BEAR.

I enclose an article credited to the *Horticulturist* which gives, in glowing colors, accounts of favorable results of girdling apple trees to induce fruitfulness. I have seen a similar recommendation in several papers. I once tried the experiment on some of my own trees. They bore some apples that season, but they will never bear again,—no, never! And it seems to me that the editor of the *Horticulturist* ought to have tried the experiment himself and waited till the next year to see its effect, before recommending his readers to girdle their trees, if he did not already know that a girdled tree must die.

South Royalton, Vt., Aug., 1870.

A. W.

REMARKS.—"Ringing," as it is called, is an old trick to induce fruitfulness and early bearing, but is usually applied to a branch or two of a tree, and not to the trunk. The operation is performed in July, when it is desired to force the branch to form blossom buds; and just before blossoming, when the object is to set the fruit and retain it. It is not necessarily fatal. When a ring of bark of about one-sixth of an inch wide is removed from a limb, being careful not to injure the wood, granulations are generally formed and the flow of sap, though checked for a time, is finally restored, and the wound healed. But if the ring of bark is too wide for this healing process, the limb dies, of course. Tying a cord around a limb is said to produce about the same effect, with less danger. Premium specimens of fruit are sometimes produced in this way. It is always more or less injurious to the tree, and is a practice that cannot be recommended for general adoption.

#### HINTS TO FARMERS' WIVES.

We presume that a great majority of farmers' wives may not need the hints contained in this article, but we *do know* that there are some which might be profited by putting them in practice. We know the innumerable cares and duties of a farmer's wife, cares which at times seem to crush out all life and energy. We know there are times when it seems almost impossible to bear the heat and burden of the day. Perhaps few women have fewer hours of leisure than the wives of farmers. With many of us *every* moment brings its work, and in order to live in happiness we must love to work and love *our* work.

We pity the woman who hates housework, but is obliged to go through what is to her the dull routine from kitchen to pantry, from garret to cellar; washing, ironing, cooking, cleaning, churning, skimming milk, washing pans, pails and

dishes, making and mending, and oh! dear!—all, and much more, done with the feeling that she is being sacrificed to a life of drudgery, while qualified for some higher calling. But this restlessness and dissatisfaction with present position and occupation is not confined to farmers' wives nor to women. It is experienced by men and women in all ranks and professions of life. The great good they seek is ever just beyond their reach, and perhaps the highest lady in the land is little better satisfied with present surroundings than the farmer's wife, and none are higher in the sight of God than those who do their duty cheerfully, however humble may be their sphere.

But there is no disputing there are talents for *different* vocations among women, as well as among men, and we say again that we pity the woman who thinks she has missed her vocation, and instead of attempting to act well her part, and of improving her means of usefulness, spends her days in unprofitable regrets.

There are truly many pleasures to be found in a life on the farm. May they not be increased in many instances? Every farmer should provide conveniences to make his wife's work as easy and agreeable as possible. A farmer would think he was altogether behind the times if he should tread out his corn in a five-pail kettle, who lets his wife ply the needle far into the night, making garments for perhaps six or eight, when with proper working apparatus it is a pleasure to see with what expedition work can be turned off. The men of the farm should do the churning and working of butter. There is then enough left for the women to do, and there is pleasure in sending off the tubs of golden butter, especially if we know it will be called the best in the market.

But aside from work, could not we make our homes pleasanter? We do not have much time to spend in decoration, perhaps, but a few minutes each day may make our surroundings much more cheerful. We know of some farmers' families where, if you go into their homes during any time of the day, you will find the ladies (?) in ragged and mended dresses, without hoops, with uncombed hair and no sign of collar or ribbon. The dresses of their children, also, from their many colors, remind one of Joseph's coat, which in its day may have been a triumph in the art of tailoring; but in this instance the children are patched to save their father's purse strings; and this in a family with means at command to dress comfortably and tastefully.

We know there are many who are obliged to be very economical, but there are but few that cannot have a clean dress and collar to put on, when we sit down to do another kind of work. And the children, too, if kept clean and tidy, will grow up with more refinement of character than they will if they are obliged to wear their father's boots, pants and frocks till they will hold together no longer. Do all this for your own self respect; you feel more like somebody to sit down dressed up a bit, and when your husband comes in—mind you! I don't say do this *for* your husband,—that has been preached in every paper in the land! Do it for the purpose of pleasing him, and ten to one you never know by word or deed that it is appreciated. But, as I was saying,—when your husband comes in, you feel you are ready to receive him as in days that neither of you have forgotten.

Make home pleasant for the children. Provide books and games for the older ones, and plenty of pictures for the little ones. We know a little boy, only a little over two years old, who went into a neighbor's kitchen, as pleasant as many a farmer's kitchen, and looking round on the bare walls, said, "No pictures here, mamma!" The pictures of his home had their influence, and he noticed their absence here.

I intended to make a few more suggestions, but this article is already too long, and as I am not used to writing for the papers, it may not prove acceptable. In that case—time enough wasted.

E.

#### AGRICULTURAL FAIRS.

State and county cattle shows and fairs have been held annually in nearly all sections of New England for a great many years. But while the hoes and the spades used in 1870 are very different articles from those used fifty years ago, the agricultural Fair of this year is little more than a repetition of that held half a century since. The most striking change that has been made on the earlier programmes is seen in the introduction upon the fair grounds of the ancient horse race. We are not pleased with this change. It looks to us like progress backward, rather than forward. We should much prefer some such plan as is proposed by a writer for the *Prairie Farmer*, from whose article we copy the following suggestions:—

Without any disparagement to its labors, it may be said that the agricultural society hardly compares with the horticultural society or the dairy-men's association as a working society. These last named associations do very much in the matter of investigation and experiment that, it appears to us, the State agricultural society would do well to imitate. They lay out work to do and assign men to perform it. They hear of blight and mildew, or huffy cheese, and the case is investigated and remedies found out. They determine the localities best adapted to the production of fruit and dairy products, and give the result of their labors to the world. They are not content to be simply recorders of progress, but they help on the work of progression. They hold few fairs; but their meetings are for the purpose of comparing experience, drawing out discussion and settling on determined results. There is as much need of having the new varieties of corn and grain tested in different parts of the State, and the result published, as there is in the case of new varieties of pears and blackberries, and on whom would the work so appropriately fall as the members of the State society?

There are many farmers in our State who have made themselves proficient in many branches of husbandry, who take little interest in fairs. While other men have been feeding cattle and swine, they have been studying the application of manures and the curing of grass. These men might contribute nothing to a fair, but in a farmer's convention, conducted like those recently held under the auspices of the Maine State Society, they would contribute facts that would be of immense advantage. Assemblages of this kind would serve to bring out talent that has heretofore been hidden, and would furnish the compiler of our reports with the most valuable materials for publication. The facts that were brought out at the Madison County Farmers' Convention last winter, and the interest that was attached to them, plainly shows that great good would result if similar meetings could be held at accessible points, under the management of the parent society.

We are aware that the efforts that have been

made to introduce discussions of agricultural subjects at these fairs, have not always met with very encouraging success. It has been difficult to enlist the interest of farmers in these exercises, as they have been conducted. Somehow they do not seem to be in harmony with the stir and bustle of shows as usually managed. And the question is, What changes in the management of these exhibitions will secure the desired result? Would a style of proceedings somewhat similar to that adopted by pomological societies at their stated sessions prove efficient, and is such a change practicable? Questions of this kind are much more easily asked than answered. Evidently some change in the agricultural fair is demanded, and we think that which has been taking place of late years is not satisfactory. What then shall be done? Let us bear these questions in mind, as we attend the exhibitions this fall, and prepare ourselves to suggest and adopt such improvements as will make these annual fairs more useful and more instructive. The increase in the number and circulation of agricultural books and newspapers has been very great since agricultural fairs were first held in this country. Farmers read much more now than formerly. And this fact suggests to our mind the character of the improvements needed in the meetings and shows of agricultural associations.

#### PERSONAL.

The death of Benjamin F. Cutter, of Pelham, N. H., aged 68, is announced. In years past he was a frequent contributor to the *NEW ENGLAND FARMER*. His last article, on "Trimming Pine Trees," was published in 1868, and was dictated, as from a lameness in his hand he was unable to hold a pen. His articles were marked by practical good sense and extensive information. He employed most of his time on botany, pomology and entomology, and contributed largely to agricultural and scientific publications.

The *Mirror and Farmer*, received since the above was written, says his death occurred on the 14th of August, from dyspepsy. It adds, that he was one of the most systematic farmers of the State. He was a native of Pelham, and was always content to make the old homestead his dwelling place, though through excellent taste he had added greatly to its value and its attractiveness. He was the originator of that popular berry known as Cutter's Seedling Strawberry. The loss of such a man will be felt beyond the circle of home, and even of the town, which he has benefited by his industry and skill.

In sending a communication to the *Mirror and Farmer*, Mr. Levi Bartlett, of Warner, N. H., who has measured more than his "threescore and ten," remarks, in a note, that the health of his hired man failing this spring, he was left to depend on himself and son, with an occasional day's work, to carry on the farm. He says, "Since the 18th of May I have performed as much labor on the farm as I used to forty years ago. By letting into my work like a 'thousand of brick,' my crops are free from weeds, and, except some falling off in the hay crop, they are a full average with previous years. Never had a better corn crop; oats ditto; five varieties of winter wheat, some winter-killed, but what survived the winter is No. 1; ten kinds of oats."

Carlos Pierce, of the firm of Pierce, Flanders, & Co., of Boston, and a breeder and exhibitor of stock, died at his residence in Stanstead, Can., Aug. 20, aged 40 years. He had spent the winter in Washington, and returned home somewhat unwell. His disease was typhoid fever, complicated with an attack of cholera morbus.

*For the New England Farmer.*

#### ILLINOIS PASTURES AND MEADOWS.

BY JOHN DAVIS.

If the great State of Illinois has any *forte*, it is agriculture. Soil naturally rich, and so level that there is scarcely a waste acre in a thousand, one can hardly fix a limit to the number of people she will be able to feed, when careful and intelligent farmers shall husband all her resources, and bring the soil to its utmost capacity.

I am not ignorant of the fact that much of her soil is underlaid with vast coal beds, and that hence her manufacturing capacity is immense. Yet, vast as is this capacity, it is not so universal or so cheaply available as is the fertility of the soil. Her climate, of course, is continental, and is more or less subject to extremes of temperature, drought and humidity. Yet, on the whole, not more than the average of fertile continental countries.

Grazing or grass growing for the production of live stock, is at the very foundation of Illinois agriculture. Reduce her to raising grain merely, and she would cut no great figure in the markets of the country. But if you would learn of her capacity, look over the cattle market reports of New York city. It is not uncommon to see the number of cattle from Illinois footing up greater than all the other States put together. And when we consider Ohio, Kentucky, Iowa and all the other great grazing States, this report respecting Illinois means a great deal.

Our best pasture grass is the Kentucky blue grass (*poa pratensis*). It stands drought and cold well. Its season of rest is from the ripening of the seed in June, until fall showers commence, say about the first of September.

It is reliable for pasturage of the richest quality, from September till July, unless covered by snow.

The Redtop (*agrostis vulgaris*) is a fine pasture grass for wet lands. It makes a tight, strong sod, which drives out the weeds and wild grasses, and is not easily poached by the animals.

White clover (*trifolium repens*) is a hardy, nutritive little plant, which furnishes much pasturage in spite of us. It is the most aggressive plant we have, on some soils; will stand feeding, grief and abuse better than would appear possible. Upland clay soil, with considerable lime, appears to be its most suitable home. It is fine for cattle, sheep and hogs; but for horses, timothy (*phleum pratense*) is our great meadow grass. It is the universal preference for hay, and in the fall, after mowing, is largely fed down as pasture. Considering its universality, it must be reckoned, as a pasture grass, next to, if not equal to the blue grass itself.

Red clover (*trifolium pratense*) is usually the companion of timothy in the meadow for hay, and is most excellent as an early pasture, after mowing. Its season of rest is not in midsummer, but, regardless of heat or drought, springs up immediately after mowing, when it is sometimes much needed. It is not much used alone, either for hay or pasture. We do not use it much yet as a green crop to be ploughed under. In the meadow we prefer that it form about one-third or one-fourth of the crop of hay. The periodic decay of its long tap-roots enrich the soil and keeps it mellow. It does not run out in this region, but continually comes from the seeds, keeping its foot-hold in the meadow, with timothy, quite well.

The best time to sow blue grass, is with wheat or rye in the fall, though it frequently comes in the pastures, driving out all else, without the agency of man. Timothy is also sown in the fall, with the winter grains. It never appears of itself, as does blue grass. I have frequently seeded land by carefully scattering hay for the cattle, when snow is on, to prevent waste, on land sown to rye. Sown thus late, the first crop is rye entirely. After that timothy, making good fall pasture among the rye stubble.

Red clover is not safely sown in fall, as the young plants sometimes winter kill. It is mostly sown in March or early April, on land sown the fall previous, to timothy. Red clover does not appear on land itself, except the land has in times previous borne clover seed, or has been accidentally seeded by scattering manure.

White clover is seldom or never sown. It is universally viewed as an intruder. Though valuable, yet it is objectionable. Never growing large enough for hay, frequently causing horses to slubber badly, it is not near so profitable as other grasses.

In an article like this, and in a State as new as Illinois is, it would, perhaps, be just to notice the wild grasses of the country, which have contributed so largely to the convenience, wealth and credit of the State. Without being tedious, I can only say that there are several varieties, naturally adapted and almost always found in peculiar localities. Elevation, humidity, and texture of soil being almost always truly indicated by peculiar natural grasses. They all form tough sod, some of them much more so than any tame grass. Most of them bear seed, stand burning, grazing and considerable trampling, with impunity. Yet, when once subdued by cultivation, I have never known them to re-occupy the land, as tame grasses sometimes do. They are never sown by man, and are disappearing from the State very rapidly. Ten to twenty years ago they furnished by far the larger portion of summer grazing for the live stock of the State.

The great want in Illinois is *cheap* farm labor; and one reason why the grasses of the State have become so important, (aside from natural adaptedness,) is the ease and cheapness of their management. Pastures, of course, when fenced and established, require little outlay for annual labor. The stock live in them all the time, except during the severest winter weather, when the hay crop, or corn in the shock is made a substitute.

Hay is now secured on our level meadows, almost entirely with machinery, worked by horses. In a horse-raising country, like this, horse labor is cheaper than Chinese. An intelligent lad of fifteen to eighteen years old, with a good pair of horses, will cut about eight acres per day, with a forty-eight-inch iron mower. The hay is raked with one horse into windrows, at the rate of twenty or more acres per day. A bunching rake, with a horse at each end, managed by two small boys, will throw these wind-rows endways into piles, very fast. The piles are brought from different directions, and left in pairs—two and two,—near each other. The men then come with forks, throw one pile upon the other, trim down and top off. The shocks thus made should contain from three to ten hundred pounds. Toward the latter part of the week, the day of stacking comes. The two boys, with the bunching rake, bring the hay cocks to the stack. Some eight to ten are pressed together by the horses, for the foundation of a rick. The balance are brought alongside for the superstructure. The inevitable horse, with his crane, pullies and fork, managed by a boy on his back, hoists the hay on to the rick as fast as one man can stack it. Often two are required. One man is required to set the fork. Thus two men, three boys and three horses will stack an immense weight of hay in a day. Were it not out of season, I would describe some of our peculiar hay machinery. It will be more appropriate next June.

Haying is not the human drudgery it once was. It is much like going to war when the men are all officers. For the boys it is a regular gala day. On the spring seat, mowing, riding the bunching rake, or pitching hay on horseback, it is little else than fun for them.

*Box 50, Decatur, Ill., Aug. 16, 1870.*

#### ENCOURAGE HOME PRODUCTION.

At the opening of the recent exposition of Textile fabrics, at Indianapolis, the following remarks occur in the opening address of President Bowent of Chicago:—

"I need not tell you of the great improvement that has been made by our manufacturers during the past few years, for any one that has given any thought to the subject would readily notice, in examining the beautiful goods now on exhibition at this place, that we, as manufacturers, are marching on in the highway to success, and the question is, shall we make our success certain? The practical question is, shall we receive from the good people of our common country words of encouragement that shall make our services the more certain, or shall the people's verdict be against us, and the great market of our land be given to strangers, in part to our enemies? Are we able to produce such articles of textile fabrics as the market demands? Shall we influence our approval of the men and women of our nation in the use of American goods? Give us these and the fostering care of our government, and we shall soon see our glorious land with factories and foundries both north and south, and the tide of prosperity will be with us as heretofore unknown.

"We say, then, let us encourage these industries. Let us assert, in the full development of our great country, in which we all justly take pride, and with a prosperous and healthy state of our manufacturing interests all over the land, we shall enjoy thrift that will be most gratifying, and a page in the history of our political economy, yet unwritten, will be revealed unto us. I am greatly rejoiced to see so large a display of goods on exhibition from the Southern States of Kentucky, Tennessee, South Carolina and Georgia, showing to us the great interest our friends of the South are taking in this matter, which is indeed one of great importance to us all."

He called upon the ladies to wear shawls of home manufacture, instead of going to Scotland or France to obtain them. The West made just as good ones as the world could produce from wool.

—The Farm at the Maine Agricultural College, Orono, Me., contains 375 acres, about half being wood land. About 80 acres are in pasture and meadow. Only 17 acres are under the plough this season.

*For the New England Farmer.*

## THE HORSE AT OUR AGRICULTURAL FAIRS.

The horse has always occupied a prominent place at our agricultural fairs; but within a few years he has taken a long stride forward and left all other domestic animals in the background, and now receives the major share of the premiums and of the time of both managers and attendants of the annual gatherings. Even man himself, with all his attainments, is cast into the shade by a good horse.

There can be no doubt that this increased interest in the equine race will result in its improvement, both in our estimation and treatment of it. The most casual observer can see that there is a great change of public sentiment in his favor—that his services are yearly better and better appreciated. Owners of horses take more pride than formerly in having an animal that bears unmistakable marks of kind usage.

This is one of the beneficial tendencies of societies and fairs, and is as it should be. But to secure the desired result, is it necessary that the horse should monopolize the time and premiums of our societies? It is not a little interesting to see how societies professedly devoted to the general cause of agriculture are making a specialty of the horse: for example, last year the premiums offered for the horse by the New England Society amounted to \$4,500, while those for neat cattle in all their grades and classes was \$2,190; less than \$800 was offered for sheep and about \$260 for swine.

According to this schedule of premiums one unacquainted with farming in New England might reasonably suppose, that the value of horses exceeded that of all other stock. But the capital invested in cattle in these six States is 30 to 40 per cent greater than in horses, and yet this society is willing to expend two dollars upon horses to one upon cattle. The expense, risk and care of taking cattle to a fair is as great as with horses, yet the highest prize for a herd was less than the lowest prize in the trotting matches. The valuation of sheep in New England is nine and a half millions, or about one half of that of horses, yet this society considered a single trot worth more, or at any rate offered to pay more for it than for the benefit of sheep-owners. All the premiums offered for swine would be an insignificant purse for horsemen. Now, I think a prize bull and herd of cows are of far greater value to a community than a fast colt that can win a prize by his speed; and who will say that the improvement of the sheep and swine of New England is not of greater importance than the best race this society ever has or can get up?

Again, the highest prize for best mower, horse-rake, tedder, or any of these great labor-saving implements, was five dollars; and

throughout the fruit, floral, vegetable and grain departments, and in that of domestic manufactures, merely nominal sums were offered. These, perhaps, are the same as other societies give. But I think a society that is willing to pay one thousand dollars for a horse trot, ought to give greater encouragement to exhibitors in all these important departments. One thousand dollars for a horse trot, five dollars for the best mower and thirty dollars for essays upon subjects of vital importance to farmers! Is this a fair, a just recognition of merit, talent or mechanical genius? The mower is the greatest blessing that mechanical ingenuity has lately given to farmers, and the price of all the trotting horses in a State would be no inducement to give them up. Five dollars to a trotting stallion and one thousand to the inventor of a mower or any other great labor-saving implement, would be a more just appreciation of what does really promote the welfare of the masses of farmers. Should money be the only inducement for writing an essay, the man so contemplating had better throw aside his pen, buy a fast horse and go in for the races. When the ladies see the trifling premiums offered for the works of their hands—the sum total being less than a horse jockey gets at a single race,—is it strange that they do not contribute more freely to these fairs?

Our agricultural literature abounds with discussions upon "Intellect in Farming," "The Superiority of Mind to mere Physical Power," but is it not working antagonistic to these well established truths when a higher premium is paid for physical than mental labor,—when a fast horse is valued higher than man himself. So long as horsemen receive the lion's share of the attention and premiums of our fairs, it is not strange that they assume consequential airs, and are inclined to snub cattle breeders and raisers of sheep and swine.

It is well known that the bulk of the money given to horsemen goes for racing, or, to speak more guardedly, trotting or trials of speed. The propriety of bestowing a society's income in this manner may well be questioned.

Passing by the effect as an amusement upon morals and the intellect, what are its consequences or benefits upon our horses? The aim of breeders of horses in this class is to obtain speed, for it is the fastest animal that wins the large premiums. Speed is cultivated to the exclusion of other qualities. In the days when a well mounted courier was the swiftest messenger, and hunting with horses was a favorite employment, there was a demand or necessity for breeding expressly for speed. But since the steam car and telegraph came into use, the real necessity for this description of horses has ceased; the mass of farmers do not want them; the community, as a whole, have no use for them.

The excitement caused by exhibiting at our

fair a few remarkable animals, and continually parading their feats and dwelling upon the money made by them, has caused many a man to attempt to produce likewise a fast steed, who, after all his care and expense, has seen his labors come to naught. With this one object in view, breeders have gone to an extreme, and are filling the country with stock horses said to be fast, when they were not needed. Had the enterprise been expended in producing horses of all work, roadsters and draught-horses, the capital would have been better invested, and greater and more lasting benefits would have been apparent, because there is a great and growing demand for horses of these classes. Plain farmers can breed animals of the latter description with some certainty of a remuneration. Great speed is, of all qualities, the least desirable to farmers; a rapid walk, ability to draw, are qualities that will always render a horse saleable.

There are too many dull, slow-walking, slightly built, and small horses in our markets. More time is lost daily by slow walking than has been gained by all the improvements in high speed.

Another point to be considered in connection with these trials of speed is the immediate effect upon the horses. Trotting inside of three minutes requires great exertion; few horses can do it without taxing their powers to the utmost. It is like loading a horse with the last pound he can draw, just to see him pull. Because a horse can draw two or three tons, it is no reason for putting that load upon him; and because a horse can trot a mile inside of 2.40, is it kind, merciful usage to put him to that test for amusement? Did these trials of speed serve to strengthen, prolong the life, or render a horse more useful, or give any positive benefit to spectators, then something might be said in their favor. They are simply putting a dumb animal to his utmost. Over-driving is the same as over-loading. Whether it is done upon a common road or under the auspices of an agricultural society, it is hazardous in the extreme, and such violent exertion tends directly to break down and shorten the days of the strongest constitution. Since this fashion for fast driving has prevailed,

many a promising colt has been injured, permanently injured, by the ambitious and vain hope of its owner to make a fast horse of it. The association that fosters this taste by yearly opening grounds to contests of mere speed, and bestows its highest premiums upon the fastest horses, sanctions fast driving anywhere.

Thus, in whatever aspect the subject is viewed, it is open to serious objections. The society that desires to promote the interests of farmers, is bound to respect the interests of all, and not let one class of exhibitors, or objects, monopolize the premiums, to the exclusion of others of equal and far greater importance. Those societies who choose to make a specialty of the horse, and let horsemen govern, should at least take another name than *agricultural*.

N. S. T.

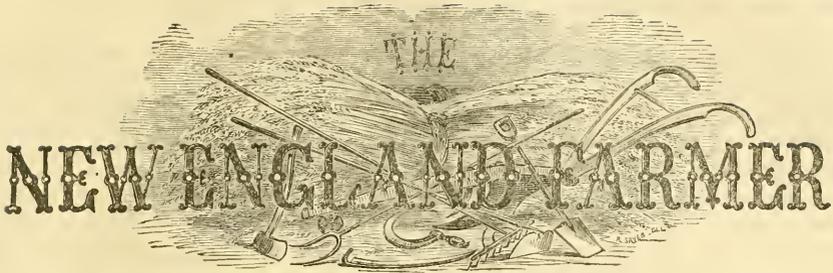
Lawrence, Mass., Aug. 25, 1870.

#### DO BEES GATHER OR MAKE HONEY?

I am decidedly of the opinion that they gather it and deposit it in the hive, without any modification whatever. There are few things we can say we *know* are not so; but it seems to me to be too late in the day for any one to maintain that honey is manufactured by the bees. As for their making honey from molasses, I will not say I *know* they never will, but I do know I never could induce them to use a particle of it, and I have tried numerous experiments with it. The foundation for the belief that they ever use it, probably lies in the fact that the bees will gather the sugar settled in the bottom of molasses casks, but observation will show that it is only the sugar. I never could detect them carrying off one drop of liquid molasses.

Likewise, I have satisfied myself that bees seldom visit more than one kind of blossom during one excursion; have known exceptions. There is no evidence, however, that, as is maintained by some, they are particular about storing each kind of honey by itself in the hive. One may discover cells of clover honey, discolored by buckwheat, which is neither pure clover or buckwheat.—*M. Quinby, in Rural New Yorker.*





# THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

## NOVEMBER.

"Low the leaves lie in the forest, on the damp earth,  
brown and chill;  
Gather near the evening shadows; Hark! the wind  
is sorrowing still.  
Vanished are the pine-crowned mountains, hidden in  
a dusky cloud;  
See the rain, it falleth even from the wan and dreary  
sky;  
Rusheth on the swollen streamlet, willy whirling,  
foaming by;  
And the branches, leafless, waving in the Fall wind,  
low are bowed."



**N**OVEMBER!  
the Month of  
Thanksgiving  
Days; the season  
of thanksgiving  
hearts. The crops  
are harvested and  
secured; and though  
drought, or other  
causes, may have  
cut some of them  
short, an abundance  
for all, man and  
beast, is left.

The terrible famines which occasionally cut off the people of other lands, will not probably be felt here. Our country is so widely extended, that some portion of it will always be blessed with abundant harvests. If drought, insects or storms prevent crops from maturing in this region, some

other in the wide domain of our sister States will have a surplus to spare.

In earlier times, this might not have availed us much; but now that the country is threaded with railroads and canals, transportation is so rapid and cheap, that one portion of the country can supply another and distant one with the necessities of life in a very short period. In this we are highly favored. It is one of the great securities against those terrible calamities which have occasionally taken place in other portions of the world. Three or four hundred years ago, the most grievous famines occurred in England, because the land was so wretchedly cultivated. Men, women and children perished of actual hunger by thousands; and those who survived kept themselves alive by eating the bark of trees, acorns, and pig-nuts.

A deficiency in a staple article here, has more than once been made up from the abundance at the West, and this change is always going on in this country.

The November work of nature is now going on. Heavy rains usually saturate the earth, fill up the ponds and streams, carrying with them not only moisture for the roots of plants, but treasuring up *warmth* for winter use. The observing farmer says:—"It will be a cold winter." Why? it is asked. Because little rain has fallen, the ponds and streams are low, and the winter will be a cold one. And so it would prove if the rain were with-

held. The full streams and ponds contain a certain amount of heat which is given off in the winter, and the weather is considerably modified by it.

But the rains not only do this; they also carry warmth to the soil, and various elements of fertility, which feed and stimulate the roots of plants, and prepare them for a vigorous spring growth.

November frosts are also as useful as the dews of June or the showers of July. They have their time of coming and their part to perform, and will not postpone them to another season.

All these operations in nature, ought to be suggestive to the farmer, that he, too, has various labors to perform in November, that ought not to be left for December.

The permanent improvements of the farm, the care of the animals which serve him, preservation of the fruits and other crops, which have been harvested, the security of buildings and cellars against storms and frosts, and the social interchanges between neighbors and relatives,—all require the attention of the farmer in November.

#### COLLEGE CATTLE.

At the fair at Amherst, the Massachusetts Agricultural College, as we learn by the *Amherst Record*, showed the following stock from its farm:—

*Short-horns.*—Bull, "Mountain Lad," bred by Augustus Whitman of Fitchburg, Mass., by "Red Star," 5107. Cow, "Young Acacia," bred by G. Munson of Huntingdon, by "Mameluke," 3114. Heifer, "Yarrico 57th," bred by Paoli Lathrop of South Hadley, by "Autoerat," 5334. And "Autumn Rose," bred by Phineas Stedman of Chicopee Falls.

*Ayrshires.*—Bull, "Colfax," bred by Collins, Collinsville, Conn., by "Robin Dame," "Lady Ellen," 123. Heifer, "Lulie," bred by Henry F. Hills, Amherst, out of "Tulip 4th," 799. Cow, "Emily 4th," bred by A. B. Conger of Rockland, N. Y.

*Devons.*—Bull, "General Lyon," bred by E. H. Hyde of Stafford, Conn. Cow, "Winona," bred by E. H. Hyde of Stafford, Conn. Calf, "Little Gen." bred by Massachusetts Agricultural College.

*Jerseys.*—Bull, "Gipsej," bred by the late Chas. G. Loring, Esq., of Beverly, from imported stock. Bull, "Enterprise," bred by James Thompson, late of Nantucket, but now of Worcester, Mass., by "Don Pedro," 16. Cow, "Lucy," bred by Henry Cobb of Amherst, by "General Grant" out of "Fanny."

There were also eight grade cows, twelve South-down sheep, a team of four horses and two oxen,

with a Chester white boar and sow, and four Suffolk grade shotes; also, specimens of corn and potatoes from the College farm.

**REMARKABLE EFFECT OF SUN HEAT.**—Fruit cooked upon the trees! During some of the last days of August, when the sun seemed to exert its greatest power upon this mundane sphere, tomatoes were taken from the vines, on one or two occasions, and brought directly to the table for use. On taking up one of them, it was thrown suddenly down because *it was so hot*, and was found uncomfortable so by several who tried it. But this was *cool* compared with what the *California Scientific Press* states took place out in that land of wonders. There, the fruit actually cooked upon the trees! Many of the grapes were fairly cooked upon the vines. Plums needed no stewing. The thermometer indicated 114 degrees in the coolest shade, but the birds did not drop dead from the trees from the effects of heat, as it is stated they did in Marysville, in 1858.

*For the New England Farmer.*

#### THE GARDEN FOR NOVEMBER.

During this month most of our preparations for winter should be completed; and the earlier in the month the better, usually, in our New England climate. If our suggestions have been followed, there will now remain but little fall work to be accomplished. Still it may be well to look around. There may be some late vegetables not yet gathered. See that they are secured at once. Those late cabbage,—are they to be stored in the cellar, or buried in the garden where they can be reached nicely without difficulty during winter? See that they are stored so that they will not become water-logged; nor the mice get at them, which will make sad work, if allowed to get among them. See that they have good ventilation, whether in the cellar or out doors. Ventilation is necessary for all vegetables wherever stored, and especially is this the case when in the cellar under our living apartments. An opening into the chimney in the cellar for the bad air to pass off at the top, is about the best arrangement for cellar ventilation. Guard the turnips, carrots, beets, celery, &c., against frost, mould, rot and excessive dryness. They are all much more relishable when kept as near as possible in the condition of freshness when first gathered from the ground.

If your garden soil is a heavy or clayey loam, it will well pay you to spade or plough it deeply, leaving it rough and ridged to throw off surface water, and to subject the stiff bottom soil to the action of the winter frosts. If a good dressing of manure is turned in at the same time it will tell in the better amendment of the soil, both as to its mechanical condition and fertility, in the future. The gardener on

such land, who is desirous of deepening his soil, and of having his garden dry and early in spring, will not fail to have it underdrained, as well as thrown into ridges in the autumn.

Are the bean poles, stakes for tomatoes, hot-bed frames, melon and cucumber boxes, &c., gathered and stored under cover? They will last enough longer to pay for such care and attention. The garden, too, looks slovenly, with its summer furniture lying around loose, and gives to the passer-by an impression that the proprietor cares little for his garden or is slovenly and negligent in his habits.

Is there a corner of your garden that is wet and has frequently troubled you at planting or other times? If so, it shows that there is need of underdraining, and now is just the time to do it advantageously. Vegetables, vines and fruit trees, can no more live and thrive with wet feet than you can preserve your own health with your feet constantly soaked in cold water. Perhaps you have often wished, and intended to drain it some time. Well, this fall is the best time you will ever have to do it. The ground is now clear of crops, and after the late, long, hot, dry summer, there should be little water to interfere with the operation. Cut the drain not less than three feet deep; secure a *good* outlet, as drains fail as often from a bad outlet as any other cause; lay good, well burned pipe and collar tile, not less than two inches bore, having a true descent from head to outlet, and cover all well before the ground freezes. If well and faithfully done it will yield you better satisfaction than any other job accomplished in the garden this summer.

How about the grape vines? Have you enough for a good supply for your family? Now is a good time to investigate the merits of different varieties, and to decide what ones you will add to your collection. Haven't got any! Then, just sell a dozen or two of eggs, from old "spec," and invest the proceeds early next spring in one Hartford Prolific, one Concord, one Delaware and one Iona. These will do to commence with, if your garden is not too far north or on too high a hill, and my word you will never regret the expenditure. Early this month is, perhaps, as good a time for pruning the vine as you will have. Later it is too cold to work with comfort, and besides, the vines will be frozen, when it is not good for them to be cut or handled. Most varieties are benefited by some winter protection, which can be applied with less trouble after being trimmed. The extent of pruning must be governed by the habit and vigor of growth of the vine; a rampant, long-growing variety will not bear as close or severe pruning as a less vigorous or short-jointed grower. Save cuttings, burying them in sand in the bottom of the cellar, if not too moist, for increasing stock if desirable.

I saw, as I passed your place the past summer, that you had a variety of roses, flower-

ing shrubs, vines, &c., which added greatly to the attractiveness of your place. Have you given them winter protection? We have had an unusually hot summer, and as 'tis said that "one extreme follows another," we may have an extremely cold winter. The hardy June roses bloom better if laid down and slightly covered. The Hybrid Perpetuals are not safe without some protection; the Bourbons, Noisettes and Chinas absolutely require it. Nearly all rare shrubs and herbaceous plants should have a few leaves or a handful of rubbish, that will not harbor mice, gathered around the crowns, with a little manure added. Newly planted shrubs, small trees—conifers in particular,—Rhododendrons, Kalmias, Azalias, &c., should have a few pine or cedar boughs tied around them, or stuck in among the branches, so as to pretty effectually shield them from the sun, as a bright sun in winter spoils the beauty of color in the leaves. Small hillocks of fresh soil thrown up around the stems of all freshly planted trees, shrubs, &c., are beneficial. No tall grass or weeds should be allowed to stand in the vicinity of trees, shrubs, &c., to furnish harbors for mice during winter.

**COLD FRAMES.**—Have you provided plenty, and room sufficient, for cabbage plants, cauliflowers, lettuce, radishes, &c., with good covering to lay over them during the coldest weather? Keep them open, except when there is danger of freezing. Secure some ventilation, even when most thoroughly covered; bank up the sides warmly. The extra covering to lay over the sashes may be anything most convenient to shut out cold,—leaves, blankets, straw, mats or wood-shutters.

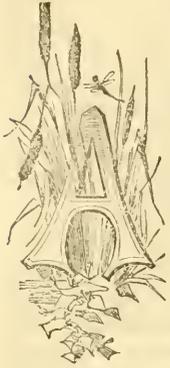
**STRAWBERRY BED.**—Pine or cedar boughs strewed over the plants make as good protection as can be desired. Give them some winter protection, for the hot dry summer has been a hard one on them. W. H. WHITE.

*South Windsor, Conn., 1870.*

**NEW CATTLE DISEASE.**—The Warren, Trumbull county *Chronicle* says that farmers and others in that section, complain of a new cattle disease having broken out, called black-leg. The flesh on the fore legs of the cattle gradually drops off, leaving the bone exposed. A gentleman from Lorain county tells us that the same disorder is prevailing to a considerable extent there, the fore legs of the animal swell to such an extent that the skin bursts, and the flesh drops off, having turned black. The same epidemic is also prevailing in Canada, opposite Detroit; some of the horses there have died with it. The conclusion of many who are familiar with the workings of the disease, attributes its cause to the bite of a peculiar kind of black fly. Some of the best veterinary surgeons are of the same opinion. Washing the parts with strong soap suds, and applying a coating of lard, fish-oil and sulphur, is given as a remedy.—*Ohio Farmer*

### CHEMICAL FERTILIZERS.

Can lands be made fertile without the application of barn-yard manure?



T the late meeting of the "Editors' and Publishers' Association," at Haverhill, at the farm of Dr. NICHOLS, who is a chemist as well as farmer, allusions were several times made to some of the growing crops then on the farm as having been produced *entirely without the aid of fermentative manure*. From an intimate acquaintance with Dr.

NICHOLS, and his reputation as a scientific and upright man, we have no doubt that his statements in regard to these crops are entirely trustworthy.

Hoping that Dr. NICHOLS will, at some future time, inform us of the processes he pursues *with his chemicals* in securing crops, let us at present look a little in detail at the matter, to see whether we, as farmers, have power to restore exhausted lands without the application of barn-yard manure.

Food which has been fed to stock, such as grass, hay, grain and vegetables, and passed through a state of combustion is now, and probably must continue to be, the principal source of fertilizing material on the farm. The question to be settled is, simply, Is there any way of restoring lands exhausted by long cropping, or of bringing lands into a state of fertility that never were cultivated, such as swamps, stiff, sterile clays or barren lands, without using materials from the barn-yard?

Dr. Nichols declares there is, and that he has fields which have produced fair crops for seven years in succession without fermentative manure; gardens filled with fruits, vegetables and flowers, and graperies whose luxuriant burdens vie with the vineyard products of ancient Escôl.

We cannot follow out the doctor's modes of fertilizing; that must be done by the chemist; the technical names of the articles used, the quantities, and time and manner of application, are not known by us.

By one process or another, we do believe, however, that all lands may be brought into a productive state; that He who created all things never intended that there should be

tracts so utterly lacking in recuperative power as to defy all the genius of man to raise them from their native poverty. We believe that blowing sands, even Arabian deserts, can be brought into fertile fields of waving grass and corn.

The question of *profit* in so doing would be decided by the *necessity* existing that such lands should be made productive. It was found *profitable* to pump out a lake in Holland and bring 40,000 acres into a high state of fertility, and to reclaim half a million of acres in Lincolnshire, once covered with coarse grasses, but now teeming with the finest wheat crops in England. Circumstances must decide for us whether we reclaim or not.

Many of our farms have a repulsive aspect, because certain pieces near the buildings are considered irreclaimable, and are left from age to age, the receptacle of cast-off things, unprofitable, sometimes unhealthy, and always a blemish upon the landscape. Or, it may be supposed that such lands, if reclaimed, would be at a cost which would not prove remunerative. That would depend upon circumstances. If the occupation of such lands saved travelling to remote parts of the farm to cultivate and bring home the harvests, it would justify a very considerable outlay per acre to reclaim them.

The first step in making lands productive without the aid of barn-yard manure, would be to drain them, wherever damage is needed. Then the atmosphere would commence the process of enriching at once.

The next step would be to attend to the physical or *mechanical* condition of the soil. What we mean by this is the texture of the soil, whether fine or coarse, compact or loose, heavy or light.

A soil must be *fine*, because the elements of nutrition are only available to the roots of plants in a liquid form. Those nutritious elements do not travel in the soil; they are stationary there, and remain inert and without value until acted upon by other agents. If the potash, for instance, that ought to be diffused through the soil of a rod of ground, were in a mass in the centre of that rod, it would have little influence toward bringing a good crop. The result would be similar, we think, in making bread. If the fermenting substance were placed in a single lump, it

might impart its influence in process of time, but that would be too uncertain to afford much comfort to those expecting a good loaf of bread the next morning. To be useful, it must permeate the whole mass, being intimately mingled with it. So it must be with the soil. If the nutritive substances are held in course, hard particles, roots will not be much more likely to approach them than a child would be to approach a loaf of bread as hard as a rock and as large as a barn.

When grains of soil are fine they are readily acted upon by whatever agents are required to dissolve their nutritive qualities into a form to be easily taken up by the roots of plants.

If this reasoning be correct, many fields possess all needed elements of fertility, but are unproductive, because these elements are not broken up and mingled with the soil.

#### KEEPING CIDER.

As there is a very large amount of cider now being made, it is of some consequence to keep it in good condition, so that to whatever use it is applied, it should be pure. There has been so little made for several years past that there is but a small amount of real cider vinegar to be found. Fifty to seventy-five cents per gallon is asked for good vinegar, and the probability is that most sold at those prices is made up of articles that ought never to be used as food, in any form.

Vinegar at eating houses, and some hotels, is not only not good, but is absolutely disgusting. In some cases it is thick and "ropy," and in others sickening to taste and smell, and must be extremely unwholesome.

In a late number of the *Knoxville Whig*, are some suggestions which may prove valuable to those who think that cider is a healthful drink. It is as follows:—

"Much of the excellence of cider depends upon the temperature at which the fermentation is conducted; a point too frequently overlooked by the manufacturers of this liquor. As soon as expressed from the fruit, it should be strained into sulphured casks and placed in a cool situation where the temperature does not exceed 50° Fah't—if left in the heating sun, much of the sugar is converted into vinegar by the absorption of atmospheric oxygen, and thus the liquor becomes acid and rough. On the contrary, if the fermentation be conducted at a low temperature, nearly the whole of the sugar is converted into alcohol and remains in the liquor, instead of undergoing the process of acidification.

The acetous fermentation or the conversion of alcohol into vinegar proceeds most rapidly at a temperature of ninety-five degrees Fahrenheit, and

at a lower temperature the action becomes slower, until at forty-six degrees Fahrenheit, no such change takes place. Independently of differences in the quality of the fruit, this is the principal cause of the superiority of the cider made by one person over another, living in the same neighborhood. The one has a cooler cellar or barn than the other to store his cider in. In practice it has been found that sour and rough apples produce the best cider. This arises because they contain less sugar and more malic acid, and the presence of the latter impedes the conversion of alcohol into vinegar; but cider made with such apples can never equal in quality that prepared at a low temperature from fruit abounding in sugar, which, if properly strained or racked at every indication of fermentation, will keep good twenty years.

One very common cause of bad cider is, that it is put into unclean barrels; barrels that have become musty, or tainted in some other form, by standing through the summer with one or two gallons of dregs left in them after drawing off the cider. These partially putrefy and become as disgusting as anything else that has passed into the putrefactive state. When the cask is once thoroughly tainted, it is very difficult to sweeten it again.

There is a process of checking the fermentation in cider so as to keep it sweet, which may be done as follows:—Take a strip of canvas or other thick cloth, about twelve inches long and two broad; dip it into melted brimstone; when dry, light it, and suspend it from the bung-hole of a cask, in which there are a few gallons of cider until the match is burnt out. The cask must be stopped for an hour or more then rolled to and fro to incorporate the fumes of the match with the cider; after which it may be filled. Sometimes this process is resorted to for the purpose of giving an additional flavor to the cider. To effect this, some powdered ginger, cloves, &c., may be strewed on the match when it is made. The burning of these ingredients with the sulphur will convey somewhat of their fragrance to the whole cask of cider. But this should be done as soon as the vinous fermentation is fully perfected. Should fermentation return, repeat the process. If a candle goes out on being held in the bung-hole, fermentation has commenced again, and carbonic acid is present.

—It is best to handle calves and colts as much as possible, pet them, lead them with a halter, and caress them in various ways. Young stock managed in this way will always be docile and suffer themselves to be approached and handled, both in the pastures and in the barn.

### ABOUT SEED WHEAT.

The Treadwell has been for a long time a favorite wheat with the farmers of Michigan. It is a mixed variety, some of the heads being bearded and some bald. It is inclined to produce very heavy straw, and is apt to lodge during a wet season. These objections have caused many farmers to give it up, and to sow other varieties. Soules wheat was much sown in Michigan, until it became so liable to the attacks of the midge or wheat-fly that it had to be given up. The Diehl is a bearded white wheat, having a very handsome plump berry. On good wheat soil, and with proper preparation, a large average yield may be expected. The head of the Diehl is shorter than that of most bearded varieties, and the straw is not liable to lodge.

The Tappahannock is a bearded white wheat, which was disseminated by the Agricultural Department of the Patent Office several years ago. It is an excellent variety, which is rapidly coming into favor. It is an early ripening wheat, which withstands the attacks of the fly, and is not liable to lodge. The straw is of a purplish color, somewhat resembling the Blue-stem. Some persons think that it really is the Blue-stem which has been raised in the Southern States for some time, thus causing its early maturity; but such is not the case. In growth the Tappahannock resembles the Soules, but it has less leaves, and on account of its not being liable to lodge it is adapted for seeding to clover and grass. This variety has turned out very well in Michigan for the last three or four seasons. The Diehl has also done well. The Treadwell is still raised extensively in many localities.—*Western Rural.*

*For the New England Farmer.*

### CEMENT CISTERNS, FILTERS, &c.

I hope it will not be inferred that I wish to detract aught from the excellence of Mr. Livermore's article upon this subject, in the *FARMER* of August 26, if I attempt to add a few suggestions, or strengthen the points already made.

And first, most people err in making their cisterns too small. The cost of making them one foot deeper or wider does not increase proportionately to the increase of room; that is, a cistern 8 by 9 costs but little more than one 6 by 7. The first size, and even larger, is not too capacious to supply the wants of a farm house.

Secondly, in locating, if the north side of the house is chosen, every part must be well down below the surface of the ground, or there will be trouble with the pipes when zero weather comes. Beneath a shed or an ell, frequently, is a good location. There is less danger from frost in these places, and often something may be saved in the length of the pipes. The worst location is in the cellar,

under the house. The evaporation from a large open cistern under rooms daily occupied by the family, cannot be conducive to health.

The plan of simply plastering to the earth does not answer in all cases. The soil that admits this must be dry, firm and compact. In a loose sand, newly made land, or very wet and spongy soil, a supporting wall is necessary, which may be stone or brick. I have cisterns with walls of each material. In making the first, small stones were used, and a wall one foot thick was laid in good lime mortar, with the inside thoroughly plastered with hydraulic cement. When bricks are used, a single course, or a four-inch wall is sufficient. The arch is turned by the eye, without a centre, while with stone, a centre is necessary. An experienced mason will lay a brick arch as rapidly as the wall. A good job with brick, requires a strong cement mortar,—one part pure sand and one part cement. The inside plastering should be of cement only. Considering the price of material and the greater amount of labor required to build of stone, I think brick are the cheapest. It requires but little cement mortar to lay up a single brick wall upon a large circle. The brick give an even surface, and a thin coat of plastering, if well laid on, is sufficient. This fact, with the labor, should be taken into account in estimating the relative cost of cisterns made of brick and those made by plastering on the earth. Where bricks and stone are plenty, they can be used without adding materially to the cost. When the work is thoroughly done, there can be no question of their great durability. The necessity of having a strong supporting wall for the sides, where, as in many villages and cities, all kinds of soils and situations are to be dealt with, is obvious.

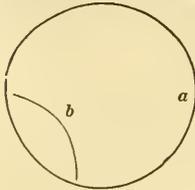
It frequently happens, in constructing large reservoirs and deep cisterns, for water for fires, &c., that springs are met, and the inflowing water is a hindrance to making them tight. They can be built safely and made tight in wet ground and near where water constantly comes in, but an inexperienced builder had better not attempt one in such a location. In such locations it will often be cheaper to make a more shallow one, in the form of a parallelogram, or to build two smaller ones—in either case keeping above the springs. Upon a farm there is greater choice in locations, and the top of cisterns can, in many cases, be made above the original surface of the ground, and a mound raised around it, to prevent freezing.

Where water is wanted for drinking, or when an extra nice job is desired, it is a good plan to coat the inside, after cementing, with silicate of soda. Two or three coats of this will give a smooth, glossy and very hard finish, which will at once prevent all taste of the cement. This is inexpensive, and in a liquid form is quickly put on with a common white-wash brush.

It is highly important that the inlet and

overflow or waste pipes should be of durable material, and be permanently put in. Of course these should be near the top of a cistern, and if possible, well underground, or at least laid with a good fall for the water, otherwise in winter the water from melting snow that runs slowly, will freeze and stop, if it does not burst the pipes. Three-inch glazed earthen pipes are used somewhat in this vicinity, and answer well, if protected from frost. Tin, zinc, and galvanized iron are also used. Cast iron, though costing most, is best of all. If a cistern is filled in December, the inlet pipe may be shut off during the three winter months, and all liability to freezing of pipes prevented.

No cistern is complete without a filter, for it is not sufficient that there be always an abundance of soft water, it should also be pure and sweet. The roofs of buildings have more or less dust and smoke upon them, and if pigeons are kept, filth accumulates rapidly. Among us the most approved method of purifying the water is by filtering or straining it



through brick, thus: let the circle, *a*, represent the inside of a cistern. A small compartment is partitioned upon one side, by laying, in cement, a single course of bricks, as represented by curve line, *b*. The bricks are laid

upon the narrow side or edge, and the cementing must be carefully and neatly done, that the joints may be perfectly tight, and no cement put upon the wide side of the brick. The quality should be soft brick, such as are of deep red color, or what are sometimes called light hard. Those too hard are too dense for water to pass through freely, while the softest crumble after a few years. The wall of the compartment should be built up close to the top of the cistern, making an airtight chamber. No dust nor insects can now get into it. A space equal to one or two barrels is sufficient, and about one hundred bricks will be required. Water passes through this amount of surface as fast as wanted for any ordinary use. This method of filtrating gives universal satisfaction, and for simplicity, cheapness, and efficiency, has not been surpassed. It is fast superceding the old and more complicated apparatus made of sand, charcoal, granite chips, sponges, &c.

It is assumed that no one building a cistern would fail to conduct the water to the sink, by a pipe, and have a good pump. In this cold climate the laying of this pipe requires particular attention. It should be well below the frost and without a sag, so that when the water is let down it will run entirely out, and not collect at any point and freeze. If that portion of pipe in the cellar is liable to freeze, it can be wound with woollen, or if it is a

straight piece it can be enclosed in a box and packed in saw dust. Of the many varieties of pumps offered to the public, a common, medium sized copper one is best.

An important adjunct of a cistern, is the means of having a suitable portion of the water constantly hot. In the farmer's kitchen a large quantity of hot water is daily used. The larger sized cook stoves are now provided with tanks to supply this want. If there is no tank, a smaller copper boiler can be procured at small expense. No extra fuel is required to heat it—the surplus or waste heat of a stove is utilized.

Another adjunct is a bath room. This has not been considered an essential part of a farm house. It is looked upon as a luxury beyond the reach of plain farmers. Now no class of society actually need to be in the habitual use of bathing more than farmers and out-door laborers who perspire freely and whose occupation keeps them so many hours in dust and dirt. The pure air and sunshine which they enjoy is not enough; the free and judicious use of water also promotes health and longevity. The time is coming when higher ideas of cleanliness, comfort and health will prevail, and bathing rooms will be as common in our ordinary houses, as they now are in the costly city homes.

In planning for a bath-room, facilities for heating the water to be used, must be considered. It is a mistake to suppose a house must be warmed with steam or a furnace to have a bath-room. Select a medium size room in which a stove can be used. It may be upon the first or second floor. A good position is frequently directly over the kitchen, as there piping will be saved, and the heat from the cook stove may be used. Put in the bath-tub with a waste pipe leading to the drain, and another pipe from the cistern, and attach a pump. A cheap stove and boiler will at the same time heat water and the room. With a short piece of gutta percha pipe attached to the pump, water can be sent directly to the boiler or bath-tub. The fuel requisite to heat up once or twice a week can scarcely be estimated on a farm. Or the room can be heated from the kitchen below, by a register, or by passing the funnel through the floor and into the chimney in the bath-room, while the water is heated below and brought up. A little ingenuity will make everything convenient and serviceable, and give the whole a neat appearance, and it will be as useful as if it were finished in costly wood and marble.

The entire expense of a cistern, filter, pipes, pump, tank or boiler, and furnishing a bath-room plainly, need not exceed one hundred dollars, and if part of the work can be done by any member of the family, it will be considerably less. What like investment will pay better? Surely no share in bank, railroad or city and State bonds. A short trial will reveal its intrinsic worth, and prove that an

abundance of pure, soft water, hot and cold, is not a luxury, but a necessity. N. S. T.

*Lawrence, Mass., Oct., 1870.*

*For the New England Farmer.*

### FILTER FOR CISTERNS.

BY B. LIVERMORE, RE. HYDRAULIC CEMENT WATER PIPE LAYER, HARTLAND, VT.

The common way of filtering water through charcoal, sand, &c., as it runs into the cistern from the eaves of the house, proves ineffectual.

Such a filter may arrest and separate some of the impurities in the water for a few gentle showers, but when a rapid flow of water is produced by a hard shower, a great share of these impurities will be carried through this filter into the cistern.

The true way to filter water is to have it pass slowly through a filter of such material as will allow nothing but water or liquid to penetrate it. Such a filter is made of brick. The bricks should be well burnt.—not so hard that water will not penetrate them, nor so soft that time will crumble them in water.

A filter which will contain a barrel or a barrel and a half, will be found of sufficient size for a common family.

To make this filter, first wet the brick, and lay up a filter, using a mortar made of clear cement, being careful to make the joints perfectly tight, and keep the face of the brick clean, because if bedaubed with cement, water will not penetrate them. The brick should be thoroughly saturated with water, as the cement mortar will immediately set on touching a dry brick, and make it impossible to lay a tight wall.

Make this filter at the bottom of your cistern with no outlet but the pipe which goes to the pump, and no inlet but through the body of the brick, and a small pipe which reaches above the water to admit air, as the water is drawn out of the filter.

About two pails of water will pass through the walls of such a filter in an hour. This with the barrel and a half of water which it contains is sufficient for common families washing days. A box 28 inches long, 16 deep, and 16½ wide, will contain a barrel. The filter may be made without the air pipe, but I think the water is better filtered with it.

The water as it passes from the eaves to the cistern, should go through a screen, to keep the leaves, &c., which lodge on the roof of the house from entering the cistern. This I make in the form of a box and place it near the ground where I can handily clean it out when it needs it. The bottom of this box is fine wire gauze.

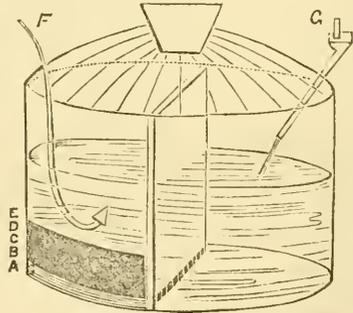
The box may hold about a pailful, and have a lid that may be easily opened to clean the screen. The conductor from the eaves to the cistern should be so fixed that the water may be prevented from running into the cistern

during the first part of a shower, after a long dry spell, and till the roof is washed from smoke and dust.

Such a cistern, so arranged, will afford far more wholesome water than is furnished many cities and villages from ponds and brooks, and conveyed through poisonous lead pipes, and the interest on the money invested in such a cistern will be less than the tax charged for pond and brook water.

*Pratt's Junction, Mass., 1870.*

REMARKS.—In consequence of the great trouble which many families have experienced the past dry season from the failure of their usual supply of water, we think the foregoing articles, as well as that by Mr. Livermore published some weeks since, will prove interesting to many of the readers of the FARMER, though in some particulars both writers give nearly the same directions. As the form and situation of the brick filter are not essential, each one may adopt such plan as his individual preferences may suggest.



Perhaps the annexed cut, which shows the old style of passing the water through charcoal and sand, at A B C D E, also a brick wall through the centre of the cistern, may illustrate the arrangement of pipes, &c., on the plans recommended by Mr. Livermore and N. S. T. G is the pipe for conducting the water from the roof to the cistern; and F shows the pipe for drawing out the filtered water, on the opposite side of the partition. Now suppose this partition removed, and the dark portion of the cut to represent one side of Mr. Livermore's brick box, or N. S. T.'s circular partition, the pipe F would enter that, instead of the water above, as is represented in the cut, and consequently there would be no need of the partition, or of the charcoal, &c., as the water for use would be drawn only from the inside of the filter.

## CHEAP AND DEAR LABOR.

We have been amused—to use a somewhat non-committal expression—by reading the discussion that has been going on of late in the agricultural and other papers printed at the North and the South, at the East and the West, on the labor question. We are old enough to remember the cheap labor of New England fifty years ago, and we are young enough to have had some experience with the dear labor of which there is just now so much said. Our “young idea” was taught by the winter schoolmaster at eight to twelve dollars a month, and by the summer schoolmistress at seventy-five cents a week. We recollect the engagement of a young married man with a neighboring farmer, for the alternate weeks of one season, at eight dollars per month for the time employed, payable in “neat stock in October or grain in January.” We have ourself done a man’s work at sixty-two-and-a-half cents a day. We have also witnessed, in the southern portion of the country, the culmination of perhaps the most magnificent and best contrived system of cheap labor known to modern times; and we have watched with equal interest the steady growth at the North of perhaps the most vigorous and perfect system of dear labor that was ever employed in shop or field.

Which system is most in accordance with the spirit of the times, with our “free and equal” institutions, with personal and general prosperity? We can hardly credit the testimony of our senses, that such a question should still be considered an open one in New England, and that the conductors of industrial papers north of the Mason and Dixon line should find themselves engaged in an argument in favor of cheap labor. We were no better prepared to find southern men, before the dust and smoke arising from the downfall of slavery has cleared away, distinctly announcing such principles as are stated in the following article from the *South Land*, an agricultural paper published at New Orleans, and edited by D. Redmond, Esq. We have taken the liberty to indicate by italics a few sentences which we regard as worthy of particular attention, as the expressions of a Southern man who has recently witnessed the destruction of the cheap labor, or “servanthood,” to which himself and his friends had been accustomed all their lives:—

## Disappearance of Servanthood.

In the literature of grumbling, the institution known in London and in some American cities as “servant-galism,” long since arrived at the dignity of a first-class nuisance; and one, withal, susceptible of slight mitigation indeed for a few of its victims, but for all of them a necessary and interminable evil by reason of its inextricable association with an indispensable element of good. But of late years contributors to this department of literature have had a fruitful and eloquent theme in a different aspect of the servant question. *It is the tendency of servanthood, in general, to disappear—that is now the matter.*

Students of what may be called the morphological development of history, must, of course, have observed that successive periods are distinguishable, not less as marks of a progressive transformation in the actual conditions of society, than as marks of a progressive transformation in the intellectual and moral conditions of the masses of men. Under this inexorable law of orderly mutation, the vast structure of feudalism,—massive but airy, inaristic but gloomily splendid, apparently irregular but really systematic,—has been crumbling for centuries. Piece by piece it has been disintegrating. A single part broken or displaced became a logical protest against the repose of some other part, which in due time underwent the same fate; and this sequence once established was the prophetic announcement of the final dissolution of the whole fabric.

Well, we are standing now very near to the utter accomplishment of this prophecy, amid the debris of the feudal system; a quaint and curious jumble, absurd and yet venerable, grotesquely incongruous with the new births of time, and yet not without its traces of poetry and romance; the fragments as it were of some magnificent dream which has lost its spell, or of some cloud-castle disarranged by a conspiracy of sunlight and heat, of wind and thunder.

When villainage and next vassalage disappeared, all forms of personal dependence and loyalty, and of hereditary privileges and disabilities were doomed. In the long procession of events which this implied, servanthood, in the old menial sense, was at length to be no more. *For without caste there can be no servanthood in that sense, and the same causes that have been sapping those two props of the ancient hierarchical system of Europe, the divine right of princes and the infallibility of theological dogma, have been also fatally at work upon the principle of caste.* The great trouble with those who repine and fret at the difficulties and perplexities of the servant question—a trouble of which they are for the most part, perhaps, wholly unconscious—is the evanescence of the servant element; or, to speak more philosophically, its transmutation into something no more like what it was than a butterfly is like a caterpillar, or a bull-frog is like a tadpole, or a mosquito is like a wiggletail. *They would do well to recognize this momentous fact at once; to cease vainly clutching at the past, but to look around in the present and forward into the future, with faculties keen to discern and quick to grasp every substantial compensation for loss, every golden opportunity for improvement.*

It is true that glowing hopes have been kindled in many households, that the advent of the industrious, docile, deferential, supple and practical Chinese Mongolian, will furnish material for re-establishing the old-time institution of servanthood. But, in our candid opinion, they are counting the chickens that will never be hatched—that were never in the shell perhaps. In the first place, Chinese immigrants stick together in gangs for purposes of co-operation and self-protection in a strange land, among a strange people. It will be

a long time before they deviate from this rule of cohesion. They will only begin to disperse in a manner to render them available as domestic servants after they have become familiar with the *prevailing genius of the country, an essential part of which genius is an invincible antagonism to servanthood of the primitive menial sort*. They cannot but imbibe in a large measure the spirit of this antagonism. It will be in the air which they breathe. It will be one with the spirit of the age, which is not to be successfully resisted or circumvented or evaded—which is, in a word, the autocrat of the age.

People, then, who have vexed their heads over the servant question, had better at once remit it to the limbo of obsolete problems. *Let them reconcile themselves as well as they may to the idea of buying a certain kind of household labor, a certain kind of personal help, as they would buy any other sort of merchandise, giving them no claims whatever to general obedience and deference from the persons selling*. In so far as they want service in those kinds beyond what they can buy on these terms, they must be their own servants or go without it. Let them prepare their minds, train their faculties, and adapt their habits accordingly.—*The South Land, edited by D. Redmond.*

Some of the views expressed in the article above quoted remind us so forcibly of those advanced by M. De Tocqueville, in his "Democracy in America," that we cannot refrain from making a single extract from that work, which it will be remembered was written nearly forty years ago. Our extract relates to the antiquity of what the *South Land* denominates "the tendency of servanthood, in general, to disappear." Some of the manifestations of this tendency, as seen in the history of France during the past seven hundred years, are thus strikingly presented by this celebrated and philosophical writer:—

Let us recollect the situation of France seven hundred years ago, when the territory was divided among a small number of families, who were owners of the soil and rulers of the inhabitants; the right of governing descended with the family inheritance from generation to generation; force was the only means by which man could act on man; and landed property was the sole source of power. \* \* \*

If we examine what has happened in France at intervals of fifty years, beginning with the eleventh century, we shall invariably perceive that a twofold revolution has taken place in the state of society. The noble has gone down on the social ladder, and the *roturier* has gone up; the one descends as the other rises. Every half century brings them nearer to each other, and they will very shortly meet.

Nor is this phenomenon at all peculiar to France. Whithersoever we turn our eyes, we shall discover the same continual revolution throughout the whole of Christendom.

The various occurrences of national existence have everywhere turned to the advantage of democracy; all men have aided it by their exertions; those who have intentionally labored in its cause, and those who have served it unwittingly—those who have fought for it, and those who have declared themselves its opponents—have all been driven along in the same track, have all labored to one end, some ignorantly and some unwittingly;

all have been blind instruments in the hands of God.

The gradual development of the equality of conditions is, therefore, a providential fact, and it possesses all the characteristics of a divine decree: it is universal, it is durable, it constantly eludes all human interference, and all events as well as all men contribute to its progress.

In several of our Northern papers we have seen utterances which appear to us to be strangely in contrast with these views. That the reader may judge for himself we give, as samples of much that has appeared in these papers, the following extracts of editorial articles recently published in the *Prairie Farmer*, of Chicago, Ill., and in the *Daily Journal*, of Boston. From want of space we are obliged to omit most of the elaboration of the points quoted, but we have aimed to do as full justice to the writers of each of these articles as is possible without quoting them in full:—

It is admitted by all that the great obstacle that stands in the way of development of the resources of this country is the scarcity of labor, and as a consequence, its high price. \* \* \* Statisticians tell us that over a million of dollars a day goes from the United States to purchase goods that are manufactured by means of cheap labor of foreign countries.

No persons, as a class, are suffering so much from the scarcity and high price of labor as are the farmers of the West and South. \* \* \* Much of our wheat finds its way to Liverpool, where it is put into the market along with the products of Russia, where harvesters can be employed for a week for less money than they can be hired here for a single day.

As a rule, there are very few of our native-born citizens who wish for employment as hired laborers on a farm. Ordinarily they can find occupations more remunerative and better adapted to their tastes. Without disparagement to the European foreigners amongst us, it must be said that they are, for the most part, seeking homes for themselves, and only wish to engage temporarily as hired laborers on the farm. \* \* \*

Where then are we to look for *cheap* and abundant labor, if not to that ancient extinct, the number and industry of whose population are the wonder of the world? *Here are a people ready and willing to become "hewers of wood and drawers of water,"* if thereby they can earn a sum which would not tempt the European, much less the American laborer, to engage in the most desirable business occupation.—*Prairie Farmer.*

The time was—say twenty-five or thirty years ago—when a race existed known as family servants. This race has become extinct. \* \* \* The wealthy classes in the large cities have done much to demoralize servants by paying large wages and demanding very small returns. The middling classes are obliged to pay higher for this class of labor, because their more wealthy neighbors have, out of their abundance, established a tariff which regulates the market price. The rich in this way inflict a positive evil upon society, and they are, we think, responsible in a large degree for this domestic evil.—*Boston Journal.*

We have not a word to say, at present, on the Chinese question. The emigrants from

that ancient empire may, or they may not, be "ready and willing to become hewers of wood and drawers of water;" they may, or they may not, re-establish the "extinct race of family servants;" they may, or they may not, furnish that "cheap and abundant labor" alluded to in the foregoing extracts.

We are discussing a broader question, one which involves the expediency of cheap labor in any form.

What does cheap labor imply?

We do not ask what those mean who demand cheap labor. We impute no wrong motives to them. The desire to buy cheap and sell dear is universal with business men. A large share of the farmer's crops goes to pay the hired man; a sad inroad is made on the income of the family by the expense of domestic help; and by their demand for cheaper help, the farmer and the householder mean no more than do city and village consumers when they demand cheaper meat, cheaper flour, cheaper butter, cheaper clothing, &c., &c. Each and all, as the world goes, have the right to buy and to hire as cheaply as possible; and, after all their bantering, we would by no means deprive them of the poor privilege of grumbling and fretting because they cannot buy or hire cheaper. But all this does not by any means answer our question, What does cheap labor imply?

When we remember that, as Bancroft says, "Slavery and the slave-trade are older than the records of human society," and that in all nations of antiquity slavery or vassalage was the common condition of the laborer; and then, as we trace the gradual improvement that has taken place in his condition and wages since the advent of Christianity; as we see how steadily the social revolution has advanced during these centuries, and amid all the vicissitudes of national life, and in spite of all obstacles, even those recently interposed by the friends of "cheap labor" in the southern portion of our own country,—we are forced to the conclusion that the demand for cheap labor implies something more than is intended by our respected contemporaries by whom it is made.

Our own views of its import have already been intimated. We believe that cheap labor can be secured only by restoring old-time serfdom in some of its various forms; for we

regard the advance in wages to be a necessary result of the increasing equality in social conditions—one of the consequences of the recognition of the principle that "a man is a man, for all that."

In this view of the subject the demand for cheap labor appears to us to be opposed to the spirit and tendency of our "American institutions," and particularly to the Northern idea of "free soil and free men." It is also opposed to that long procession of events which are alluded to by De Tocqueville, and which in another part of his work he says has impressed him with "a kind of religious dread." Can this "irresistible revolution, which has advanced for centuries in spite of such amazing obstacles, and which is still proceeding in the midst of the ruins it has made," be turned back, and the free labor of our Northern fields, shops and households, be supplanted by that of any "people ready to become hewers of wood and drawers of water?"

If it were possible, is it desirable that such a class, or caste, should be introduced among us? Should we make a more profitable use of cheap labor, if obtained, than did the planters of the South? Has not cheap labor proved a curse to employers and employed in all places and at all times? These are some of the questions which we proposed at the outset to discuss, but the length of this article admonishes us that this must be postponed to another time. And for the same reason we can barely express our dissent from the remark in the extract from the *Prairie Farmer*, that, "as a rule there are very few of our native-born citizens who wish for employment as hired laborers on a farm." In proportion to the whole number, there may be less now than formerly; still there are by far too many young men who depend on the earnings of a few years' labor for a start in life as farmers, to be thus summarily disposed of by the advocates of "cheap labor." The boys have rights; and this class of laborers, as well as the employers, have claims on the agricultural press which cannot be ignored, at least, not by the *NEW ENGLAND FARMER*.

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—It is stated that a fat bullock, driven to market over ordinarily level roads, rested nights, and well fed three times a day, loses eight pounds per day, where the journey extends over a number of days.

## EXTRACTS AND REPLIES.

## BAD HABIT IN A COW.

I have a three-year-old heifer which dropped her calf the middle of June. She did well apparently, and is in good order. But when I go to milk she will urinate, and moans continually as for her calf. Is it a habit, or a disease? and can you give any remedy?

I have read many cures for kicking cows. All dumb creatures should be handled when young, and with kindness. If you cannot govern your own temper you need not try to control that of dumb brutes. If my cow is fractious or addicted to kicking without cause, I grip the gambrel cord firmly with my left hand, and milk with my right, showing her I am perfect master, but coaxing her gently at the same time; and I never had to repeat it more than twice.

## CABBAGE WORMS.

How can I save my cabbage from large green worms? They go into the head and eat it out. I have tried black pepper, salt, and air-slacked lime without any effect.

## CHEAP STUMP PULLER.

Can any reader of the FARMER give a plan for a cheap stump lifter? Patent ones are too expensive. J. C. MILLER.

Fort Kent, Me., Aug. 18, 1870.

REMARKS.—If the udder is in good order, so that it is not painful to her when milked, we can see no reason why she should be troubled. Perhaps the mode which you prescribe above for curing kicking cows will overcome the unpleasant habit of the heifer. Feed her while milking with a little nice hay or grain, which may divert her attention and aid in overcoming what may possibly be more of a habit than a disorder.

A frequent examination of the cabbages, and destruction of the worms by hand, will probably, alone save the crop.

We gave an account of a cheap stump puller in the FARMER a few weeks ago.

## DANGEROUS WATER PIPES.

I saw an article in your paper cautioning the public against the use of galvanized iron water pipes. As I am about to purchase some for a cistern, I would like to inquire what is the best, cheapest, and most durable pipe for water supply. North Haven, Me., 1870. A SUBSCRIBER.

REMARKS.—Dr. Nichols, Editor of the *Boston Journal of Chemistry*, says that an iron pipe is more safe than a galvanized iron pipe. We have used wood with great success, even where there were two or three turns at perfect right angles, and should always use it in preference to any metal pipe, where it was practicable.

## FEEDING AND BREEDING SWINE.

Which is the most profitable in fattening hogs, to boil corn with potatoes and pumpkins, and feed to them, or carry the corn five miles to mill, and get it ground into meal, and lose the toll, and time of doing it? Which will hogs do the best on, to feed them three times a day, or give the same amount, twice each day? I have only fed twice a day, this season, and think they never did better. I have a Chester County boar, twelve weeks old, that weighs one hundred pounds. Would like to

buy a sow pig, to keep for breeder. What would be best to cross with him? A SUBSCRIBER.  
Northfield, Vt., Aug. 15, 1870.

REMARKS.—If fuel is cheap, boil the corn, potatoes and pumpkins, feed it out, and note whether any portion of the corn passes in an undigested condition. If it does, to some extent, it will probably be better to get it ground. Quite likely it will all be digested.

To form an excellent breed, procure the hand-somest sow you can find, and let her run with the boar. If the progeny is good, select the best and go on again, to perfection.

## EFFECT OF FODDER CORN ON MILCH COWS.

Previous to feeding corn-stalk fodder corn to his cows, by Mr. W. L. Locke, Jr., of this town, they filled 45 pans with milk; after he commenced feeding them with the fodder corn the same cows filled 51 pans equally as full, and the cream had a better color. Z. E. J.

Irasburg, Aug. 30, 1870.

REMARKS.—To the foregoing statement we may add the following dialogue between the editor of the *Maine Farmer* and a dairyman in the vicinity of Augusta:—

“Do you feed your cows?” we ask.

“Yes,” is the reply; “I have fed them for nearly two weeks, ten days certainly. I give them fodder corn, and feed my working oxen as good hay as I have in the barn.”

“What was the effect of feeding fodder corn to your cows?” we inquire.

“It increased the flow of milk at once, which for a week kept much above what it had been on pasture feed. Now, getting no feed in the pasture and feeding them almost exclusively on fodder corn (which is this year far less succulent than usual) I find that they just about hold their own. Cows that are not fed fodder corn have shrunk fully one-half in the quantity of milk produced.”

## HOW TO LAY A STONE DRAIN.

Having frequently seen inquiries about laying underground stone drains, and having had some experience in the work, I will endeavor to give an idea of the way I do it. The ditch should be at least one foot wide at bottom, and wider if large stones are used. The earth should be thrown out on one side only of the ditch, and the stones hauled to the other side. The man who lays the drain must stand in the ditch, and another man on the ground to pass him the stones to be laid. Now take a stone, say four inches deep, or wide, and of less thickness, and set it on edge against the left bank of the ditch, putting the thinnest edge down, and placing it so it will fall over if you do not hold it up, then with the other hand set a similar stone in a similar way on the right-hand side, and let the upper edges of these two stones come together over the centre of the water-course, and you have an arch, or space, in this A form. Place other stones in the same manner, till you have an arm's length or so of this roof, as it may be called, then place other stones against the banks over these, and clink up the whole distance, being careful to make all tight, and not lay any stone so that it can fall through into the water-course. Do not throw on loose stones till you get those thus laid all solid. A drain thus laid will never give out if the ground is hard, nor will it gully. After a man gets his hand in, he will lay a good long piece in a day.

Where the drain is made by laying stones on

each side of the ditch, and then others laid on to them and across the water-course, it is necessary that the side stones be of pretty uniform size, and the top stones must be of good length, and of tolerably even width. But in the plan I recommend, stones of almost any shape can be used. When I first began to make ditches in this way, I thought it necessary to cover the stones with brush, but with a little practice I was able to clink up the arch so tight that I dispensed with the brush altogether. In filling up, I throw on at first some of the coarsest stuff I can get, and tramp it well when the ditch is partly filled. With well shaped and tolerably flat stones, a larger outlet can be made in this way than in any other.

R. DAVIS.  
*Troy, Vt., Aug. 25, 1870.*

#### FOWL MEADOW GRASS FOR WET LAND.

I have a piece of flat swamp land that is made quite wet in the spring and fall by water from the surrounding hills. It is not well adapted to tillage, and I would like to increase the grass crop. Will some one who knows about fowl meadow grass inform me whether it would be likely to do well on such land, and of the best time to sow the seed; also whether it would be better to mix some redtop with the fowl meadow.

JOHN SMITH.  
*Newbury, Vt., Aug. 15, 1870.*

REMARKS.—The land you describe is we think well suited to fowl meadow grass. It flourishes on the borders of streams and meadows that are only occasionally overflowed, and where the water stands but a short time. Fowl meadow grass grows tall and thick and makes a soft and pliable hay, which is highly relished by most stock. It is a good plan to allow the grass on some portion of the meadow to go to seed, as it will perpetuate the crop indefinitely. We have never sown the seed, but think it would be properly done in September or in the spring. It thrives best when mixed with other grasses.

#### CRANBERRIES.

I have a piece of land so near a river that it can not be flowed, in which the muck is from one to four feet deep. Can cranberries be raised on such land? If so, how shall I proceed to fit the land, and to introduce the cranberries? Shall I sow the seed or transplant the vines; and in either case how near together must they be put, and at what time of year should the work be done? Though this is the first time I ever attempted to write even a question for a paper, perhaps you will be able to understand what I wish to know.

J. T. R.  
*West Paris, Me., Sept., 1870.*

REMARKS.—The regular cranberry growers regard winter flowage as essential to the most successful cranberry patch. Still many cranberries grow on the margins of streams which cannot be flowed at pleasure. In your case, and with your inexperience, we should advise you to try a small patch, say two or three square rods, by way of experiment. O. Judd & Co. have recently published a book on the Cranberry, at \$1 25, which gives in detail all the processes of cultivation and management, with the experience of individual cultivators. The essential directions seem to be the following:—

1. The soil, subsoil or bottom, must be peat or peaty matter. This you have.

2. There should be no cold springs, but a head of water, so that the bog may be quickly flowed at all times. This you have not, but perhaps it is flowed in the winter.

3. The turf or top soil of roots, grass, &c., must be removed down to the peat. This will make a good material for compost on high land.

4. Ditches must be made so that the water can be drained at least twelve inches below the surface during the growing season; especially the cold water from the borders must be drawn off.

5. Cover the surface of the peat, after the soil is removed, from three to twelve inches deep, as to depth of muck, with sand that contains no loam, nor grass or weed seeds,—such as will not adhere when pressed in the hand.

Set vines in hills or rows two feet apart. Spring is the best time for setting vines.

#### AGRICULTURE, MANUFACTURES, &C., IN GEORGIA.

Last week I sent you some papers and documents, and now send you a few more, by which you will see that there are few if any States in the Union taking more interest in the cultivation and improvement of the soil, than Georgia.

You will see our County Fair comes off the 4th, 5th and 6th of October, at Cartersville.

There will be a grand State Fair at Atlanta, on the 19th to 26th of October. Immense preparations are being made.

The National Agricultural Congress will assemble at Augusta, Ga., on the 27th of October.

Besides these, there will be a number of others in various parts of the State, which fact exhibits a spirit of life and activity hitherto unknown.

You will also see by Gov. Bullock's message to the State Legislature, by the constitution adopted, and the resolutions passed by the Atlanta Convention, that the State is wide awake to the subject.

There are at least four periodicals in the State devoted almost exclusively to agriculture, and quite a number of the country weekly papers that keep a standing department in their columns on the same subject. So you see we have more than a supply in number, but they will soon be pruned up and thinned out to a proper stand, and then we may expect the best results.

Georgia will, I believe, become self-sustaining in the way of her provision supplies, to the saving of many millions annually. She will before long *save and make* her own fertilizers, to the saving of many millions more. She has long been manufacturing a portion of her cotton. This industry will continue to increase more and more until she will be able to supply her own demands, as she has immense water-power idle.

The new railroad running South from here is bringing its rails I am told from New Jersey. The time is coming when this county will be able to supply the whole State with railroad iron, although there are only two or three works now in operation. Before and during the war, there were nine in a diameter of eight miles. She will also before long make a large proportion of her agricultural implements.

You may well believe that Georgia possesses the enterprize, energy, and skill, as well as the resources, to enable her to become one of the leading States in all that constitutes true greatness in a State.

J. H. R.  
*Cartersville, Georgia, Aug. 31, 1870.*

REMARKS.—We alluded last week to the Agricultural Congress mentioned by our respected

correspondent, and we notice by the Governor's Message, that in addition to the payment by the State of an unclaimed appropriation of \$2500 a year, due for ten years, an appropriation of \$10,000 annually for the future use of the Society is recommended, and that the publication of the Transactions be made by the Society, instead of a government official.

In one of the documents sent by "J. H. R." we notice an article by Col. George N. Lester, Commissioner of Land and Immigration, in which it is said, "the statement that the present settlers do not want Northern men to come among them and settle, has no foundation in fact. They do not want men to come among them who make politics business, but all laborers, farmers and mechanics, will be welcomed and kindly received."

We thank our correspondent for his kind attentions and hope to hear from him often.

#### BLOODY MILK.

One of my cows, a five-year old, has for some time given from one teat bloody milk; not every day, but occasionally. Can you suggest the cause, or cure, if any, of this complaint? She is a good cow, and I do not relish the idea of losing her.

*Fitchburg, Mass., Aug. 29, 1870.* G. B. W.

REMARKS.—The trouble with your cow is probably what is generally known as garget. It may, however, result from some injury. About as many remedies for this disease have been recommended as there are cures for colds or warts. Poke root fed with potatoes is an old prescription. Half a pint of beans once or twice a day is another. Some think tomatoes are good. We have given, with apparent benefit, twenty grains of Iodide of Potash three times a day, in the cow's drink. One ounce will make twenty-four such doses.

#### DISEASED LUNGS OF AN OX.

Saturday evening, about 7 o'clock, August 20, I saw my oxen—a good pair—in the pasture, apparently well, and for aught I knew perfectly healthy. On Sunday morning I found one of them dead. I skinned him, and on opening him I found the heart of an unnaturally small size and very black, and with very little blood in it. One lung was a great deal smaller than the other, and very much inflamed. The other lung appeared healthy, as did also all the other parts of the ox. I wish to know your opinion of the cause of the sudden death of my ox; whether the disease is likely to spread, and what can be done in case my other cattle are attacked. M. F. P.

*Stratton, Vt., Sept. 1, 1870.*

REMARKS.—We can hardly give a guess as to the cause of this sudden death, nor suggest any remedy in case other cattle are attacked. Inflammation of the lungs of cattle, as well as of men, occasionally occur, perhaps oftener than is generally supposed, but death in such cases seldom takes place without previous signs of illness. Possibly you might have overlooked those signs, and your ox may have been affected longer than you were aware of. In cases of pleuro-pneumonia the diseased lung is enlarged, and generally adhe-

rent to the diaphragm, and the heart and other organs are usually unaffected. This disease is generally considered contagious. A few years ago Massachusetts lost about one thousand cattle from this disease. In all cases of death of animals from diseased lungs, we think it is advisable for farmers to secure an examination by some physician, in neighborhoods in which there is no educated veterinary surgeon. Cattle are far more valuable than formerly, and the presence of a contagious lung disease in a herd is a serious matter. We are, however, inclined to the opinion that in this case the immediate cause of death was some disorder in the heart, possibly brought on by want of ventilation in the stable in which he had been kept at some time in his life.

#### IMPROVED IMPERIAL SUGAR BEET.

Several weeks since you invited me to give, through the columns of your paper, my method of cultivating the Imperial beet. I have also received several letters of inquiry in regard to it. I will therefore now comply with your request. Although the subject may seem somewhat out of season for this year, it is just in time for those who may wish to prepare ground this fall for early sowing in the spring.

We first procured our seed of the Hon. Rollin Lane, of Cornwall, Vt., some three years ago.—Since that time we have cultivated this variety in preference to all others, first, on account of the large yield per acre; secondly, from the absence of lateral roots, which renders it more readily cleaned for use; and thirdly, because it grows for the most part above the ground, and therefore is much more easily harvested than the old variety. The yield varies in different localities and under different cultivation, from eight to sixteen hundred bushels per acre. Beets flourish best on rich, moist sandy or gravelly loam. But the amount of production depends largely on the proper preparation of the soil, and on clean and thorough cultivation. Opinions differ in regard to the amount of manure per acre, also in regard to the best method of its application. It may, however, be safely affirmed that there is not the slightest danger of getting the soil in too high a state of cultivation for a maximum crop.

We prefer applying the manure on the surface and harrowing it under, as it becomes more thoroughly mixed with the soil when "ridging" than if ploughed under. We presume the practice of "ridging" is understood by most farmers, but for the benefit of those not accustomed to its practice, I will say that turning two furrows up together is not satisfactory. It is better to pass through the field with a plough, throwing up a wide, deep furrow; in returning let your horse walk on the furrow, taking such part of it as you wish, and you have a nice mellow ridge, with the manure thoroughly mixed with the soil, and the lumps, if any, in the furrow between the ridges. Then with a light harrow or garden rake level the ridge to within two inches of the general surface, and you are ready for the seed, of which about two pounds per acre are required.

As to the time of sowing, I find, on referring to our farm book, that our present crop was sown May 20th, which is as late as it should be sown. The fact is, the earlier the better, if the soil is sufficiently warm to render the seed safe from rotting. Sow in ridges two feet apart, and when the plants are four inches high thin to one foot apart in the row. Hoe often, keep the weeds back and give the beets the advantage, and with a favorable sea-

son you will be rewarded for your labor with a good crop of beets.

In harvesting, which should be done before the ground freezes, pile the tops in small heaps, and when the frost has killed other soiling crops, they will be found excellent food for milch cows or for fattening cattle.

I hope the subject of raising roots for both summer and winter feeding of stock will be discussed in agricultural papers and by farmers' clubs and agricultural societies, and that farmers will be encouraged to extend their cultivation.

Brookfield, Vt., Aug. 25, 1870. C. B. FISK.

#### SEASON IN WASHINGTON COUNTY, VT.—BEARS.

We have experienced the hottest and driest season within my recollection, which runneth back more than forty years. Saturday night, Sept. 3, we enjoyed the first rainstorm that has fallen since our crops were put in the ground. Still I suppose we have not suffered so much from drought here among the mountains as some other places have, for we have had occasional showers, so that all our crops have matured, some of them being a little short. Just here, the hay crop was fair, and secured in excellent condition. Oats good, unless on the driest land. I harvested my surprise oats in 77 days from the sowing, and my corn in 90 days from planting; but both corn and oats were on land that suffered from the drought, but not so much but the crops were fair. Some pieces of potatoes are good, but the general crop will be a little short. I see that you speak of Early Rose weighing 1 pound 10 ounces. We have grown them weighing 2 pounds 10 ounces here. The grasshoppers have eaten most of the fall feed as fast as it grew, but their teeth are getting poor now, and the refreshing rain of Saturday night will probably give us some feed yet and may help late potatoes, as there has not been frost enough to kill the tops yet. Bears have been killing sheep on our mountains recently, and yesterday Mr. Albert S. Pike shot one that girthed six feet and measured seven feet in length, but they had no conveniences for weighing it. This morning a neighbor caught a smaller one in a trap.

Roxbury, Vt., Sept. 7, 1870. W. I. SIMONDS.

#### CORN HARVEST.

Many farmers in this vicinity husk most of their corn in the field, and regard it as the easiest and cheapest way of harvesting the crop.

A bench, sixteen or eighteen inches in height, is made of a plank or slab six or eight feet long, by boring holes, and putting in four long legs. This is easily moved about the field. Lay the corn across this bench, place the basket at the bottom of the bundle, and sit astride the bench. This arrangement brings everything handy, and a smart man will husk and put in a cart from 25 to 40 bushels in a day, by daylight. It can be unloaded in the evening, which is safer than husking by lantern-light. When the bundles are husked set up the fodder as you would shock grain, putting in ten to twenty bundles, and throw the scatterings, and three or four bundles on top for a "cap" to keep out the rain. Fodder put up in this way will keep out till snow comes, if you wish it, without injury. It will dry off nicely and not heat and mould in the mow.

You can husk and crib up your corn early, when the weather is warm, leaving the fodder to cure in the field, and when you cart it put it where you wish it to remain. This saves on the handling. Pitting heavy stooks of corn on and off a cart is very hard work, the bundles are liable to be torn to pieces in the process, and the fodder, if packed in any considerable quantity, is liable to heat, and be very badly damaged.

Nearly all the corn in this vicinity was cut in the month of August, and many are already engaged in husking it.

J. R. W.

Springfield, Vt., Sept. 5, 1870.

#### IMPORTATION OF ENGLISH STOCK.

Mr. M. H. Cochran, of Compton, Canada, has been in England this season buying stock at prices which have surprised even Johnny Bull himself. A few hundred guineas, more or less, seem to have been a small consideration with him when balanced with the merit of an animal. The English papers give the details of his purchases. They state that the aggregate cost of his purchases amount to about \$75,000 in gold. At Wetherby Grange he purchased Duchess 101 for 1500 guineas, and Duchess 103 for 1125 guineas. At Warlaby he bought Lady Grateful for 1500 guineas; and Mabel and bull calf for 900 guineas, &c. It is said that these cows for which he paid 1500 guineas must cost him over \$8000 at his farm in Canada.

On the sixteenth of August a portion of this stock arrived in Canada, consisting of 34 Short-horns; 4 Jerseys; a large lot of Cotswolds; 30 Berkshire swine, some of which were from Her Majesty's Shaw farm; Yorkshire and Suffolk pigs, and a very fine hunter mare. A correspondent of the *Country Gentleman* says:—

We saw the new comers the day of their arrival, many of them fearfully bruised and stiffened by the severe storm encountered on the passage. The hunter and a few pigs and sheep were killed outright, and some of the heifers are in a bad way, but may recover. Mr. C. left behind four of his choice ones, including Lady Grateful and Royal Commander from the Warlaby herd, not caring to risk all his gems in one boat. A few came over in good shape.

Booth's Marksman, a roan, 11 months, seems lively and is a promising young bull, very stylish, with good head, straight top, and of as good points as the average of calves of his age. He is of the same family as the beautiful cow, Star of Braithwait, imported in 1868. Col. King, of Minnesota, bought Booth's Marksman the morning after his arrival.

Old Sam is a red, two years, somewhat plain in his horns, but stylish, with level top and bottom lines, very round ribs; few judges of short-horns will find any fault with this animal that time and care will not mend.

Scotsman (27,435) is a roan, calved February 27, 1868; bred by the Duke of Buccleuch, Dalkeith Park, Edinburgh; got by Royal Errant, 22780. He won first prizes as a yearling, at the Royal Northern Society and at the Morayshire Club Shows, also at the Highland Society's Meeting at Edinburgh, 1869; and as a two year old he won the first prizes at the Meeting of the Royal Agricultural Society of England at Oxford, and at the Highland Society's Show at Dumfries, 1870. Capt. Balco, the sire of Scotsman's grandam, was imported some years ago by the Shakers of Union Village, O., and Balco, his sire, was imported by Col. Morris of Mt. Fordham. This bull also goes to Col. King's farm, near Minneapolis, Min.

Among the females that got over with but slight bruises, is the now 2-yrs Countess of Yarborough, winner of second prize as a yearling at Oxford last month.

Booth's Lancaster, a roan 2-years, is in blood a full sister of Mr. Pickrell's prize bull Baron Booth.

Rosedale 3d, half sister to the world-renowned Rosedale, is very neat and promising; as are the two Duchesses 101st and 103d; also Duchess 2d and 3d, and Candidate's Duchess, although the three latter have but little affinity to the great Bates family of the same name. We notice the names of many well-known breeders in this lot, (for catalogue apply to Mr. Cochrane,) Capt. Gunter, the Booths, Rev. J. Storer, Messrs. Bruere, Garne, Fojambe, Barnes, Beattie, Atherton, Aylmer and others.

The white pigs are good samples, as are also the Cotswold sheep, and we chanced to meet at Hillhurst Mr. Rankin of Illinois, the well known breeder of Berkshires, who says the new importation is decidedly the best lot of pigs he ever saw together.

**GRASSES AT THE SOUTH.**—The idea that successful agriculture can exist only in connection with the cultivation of the grasses has been urged of late with much earnestness by some newspaper writers, and attempts have been made to introduce their cultivation into the Southern States. A Florida correspondent of the *Georgia Southern Cultivator* says, from what he can gather up, it appears that the successful culture of the grasses is a failure. Not only during the last thirty years, but of late, under the excitement of grass raising, it appears a failure, for only now and then you hear of a successful grass patch, and the country is, as it was, a no grass country. And he asks the question whether in Egypt, Greece and Italy, the grasses were regarded as essential in the system of agriculture which fed a dense population; and if wheat was raised in Egypt, why may it not be raised in Florida? Had they a variety that we cannot now procure?

**A NEW BINDER.**—Attempts have been made repeatedly to attach to reaping machines an apparatus for binding the grain as fast as cut. The Adams, Mass., *Transcript* notices an invention for this purpose, by L. O. Locke, which is to be attached to the W. A. Wood reaper, manufactured at Hoosic Falls, Mass. The *Transcript* says that on a recent trial the grain on an acre was cut and bound in twenty-five minutes. The grain is bound with fine wire, at a cost of fifteen to twenty cents per acre for material.

**VERMONT HORSE STOCK COMPANY.**—We are glad to learn by the *Journal and Watchman* that the treasurer of this company, Mr. L. T. Tucker, announces that the sum of \$25,000, which it was necessary to raise before any active business could be commenced, has been secured, and that a vigorous prosecution of the work for which the charter of the company was procured, will be speedily commenced.

—John T. Alexander, the great Illinois farmer, has 34,000 acres of improved land. Last year he paid out \$76,000 for wages, and sold \$493,000 worth of live stock alone.

**PROSPECTS OF THE HOP CROP.**

As the harvest for hops is now near at hand, all who are interested in this branch of agriculture will be desirous to learn the present condition of the plantations in England and this country, so as to form some idea for future values.

Mr. John A. Morton, manager of the Hop Exchange of this city, has just completed a tour of inspection through the following counties in New York:—Schoharie, Otsego, Chenango, Madison, Oneida and Montgomery, which are the principal hop districts in that State. In all these counties present appearances indicate a crop very good in quality but small in quantity.

In some districts the yield will be very light; many yards in Schoharie and Otsego will not produce over a quarter of a crop, while in other sections the hops looked thriving. He gives the opinion that two-thirds of a crop this season would be a very liberal estimate for New York State. Recent advices from Wisconsin represent the crop light, and damage to some yards by frequent showers, followed by a very hot sun. In Michigan the crop will be light and the acreage considerably reduced.

Should the crop in Europe and America be harvested in good condition, it is very probable prices will be moderate the coming season. But as the acreage and yield in the United States will be much less this year than last, hops will be likely to command a fair price.

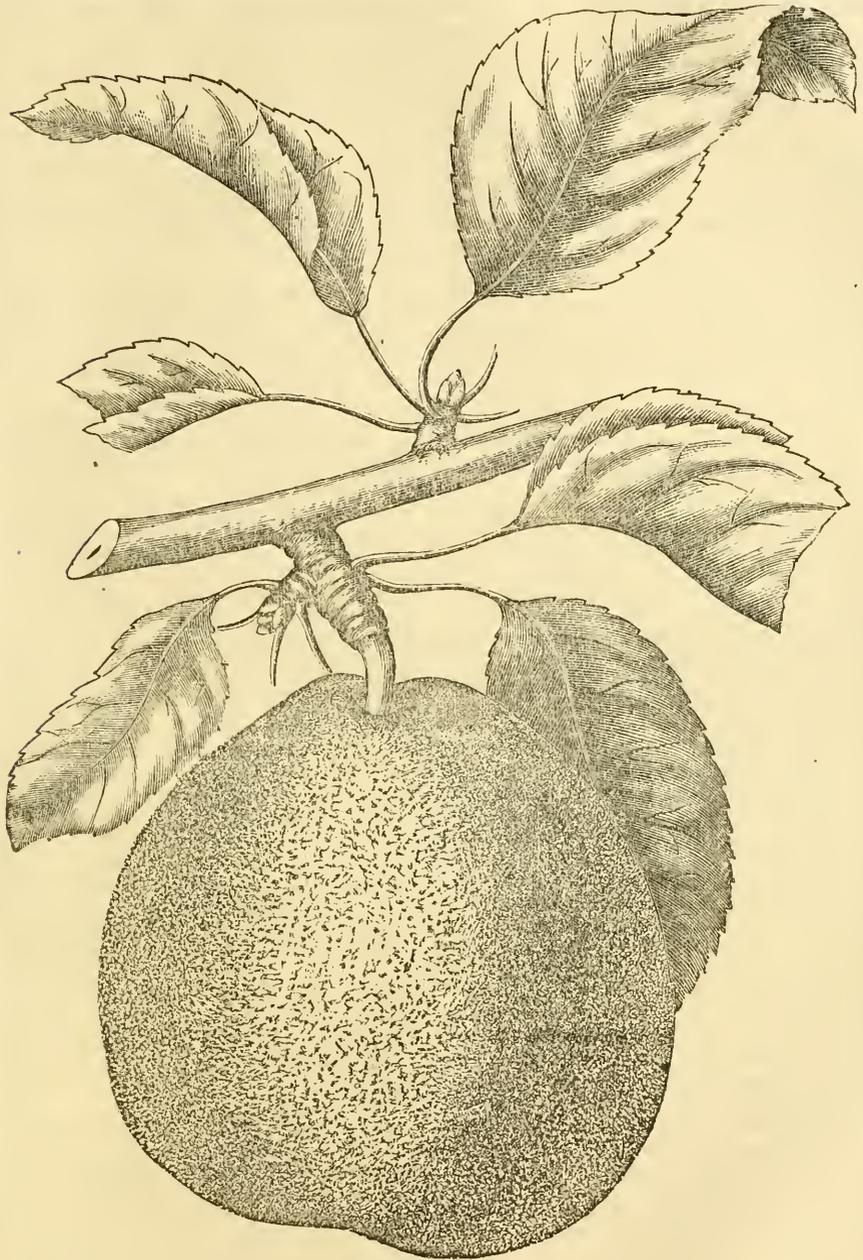
Advice to all growers. When hops are cheap or likely to be so, pick them as free of leaves as possible; do not gather any rusty, mouldy or discolored hops; have them properly cured and put up well, so as to be considered a strictly prime or choice hop. Most brewers would rather pay a good price for a prime article than use inferior grades for nothing. When hops are very scarce low grades are saleable, but this is for the reason that brewers are compelled to use such in the absence of a better quality.

To enlighten those who think hop growers can afford to sell for five or six cents per pound, Mr. Morton gives the cost of cultivating a yard of about forty acres near this city, in which he has an interest.

The following work has to be done every year:—

Setting poles . . . . .	\$112 25
Grubbing . . . . .	70 62
Training vines . . . . .	114 35
Cultivating . . . . .	58 80
Hoedg. . . . .	53 40
Ploughing twice both ways . . . . .	145 62
Total . . . . .	\$550 04

The cost of picking, drying and bailing hops is equal to about eight cents per pound. The capital required to establish a good yard, when cedar poles are used, and proper buildings for drying are constructed, is equal to \$300 to \$400 per acre, not including the value of the land.—*Detroit, Mich., Post.*



THE MT. VERNON PEAR.

The pear shown in the above cut is of Yankee origin, and first grown in ward 15 of our own city, then known as Roxbury, in the garden of the late Hon. Samuel Walker. As it proved to possess unusual merit, it was deter-

mined to propagate it for sale, and an arrangement was made with Wm. S. Little of the Rochester Nurseries, to send it out. We have the following description:—"Fruit—full medium to large, nearly globular; color, a rich

cinnamon russet, with a reddish cheek; flesh, juicy, crisp, melting, with a spicy, vinous flavor, which is peculiar, and quite distinct from that of any other known sort. Season—November to January. The tree is one of the strongest growers, and comes into bearing early."

Many leading horticulturists have spoken highly of this pear, as a decided acquisition. President Wilder says:—"Its rich russet color, high flavor and handsome appearance, will give it a prominent place among our late autumn varieties." The last edition of Downing's Fruits and Fruit Trees classes it as "very good."

*For the New England Farmer.*

#### PRODUCTIVE AND DISTRIBUTIVE INDUSTRY.

MR. EDITOR:—One of the most fruitful sources of the antagonism of capital and labor is to be discovered, in the opinion of the writer, in the very unjust and inadequate conceptions of what does really constitute capital, together with the attempt of a large proportion of our active population of both sexes to enter the *Distributive* rather than the *Productive* departments of industry.

That in a country like ours, where, in even the oldest and most thickly settled communities, only a small proportion of the soil is brought under *thorough* cultivation,—without any estimate of the illimitable area of land now waiting for the hand of industry—there should be any person of sound mind and healthy body who should seek in vain for remunerative employment, seems an anomaly too monstrous for the most gaping credulity to swallow, and yet complaints are every day reaching our ears from persons claiming to be subjected to privations and hardship, resulting either from want of remunerative employment or the cupidity of employers. Indeed, so all-prevailing has the misapprehension already become, that it is quite common to hear landholders complain of the unreliableness of the great mass of laborers, and the almost intolerable burden of the care of their own lands, while many very respectable persons in the industrial classes would be glad to find quiet and decent homes in the agricultural neighborhood but for the niggardliness of the landowner.

I wish, Mr. Editor, to call your attention to two or three suggestions, and to ask you to lay them before your readers, with the added weight of your emphatic endorsement, if they are, as I cannot doubt but they will be, such as commend themselves to your own good judgment. It is, of course, impracticable in the brief limits of a single newspaper article,

to more than barely allude to the various theories of political economy which have found advocates even in our own county. A very general state of profound ignorance of the main ideas of the science is no doubt at the bottom of most of our rural difficulties. By some strange fatality, most people have come to look upon industry as a sort of tributary to capital, or rather to ready money or lands; overlooking the fact that this capacity for industrial pursuits is itself the very best capital, without which *all other* capital would be worthless.

Some one has lately said, in a very forcible way, that a "sound, healthy, industrious, working man represents a sum of money equal to that of which his yearly earnings are the annual interest at lawful rates. So that he who earns \$600, stands for what is better than \$10,000, for he can put himself to use, while one who has only the ready money might easily starve for want of some agent to use his money for him."

But I wish to show, if I can, that the productive departments of industry are, by the same rule, so much better than any other, that it is only as tributaries to them that the other—the distributive—can possibly exist, since but for the former there would and could be nothing to distribute. Then, as an investment, the former is as far in advance as in any other light. Let any man with \$1,000 in ready money invest it in the ordinary course of trade, and he is accounted to be lucky if he secures an annual return of twenty-five, twenty, or even ten per cent. Let us suppose, by way of illustration, he gains a return for his one thousand, of two hundred and fifty, or twenty-five per cent. Now, let any intelligent man take this amount, \$250, and invest it in the cultivation of a field of grain. If judiciously applied, in nine cases out of ten, after paying all the expenses, interest of land, &c., he would receive a return, if not fully equivalent to the one thousand originally invested, which would be by no means out of proportion with the experience of the most successful cultivators. It is perfectly safe to expect more than twenty-five, fifty, or even one hundred per cent, to say nothing of the comparative absence of all risks.

It seems to me if this statement could be set forth in plain colors before the eyes of our industrious and energetic people, it would convince them that productive industry is the best and safest way to make money—the best and safest investment; it would go very far to do away that most unreasonable and most pitiful mistake, that *labor is degrading*; and we should often see persons, instead of going into the money markets to make loans to invest in trade or speculation, eager to buy or hire land, in the belief that a better and surer return would be thus realized than is ordinarily gained by the trader or stock gambler.

Those persons who now complain of the burden of carrying on the processes of agriculture, would find persons of character and capacity ready to improve their lands, while at the same time their value would be very much enhanced. Let such land owners, then, at once offer inducements that will justify and attract men who desire to rear up their families in usefulness and respectability, and provide suitable homes for families where they may expect a double reward in the advancement of their personal pecuniary interests, and the *consciousness* of aiding the progress of good society.

I desire to mention an instance of the success of this plan of operation, in the history of a friend and townsman, a large landed proprietor, now over 70 years of age.

#### Alpheus Williams.

Born in the State of Massachusetts, he was left an orphan and *perfectly destitute*. At an early age he apprenticed himself to a farmer with whom he only learned the art and value of industry and self-reliance. Blessed with good health and an iron constitution, he laid the foundation for an almost unprecedented course of successful industry, by confining himself entirely to agricultural pursuits. Settling at about the period of his majority in the southern part of Vermont, he became the owner of a small farm, which, almost forty years since, he was induced to exchange for a larger one in the Champlain valley, where he now lives. Here, with a large and growing family, he early embarked very extensively in wool culture. By his skill and assiduity he succeeded in not only producing one of the most even and valuable flocks of grade sheep in the county, often numbering more than one thousand; but, as a natural sequence, in augmenting his landed possessions until their size, together with his own increasing years and infirmities, forced him to look for aid in the management of his affairs.

He had early adopted the policy of leasing his lands to his sons and others whom he could trust, and found this mode so satisfactory that he gradually retired from active participation in the care of his still increasing landed possessions. Leaving his large and well-built mansion for the use of his farm, he erected for himself a convenient home and out-buildings, on a site well adapted to his tastes and surrounded with such embellishments as blend the useful and the agreeable. Here, retired from the pressure of his business, with his children and his grand children around him, he is enjoying the fruit of the labors of his life, and the visitor finds a genial and hearty old man.

Permit me, then, Mr. Editor, to say to such as are in his situation, either at present or approximately, go and do likewise.

PETER E. PEASE.

Charlotte, Vt., Aug. 25, 1870.

*For the New England Farmer.*

### MANAGEMENT OF AG'L FAIRS.

#### Another Suggestion.

I was much amused by a recent article in your columns, by a correspondent who proposed to introduce "prize fighting" into the agricultural fairs.

I supposed, and I still suppose, it was a joke, designed to show the advocates of horse-racing, and other species of gambling, to what results their usual arguments are tending.

If the morality of the matter is to be ignored, and all sorts of means are to be used to draw a crowd and to get money, then why not, as your correspondent says, introduce the "prize fight?" Why not even erect a gallows and whipping-post on the fair grounds, and let the penalties of the courts be inflicted during the fairs, to help "draw a crowd," if that *alone* is the end in view? But, sir, I take it that these things, one and all, are absurd and dangerous. The *morality* of these annual *gala days of industry must not be ignored!* It must be carefully guarded and improved. While doing this, of course we should try to make them pay their way, by all laudable and unquestionable means.

I am induced to take pen in hand in this matter from reading the recent proceedings of the St. Louis Farmers' Club. This grave body understands that "in New England it is proposed to introduce the prize fight into the fairs." They, of course, oppose this particular thing; but, "since New England is renowned for virtue, and since she is the mover of such a proposition, are not other localities fully justified in continuing the horse-racing, and snake, and fat women shows, *ad libitum?*" It is thus they argue. I hope New England will come to the rescue! Set us right in this matter. Tell our St. Louis horsemen and gamblers that they have been *sold*. That the prize fight proposition is a burlesque, and is so considered and so treated by every man of fair sense and morality. I would suggest that the *common school* be admitted to the fairs!

Let there be a large and well-arranged EDUCATION HALL on the fair grounds, as there are now textile fabric, floral and farm product halls. To this hall let the parents, teachers and children of the land be invited during a portion of the time the fair is progressing. Let there be premiums offered for the best modes of conducting recitations in all the various school branches; for essays, declamations, dialogues, and original orations, on specified topics and of specified lengths. Let there be public discussions on specified propositions, mentioned in the premium lists. Let there be encouragement offered to vocal music, instrumental music, drawing, painting, penmanship, reading, &c., &c. In a thousand ways this scheme could be made interesting and popular. I would not make a teachers' institute of it. I would largely interest and em-

ploy the youth and children of both sexes. School exhibitions are universally notorious for drawing crowds. I would try them at the fairs, in all the most approved and improving ways. Interest and use the children, and you draw the mothers of the land. Before these obscenity and immorality will shrink abashed.

The people of this nation pay their money more freely for education than for any other good object. Were the agricultural societies to distinctly encourage popular education, would that not be another strong reason for public patronage? Should the prize fighters fear that under such a regime the nation would tend to effeminacy, and would prefer a dash of the old Spartan sports? Then I would say give us the common school complete! In appropriate corners mark off the school playgrounds. Under proper police regulations let there be foot-races, pitching of weights, games of "cat," "baste," and "bullpen." Let maidens romp on the sward, jumping the rope, playing at "thread the needle," "lost my glove yesterday," &c., &c. In short, Mr. Editor, I would have something to interest and improve every civilized child and parent in the land. I would have nothing to degrade or brutalize. The horse-racers tell us that we must encourage gambling and other immoralities or give up the fairs, as the system is worn out. I hurl in their teeth, BOSU! We have not yet fairly started in these matters. We have not yet copied even all the Old World practices as much as we may, such as the sale and exchange of animals and articles, the hiring of farm help, &c. Our Yankee invention has not been exercised at all to speak of, except on the immoral side. It is time good men were alive to this matter.

All nations, both savage and civilized, have their festivals, holidays, and public amusements. If good or innocent ones are not sustained, barbarous ones will be, most assuredly. Let us encourage those things which distinguish us from the savages, who so unworthily occupied this great land before us, such as public morality, popular intelligence, thrift, and decency.

Such spectacles and practices as tend to brutality, barbarism, unthrift, and national decay, should be avoided and condemned.

JOHN DAVIS.

*Box 50, Decatur, Ill., Sept. 18, 1870.*

#### ABOUT SUNFLOWERS.

Sunflowers are now five feet high. I have commenced to feed their leaves to my stock. They are the best of all green feed for milch cows. I expect to have leaves enough to feed four cows and two horses, twice a day, until the middle of November, from one acre of ground. If it is too much trouble to pull the leaves, the crop will do equally as well as corn, sowed broadcast, growing a greater weight per acre. Cattle will eat up leaves

and stalks when three feet high and over. It can be mowed with a scythe.

It should be sown at different times, so as to keep up a supply of feed through the season. It is not always that the largest seeds produce the largest plants; it is so with the sunflower. The large white seeds do not produce as large plants, or as many leaves, as those which are smaller and darker, with black stripes. In my experience it is impossible to have it all one color. In the largest sunflower which grows from ten to twelve feet high, there are black and white, half white, and striped. If you want green feed, don't buy the large white seeds; they are not half the value for feed, and the seed is nearly one quarter lighter than the other kinds.—*Cor. Western Rural.*

#### MAINE BOARD OF AGRICULTURE.

This board has for several years held a two-weeks' meeting in Augusta during the session of the Legislature of the State. For the purpose of more directly interesting farmers in the discussions of agricultural subjects, and with the hope of inducing them to participate in these discussions, a session is now held in some part of the State during the summer season. Last year this semi-annual session was held at Orono, the location of the Agricultural College of the State. This year the board met in Foxcroft, the last of August. The *Maine Farmer* remarks:—

The faculty and students of the college at Orono have been in attendance, the citizens of the place generously giving them free entertainment during their stay. The people in attendance have apparently been interested in the meetings, but they have been largely made up from those living in the village. There was not a large number of farmers—those it seems most desirable to reach—present, and we think the meeting failed to draw out that attendance from the towns about here that was expected by those having the management of the same.

After an address of welcome by Mr. Chamberlain, and the usual preliminary exercises, Col. W. Swett read a practical paper on the Cultivation of Apples. This was followed by an essay on Road-making and the Management of country roads.

It advocated the abolishment of the present system of district supervision, and intrusting the care of the roads to a competent town committee, one of whom, at least, should be a competent engineer.

At the evening session on Tuesday, August 30, papers were read by Mr. Thing on "Success in Life," and by Mr. Norton on "Improvement of Soil by Ploughing."

The forenoon of Wednesday was occupied by an instructive and carefully prepared paper on Ploughs and Ploughing, by Mr. Gilbert of Androscoggin County. A discussion followed, in which some lengthy and interesting remarks were made by T. S. Gold, Secretary of the Board of Agriculture of Connecticut. Mr. Lebrock's lecture on Farm Law took place in the afternoon, and contained a brief summary of those points of law in which farmers are most interested. In the even-

ing the subjects of Associated Dairying, and Curing of Milk, were presented respectively by Rev. Wm. Gurney of Foxcroft, and Mr. Gold of Connecticut.

On Thursday the Board went on an excursion to Sebec Lake and Granite Mountain. In the evening, Hon. Samuel Wasson delivered a lecture on Water—the subject being considered chemically and practically. An allusion was made to the natural advantages of Maine in furnishing sites for mills and factories, and he believed by encouraging their establishment we were directly advancing the cause of agriculture, by creating a sure and ready demand for all farm products. After the lecture, a little time was spent in listening to the reports of the delegates from Farmer's Clubs in attendance, to the number of perhaps half a dozen, each speaker occupying but few minutes—all showing the value of these clubs, and testifying to the good they have accomplished.

The meeting of Friday afternoon being the closing one of the session, was largely taken up with the formal business consequent upon the event, and what was done was performed in a hurried manner. There was, however, something said about dairying, a short paper by Mr. Bodge on sheep farming, and some rather sensible remarks by Mr. Buck of Hancock County, a representative of the Farmers' Club there. Some of these subjects would have been discussed had there been time.

#### AGRICULTURAL ITEMS.

—Of a flock of 1350 fine wool sheep in Bates County, Missouri, all but 20 died of scab.

—The Trustees of the Illinois Industrial University—Agricultural College—have decided to admit females to all the benefits of the institution.

—Forty years ago one could buy a good cow for \$12; now it takes \$80. Yet forty years ago flour was but little cheaper than in 1870. As a nation we make too much grain, and do not raise enough stock.

—A writer in the *Homestead*, Iowa, asks what the working man is going to do for meat, and thinks the question will soon be a serious one. He says that unless more stock is raised, laboring classes will soon have to do without meat.

—The Stockdale beef packery, near Brenham, Texas, began operations last fall, and for its first season's work killed 4500 cattle, packed 3000 tierces of beef, and shipped off 1,000,000 pounds of hide and tallow.

—A correspondent of the *Germantown Telegraph* who lost seventy chickens by gapes last year, now says that fresh water daily, with a lump of roll brimstone kept in it, will be found a certain preventive.

—A Western farmer noticed that almost all the potato bugs in his garden had disappeared, and a short time after he killed a large, striped snake with his hoe, and found that it was full of the larvæ of the potato bug. It had about cleared out the garden. He says he will kill no more of those snakes.

—In Michigan the production of plaster in 1869 amounted to 90,000 tons; amount of capital invested, \$650,000. The aggregate value of the

plaster manufactured from its beginning in 1840 up to the present, is \$1,298,075. The business is rapidly increasing. The lands now comprising the works number 3,727 acres.

'Tis pleasant, on a fine spring morn, to see the buds expand;

'Tis pleasant, in the summer time, to view the teeming land;

'Tis pleasant, on a winter's night, to crouch around the blaze;

But what are joys like these, my boys, to autumn's merry days!—*Dickens*.

—A correspondent of the *Country Gentleman* planted a few acres of turnips, which were large enough to begin to feed the first week in July, when they were fed to pigs, no other feed given until the last week in September. No lot of pigs could have done better, growing and keeping in good condition all the while.

—The culture of flax has been recently introduced in California. One farmer who has planted thirty acres, will obtain from 1000 to 1200 pounds of seed to the acre, bringing in a gross return of \$50 to \$60 an acre. The stalks are worth \$20 a ton. The flax in California is not pulled from the ground, but is cut with a reaping machine.

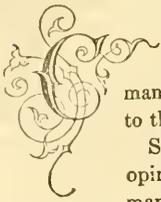
—Luther Kendall, of Felchville, Vt., has sold during the past year one hundred dollars' worth of butter and cheese, made from one cow of the native breed, besides supplying himself and wife, and occasional visitors, with milk and butter, and raising a calf for which he was offered twenty dollars.

—When a horse refuses to eat, he should not be made to do any more service that day, for it may be known that he is tired out or sick. It is barbarous to compel a horse to perform labor when in such a condition that he refuses grain, yet it is often done, and by men, too, who think they are merciful.

—The *St. Louis Journal of Agriculture* thinks the present is the time to attack and destroy burdock. It says the old stems, with burrs on them, should be cut with a spade or mattock just below the surface, and carefully piled together while green. After a few days of dry weather, set fire to them, and stand by till the last burr goes to ashes. This done, the young plants that have grown from the seed this year should either be pulled up or the roots cut off below the collar, and thrown upon the manure heap.

—After losing a large number of chickens from swollen, sore heads and eyes, a correspondent of the *Prairie Farmer* found on close examination that their heads were covered with a perfect mass of nits, piled one upon another, and a long, flat kind of lice, busy adding hundreds more. Among the wing quills were thousands of a smaller kind of lice in heaps. He made a quantity of sulphur and lard ointment, and put it on several times. Not one has died since, although his neighbors are still losing as many as ever.

## SURFACE MANURING.



CONFLICTING opinions exist among good farmers as to whether it is best to apply manure to the surface, and if so, as to the best season of doing it.

Some twenty years ago, the opinion was popular that when manures were applied to the soil they should be immediately covered with it, and at a depth of four to six inches. That opinion has been much modified, some even having gone so far as to say that it should not be covered at all.

It seems to us that the truth lies between the two extremes.

First, as to covering manure. We are informed that in England the common practice at this time is to apply as much of the manure as is practicable to the surface, and never cover it. It is used in liquid form, or if solid, in very fine condition, and merely mingled with the soil by the harrow, or the drill with which the grain is sown. When the soil is devoted to roots, or any crops where hoeing is to be done, the manure is still kept on or very near the surface, and is reduced to a fine condition.

We have plenty of examples in nature in this respect. She will restore most exhausted lands to a state of fertility by the slow process of annual deposits upon the surface of such plants as are indigenous to the soil, some of the elements of which are derived from the atmosphere. She does not plough under anything, but still produces large forest crops or heavy growths of grass, or other coarser herbage, annually. This process may serve as a hint, but does not prove that there is not a quicker way to reclaim the land. Vegetable substances that are tender and succulent would probably decay, and form a favorable bed for seed or roots when slightly covered up in the soil, in a fourth part of the time which would be required if they remained above ground.

In a discussion of farm-yard manures in the "London or Central Farmers' Club," the chairman said he believed that manure was never so advantageously applied as when it was laid on the surface, and that so far from deteriorating or losing anything through exposure to the atmosphere, it caused more benefit to the upper soil, where it was desir-

able its effects should be most apparent." This opinion seemed to be received as sound doctrine, for no one objected to it during the discussion.

Mr. Robert Baker, who opened the discussion at the same meeting, after touching upon almost every conceivable point in the management and application of farm-yard manures, stated distinctly as his belief, that "*the best mode of applying manure was to take it direct from the farm-yard and turn it in at once, so as not to leave it exposed.*"

We arrived at this conclusion many years ago, from our own practice and observation from time to time. This course seems to be free from any of the objections which are urged against other modes of using it.

In this way the manure is handled but once, whereas, in composting, it must be moved several times.

In composting, at each overhauling there is a loss in the escape of ammonia, and there is danger of carrying fermentation too far, and thus greatly injuring the manure.

If manure is taken directly from the yard and ploughed under, it is handled but once, loses nothing in the escape of ammonia, because no fermentation has taken place, and is not injured at all by heating.

Covered two or three inches, it is soon in a warm and moist condition, so that fermentation readily takes place and gases are given off. These are arrested by the soil, as are also its juices, and are not only in a state of readiness to be taken up by the roots of plants, but act in a double capacity by becoming food themselves and acting upon other materials until they become so.

In applying it in a green state, much of it will be in a coarse condition, but fermentation and the action of frost will tend to pulverize it, so that a second ploughing will usually incorporate it pretty thoroughly with the soil. With these advantages, then, we have no hesitation in recommending this course with all the manure that can be applied in the autumn. If composted with any substance that will divide the wet manure, so that it can be made somewhat fine, then we would put it under in the spring as early as the condition of the soil would permit.

For these, and other reasons which might be urged, we are clearly of the opinion that,

so far as we can make it convenient, it is best to put all the manure we can under ground in its fresh and crude condition, and cover it not more than three inches at the most.

Some good farmers do not apply manure until it has been kept a twelvemonth; we believe that is the case with Mr. JOHN BROOKS of Princeton, Mass., who is a large and prosperous farmer. What special advantages arise from this course are not clear to us, and we should be glad if he would state them through these columns.

#### Top-Dressing.

With regard to this mode of manuring there are also various opinions; but that it can be very profitably employed scarcely admits of a question. On grass lands it is generally withheld too long,—until the grass *roots* are exhausted, and there is nothing left upon which to build up a crop. If on high land, the top-dressing should be applied as early as immediately after the second year's crop is taken off, or in the succeeding fall. Then it has vigorous roots to work upon, and by top-dressing annually, or every other year, mowing fields might be kept running for ten or fifteen years, and produce from a ton to a ton and a half annually. This would save a considerable cost in ploughing, leveling and the cost of seed.

On moist lands, once well set in grass, swale lands, lands on the margin of meadows, a slight annual top-dressing will help them to produce profitable crops for fifty years in succession; and the fodder will be good. Dry cows, young cattle and working oxen, doing moderate winter work, will thrive well upon it.

Top-dressing may be applied most advantageously in the autumn, and about the time when we usually have plentiful rains, before the setting in of winter. The manure can then be applied without injury to the ground by carting over it, and the rains will wash out the soluble matters from the manure and carry them down among the roots of the plants, and will also force the coarser portions down around the stubble, to act as mulching through the winter. Other advantages are, that farm work is not so pressing as in the spring, the teams are stronger, and the carting quicker and cheaper over hard ground.

#### THE DROUGHT.

The drought, from which we are now suffering, is the most wide-spread, continued and severe which has occurred within our recollection. It embraces the whole of New England, New York, Northern Pennsylvania, and the whole belt lying between the Ohio River and the lakes. It has not been uniformly severe throughout this extensive region. Some localities have been partially relieved by occasional showers. The more southern portions, in which the crops complete their growth at an earlier period, have suffered less than those lying further north, in which they depend upon July and August for making their growth, and have thus had to contend with the entire dry period. Consequently the corn, late potatoes, root crops and pastures have suffered severely, as have the fruit crops, fruit trees, and even the forest trees.

On dry pastures and old mowing lands the roots of the grass in many places are entirely dead, and it is doubtful if the fruit buds in some sections will form for the fruitage of another year. The soil is unfit for ploughing, and the reception of the winter grain.

Hay, grain, potatoes, butter and pork in all this northern section must be very high. The loss in crops must be almost incalculable. Those who are dependent on the sale of their crops for money to pay their taxes and support their families through the coming winter, must look forward with sad forebodings. But let us not be discouraged. The past few years have been eminently prosperous. The accumulations of those years must be freely used to meet the emergency, and to relieve the wants of those who have not been fortunate enough to accumulate for themselves. Before the seven years of famine in Egypt there were seven years of plenty. Before our late enormously expensive war the country had been wonderfully prosperous, and the accumulations of this prosperity furnished the means of supplying our armies, and of sustaining the government, to which, under Heaven, our prosperity was due. Adversity is not without its uses as well as prosperity. Without it we should become proud and self-confident, and forget our dependence upon the Great Source of all our blessings. But we did not sit down to moralize, but to ask what lessons we, as agriculturists, should learn

from the experience and observation of the present season.

Let us notice some of the facts that present themselves to our observation. Here is a field under high culture. It is under-drained, was well ploughed, and the plough was followed by the subsoil plough, making a tilth of fourteen or fifteen inches deep. It was amply manured, and the manure thoroughly mixed with the soil. The seed was put in early, as in a soil so treated it may always be. Some stimulant was applied in the hill to give the seed an early start. The plants started at once, and grew vigorously from the first, and under the continued heat they have made a marvellous growth. The large stalks and broad leaves, with open pores, have imbibed the nightly dews, which have aided the sap to flow freely in the succulent vessels. The cultivator and the hoe have been diligently employed to enable the air to penetrate the soil and keep up the decomposition by which the roots are supplied with food. The roots penetrated deeply and found the food and moisture needed. The plants pushed on to perfection with precocious energy. The kernel formed and filled. The potato acquired its normal size long ago. Such land, under the stimulus of the burning sun, rapidly accomplishes its work, doing as much in five or six weeks as it does in a cooler season in eight or ten, so that however great the drought of the summer, if there was a good supply of water in the spring, there is almost a certainty of a good crop. A good crop of grass and grain is produced on such soil before the drought comes. Just these results may be seen in many instances during the present disastrous drought.

On the other hand, where the soil is poor, and was poorly prepared for the seed, and the seed was put in rather late, the crops started slowly. The plough and the hoe were not diligently used, the ground became baked, the air did not penetrate to keep up decomposition in the soil, and by the time the plants were ready to begin to form their fruit, they were parched and wilted. Their curled leaves did not expand their pores to drink in the sweet dews. They struggled on for a time, and finally succumbed to the adverse circumstances with little or no result. Such instances and the almost entire failure of the labor of the year are common to a melancholy extent.

Is there any remedy for this state of things? Can we guard against the effects of such a drought as we have passed through? The farmer, like every other man, wishes to invest his money and labor where there is a reasonable prospect of a good result. Can he do this with as much certainty as attends other human enterprises? It will be said the results of the husbandman's labors depend greatly upon the elements, which are beyond his control or influence. But is it not so with all the labors of man? The winds and the waves may defeat all the shrewdness and far-reaching calculations of the merchant. The cost of the material worked by the manufacturer often depends essentially upon the season. His buildings and machinery are subject to destruction by fire and flood.

These classes do all that human skill can do to guard against the influence of the elements, as well as to avail themselves of their aid, and why should not the farmer? If the merchant committed his cargoes to unseaworthy vessels, or the manufacturer erected combustible buildings upon the sand, would they have or deserve success? They heed the lessons of experience, and so, although calamities sometimes befall them, upon the whole they are successful. They have the sagacity and courage to avail themselves of the means which increasing knowledge and science put into their hands. The merchant who should confine himself to the customs and the navigation of the past, and the manufacturer who should use the machinery of the last century, would find themselves swallowed up in the waves of modern competition.

In like manner the agriculturist must avail himself of the results of science and experience. He must so prepare his soil that whatever may be the season, his labors and hopes shall meet with a reasonable reward. He must have the courage to apply the knowledge which experience teaches him.

The great difficulty is that we do not do as well as we know. We know that only high farming is uniformly and permanently successful. We know that shallow and negligent cultivation rapidly exhausts the soil, and that with such cultivation, in an unpropitious season, the crops always fail. We know that with a thorough preparation of the soil, and skillful cultivation, the crops are always good,—better indeed in propitious seasons,—but

always good. Let us not attempt, under any circumstances, to cultivate more than we can cultivate in the best possible manner. If we have manure and labor sufficient only for one acre, let us not attempt to cultivate two. Let us have the courage to do right here, as in every other avocation of life, and Heaven will bless our efforts.

### EXTRACTS AND REPLIES.

#### CABBAGE WORM.

Can you or any of your correspondents give a method of saving the cabbages from destruction by the worms? In this section the plants were nearly all destroyed by a little green worm, the product of a small nit resembling a seed of Timothy grass, which is deposited on the under side of the leaves of both cabbages and turnips. I have not yet found what the parent is, but suppose it to be some nocturnal fly. Information may save the crop another year.

W. H. W.

Stamstead, P. Q., Aug. 31, 1870.

REMARKS.—Within a few years past there has been much complaint about worms upon cabbages. What is known as the Rape Butterfly in England—*Pieris rapa*—was introduced into this country some twelve or fourteen years ago by way of Quebec, probably as nits on cabbage leaves. It gradually spread into Vermont, and is now extending over the country. The butterfly is a nearly white miller. The caterpillar, or worm, when full grown is an inch and a half long. The eggs are laid the last of May. The millers are caught in England with a net, or bag, made of mosquito netting. A stick some four feet long for a handle, with a wire hoop on which the net is fastened, may be rigged up by any one. They are destroyed in the chrysalis state, by placing boards about two inches above the ground, on the undersides of which the worms undergo their metamorphoses. From these boards they are scraped off and destroyed. S. C. Wait, of Gouverneur, N. Y., writes to the New York Farmers' Club that he was able to drive them from his patch with brine—ham and beef brine from the meat barrel. Mr. A. B. Allen, of New York, states in the *Country Gentleman* that he succeeded in keeping his cabbages free of worms by the use of whale oil soap. But from his remarks we doubt whether he had the new importation—the *Pieris rapa*, which is somewhat different from the *Pieris oleracea*, described by Harris, and which has been much longer known in this country. Mr. S. Currier, of Norwich, Vt., says that he finds the miller to be active and sly, and the caterpillar to be little disturbed by brine or any other application he had tried, except that of clipping them in twain with the sheep-shears,—a comparatively expeditious, but still rather laborious process where the worms are on a large number of cabbages, especially as one brood of worms is soon succeeded by another.

We hope some of our correspondents will be

able to furnish a more satisfactory reply to the inquiry of W. H. W.

#### CURING SUMAC LEAVES.

Will you please inform me how to prepare sumac leaves for market? I have quite a large quantity on my farm. Some say they are valuable for tanning purposes.

E. P. LUTHER.

North Dorset, Vt., Sept., 1870.

REMARKS.—From an article in the *Rural New Yorker*, we condense the following directions. The leaf and leaf stems only are used. These are picked before the shrub blossoms. It should be cured like herbs under cover or at least in the shade. After being dried sufficiently to break readily in the hand, it is ground to a fine powder and put in bags containing about 150 pounds. The American article known best in market comes mostly from Virginia. That gathered in New York, New Jersey, &c., is not considered as valuable. The leaves in their natural state are worth about fifty dollars a ton at the mills. They are too bulky for long transportation before being ground, hence the nearer a mill the better for the gatherer. The best of the foreign ground is worth about \$175 per ton in New York; while the wholesale price of the best American is only \$90. Sumac is used for dyeing as well as tanning. One objection against the American leaves in tanning is that it colors too much for the nicest morocco. Still, it is believed that by care in growing, gathering, curing and preparing for market, it is possible to make such improvements that the American article will take the place of the imported, to a great extent. We know nothing of the mill for grinding the leaves. It is stated that the amount gathered in Virginia is yearly increasing.

#### A POULTRY HOUSE.

I want a new house for poultry. Will it be a good place in the barn cellar? I have had it there for a year or two past, but my eggs do not hatch out well. I set a hen on 15 eggs and she brought out three chickens. I suspect that my cellar is too damp for poultry, and wish I knew.

E. O.  
Peacham, Vt., Sept., 1870.

REMARKS.—Poultry never does well in a damp place. Where the barn cellar is mostly above ground, is open to the south, and is warm in winter, it makes a good poultry house. But it ought to be "roomy" and some portion of it always clean. The secrets of success in poultry raising are *warmth, cleanliness, and plentiful feeding of a variety of food.*

#### GRASS SEED FOR PASTURE LAND.

I am going to plough some 20 acres of pasture this fall that has not been ploughed for thirty years or more. The land is a clay loam. I shall top dress and seed next spring with some kind of grass seed, sowing oats at the same time. What would be the best kinds of grass seed to sow? Herdgrass runs out here in a short time. The pasture is not a wet one, nor very dry; is mostly free from stones, smooth and clean, with rather thin soil. Please to answer through the FARMER. I am a young farmer; bought a farm two years

ago of 135 acres. It had kept about 10 cows and a team when I bought it. It will now keep some 15 cows and team. I have bought only about \$25 worth of manure, but use muck, ashes, leaves from the woods, &c., keep my stables well littered with straw, muck, sawdust and leaves scattered in barn-yard, hog-pen, &c. I intend to improve my farm so that it will keep 30 head of cattle in less than ten years, without much aid from commercial manures, with the exception of buying occasionally a ton of plaster. A. M. STEVENS.

Williamstown, Mass., Sept., 1870.

REMARKS.—In order to get a good pasture, it must be seeded with a variety of grasses, so that some of them will start early in the spring, and others succeed them through the summer. If there is but a single variety, that comes on, ripens, where not kept down by the stock, and the feed is gone. Now, sow the following, per acre:—

Sweet Scented Vernal,	7 lbs,	blossoms in	April & May.
Orchard Grass,	6 "	" "	" May & June
K-crop,	2 "	" "	" June & July.
Herdgrass,	3 "	" "	" June & July.
White clover,	4 "	" "	" May to Sept.
Kentucky Blue Grass,	4 "	" "	" June & July.

Some persons sow other varieties, such as Meadow Fxtail, Italian Rye Grass, &c., but the above will answer very well.

Thanks for your good opinion of the FARMER, and we sincerely hope you may succeed in your efforts to make farming a profitable and honorable vocation.

#### DROUGHT IN SOMERSET COUNTY, MAINE.

GENTLEMEN:—Farmers in Somerset County are very much discouraged. They are terribly dried up; scarcely any rain since May. In some places the land is dry as an ash-heap three feet deep. Grain exceedingly light. The potato crop is a failure. There is a great famine among stock-raisers in consequence of the extremely small crops of hay. The grasshoppers are eating every green thing. In some sections they have destroyed acres of corn and beans. I saw one piece of beans, some two acres, with not a leaf or stem, and the pods were green. Apple trees are treated in like manner, especially young trees. Fields and pastures are grubbed down smooth, so that there is nothing for cattle but to browse, and little of that. Many farmers have fed all their corn fodder, and some have made large holes in their hay mows. Others are selling stock at panic prices. For instance, cows for \$20 to \$25; yearlings at \$7 and \$8 per head. I saw a pair of six teet four inch oxen, very good beef, sold for \$75,—and so it goes.

Brooks, springs and wells never before known to go dry, have failed, and water is drawn from the larger streams for family use.

A great amount of suffering has occurred to man and beast this summer, to say nothing of the inconvenience, in consequence of the drought, and for aught I can see, it is likely to increase. Extensive and damaging fires have occurred. Thousands of acres of timber have been destroyed, and other property as well, the past summer. One thing the farmer has to console him, he can fill his cellar with apples, if not with potatoes. Fruit was never more abundant, and generally of excellent quality. Then let baked apples and milk supersede boiled potatoes and tried hog. ZEN.

Springvale, Me., Sept., 1870.

REMARKS.—This is certainly a gloomy account of the condition of things among our friends in Maine. We hope it is not so bad throughout the

State. Consolations may be gleaned in very trying circumstances. One is in a firm and abiding faith that all events over which man has no control will be conducted for the best, and that a calm and hopeful resignation to them will afford more comfort than any repining. Our correspondent has found another, and a good one, in the baked apples and milk, one part of which, the apples, are abundant. Fed moderately to the cows, this will increase the flow of milk, and thus both apples and milk may be plentiful.

#### THREE RECEIPTS.

I send you three receipts. The first two I have many times tried without fail; the third but one year, with perfect success.

#### SCRATCHES IN HORSES.

For full-grown horse, feed one table spoonful of salts and one of sulphur three mornings in succession; then after three, feed again, if needed.

#### FOR LICE ON COLTS AND CALVES.

Mix a little sulphur with salt, and feed on the ground before cold weather; you will not be troubled in winter with lousy calves.

#### TO PROTECT FRUIT AND SHADE TREES FROM MICE.

Take tarred roofing paper, cut crossways of the piece, which is about two feet wide, strip fifteen inches wide, wrap lengthwise around the tree, which will cover it two feet high; and put it on in a warm fall day, as it is had to handle when cold. Shoreham, Vt., Sept., 1870. E. B. D.

#### THE AMERICAN BEAUTY APPLE.

I send you two apples taken from the farm of Peter Wayland, in this neighborhood, called the *American Beauty*. I know not whether it has attained any notoriety abroad, but think not, as I have never seen any of them in the markets in any of our large cities. It is much cultivated here, and the original tree where I obtained this fruit is often visited by strangers who have been charmed with the beauty of the fruit.

Please examine, and pass your judgment upon its merits or demerits. R. G. W. PARKER.

Pratt's Junction, Sept., 1870.

REMARKS.—Very beautiful specimens; are solid, weigh half a pound each; bright red, with russet dots. Warder states it is a winter apple, and good in quality.

#### CROPS IN WEST VIRGINIA—REMEDY FOR SHEEP POISONED BY LAUREL.

MEMBERS EDITORS:—We have had a very good season, taking it all together. In the spring it was too wet, then for a short time too dry, and after that very fine.

Wheat about two thirds of an average crop; rye one-half; oats extra; also corn the same. Hay hardly an average crop,—too wet in the spring. Fruit about one-fourth of a crop, and indifferent. Wheat flour at one mill, 4 cents per lb, when others are out. The other two, 3½ cents per lb. No old corn to be had. New, about 50 cents per bushel; rye, \$1 per bushel; oats, 35 cents per bushel; butter, 16 cents per lb; bacon, 20 cents per lb; eggs, 10 cents per dozen; chickens, \$1.50 per dozen, and dull.

I have seen in your paper a number of cures for sheep when they get poisoned with laurel. When I was a boy, my father was driving his sheep in the spring from Somers, Conn., to Worthington, Mass.,

and he had several of his flock poisoned by eating laurel. A Methodist minister happened to come along, and inquired what was the matter of his sheep? Father informed him of the fact. He then requested me to catch one, which I did. He opened its mouth, and cut the third wrinkle in the roof from its teeth and let it go. He said that he would warrant it to cure every one that was not so far gone that it could not swallow the blood. Father lost one only out of over twenty.

One of my neighbors wishes to paint the roof of his house with gas-tar. He wants to know what he must put into it, so as to thicken it a little. He wants to apply it with a brush.

Can any reader of the FARMER give the required information. If they can, we will be under obligations to them.

H. A. PEASE.

Wardensville, West Va., Sept., 1870.

#### SOILING OF CATTLE.

I would be glad to get a book on soiling cows. Can you inform me where such a book can be had?

L.

Starksboro', Vt., Sept., 1870.

REMARKS.—The Essays by Hon. Josiah Quincy, published by A. Williams & Co., Boston, at \$1.25, are the best that we know of. The volume contains, in addition to the Essays on Soiling, a memoir of the author, and an agricultural address delivered by him before the Massachusetts Agricultural Society in 1819.

#### ROUND OR WHOLE SHOES FOR OXEN.

When an ox has a bad claw by calking, or one claw gets lamed by sprain, gravel or stone bruises, take two of his common shoes, properly fitted, and weld them together at the toes; put on a toe each, as on a horse-shoe; let the claws of the foot touch at the toes; nail on your shoes, and go to work with your oxen. All will be right in a day or two. Shoes thus set will last as long as two or three settings of single shoes, when at work on a stone-quarry or other very rough place.

Brother teamster, don't let the blacksmiths frighten you on this subject. No dirt or gravel will work up between the claws to injure in the least. At first thought, perhaps you will say that it is contrary to nature to thus confine the claws of the foot of an ox. Be this as it may, you will find that such a shoe will greatly assist nature in curing a very bad foot. By thus shoeing one ox, in particular, that tore off a part of one claw, which had been badly cut by calking, I did not lose a day's work. The shoe was set with but two nails in the lame claw, and those at the heels. I have saved the work of three different oxen by thus shoeing, this season, I have no doubt.

Our cattle, which are heavy, work on a granite quarry which is as rough as need be. Friends, try the round or whole shoe, and if not pleased with it, you can cheaply take off the shoe if it does not prove beneficial. NELSON CONVERSE.

Marlborough, N. H., Sept. 12, 1870.

#### THE HUTCHINSON PEACH.

For more than forty years there has not been an entire failure of a crop from this peach.

It is a native seedling, retained on the same farm without mixture from other varieties, reproducing itself from seed. If any deterioration is produced by budding the peach, then seedling trees from this stock must be desirable. The quality is not surpassed; spicy, juicy, pleasant, tender flesh, white-colored about the stone, skin bluish in the sun, but mostly light-colored, mottled with pink, of medium size, belongs to the rarer class of

peaches. The tree is vigorous, with long, dark green leaf. The fruitfulness and quality of this peach, to be fully appreciated, should be seen and tasted, as it is now, Sept. 12th, in perfection, on the Hutchinson farm, in Reading, Mass.

The whole crop is in demand in the immediate vicinity. The crop does not exceed fifty bushels, which, at \$4.00 per bushel, is the most profitable product of Mr. Hutchinson's farm.

J. W. MANNING.

Reading, Mass., Sept. 12, 1870.

#### VITALITY OF SEED RYE.

R. Lockwood, of Irasburg, Vt., sowed last spring a small piece to rye, the grain being seven years old. Not a stalk came up, while adjoining oats, wheat, and peas looked finely. Hence it was not the season that prevented germination. Four years ago he sowed some of the same lot of rye, and it all grew well. This seed that remained in the barrel until this season, has not been exposed to any influences such as fermentation or dampness that could have destroyed vitality. Was it old age?

Z. E. J.

Irasburg, Vt., Sept. 1, 1870.

#### AGRICULTURAL ITEMS.

—The Philadelphia *Gardener's Monthly* complains that "our Horticultural Societies themselves lose sight entirely of their mission and objects. There is not one that offers the slightest encouragement to the *working gardener*—the main principle on which they were founded."

—Flower and garden seeds, when done up in papers, are sometimes destroyed by mice. Well dried and put into vials and bottles that may be lying about the house, these seeds will be safe. If the bottles are neatly labelled and put away in order, it will be found a very pretty way of preserving seeds. The bottles should be washed and dried before being filled.

—Ten imported Jersey cows were sold in Boston, Sept. 2, at \$200 to 430; averaging \$299.50 each; a Guernsey heifer for \$2.60, a Jersey bull for \$200; two Southdown rams at \$50 each; one Yorkshire sow at \$180, another at \$100; one trio Gray Dorkings for \$15; one trio White Brahmas \$10; one trio Rouen Ducks, \$17.50; two Aylesbury Ducks, \$3.50.

—To cure dogs of sucking eggs, a correspondent of the *Southern Cultivator* says:—Take an egg, punch a hole in it large enough to admit the little blade of a knife, and put in through the hole as much tartar emetic as he can pile on a dime-piece, and give to his dog, or put in a convenient place where he can find it. Repeat three or four times within ten days or two weeks.

—The *Horticulturist* gives the statistics of the fruit farm of L. A. Gould, Santa Clara, Cal., recently visited by the editor, Mr. Williams:—Number of apple-trees 4000; pear trees 3350; cherry trees 500; English Walnut, peach, plum, fig, &c., 8200. Ten acres of grapes; two of blackberries; 35 of strawberries, many of them among trees. Raised 50 tons strawberries; 8860 boxes apples; 4609 boxes pears; dried 2500; fed to stock 280

boxes; cherries 12,000 pounds, grapes 65,000 pounds. The fruit boxes contain about two-thirds of a bushel. The strawberries yield two crops a year—May and September.

**SUBSOIL ATTACHMENT.**—Mr. W. Brown of Hampden Falls, N. H., writes to the *Country Gentleman* that he, with others, bought the right to use the patent in his town, with the privilege of ordering the castings from the foundry. They cost nearly double the sum represented by the agent. On light soils it operated in good shape, but on such land as he wished to subsoil he found it worthless and had abandoned its use. It required too much power for an ordinary team, and with a team of sufficient strength there was great danger of breakage. He prefers the regular subsoil plough. The attachments, however, gave good satisfaction as an aid in digging tile ditches.

Another correspondent of the same paper, in Michigan, says that he has been led to believe, from experiments without a dynamometer, that three horses will turn a furrow ten inches deep as easily as one five inches deep and subsoil five inches more, and in the former case the soil will be pulverized to the full depth far more perfectly.

*For the New England Farmer.*

#### RENOVATING EXHAUSTED LAND. Successful Farming.

In all parts of New England, farms are sold and bought every year, and other farms, occupied by the discontented owner or by a tenant, are in the market. Some of these farms have old buildings, and a soil that is at present unproductive. The purchaser usually pays only a part of the price, and calculates to pay the rest from his annual crops, dairy products and the growth of young stock.

Now, with a worn out soil, there will be disappointments often during the first few years. The careless farmer has ploughed freely, manured lightly, and sowed but little grass and clover seed, often using the sweepings of the barn floor, containing various kinds that have been shaken from the hay during the winter.

Such land may well be compared to a cow so nearly famished, or to a fine horse in so low a condition, that every bone, muscle, tendon and cord, as well as the blood, is affected. One generous feed to such animals does not result in a generous flow of rich milk with the one, nor in an ability to travel ten miles an hour or fifty in a day with the other. If such an animal has access to the corn-field or oat-bin, the stomach becomes loaded with nutritious food, but it imparts but little benefit to the body. But continuous good care fills the shrunken skin with firm flesh, mingled with fat, so that the animal is eventually able to make a good return for the owner's care.

The first farm south of my own was occu-

pied by a tenant during the first fifteen years of my remembrance. Its soil is partly of a light character, tending to sand on the tops of the knolls, but on the lower portions so approaches clay that fence-posts are thrown out by the frost, and the soil is slightly sticky when wet. This farm is naturally free from stone, and is part of a valley of 5000 acres of excellent land. During its occupancy by tenants it was at times badly managed. Large fields were ploughed and sowed to oats three or four years in succession, then lightly seeded to grass. The ploughing was very shallow, about four inches, and was done by boys, who would in mellow stubble ground run the plough two feet upon the land, only stirring part of the soil; but it would harrow smooth. No effort was made to preserve manure or add to its quantity. What did accumulate in spring and fall was drawn to the field, dropped in small heaps, and the boys took stents in spreading and gained time. Where the heaps were, the grain would lodge. A small piece of corn was usually well manured, and made a good crop.

Nineteen years ago this farm, of 220 acres, was bought by G. B. and Myron Brewster for \$3500. These young men, with a widowed mother and sisters, came from the country, near Lake Champlain, a good corn and stock region, and they commenced the work the first spring with good courage. A pasture was ploughed for corn and potatoes, and plaster applied in the hills. But as corn here must be well manured, this crop was a failure, as the old residents here knew it would be. The grain and grass was light. The pasture was grown up to alders by the brook, and on higher land the sweet elders and raspberry bushes were abundant. The stock pastured, eight cows and twenty sheep, proved enough to consume the fodder raised. No wheat was raised, as the midge would destroy it. So with poor crops, low prices, with flour, sugar and many things to be purchased, the income was but little more than enough to pay the interest on the purchase-money.

What seemed strange was, that after a piece had been well manured and cropped only twice or three times, and seeded to grass, it would not yield heavy crops but a short time, when sorrel and June grass would come in. Thus seven years passed. Both young men were married; and G. B. Brewster bought out his brother, paying him \$1500 and assuming the old debts. More attention was paid to manuring; all made in the winter was applied in spring—the coarse ploughed in, the fine harrowed in; the soil thoroughly worked; and more clover and grass seed were sown to the acre. The pastures were improved by cutting bushes and clearing some woodland, and more stock was kept. Dairy products brought higher prices, and cows were kept better. Hops were raised, and with good crops proved remunerative.

It became necessary to have a new house, and after due preparation a commodious one, with wood-shed and horse barn attached, was erected in 1862. It was thoroughly built, well finished and painted throughout. Shortly after this the estate became so desirable that \$10,000 was offered for it, but Mr. B. considered this his home and refused to sell. Help was freely hired, liberal wages were paid, and workmen well treated. The soil, by successive manurings and good management, became more fertile, and wheat began to be raised with good success. As many as 25 bushels per acre were harvested, 70 of oats, 300 of potatoes, 70 of corn and 900 of turnips.

More barn room becoming necessary, one was built in 1868, 92 feet long, 48 feet wide, with a cellar under the whole, for muck and manure. The stable above the cellar was the length of the back side and one end, 140 feet long, making room for about 40 cattle fastened in stanchion. At present the farm can keep this amount of stock, beside horses for team, and a few colts.

In 1869 another purchase was made, for \$2500, of two lots, 220 acres of very fine woodland and natural meadow, south of the farm first purchased, making 440 acres of choice land. The old debts are all paid up. And all this has been done mostly by straight, practical farming and dairying, with no blood stock, no injustice to hired help, no stinginess in neighborly deal, and no mean or unchristian action. A few dollars have been added to the income by buying hogs, and in each of the falls 1867 and 1868, about 500 turkeys were bought, fattened, dressed, and sold, making a good profit.

Last fall Mr. B. represented the town in the legislature of the State. In the winter, with his usual energy, he decided to increase his income by getting lumber from his own woodland. With two men that he hired by the year to cut the logs, and with his one span of horses that do his farm work, he went at it, and the following amount of sawed lumber was the result of the winter's work:—10,000 feet No. 1 clapboard, worth \$20 per m.; 7,000 feet floor boards, worth \$25 per m.; 26,000 feet railroad fence boards, worth \$11 per m.; 18,000 feet pine (not yet sold,) worth \$25 per m.; 4,000 feet poor fence boards worth \$8 per m.; in all, 65,000 feet, average worth per m. \$18. The sawing was done for \$2 50 per thousand. The principal part of this was immediately sent to market, but some is not sold.

The present summer he has commenced to buy butter for Messrs. English, Simpson & Co., Faneuil Hall Square, Boston, and each week buys from one to two and a half tons, as they order.

The lessons that I draw from this instance of successful farming, where a man's property has increased from a few hundreds to over \$15,000, are first, that a worn out farm can-

not at once be made fertile even by good farming, and a heavy dressing of manure, but that a continued course of good treatment is necessary to restore fertility and strength to the whole mass of surface soil.

In the second place, I learn that it is not "economy" that makes farmers rich, but a big income. I know some meanly economical farmers that are poor. In this case good wages are paid; labor saving implements used, and help enough employed to prevent the necessity of forced over work; food in abundance and variety is furnished; good household furniture provided, with all needed conveniences; and such freedom from harassing, soul-corroding anxiety, that visitors say "if this is farming, I should like to be a farmer."

And, in the third place, I am taught that strict honesty, perfect fairness, and even liberality in all business and neighborly transactions are compatible with success in farming, whatever may be thought to be the result of the exercise of their virtues on individual prosperity in other professions and occupations.

Z. E. JAMESON.

*Irasburg, Vt., Aug., 1870.*

*For the New England Farmer.*

#### ON FATTENING SWINE.

MR. EDITOR:—I wish to give your Northfield, Vt., correspondent of Aug. 15, the result of my experience in fattening hogs.

I regard apples boiled and mashed, with a half bushel of meal to a barrel of apples, added while hot, and slightly fermented, as much better than pumpkins or potatoes. Apples fed in this way make firmer and sweeter pork than any feed I ever tried. I prefer apples to potatoes for keeping store hogs; they consume more in quantity, but will thrive better on them than on potatoes.

Twelve and thirteen years since, I each year wintered a fall pig, let them run with my cows through the summer, giving them only the slops made by our family; giving all the skimmed milk to my calves. When apples began to fall off, they had free access to them; which lasted them until cold weather, without any other feed. When my cows were taken to the barn, the hogs were confined in the barn yard, a good sized one, with a warm shed, and fed on corn-meal mixed in a stiff cold mush, twice a day only. After a while they had as much as they would eat, and the hens immediately finished what was left. They never lost their appetite, nor pined between meals; being fed regularly, with nothing but water in reach between meals. The feeding-trough was in the open yard, well removed from their bed. They kept clean and in a wholesome atmosphere, but would frequently root through the frozen ground and lie with the navel in contact with the fresh earth, to rid themselves of an excess of elec-

tricity. They were killed near Christmas; the poorest of them, which was killed the first year, was pronounced by the butcher as *the fattest hog he ever saw*, (weight 425 lbs.) The next year's hog, though smaller, was much the fattest.

I believe pigs will fat fastest on cooked food, and should be fed three times a day, without being able to get a particle between meals, but old hogs should have uncooked corn-meal, which they will eat the most of, and yet digest it well, if fed only twice a day.

A large yard, with a chance to root into the fresh earth, are necessary to secure wholesome quarters, and contentment for a fattening hog, and these are both necessary to make wholesome pork.

PHINEAS FIELD.

*E. Charlemont, Sept. 15, 1870.*

REMARKS—In the abundance of apples all over New England, it is encouraging to find such testimony as the above, that swine are fond of them, and that they are wholesome and nutritious. We can add our own testimony to that of Mr. Field. Since the sweet apples began to drop, some weeks ago, they have been collected, boiled, mixed with corn-meal and a small portion of shorts, and fed to the hogs. They are relished better by the swine if a small amount of salt is added, and thoroughly stirred in.

In this dry season, when the corn, potato and pumpkin crops are short, the apple crop may be made to go far in making up deficiencies in other crops.

We thank our correspondent for this timely reference to the subject.

*For the New England Farmer.*

#### SEASON AND CROPS IN NEW HAMPSHIRE.

The Drought,—Wheat,—Corn,—Oats,—Potatoes—Apples,—Corn Fodder,—Hay,—Garden Stuff,—Cider Mills.

The present season will be long remembered as one of excessive heat and drought—the hottest and driest, probably, in the memory of our oldest people. In some localities in this town, people are obliged to resort to the swamps and dig holes to get a supply of water for ordinary purposes. Our largest brooks are dry for rods in succession, and stock in many pastures is suffering for the want of water, and the "green things" that are not growing.

All the cereal crops have been uninjured by the drought. Corn on the light, sandy soils is a total failure, but on the hill farms it is better than last year.

Wheat is mostly threshed, and will average about fourteen bushels to the acre. I know of

one or two pieces sown as late as May 15th, entirely ruined by the rust, and it was done August 4th, when we had a shower which thoroughly soaked the straw. The kernel at this time was in the milk. After the shower, the sun came out hot, causing the stem to crack and the sap to ooze out, thereby rendering it in just the right state for the attack of the spores of the rust plant.

There is no trouble in raising good wheat in New Hampshire if we sow good seed and sow it early. Three bushels of my seed were threshed with a flail, the other six with a machine. From careful estimates, the part of the field sown with seed threshed by hand yielded 33 per cent. more to the acre than the machine-threshed, being earlier, thicker and better every way. In threshing for seed, I thresh the tops of the bundles lightly, without opening. In this way I get the earliest and best kernels for seed. The late, imperfect, and short heads are in the middle of the bundle, and of course are not threshed. I run these bundles through the machine, and allow the threshers for what I thresh off.

Oats are fair. The White Swedish, Excelsior and Probstein being far superior to the Norway. Some of our farmers think the last named more suitable for shoe pegs, than to feed to horses.

Potatoes are light and small. The Early Rose has done the best of any variety. Every one is pleased with them.

The apple crop is enormous. The codlin moth has troubled the fruit but little—consequently it is fine and nice, and buyers may expect fine fruit at fair prices.

Dairy products will be scarce in this section, as there has been nothing in the pastures to make milk since the middle of July, and most of our farmers did not take the precaution to sow corn for soiling—consequently cows are nearly dry.

I wish to add a word here in favor of corn sown for fodder. I have raised it for the last fifteen years, and have fed it to my cows with the best results. The cows always gain in flesh and milk, while fed with it; horses and oxen eat it in preference to good hay, and work equally as well. I sow it in drills, three and a half feet apart, usually manure in the drill; sow the corn by hand and cover with a harrow, and hoe twice with Ford's horse hoe. The plant usually grows about eight feet high, and the largest stalks are about one and a half inch in diameter, and will average about twenty stalks to one foot in length of drill. I find these stalks are very sweet. All my cattle have been fed upon them night and morning since the first week in August, and they have not wasted five pounds. I had rather have it, pound for pound, to feed to my stock, than English turnips, and it does not cost half as much to raise and feed out.

The hay crop fell short at least one-third, and stock is on the decline. Six feet cattle

can be bought for \$100, and sheep for what their pelts are worth.

Garden truck is scarce,—not half the farmers have enough for their own use.

Are the cast iron hand cider mills, so largely advertised in the papers, practicable for common use? Can good cider be made with them? One of my neighbors has one of the "5000 now in use," and I got him to make me a barrel of cider from good, ripe apples, and paid \$1.60 for making, but the cider is not fit to use, being black and nasty, and tasting as bad as it looks; and this is the complaint of all who have had cider made in it. I noticed the cider made at the Fair at Manchester with cast-iron mills, had a black complexion, and tasted iron. Is this generally the case, or is it the exception? Will some one answer who has had practical experience with them?

S. C. PATTEE.

Warner, N. H., Sept. 16, 1870.

#### SUBSOIL IN MARBLEHEAD, MASS.

Our correspondent, James J. H. Gregory, of Marblehead, gives the following facts in a letter to the *Country Gentleman*, from which he draws the inference that in some places the subsoil contains a large amount of fertilizing matter:—

"Four years ago I had a wall laid along the border of my garden. I had the trench for the foundation dug very deep, well down into the hard-pan, and had the hard-pan thrown into a pile separate from the loam. The loam was used in the compost heap, and the hard-pan—a half sandy, half gravelly mass, with just enough of coarse soil in it to be seen—was left to be used to fill up some path.

"In the course of the summer, I noticed a plant growing on it with surprising vigor, which, on examination, proved to be the common mustard, but with leaves nearly as broad and large as a cabbage—a size I had never seen surpassed in the richest soil. Beside it, and also on the hard-pan, was growing a plant of Apple of Peru with a vigor that belonged to the richest soil. The following spring I spread the lot on the flower garden and had a wonderful growth of flowers as the result.

"A year later, one of my neighbors in another part of the town dug a ditch, that drained his land through mine, to the depth of over six feet, cutting for about the last three feet through hard-pan, and throwing this on my side of the wall, where it made a heap about three feet in depth, of apparently nearly pure gravel, a little mixed with sand. The next summer while passing that way, I stepped aside to examine the ditch, when to my surprise I found growing on the heap of hard-pan, hog-weed that was nearly as high as my head. The only inference I can draw from these facts is, that under some circumstances

hard-pan is an excellent manure. In each of these instances the surface soil was a strong loam that had been under good cultivation for many years. May it not be that some of the salts of the manure applied during this period, passed through the loam to the hard-pan below, and there remained, held as in a bowl? Lime, it is stated, has this tendency, making it necessary to plough deeper each year to bring it to the surface. By whatever theory they may be explained, the facts seem to prove that in this broad country of ours there must be a multitude of acres underlain by vast areas of fertilizing material. Should further experiments demonstrate this to be a fact, it must prove of immense practical value to our tilled acres, of which the best fed have the habit of calling for a little more."

#### A MODEL COW STABLE.

In connection with winter keeping, let me describe the winter quarters of ten cows: the ground slopes gently to the southeast, and is about eighty feet square. On the rear, toward the northwest, is a hay-house, eighty by eighteen feet, the space under which is occupied by cow-house under the west end and overshoot under the east, each forty feet long. The cows are arranged on plank floor, with gutter and four-foot walk behind them, and hay manger and passage in front of them. They all face northwest, each having a space of four feet, with no divisions between them, and are kept in stanchions. In the rear are three doors to allow them to go out into the yard, and one at the east end of walk to go under overshoot. The yard is about sixty-two by eighty feet, is sheltered on the northeast and southwest sides by low buildings, and on the southeast by a board fence four feet high. In the centre of the yard is an octagonal inclosure of boards four feet high and twenty feet in diameter, into which all the manure of both stalls and yard is thrown as fast as delivered, so that the yard is kept perfectly clean. Over this yard is kept spread marsh or salt hay about six inches in depth, so inviting that the cows can lie down in any part of it. While in the yard they are sheltered from all the cold winds, and from the southeast comes the morning sun as soon as risen. The overshoot furnishes shelter from the rain, and at its western end, between the passage doors, is the water-trough, always full. There is a window on the southwest side of the west corner, to light their heads and the passage in front of them, and two windows in their rear. The hay-mangers are level with the floor, and large enough to hold easily five pounds of hay. Each has a lump of rock salt, and the meal is fed on the bottom. During all fair weather they are in the yard, except at meals. Thus are they bright, comfortable, and thrifty.—*Charles L. Sharpless, in Country Gentleman.*

## CULTURE AND USE OF TEA.



TEA has now become almost a necessity of life in nearly all portions of our country. It is found at noon and at night on most of the tables in not only private families, but at the hotels.

It has been in use but a comparatively short time.

even in England; and was wholly unknown to the Greeks and Romans. In 1660, a duty of eight pence per gallon was laid on the infusion of tea made and sold in the coffee-houses in London. An entry in the published diary of Mr. Pepys, secretary to the admiralty, says: "September 25th, 1661,—I sent for a cup of tea, (a China drink), of which I had never drunk before." From other sources we learn that the Portuguese had intercourse with China as early as 1517, and were allowed to purchase silks, porcelain and tea. The Dutch arrived in China for the first time in 1601, but there is no authentic evidence that they or the English imported tea into the East during the first half century from 1600. But soon after that, in 1660, its use was beginning to spread. In 1664, the English East India Company brought home two pounds two ounces of it as a present for his majesty. But in 1667 that company gave the first order to their agent at Bantam to send home 100 pounds of tea for the purpose of making "presents to their friends at court." The present consumption of tea in England is more than 51,000,000 of pounds annually. We have no means of knowing what it is in this country, but probably as much more.

There are comparatively few families now that do not have their cup of tea once a day at least. It is common on the tables of all classes,—on that of the day-laborer, perhaps, more frequently than on that of the rich.

The tea-tree does not require a tropical climate, but great care is necessary in its cultivation. The soil in which it flourishes the best is a decomposition of granite abounding in feldspar. The tea plant is chiefly raised on

the sides of hills; and in order to increase the quantity and improve the quality of the leaves, the shrub is pruned so as not to exceed the height of from two to three feet. The leaves are plucked one by one, selecting them according to the kinds of tea required. The plant is grown for the most part in gardens or plantations of no great extent, by persons little above the rank of peasants. The leaves are immediately taken to market, where they are purchased by a particular class of dealers, who dry and otherwise prepare them to be sold to the "tea merchants." The latter complete the manufacture, sorting the teas according to their qualities, give them a final drying, and pack them up in chests.

Teas of the finest flavor consist of the youngest leaves; and as those are gathered at four different periods of the year, the younger the leaves the higher flavored the tea, and the dearer the article.

Some years since a Mr. REEVES, who was for many years the English East India Company's tea inspector, was called before the House of Commons in some matters relating to teas, and said:—

"The tea plant in China has two distinct varieties, if not species, which respectively yield the *black* and *green* teas. The tree is an evergreen. The pickings of the leaves begin in May, when the plant is in the full leaf, but ready to shoot out other leaves. In the black tea plant, the first shoot, or the bud coming out, then covered with hair, forms the fine and famous *pekoe*. A few days more growth makes the hair begin to fall off; the leaf then expands, and becomes the *black-leafed pekoe*. Some young shoots have fleshier and finer leaves, which make the *Souchong*; the next best leaves make the *Campoi*; the next *Congou*; and the next, and inferior leaves, the *Bohea*.

The varieties of *green* tea appear to originate, not from the stages of picking, like the black, but partly from difference of treatment, and partly from difference of soil.

When a tea merchant buys green tea from the farmer, he subjects it to the following process: he sifts it through one sieve, which takes out the dust, the *young hyson* and the *gunpowder*, then through another sieve, which passes the *small-leaf hyson* of commerce; two other sieves take out the second and largest degree of size, and what does not pass the third, forms *hyson-skéri*. The teas then undergo the process of firing in an iron pan, at a great degree of heat, which gives the leaves a lighter twist and brings them up to their color. The tea which passes the first sieve is then put into a winnowing machine, and the fan blows the light leaf at the further end, and the larger broken leaf at a shorter distance. The heavier teas, as the *gunpowder* and *hyson*, fall nearer or farther from the hopper, and are separated by the winnowing machine. When fairly made, the difference between the *gunpowder* and the *young hyson* will be this: the young leaf, which takes the long twist, will form the young *hyson*, and that which takes the round twist will form the *gunpowder*."

Another account states that the leaves are partly dried in the sun, and then in heated pans, where they are stirred briskly about with a brush, to cause them to dry and curl up; then rubbed through the hands and heated until they assume the appearance which we see. It also states that there is no truth in the report that green tea owes its color to being dried upon plates of copper, for it is, in fact, dried upon iron plates. The *black* and the *green* teas are mostly produced from different plants, and in different districts.

It was formerly said that tea is neither nutritious nor healthy. It seems to us to possess both these qualities. No beverage to us is so invigorating or refreshing. Liebig says it is not shown by facts that its effects upon the constitution, when used in moderation, are of that injurious tendency that has been so frequently alluded to; on the contrary, there is no doubt that, among the lower classes in particular, its substitution for stronger stimulants has been extremely beneficial, and that its character has risen of late in the medical profession. It contains a substance called *theine*, and that, in combination with oxygen and some other elements, is the reason why tea so often satisfies the poor as a substitute for animal food; and why females and literary persons, who take little exercise, manifest such partiality for it.

The cultivation of tea has been attempted in various parts of the world, but without any great success attending it. In the spring of 1859, a number of tea plants was sent from the agricultural department to a gentleman in Wayne County, Miss., who reported afterwards as follows:—

"They are now from four to six feet in height, and three to four feet across the heads. The heads, formed by the branches and leaves, are very compact. As an ornament in the flower garden, the plant is desirable; its dark, evergreen leaves, when interspersed with its white flowers, present an appearance truly beautiful. It commences to bloom in September; flowers white, with yellowish anthers, resembling the single *Camellia*, and continues to bloom until checked by the severe frosts of December.

"During the late war, when our luxuries were cut off by the blockade, I made many experiments in drying the leaves of the plant in the shade, in the sun, and by the fire, but failed to secure the delicate taste and fragrance of the imported tea. I drank of the tea made of the leaves in each of these forms, and also of green leaves, and the effect, physically and mentally, was to some extent the same as that caused by the imported article. I am told that successful experiments were made in South Carolina before the war in preparing the leaves as it is done in China, but the

expense was found to be too great to make the business profitable. I reside in the long leaf pine region, sixty miles north of Mobile, Alabama, and my land is, of course, thin and poor.

We have always supposed that the names by which teas are known were mere fancy terms, but it appears not to be so. The term *Bohea*, for instance, comes from the district where it is principally grown, the Wo-ee-hills in Fokien, the great country for black tea. The *Congou* means "made with care;" the *Souchong*, "a very little sort;" the *Pekoe*, "white leaf bud;" *Gunpowder*, from the "smallness and roundness of the grain."

We have thought that a brief account of an article so highly prized, and so common on our tables, would prove of interest to the reader, and so have compiled the above from various reliable sources.

#### APPLES AS FOOD FOR STOCK.

The apple crop is immense this season. It is not confined to some favored localities as it has been for several years just passed, but abounds wherever apple trees stand,—in orchards, by the road sides and in the woods. On the old trees, where a living branch is left, it is loaded with fruit, and on young seedlings, by the dusty highway, the small, old-fashioned cider apples, are glistening in untold numbers, in the sun.

What is to be done with them? is the question often asked.

We have a report from a New Hampshire town, to-day, long famous for its fair and solid apples for exporting, that those of second quality are selling for five cents per bushel,—the purchaser gathering them himself. From another town in that State, we are informed that "windfalls" cannot be sold at any price!

We have sent one hundred barrels, already, to the cider mill, at fifty cents per barrel, which barely pays for collecting and carting them two miles.

But with all this abundance, and the low prices which the farmer receives, the printer of this sheet informs us that he pays for ordinary apples in Boston, *forty cents* per peck, or \$1.50 per bushel, and \$4.00 per barrel!

Even after the markets are supplied, and the cider mills are gorged, there will be an immense surplus to be disposed of. What

can be done with them? is the anxious inquiry of thousands. We reply,

**Use More of them as Food in the Family.**

The apple is valuable both on account of its nutritive and medicinal qualities. As a gentle laxative, they are invaluable for children, and when ripe, ought to be used freely by them. An almost exclusive diet of baked apples and milk is recorded as having cured cases of consumption, and other diseases caused by too rich food. It is stated, upon high authority, that there is no other fruit or vegetable in general use that contains such a proportion of nutriment. It has been ascertained in Germany, by a long course of experiments, that men will perform more labor, endure more fatigue, and be more healthy, on an apple diet, than on the potato.

They may be used in a variety of forms in the family; in several kinds of puddings and pies; baked, stewed, and sliced and fried as a delicious appetizer with meats. Upon the table, they are agreeable, nutritious, wholesome, and ought to be cheap.

**As Food for Stock,**

they are more acceptable and more nutritious than the potato. Hogs have been well fattened on apples alone. Cooked with other vegetables, and mixed with meal of corn, barley, rye or oats, they are excellent for fattening pork or beef. Fed to cows, about a peck each day, they will cause an increased flow of milk, and keep them in fine condition. Horses are very fond of them, and when not working hard, apples may well take the place of grain, so long as they are plenty. Boiled and mixed with corn meal or shorts, there is scarcely any food that fowls like so well, and grow so fast upon.

Gather up all, then, that are not suitable for preservation, store them in a cool, dry place, and make them save the hay which may be sold for \$25 or \$30 a ton. They may be made to prove profitable in this way.

**TOO MUCH LAND.**

Gen. BUTLER's address before the Essex County Agricultural Society at Ipswich, on the 28th September, was an excellent one. Its leading idea was that we *employ too much land in an indifferent cultivation*. He could not have hit upon a better text, nor one which needs elucidation more. He handled it in a

calm and dignified manner, and with pertinency and force. He said:—

"This aggregation of large quantities of land in one hand has resulted in so poor tillage, and so little productiveness, because of the inability to till so much in a proper manner, and has made farming so unprofitable, that, taking the waste and barren pastures, the unimproved woodland, where the shrub-oak and the stunted pine have filled the place of the maple, the beech, the birch, the ash and the oak, if all the agricultural land of Massachusetts were put at sale to-day at the price which is asked for it, the proceeds would not be sufficient to dig the stone and re-build the walls which fence them."

The reason why some farmers make more money at the West than they can here is, not because they can obtain more per acre than in New England, but because land is cheaper and they can obtain large tracts of it, and because, being easier handled, they can cultivate a larger breadth. The wheat crop of New England is greater per acre than that of Ohio or Illinois, and is worth ten to twenty per cent. more per bushel.

On this point the General says:—"In no State in the Union are the productions of the soil, acre for acre as tilled, taking the different kinds, so great in quantity as in Massachusetts, and no State where the product of the soil, when harvested, is so valuable."

The produce of Massachusetts, of cultivated land, on an average of the whole amount, is \$28 per acre; of Ohio, it is \$18 to the acre; of Texas, \$21 to the acre; and California, which boasts of her richness in agriculture, gives but \$21 to the acre!

The address is altogether an excellent one, and if carefully read, would correct many popular errors of opinions among farmers.

**EXTENSIVE POULTRY GROUNDS.**

Warren Leland, Highland Farm, Rye, N. Y., in response to an inquiry about raising poultry, made to the Farmers' Club, sent the following:—"If the gentleman will come up and see me I will gladly show him how I manage my poultry yards. I have found that for every hundred fowls you must give up at least, an acre. But rough land is as good as any. Hens naturally love the bush, and I lop young trees but leave a shred by which they live a year or more. These form hiding places and retreats for them. In such places they prefer to lay. I have great success and it depends on three or four rules, by observing which I believe a good living can be made by hens and turkeys.

"1st.—I give my fowls great range. Eighteen acres belong to them exclusively. Then the broods have the range of another big lot,

and the turkeys go half a mile or more from the house. The eighteen acres of poultry yard is rough land of little use for tillage. It has a pond in it, and many rocks, and weeds, and bushes, and sandy places, and ash heaps, and lime, and bones, and grass, and a place which I plough up to give them worms.

"2d.—When a hen has set I take her box, throw out the straw and earth, let it be out in the sun and rain a few days, and give it a good coat of whitewash on both sides. In winter, when it is very cold, I have an old stove in their house, and keep the warmth above freezing. There is also an open fire-place where I build a fire in cool, wet days. They dry themselves, and when the fire goes out there is a bed of ashes for them to wallow in. Summer and winter my hens have all the lime, ashes, and sand they want.

"3d.—Another reason why I have such luck is, because my poultry yards receive all the scraps from the Metropolitan Hotel. Egg-making is no easy work, and hens will not do much of it without high feed. They need just what a man who works requires—wheat bread and meat. Even when wheat costs \$2, I believe in feeding it to hens. As to breeds, I prefer the Brahmas, light and dark. I change roosters every spring, and a man on the farm has no other duty than to take care of my poultry. I frequently turn off 3,000 spring chickens in a single season."

#### MAKING GOOD CIDER.

Cider that is really good is almost a rarity, and yet a rich, pure quality may be obtained by an orchardist who will exercise care in the preparing of fruit, and the expressing of the juice. It is a custom very common to scrape together the refuse of the orchard, including rotten fruit, dirt, leaves, etc., and work up the whole collection together. Good cider cannot be obtained in this way, any more than good wine can be the result of working up half rotten and filthy grapes.

Apples should be gathered, as far as soundness and cleanliness are concerned, with as much care as for winter storing. They are better for lying awhile in some open shed, where not exposed to the frost, as perfectly ripened fruit makes the best cider. If it is possible, use no straw in pressing, as all foreign substances detract from the rich flavor of the liquid, and use no water unless it be in the last pressing which may be designed for vinegar. If high color is desired, it may be obtained by allowing the juice to lie in the pomace before pressing. By the exposure the saccharine matter takes up oxygen, and the same change is made in color as sugar undergoes in a refinery, and if long continued, a decomposition takes place in which the sugar is resolved into carbonic acid gas and alcohol, the cider becoming sour or hard.

People do not usually realize the importance

of having pure juice, in order to secure long keeping and high flavor. Impure liquid, in which fermentation, or natural working is checked, never becomes a good drink. Cider will, if left to itself, work clear, but the time required, and exposure to the atmosphere made, brings about a change of sugar to alcohol, as above spoken of. The object should be to purify as soon as possible. This may, perhaps, be the most effectually done by straining as soon as it comes from the press through woolen cloths, and putting up in clean barrels, and racking off after standing a few days and run through a filter into a clean cask. Only that which appears to be free from sediment should be drawn. After a week or so, rack off and filter again, and yet again if there are any signs of working. To prevent exposure to the air between the times of transfer, use a bent tube, one end inserted in the bung of the barrel and the other in a pail of water; this will allow the escape of gases which are generated in the barrel. After the cider has been rendered perfectly pure, bung up tight, and a delicious drink will be had, doubly worth all trouble.—*Ohio Farmer*.

#### FARMERS' BOYS.

When I was a boy, my first savings of ten cent pieces, earned by Saturday afternoon work—for school kept half a day on Saturday then—were expended in buying a heifer calf. Then I worked on and paid my father a certain sum each month for keeping. When the calf was one year old, I traded it for two steer calves, and now I had to put in good and strong to pay for their keep; but I occupied all my spare time in learning these calves to work in the yoke, and at one year old they would gee and haw as well as old oxen, and my father paid me for their use in leading the team for breaking in his two and three-year-olds. Again, I had a piece of ground each year after I was fourteen, that I could plant and work on shares; and if I wanted help, why I had to give two days of my time to the hired man's one day. I grew just what my fancy and reading dictated, and from the proceeds I dressed as well as any boys now. I had always some time to play, time to read, and now look back with love and pleasant thought to the old farm and the farm hand who taught me how to use every tool, and whipped me when I neglected to drive the team out straight at the end of the furrow in ploughing. This remembrance of my own boyhood has always induced me to favor all items of encouragement at home on the farm; and I believe if it were more generally practiced, we should have more good farmers, and less broken down merchants, or loafing, hanging on, time-serving clerks, ready for anything except honorable labor and usefulness belonging to the highest order of creation.—*Farm Advocate*.

### WOOL GROWING IN CALIFORNIA.

Sheep breeding, both for wool and mutton, is an important branch of agriculture in Los Angeles and Santa Barbara Counties, as well as in other parts of California. The climate is peculiarly favorable to sheep. As they need scarcely any shelter or cultivated food, they are kept at much less expense than in our cold northern latitudes. Having the mountain ranges, diseases so prevalent in other localities are almost unknown among them. The breeding of sheep for their wool, as I was informed, was first commenced in California by Mr. W. W. Hollister in 1853. Having but little of this world's goods, he was forced to become a borrower for his first purchase of sheep. He is now the owner of a flock of fifty thousand, and of an immense landed estate fitted for sheep raising, embracing several leagues, all arising from the profits of his sheep. The success of Mr. H. in the breeding of sheep for their wool, was soon followed by that of numbers of others in different parts of the State. The exportation of wool from California (commencing in 1855 with 360,000 pounds) is computed the present year at over 18,000,000 pounds. A large proportion of the cheap foot-hills and mountain ranges of California being admirably adapted to sheep breeding, this important branch of husbandry will doubtless for years to come be largely increased. The quality of wool is being constantly improved by judicious crosses with imported bucks.—*Cor. Michigan Farmer.*

### POULTRY.

We make the following extracts from the Reports of Poultry Committees at the Fairs of the North Worcester and Bristol Counties, Mass., in 1869:—

Last winter I procured two barrels of bone, intending to use it for Irish potatoes and other garden crops. My wife appropriated some of it for her roses in the flower garden, by simply strewing it on the surface of the ground around the bushes. The fowls have free access to the garden and were discovered eating the meal very eagerly. Thinking it might be of service to them, we gave them some, for several weeks, and I assure you, it was but a short time before the eggs began to come in such numbers as we had never known before. If a nest was broken up to prevent a hen from sitting, it was but a few days before she was laying again, and thus it continues to the present time. One hen has taken possession of a barrel that has some bone meal in it, and is laying in the meal. Whether she will lay the barrel full or not, time will show.

My wife thinks that care and bone meal are great institutions for her poultry yard, and very extraordinary in their effect; but as the hens have an unusual amount of cackling to

do, fears it may bring on bronchitis. The manuring of hens to make them lay, we think is original, but we have no idea of taking out a patent for it, and hence leave the discovery open to the use of all who may choose to try it.—*Worcester Report.*

The noble family of Game fowls was represented by ten coops, many of them of great beauty. There is, perhaps, no breed more truly valuable for the farmer than the Game. Its good qualities are so evenly balanced, that for general purposes, it has no superior, perhaps no equal. The hens are excellent layers, the best of sitters and mothers, being active, vigilant and fearless. They are also remarkably hardy. The cocks are very gallant, seldom or never taking a dislike to one of the flock, and persecuting her unceasingly, as is not unfrequently the case with many other breeds. They are brave but not quarrelsome, seeming to feel conscious of their superior strength and skill, and as if disdaining to engage foemen unworthy of their steel.

There can be no doubt that the demand for eggs and poultry in all our large towns and cities is rapidly increasing. The quantity of eggs consumed in the city of New York for culinary purposes, must be at least 500,000 eggs per day. In addition to this there has sprung up, within a few years, a large demand from the manufacturers of albumenized paper for photographic purposes. One establishment in New York alone, consuming 900,000 per annum.—*Bristol Report.*

### CROSS-BREEDING SHEEP.

My experience has led me to these conclusions:—

1. That generally the sire had most influence on the qualities of the fleece, and the dam gave the nutritive system.

2. The superiority in the growth of fleece and flesh depends upon a sufficiency, if not an excess, in the activity of power of the nutritive system; and that the best butcher's lambs and fleeces can be obtained from ewes of the long wool, mutton breeds with Merino rams.

3. To engraft a long and rapidly growing wool upon a carcass which has not a nutritive system capable of surplus flesh, is to imperil both fleece and flesh, and that you cannot get really good butcher's lambs from Merino ewes, whatever may be the sire. But to utilize the almost worthless flocks of Merinos which now exist, Leicester rams would be the most successful cross.

4. That there are advantages in crossing the Leicester with Merino rams—that we should obtain a hardier breed, one that would thrive better than the Leicester in our short pastures and fickle climate, that would yield a fat lamb when four months old—a fleece undiminished in weight, and wool adapted for delains, and of most desirable quality for gen-

eral use, being soft, warm and strong, just such as is needed for stocking yarn and serviceable clothing.

I have not the least doubt that the uniformity of the qualities of such a cross-breed could be perpetuated, if selections of males were made in conformity with an established standard of qualities for several generations.

The surprising conformity of half bloods of pure breeds strengthens this expectation, if those that deviate from the type were discarded.—*Country Gent.*

## EXTRACTS AND REPLIES.

### A CRIBBING HORSE.

I would like you to inform me through the columns of the *NEW ENGLAND FARMER*, what will cure "cribbing" in a horse? From what cause does it proceed? and in a young horse do you know anything that will cure? Is it a disease or merely a habit? I feel somewhat anxious to hear from you, as the horse is otherwise sound and good. A SUBSCRIBER.

*Southport, Conn., Sept. 22, 1870.*

REMARKS.—The first thing to do is, to take away from him everything that he can lay hold of with his teeth. Tie him away from stalls, racks, and partitions, and put his feed on the floor, if long hay, or in a box if cut feed, and remove the box as soon as he is done eating. Continue this for several weeks and the habit may, possibly, be broken up, though it becomes one, sometimes, of a most inveterate nature. Medicine will be thrown away upon him, unless the habit clearly arises from indigestion.

To the suggestions above, about feeding, add great regularity in the *time* of doing so, and exercise the horse every day for two or three hours. If the animal has a constipated habit, give him something that will gently move the bowels. Do not resort to any violent measures whatever. Washing the wood work of the stalls with carbolic acid water, will sometimes prevent horses from biting it.

### CABBAGE WORM.

If "W. H. W." of Stanstead, P. Q., and others who have lost their cabbages, this year by the worm which is the offspring of the *Pieris Rapæ*, will, another year, after setting out his cabbages, keep them well sprinkled with a solution of one viotril and water—a piece of vitrol as large as a walnut to a pail of water—I think they will not be troubled much with the worm. Hellebore answers very well in place of the viotril. Care must be taken not to get the solution too strong of either, as they are poison. Quite a number in this vicinity have saved their cabbages by using the above. Liquid hen manure is also very good; brine, salt, or even *kerosene* does not seem to disturb them.

*Albough, Vt., Sept. 26, 1870.*

H. L. S.

When I wrote that item in the *FARMER*, a few weeks since, recommending air slaked lime as a complete remedy for the cabbage worm, I had not the least doubt but those who would give it a fair trial would be satisfied with the results. But on looking over the *FARMER* since, I find some have

tried it without any effect. The old saying is that "a stitch in time saves nine;" so it is with the lime, it wants to be applied while the cabbages are wet, or while the dew is on in the morning, before the worm works its way into the inside of the head, where nothing can touch it. They first commence to deposit their eggs or nits upon the outside of the cabbage, and then is the time to apply the lime, which destroys the mother worms before they have time to get into the inside. It proved to be an effectual remedy with me, last year, and has this year. My neighbors have also given it a trial, with good results. If there are any who doubt this, let them visit my garden and I will show them as nice and clean cabbages as ever grew, but not so large as last year, on account of the dry weather. The worms that I have reference to are large, green worms, about the color of the cabbage leaf, varying from one to two inches in length. This is too late for this season, but let those who raise cabbages, give it a fair trial another year, when the worms first make their appearance. J. B. HOLTON.

*West Charleston, Vt., Sept. 26, 1870.*

REMARKS.—Our correspondent encloses a notice from his local paper of some large squashes and other vegetables of his raising, and takes occasion in his postscript to reiterate his faith in *lime*.

### SOIL BEST ADAPTED FOR PASTURES.

Here in New England, where hill-sides are so plenty, it has become a settled opinion among many farmers that a hill pasture is very desirable, and if their farms are river or brook meadows they desire a pasture away upon some elevation where sheep, young cattle and colts are expected to thrive wonderfully on account of the elevation, sweet grass, pure air and pure water.

It is doubtless true that upland is the best pasture. But what is upland? It is such portions of the country as are free from surplus water, as will give a firm turf, and will not break badly under the tread of the cattle put upon it. There is upland close by large rivers in low valleys, and there is low land near mountain tops, where the springs of water saturate the mucky soil, making acres a bog, where the sod is cut in pieces by the feet of the cattle. The best soil for pasturing, then, does not depend upon its elevation. A farmer may well be satisfied if his whole farm is good tillage land, and all, in rotation, is in pasture. Land that can bear a good crop of corn, with such manuring as New England farmers give, then a crop of barley or wheat with which is sown a generous seeding of clover and timothy which, the succeeding year, yields two tons or more of hay, is good pasturing, and such grass will show good results in beef cattle or cows.

It would surprise some farmers to see the small crop of grass that an old pasture would yield if no animals were allowed upon it. A good strong soil with a good turf is profitable. The Editor of the *Country Gentleman* mentions seeing in England ninety-four sheep and eighteen cattle in a pasture of only twenty acres. On the island of Rhode Island I saw, in 1869, on the farm of Wm. M. Rogers, 60 sheep and lambs in a nine acre pasture, with much surplus feed. The turf was orchard grass. Another pasture of nine acres kept nine cows, and was not stocked to its full capacity, as there were portions of the pasture that would cut a good swath of orchard grass. On the estate of E. A. Anderson, on the west side the Island, I walked across a pasture of ten acres which kept each year ten cows, except that they had, during a part of the season, fodder corn in addition. This pasture was formerly unprofitable low land, but after being underdrained, ploughed, cultivated, and seeded to grass, it became upland. In my

own neighborhood in Vermont, there are instances of very good pasturing on lands that tend to wetness. All through the season the grass is pushing up green, tender and abundant. It is quite the custom to devote the rough, steep, waste places to pasture, because they cannot be tilled, and what feed is secured is clear gain, yet, in such pastures, these lower portions, over which the melting snows and heavy rains find their way, yield the most abundantly. Land nearly level, with plenty of moisture, is preferable to all others for pasture, as grass is abundant and cattle obtain it easily. In all countries the cattle kept in such situations develop into a larger breed, more profitable for beef or dairying than those kept in the highlands.

*Isaburg, Vt., Sept., 1870.*

Z. E. J.

#### SELLING STOCK AND HAY TO PAY DEBTS.

Will some one inform me through the columns of the NEW ENGLAND FARMER, what they should do in case they were in debt considerably. I have eight cows, ten young cattle, and about 35 tons of mostly good hay. Will it be advisable for me to sell say seven cows, and a part of the hay, reserving enough to winter the young cattle? If it is a good idea, what is the most successful way to dispose of them? A NEW CORRESPONDENT.

*Warren, Mass., Sept., 1870.*

REMARKS.—Perhaps some of our correspondents have been "through a mill" of this kind, and can make some practicable suggestions to our "new correspondent." If so, we shall be glad to find space for them. Circumstances alter cases so materially that advice which would be judicious in one case might not be so in another. The rate of interest paid, the amount your cows and your hay, if not sold, would enable you to apply yearly to the reduction of your debt, are among the facts which should be taken into account in forming an opinion as to the proper course to be pursued. In Europe farmers generally rent instead of buying land, and then use what funds they possess, often of considerable amount, in managing their farms. How will it do for you to treat the interest you pay as rent, and keep your cows and hay for profit and the improvement of your land? Selling hay is generally considered as an impoverishing operation.

#### WINTER PROTECTION OF GRAPE VINES.

Will you inform me as to the best way of protecting grape vines laid down for winter, from the mice or other depredators? I have covered them with leaves, but they do not answer the purpose.

*Milford, N. H., Sept. 30, 1870.*

W. P. E.

REMARKS.—The above inquiry was submitted to W. H. White, E.-q., of South Windsor, Conn., the author of our monthly articles on gardening, who replies as follows:—

I have found that for grape vines laid down on the surface of the ground, a covering of an inch or two of light loam soil is as good a protection both from mice and winter exposure as any other. I have never had any troubled from mice, when vines were thus protected, and have had them thus covered for several winters last past. The vines come out fresh and strong in spring. Care must be used that there is no liability of trouble from surface water during winter. Either a light sandy

loam or what is commonly denominated sand—plastering sand—is the best. One inch covering is sufficient with me to protect the Diana, the tenderest I have.

#### BARK LICE.

I noticed in the FARMER of Sept. 3d, a remedy from E. Wyman to keep off bark lice from trees: a strong lye made of wood ashes put on in May or June. I want to know if that will not kill the foliage? Would not early in the spring or late in the fall be better? What quantities must be put together? What some would call strong others might not, or they might get the wash too strong.

*Woodstock, Vt., Sept. 20, 1870.*

C. F. L.

REMARKS.—Mr. Lyman does not recommend to touch the foliage with the lye, but only the trunks and branches, as far as you can reach. We have no doubt that such an application would be useful. The insects he is attempting to destroy are "bark lice," not insects which attack the foliage. Some persons wash apple trees with potash water, but it should not be used unless in a very weak form. Two or three quarts of ashes standing in a bucket of water over night would not injure apple trees, and we think would be useful. We have never tried it, but intend to do so. These little scales, generally called bark lice, are said to be the bodies of the mother insect. They cover from ten to fifteen minute white eggs, visible with an ordinary magnifying glass. These eggs hatch a little worm in May or June, and hence a wash applied at that time destroys the worm much more easily than can be done after it has taken on the hard, waterproof shell which we see on the bark of the tree.

#### FALL PEAS.

I should like to ask through the FARMER the time and manner of planting fall peas, and what kind of soil is the best for them. SUBSCRIBER.

*Pittsfield, N. H., Oct., 1870.*

REMARKS.—We have never sown peas in the autumn, and do not know anything about it. In warmer climates, they are sown in the late summer or early autumn, so as to attain a growth of three to six inches, and are then covered with straw and evergreen branches to protect them through a mild winter. They then take a start in spring and give an early crop. If sowed in this climate, we suppose it must be so late that they will not start until the following Spring.

#### KILLING FLIES.

Burning pumpkins leaves to kill flies is a failure up here in Vermont. They collect on the floor of the room, and seem to take no notice of the dense cloud of smoke filling the room, and are as lively as ever when the room is emptied of the smoke. It leaves a most disagreeable scent in the room and about every article of clothing exposed to it, that will take some time to get rid of. It either is a hoax, or our flies are smarter than others. Will others report their success or failure in getting rid of these pests by this method.

#### ABOUT SUBSOILING.

Will you or some of your subscribers give their experience in subsoiling. It seems to us that by loosening and breaking the lower strata, or at

least the hard crust formed by the ploughing of lands at about the same depth, which every one knows the plough forms in the course of time, must be beneficial, and also to guard in some measure against extreme drought, from which our crops have suffered somewhat this season, but we have had no experience, and doubt if there is any one in this section who has used a subsoil plough to any extent. What varieties of soil are most benefited by subsoiling?

CROPS AND OTHER MATTERS.

Our grain crops have been good, taking into account the very severe drought we have had. Oats rather light, but potatoes and corn are excellent, almost without exception, and apples plenty. Some orchards of old trees that five years ago did not bear three bushels will produce probably 100 bushels this year. There will be some good mutton from this town if the owner's corn and patience holds out, as some 1000 good sheep are being fattened, of which Mr. Ricker, the drover, and I. W. Winter, a good feeder, will handle about 500, and fat sheep will be the result if there is any virtue in corn.

W. V. M.

Peacham, Vt., Oct. 1, 1870.

PLANTING POTATO BALLS.

Will you please inform me through the columns of the NEW ENGLAND FARMER the proper times for planting potato balls?

L. M.

Cabot, Vt., Oct., 1870.

REMARKS.—As early in April as the ground is suitable; or, if you wish to gain time, plant them in boxes or pots pretty soon, and watch and tend them as house plants all winter, and transplant into the garden in May. In this way almost a year may be gained in the growth of the young potato.

TO RELIEVE A CHOKED COW.

Having a cow which got choked with an apple, we tried to move the apple up or down the throat with our hands, but it stuck so fast we could not. We were about trying to force it down with a stick, when a neighbor told us to throw a handful of dry gunpowder in her mouth. We did so, when she held her nose near the ground and acted as if she was trying to eject the powder from her mouth. In about half a minute up came the apple. You know a choked cow holds up her head, and endeavors to swallow.

B. L.

Pratt's Junction, Mass., Sept. 19, 1870.

CURE FOR GARGET.

MR. EDITOR.—I send you a very valuable receipt for the cure of what is called garget in cows.

Take 1 lb of dry garget root, 1/2 lb saltpetre, 1 oz iodide of potash and 4 oz of powdered mandrake root. Put the garget into 4 quarts of soft water, steep 12 hours over a warm stove, to make 3 quarts when steeped; then add the other ingredients; after straining the liquor, shake well. For one dose, take 3 gills of the liquid, and add 3 gills of water; put into a junk bottle and turn down the throat once in twenty-four hours, until a cure is effected, which will take from three to nine days.

Dexter, Maine, 1870.

JOHN L. JONES.

—At a sale of Short-horns on the 14th of August, by Mr. W. R. Dancan, of Towanda, Illinois, eighteen cows and heifers averaged \$554; and 9 bulls \$633. Cows were sold as high as \$1500, 1150, 1000, 750, &c; bulls at \$1760, 705, 640, &c.

TEXAS CATTLE.

The editor of the *Western Rural* says that an extensive dealer in live stock at Chicago told him that but for the presence of Texas cattle at that market the price of beef there this season would in his opinion have gone up to 12 cents per pound live weight, or some three cents a pound higher than it has done. This estimate may possibly be a little extravagant, but there can be no doubt that the Texas cattle have materially reduced the prices on our native stock, and that New England farmers have received many thousand dollars less for their cattle than they would have obtained if there had been no Texas stock in market.

We have therefore thought that a few facts in relation to the trade in Texas cattle would be interesting to the readers of the FARMER.

These cattle come principally from the northern part of Texas. The cost, by the head, when bought by the herd, where raised, is for beef cattle about \$11, milch cows \$6, three-year-olds \$7, two-year-olds \$4, yearlings \$2.50. The average distance driven on foot is about 700 miles. Cost of driving \$2 per head, exclusive of 20 per cent. risk; time about two months. A town on the Kansas Pacific railway, called Abilene, is the point at which most of them are received. This place is 160 miles west of the Mississippi river, 440 miles from St. Louis, and 670 miles from Chicago. The grass and water in the vicinity of Abilene cannot be excelled on the continent; and the mildness of the climate, and the absence of flies and mosquitoes contribute materially toward the fattening of cattle rapidly and with little risk. The facilities for shipping, and for the general transaction of business pertaining to the trade, are also first class; and there is little reason to doubt that Abilene will become, at no very distant day, the largest cattle market in the whole country.

Arriving at Abilene in good order, a mixed drove is held at about the following average figures:—

Beef cattle . . . . .	\$20
Milch cows . . . . .	12
Three-year-olds . . . . .	10
Two-year-olds . . . . .	8
One-year-olds . . . . .	5

After being "grazed" through the Summer, the same cattle are worth 20 per cent. more. Beef cattle, of average flesh, ready for market, are valued at \$25.

The cattle sent to market usually average about 900 pounds, and not unfrequently go over 1,000. They sell in St. Louis and Chicago at an average of 3 1-2 cents per pound—oftener above than below that price.

The larger portion of the Texas cattle, however, are shipped direct to New York and other Atlantic cities, where many are packed and sent on to Europe. The price in New York averages eight cents per pound. This makes the value of a 900 pound steer, in the New York market, \$72—or about double the St. Louis and Chicago value. The additional freight, however, very nearly covers the difference in quotations. The freight from Abilene to St. Louis or Chicago is six to seven dollars per head. The freight from Abilene to New York or Boston is nearly four times as much as to St. Louis or Chicago; and there is, in addition, a 20 per cent. transportation risk, growing out of the increased extent of the route, and the greater time consumed in getting to market. The money actually invested in a Texas steer up to the time of his reaching St. Louis or Chicago is about \$23 00; and he brings on an average at three and a half cents per pound, just \$31.50—leaving a profit to the seller, on the total investment, of \$8.50, or about 30 per cent. The same steer sent to New York or Boston will represent, on reaching there, about \$55 00; and he sells in those markets for \$72 00, average—giving but a trifle more profit than if sold in Western markets at a price one-half less.

The bulk of the cattle held at Abilene are owned by what are called the "big cattle men," who usually have 5,000 to 10,000 each. Small dealers hold from 100 to 1,000 each. The largest dealers control the market.

The Topeka (Kansas) *Record*, from a lengthy article in which we condense the foregoing facts, says that last year about 50,000 head of cattle were shipped eastward from Abilene, and so great has been the increase of the business at this point, that the number for the present year is estimated at one hundred and fifty thousand.

**THE BARCELONA OR SICILY NUT.**—We have received specimens of a nut grown in the garden of Captain Marston, of Fairhaven, Mass., which was introduced into this country by Mr. L. Jenney, of that town. It belongs

to the filbert family, and the nuts are about an inch in length. Mr. J. has something of a nursery of the tree or bush, which grows fifteen or twenty inches high. By heading back about one-third of the annual growth, it is claimed that they receive no injury from the cold of winter, though during the nine years that they have been cultivated in Fairhaven the mercury has fallen as low as 19° below zero. The fruit has been exhibited at the shows of the Massachusetts Horticultural Society, and has attracted considerable notice. It has a pleasant taste, and we hope it will prove adapted to general cultivation.

#### THE CABBAGE WORM.

In our examination of gardens, during our late visit to Vermont, we did not see a single patch of well headed cabbages. In most cases they had been completely destroyed by what was called a new worm, by all with whom we conversed upon the subject.

We see by an article in the *Country Gentleman* that Hon. Levi Bartlett, of Warner, N. H., says, "I have been perfectly familiar with the natural history of this cabbage worm, in all its transformations, from the egg upon the leaf of the plant, to the winged butterfly, for over forty years, and I have no doubt of its being a native American, 'to the manor born.'" He also refers to a description of this insect in the *NEW ENGLAND FARMER* for 1829, by Dr. T. W. Harris, in confirmation of his opinion that the worm which has proved so destructive this year, is the same as that which has been so long known by him.

In our opinion Mr. Bartlett is mistaken in this. Last year we forwarded specimens of the "new worm" to Samuel H. Scudder, Secretary of the Natural History Society of Boston, and in an article which he wrote for the *FARMER*, (Monthly 1869, page 362,) he said:

I suspect this to be a recent, most unfortunate importation from England. Several years ago, a butterfly called *Pieris rape*, which has sometimes done great damage in Europe, was discovered about Quebec, and has since spread into northern Maine and Vermont. I have not yet heard of its doing any serious injury, but it certainly will, as its rapid increase proves its accommodation to the New World. This pest was not needed, for we have now a very near relative, first described in your paper, by Dr. Harris as long ago as 1829 (see *NEW ENGLAND FARMER*, old series, vol. 7, p. 402) under the name of *Pieris oleracea*. This insect has sometimes plundered our kitchen gardens,—turnips being apparently its favorite food. In the cabbage butterfly, [the new insect—Ed.] some distinct black spots may be seen on the upper surface of the front

wings; in the turnip butterfly, [described by Mr. Harris, and alluded to by Mr. Bartlett—Ed.] these wings are pure white; both species produce two broods a year,—one in May and the other in July.

Subsequently our correspondents furnished Mr. S. u der with additional specimens, and he unhesitatingly pronounced them the *Pieris rapæ*, and said, "It is an unfortunate English importation, and is spreading very rapidly. I have myself seen it this summer in the city of Boston and have received it from northern New Jersey, where it is doing great injury." In the "Synopsis of the described Lepidoptera of North America," published by the Smithsonian Institute, the *Pieris rapæ* is not mentioned, while Mr. Harris's *oleracea* is.

The doctors sometimes say a knowledge of a disease is half its cure; and we think it is of equal importance that farmers should understand the character and habits of the insects which attack their crops. We believe that cabbage growers have a new insect to contend with—one nearly related to the old enemy, and of similar general appearance and habits, it may be, but far more voracious and prolific, and, consequently, that different methods must be adopted to avoid its ravages.

#### THE LONG SNOUTS VINDICATED.

Simultaneously with the publication of Mr. Harris' book on the hog, commendatory of the improved breeds of this animal, there appeared in *The North Alabama Times*, an article, laudatory of the long snouts or shack gathering variety—"the hogs as nature made him!" The writer, Joseph A. Leech, M. D., Verona, Miss., professes to have had many years' experience with the hog, and has come to the conclusion that most of the scrofulous and consumptive diseases, which have prevailed to a great extent of late years, are chargeable to the use of the flesh of the improved breed of hogs. He has sought diligently for the best breeds, and adds:—"It is the old-fashioned woods hog, the long-nosed bristle-backed, working, rooting, billious hog, black, blue, red, sandy or spotted; I care not for the color, so he is truly a hardy woods hog, that can stand on his head with his body half in the ground and root—root all day and half the night, and never tire or die; but do well and look well on it all the time, independently making a living. These are the right kind of hogs. Not only because they are the next thing to the ant for industry, but for various other reasons. They know their meat and reject what is poison. They are the best doctors of all hogs. They keep healthy. Their flesh is the most healthy to eat. It is the most nutritious, it is the sweetest to the pal-

ate; most easily digested. They are clear of scrofula and consumption, which no other breed is; which none of the so-called improved breeds are; whose whole flesh is filled with lymphatic, tubercular, adipose, cheesy matter; breeding scrofula and consumption in all who eat their flesh.—*American Farmer*.

For the New England Farmer.

#### DISAPPOINTMENT.

'Tis coming, coming, the blessed rain,  
The friend we have waited for long in vain.  
The hills, in sackcloth and ashes clad,  
The fainting streams, and the forests sad,  
The close-mown fields in russet brown,  
The gardens, shorn of their floral crown,  
Are smiling with hope and joy again,  
Waiting the fall of the blessed rain.

'Tis coming, coming, the welcome rain,  
Bearing rich blessings in its train,  
Nearer and nearer, the cloud waves come,  
Nearer "the roll of the thunder-drum,"  
The distant spires are hid from sight,  
Shut out by a curtain dense and white,  
And, almost here, on hill and plain,  
We hear the roar of the rushing rain.

Alas for our hopes! some unseen force,  
Hath stayed the cloud in its onward course,  
It vanishes soon—we know not where,  
And the sky again is bright and fair.  
A sound of its sighing through the trees,  
A breath of its cool refreshing breeze,  
A few stray drops on the window-pane,—  
These are *our* share of the blessed rain.

But we will not murmur, for God knows best  
When to listen to our request,  
Safe in the thought that He watches us still,  
Be it not ours to question His will.  
Others, more needy perhaps than we,  
The silver side of the cloud may see;  
While we patiently wait the coming again  
Of the cloud that bringeth the blessed rain.

Marlboro', Mass., Sept., 1870.

MATTIE.

FLOORING FOR POULTRY HOUSE.—Bricks or pavement of any kind are the worst of all materials for the floor; they retain moisture whether atmospheric or arising from insufficient drainage; and thus the temperature is kept low where warmth is most essential, and diseases too often follow, especially rheumatic attacks of the feet and legs. The flooring of a poultry house should be of dry gravel, and quite loose to the depth of two or three inches—nothing can then adhere to it; and it is not necessary nor right to sweep the floor of a poultry house. A broom may be drawn lightly over the surface, and everything offensive to the smell removed; but if turned with a spade twice or thrice a week, the earth deodorizes the dung and becomes a good fertilizer in the course of a few months, and ought then to be removed.—*Canadian Poultry Chronicle*.

*From our Special Reporter.*

#### ESSEX CO. MASS. AGL FAIR

The fiftieth exhibition of this society has just been held in the ancient and pleasantly situated town of Ipswich. In some respects this society differs from the majority of county associations. It has no exhibition grounds, no hall, no track for the trial of speed, and but little of the paraphernalia of those societies which have permanent locations and buildings. It has one tent for the show of implements, and a few portable pens. With these it circulates about the county, holding its fairs in the cities and larger towns, and relies for other accommodations upon the halls and meeting houses of the place where the fair is held. It charges the very moderate sum of fifteen cents for admission to the fruit, flower and vegetable display. Small as this income may seem, it generally exceeds its yearly incidental expenses. The society has no debt, and its fund yearly increases. As might be expected, where the fair of a society itinerates, the majority of the exhibitors are from the immediate vicinity of the town having the fair; therefore none of the Essex fairs should be regarded as the show of the whole county.

At the late fair the cattle exhibited were chiefly of foreign blood,—the Jerseys and Ayrshires being the most numerous. H Dow of Hamilton had 22 head of Jerseys. Probably not many readers of the FARMER are aware how rapidly this breed is increasing in the eastern part of this State. There is something about them that pleases amateurs, and as many people here keep but one or two cows, they can give them the best of care and feed, and as quality rather than quantity of milk is desired, the demand for the Jersey is good. The principal exhibitor on this occasion has a herd of 32. Mr. Adams of Belmont has upwards of 70, and numerous herds are found in all the principal towns.

Horses are rapidly superceding oxen in this county, and it does not pay to fatten cattle here, as a business; which fact may account for the small show of fat oxen and steers.

The swine were chiefly of the Chester County and other large breeds, while a few years ago the Suffolk predominated.

Messrs. Appleton & Dane, by their large display of excellent Cotswolds, showed what is meant by long-wooled and heavy sheep.

The horses were mostly young, not numerous, but of good quality. In looking at these, and those of the throngs of visitors, one could not help noticing their generally superior appearance,—horses, carriages, harnesses, style of driving, all indicate progress and a decided improvement over what would have been seen upon a similar occasion half a generation ago. Truly it shall not always be said, that farmers are known by their poor horses, old-fashioned, rickety carriages and dilapidated harnesses.

Ploughing has been made by this society a

specialty. All kinds of ploughs and teams are used and tested,—common ploughs, deep tillers, side-hill, &c. Latterly ploughing by boys has been introduced, through the generosity of the President of the society. The matches excite a lively interest; they come the nearest to racing of anything tolerated at these fairs. As an illustration of the interest in this exercise, it may be stated that one of the competitors this year has taken part in the matches forty years, and another, thirty-five years. On this occasion there were fewer entries than usual.

Among the implements, there were two which are comparatively new, and deserve mention. One was a Pulverizing Harrow. This is made of two pieces of wood, in the form of the old-fashioned A harrow, but has for teeth revolving wheels or cutters, like those upon ploughs. These cutters are set just a little from the line of draught, in which position they make a wider cut and stir the ground more than the thin blade of the wheel or knife would, if placed in or parallel to the line of draught. These literally cut and pulverize, without tearing up the sod, and leave the surface light and fine. There is a seat for the driver to ride. The few who have used them in this vicinity, speak of them in the highest terms of commendation.

The other, Sargent's Monitor Seed Sower, is an invention of a mechanic of this county. This machine drops the seed at such intervals as the sower desires,—that is, it drops seeds half an inch apart, one inch, or one and a half inches, and so on, up to three inch intervals. It has no brush or agitator, and does not cut or bruise the seed. It has two wheels upon the axle, and the rows are marked by tracking one of them in a rut made in sowing the previous row. Except the handles, it is made entirely of metal, and is compact, strong, durable and of very simple construction. It has been thoroughly tested by onion raiser in several towns, who pronounce it the best they have ever used. It is manufactured in Newburyport.

Last year the delegate of the State Board pronounced the exhibition of fruit superexcellent,—the apples surpassing the display of the State Horticultural Show. A distinguished pomologist said the same was true this year, and yet only a few towns were well represented either year. Were there a general contribution from the whole county, there would be a collection which it would be hard to beat. Any one who has attended these fairs fifteen or twenty years, will notice a change in this department. Then it seemed to be the aim of exhibitors to show the largest variety possible. A few nursery men and amateurs would occupy most of the table room. One, and even two hundred varieties were sent in by one person. From one to five specimens only of each variety would be upon a plate. The fruit was of all colors, shapes and sizes,

and their names had an unfamiliar sound. The visitors appeared to take little interest in them, or at most would admire the patience of the exhibitor, and pass on. Now there are few varieties and many contributors; well filled plates and baskets, and the crowding throng tarry long to express their praise and discuss the merits of the different specimens. The increased interest and greater familiarity with names and sorts, prove conclusively that fruit culture is extending; that the multitude now can talk about apples, pears and grapes. Instead of aiming to produce an endless variety, cultivators are coming down to a few. Beside the grapes originated by Mr. Rogers, there were a few seedlings produced in the county, which have some local reputation and one or two more exhibited for the first time.

The vegetable display was smaller than usual. If the drought has affected them, the specimens were generally larger than most house-keepers would prefer to buy. The Early Rose predominated among the potatoes, but most of the samples were so large and coarse looking that it was difficult to recognize them.

But I will not follow through the address, dinner, after-dinner speeches, premiums, &c., for I am reminded of your injunction to do up county fairs briefly. Suffice it to say all passed off pleasantly, and if farmers did not derive some pleasure or benefit from this gathering, it was their own fault. N. S. T.

*Lawrence, Mass., Sept. 30, 1870.*

*For the New England Farmer.*

#### COTSWOLD SHEEP AND LAMBS.

Some time since, I called the attention, (through the columns of your paper,) of my brother farmers to their sad neglect in regard to improving their flocks of sheep, giving them my experience in sheep breeding, and recommending the Cotswold as the best kind of sheep to keep. I again beg leave to call their attention to the same subject.

I have been engaged for the past year in butchering, and I find too many mutton frames, with but a very slight covering of meat and a still lighter covering of wool. Consumers are calling for better meat or for more meat and less bones, but the butcher cannot get it unless the farmer will grow it for him; and he cannot much longer afford to pay farmers for bones, because the American people have not yet learned to eat them; and, therefore, we cannot find a market for them.

If it will pay to keep sheep, will it not pay to keep good ones? I answer, yes. Good lambs were worth from the 15th of June to the first of August of the present year, from five to six dollars per head, for mutton. At those prices no one can deny that sheep pay as large or a larger net profit than any other kind of farm stock; but farmers are neglecting their sheep and letting their flocks run down,

because they say the sheep fever is over, and it won't pay to bother with them. But the fault is all with them; the demand for good, early lambs was larger than the supply the present season, and no one can say that they did not command prices that would pay well for raising them.

I called the attention of my brother farmers to the Cotswold sheep as the right kind of sheep to keep for mutton and wool combined. I also asked them to try the experiment and report to me this fall. Several have done so, and are well pleased with the result. I visited the flocks of one or two of them, while on a visit to New Hampton, a few weeks ago. One of them, Mr. Wm. R. Dearborn, of New Hampton, (who has been for two or three years past successfully replenishing his flock,) bought last fall a pure bred Cotswold buck, weighing three hundred and seventy-five pounds, and used him with his sheep. I saw his lambs in August; he had a pen of six buck lambs, selected to keep for breeders, which were the best lambs I have seen this season. I helped him weigh two of them at that time; one of them weighed 100 pounds, and the other 112 pounds, and a ewe lamb weighed a day or two after, 117 pounds. These lambs would not average over four and a half months old at the time they were weighed, and for beauty of form, quantity and quality of wool, I think it would be hard to find their equal. A neighbor of Mr. D. weighed a lamb from a grade Cotswold and South Down ewe, sired by Mr. D.'s buck, at just three months old, and he weighed 102 pounds; another neighbor of his carried his sheep to Mr. D.'s and paid him \$1 per head; he had six lambs from four sheep, and he had sold the six for \$52. I have a buck lamb, sired by his buck, that will weigh 125 pounds, and a yearling ewe, sired by the buck I bought of Mr. Hart, that weighs 150 pounds, and for beauty of form I never saw her equal. I also keep my ewe that I had of Mr. Hart. I should be happy to have any one who has any doubts about their being a good kind of sheep, call and see them, and I would like to have them call and see Mr. Dearborn's flock and examine them, and get his opinion of the Cotswold sheep.

I would like to have those interested in sheep breeding, try the Cotswolds. We must have better mutton, or the demand will die out. I believe it will pay to raise mutton, and an improvement in our mutton sheep will be money in the pockets of all concerned, and a source of wealth to the whole country. A word to the wise is sufficient.

A. L. SANBORN.

*Haverhill, Mass., Oct., 1870.*

—Of Peruvian guano, the total export last year was over 500,000 tons, of which Belgium took 82,000, England 196,000, and North America, 25,000 tons.

## GRASS FED CATTLE.

During a few years past there has existed among the cattle raisers of the Champlain Valley a spirit of rivalry or emulation in the production of good beef on hay and grass alone. Among other cattle from that section, last week, our reporter mentioned a lot of three-year-old steers, marketed by C. T. Houghton, raised by Ed. Wilcox of Bridport, and sold at 13c per lb., which the seller regarded as rather below the market price for like quality, as the lot was partially engaged the week previous. A few weeks since Mr. Houghton sold a carload from the same pasture to Mr. J. S. Thomas, who had the same week extra Western steers for which he paid 10c per pound, live weight, in Albany. The meat of some of these Vermont steers was hung up with that of those from Albany. While one of Mr. Thomas's customers was examining this beef and admitting its superior quality, he was told that a part of it was from Vermont grass fed cattle that had never eaten any grain or meal, and was asked to point out the sides from the grass fed animals. After looking them over carefully, he admitted his inability to do so.

Our reporter also noticed in his report of Aug. 20, a pair of oxen fattened by Thomas Field, Ferrisburg, Vt., and sold by F. F. Brady to S. S. Learnard, at 14½c per lb., when 14c, 30 sk, was the highest price reported for Western steers. The hides averaged 110 lbs. each; one had 168 pounds of tallow and 1336 pounds of beef—total dressed weight 1608 lbs.; the other, 160 pounds of tallow, 1052 lbs. of beef, and a total of 1322 lbs., making the dressed weight of the pair 2930 lbs. These oxen were purchased by Mr. Field four years ago, when cattle were very high for \$200, and did not weigh probably over 2500 pounds at that time. They had been worked carefully every year until the past season. They were sold to Mr. Wheeler for \$375, and weighed 4330 pounds when delivered. These oxen were fattened entirely on grass and hay.

While in Vergennes, a few weeks since, enjoying the hospitality of Ed. Wheeler, Esq., he carried us over to the farm of Mr. Field, some two miles from the city. We arrived too late in the day to visit his pastures, or to examine his buildings particularly. But from his residence, which is situated on a gentle elevation, we had a delightful view of a portion of the 950 acres which compose this farm. There had been a shower the night previous, and the meadow in front of the house, which stretched west across a gentle depression, showed a cheerful green in the rays of the sun that was then sinking behind the Adirondac range of mountains, which was in very pleasing contrast with the brown and parched appearance of the country generally at that time. The soil of Ferrisburg is probably equal to that of any other town in the Champlain Valley for the production of grass.

Besides the oxen above mentioned Mr. Field has sent some 40 three-year-old steers to Cambridge this season, which have commanded the highest market price. And the immediate object of our call was to learn the means by which such beef was produced without meal or grain, which we were assured had not been fed to his cattle.

Mr. Field usually keeps about 100 cattle, but he is careful not to overstock his pastures or his hay-mows. He regarded it as essential that all animals in his possession should be constantly gaining. He was unable to see any profit in keeping a beast one year, six months, or one month without increase in size or quality. Hence feed and care must be such as to secure constant improvement, winter and summer, spring and fall. His hay is cut somewhat earlier than is usual with most of his neighbors. By the first of July he intends to have made a good beginning at haying, and by the end of that month to have the last load from his 250 acres mowed over, in the barns. A few years ago he said he was laughed at for cutting grass "before it was half grown," but of late hay generally in that section has been cut considerably earlier than formerly. In reply to an inquiry he said that the only injury to grass land from early cutting that he had noticed, was in case a severe drought followed the removal of the grass, when there was some danger of injury to the roots.

In raising calves, his practice is to feed new milk about two weeks, when that which is skimmed after setting twelve hours is substituted. But whichever or whatever is given them must be of sufficient quality and quantity to keep them growing. During the first winter especially, they must be kept in a thrifty condition.

Mr. Field regarded the gentle treatment of all stock, of great importance. It was understood between him and his hired men, that abuse of animals from loss of temper or patience was closely associated with loss of situation; and he related some amusing instances in which his oxen, while under the care of fractious teamsters, had been stung by apocryphal hornets and bumble bees! Such excuses were "good for this trip only."

It would seem, then, as Mr. F. remarked to us at the outset, that there is no secret about making good beef on grass and hay; enough of both of good quality, with proper management, will do it. Some grass fed three-year-old steers were sold the last week at market for \$33 each; others for \$120. In which class is there the most money?

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—Milwaukee is the greatest grain market in the world. It has six large elevators, able to hold from half a million to a million and a half bushels. Yet last week five hundred cars were standing in the freight yards and on the tracks of the city, unable to discharge their wheat. This immense glut is from old wheat, and the merchants estimate that there are a million more bushels of the crop of 1869 to come.

## Ladies' Department.

For the New England Farmer.

### FLOWER GARDENING FOR OCTOBER. Out-Doors and In-Doors.

Nature's gay day is drawing rapidly to a close. She has already divested herself of many of her sweetest and brightest habiliments, and is casting her robe of many colors into the dust. "Silent type of human glory, bright and fair to see in the sunshine of prosperity, mean and dejected as the sport of adverse winds!" The frost has laid its icy fingers upon all our cherished darlings, but it waited long ere it appeared. Last season it came the 15th of September, this year it was not seen until the 7th of October, and then it went on a "rampage," and froze up everything that could be injured. Dazzlingly bright *Zinnias*, perfectly cupped *Asters*, exquisite *Heliotropes*, and loveliest of *Geraniums* and *Verbenas* were all pinched and blackened! Still there is work to be done in the garden. The scarlet, white, pink and cherry *Geraniums* must be pulled up by their roots; all the earth shaken from them; every leaf, bud and delicate shoot cut off, and the whole plant suspended by the roots, with a stout string tied around the stems, to the beams of a frost-proof cellar which will not mould. Here they will live as the bears live upon their own fat,—will thrive on the succulent matter stored up in their branches, and when another spring time has come they will renew their beauty. Scarlet *salvias* can be packed in dry sand. After their rich blossoms are cut down, take off the branches to the roots and pack away in boxes. *Fuchsias* can be also kept in sand after all their leaves have fallen; but care must be taken to keep all such plants where they will not mould, as that will destroy their vitality.

*Dahlias* and *Gladioli* must be removed before the ground freezes, yet it is well to let them remain until as late as possible, for the bulb matures for another year its rich freight of buds and blossoms, and the longer time it has the better for it. The former bulbs must be stored in dry sand, the latter can lie on a shelf in any dry place where they will not freeze. *Salvia patens*, the richest blue flower which is grown, can be stored with them, as it possesses a bulbous root.

All leaves should be raked up and laid over the flower-beds, placing slats or boards to keep them from flying away. They make a warm covering, and if dug into the ground in the spring seem to fertilize it.

*Hybrid perpetual*, *China*, *Bengal* and *Noisette roses* can be protected by heavy grass sods, so that they will endure our severest northern winters. It is too early to cover them now; later in the season we will give the needful directions.

Now is the time to prepare a bed of bulbs which will gladden the eyes soon after the snow and ice are gone. "Dutch flowering bulbs" are offered by all florists. Six of their catalogues lie by our side, and we have been comparing their prices for our own satisfaction. The "*Innisfallen Greenhouse*," Pittsfield, Mass., offer collections by mail at very cheap rates. \$1 will bring you eleven fine bulbs, among them four named *Hyacinths*. \$3 will give you forty bulbs, with nine named *Hyacinths*; and \$5 puts ninety bulbs of ten different varieties of the rarest kind, numbering two Japan lilies and twelve named *Hyacinths* among them. The last collection will give you a large bed of beautiful flowers.

Mr. Wells' catalogue also comprises very cheap collections. He is a Boston florist, and importer of bulbs from Haarlem, and offers *Hyacinths*, *Tulips*, *Crocuses* and all the rarest bulbs at a much lower price than any that we have seen. Our mention of him is not an *interested one*, for we know nothing of him, have only purchased bulbs of him in years past. The earlier the bulbs are put into the ground after October comes in, the better, although they may be planted in November, or as long as the frost does not harden the ground. In choosing a location for a bed, select one so sheltered that it will not be exposed to driving rain storms in the early spring; and the soil should be light and friable loam, well drained, so that the bulbs will not become mouldy, and thus decay. They will grow and bloom in pure sand, if not allowed to dry up. Crude manure will injure them; yet, if the soil is very poor, some very old decayed manure will be advantageous, but chicken and pig manure are entirely too strong and rank for them. Bulbs planted in beds should always be protected by two or three layers of heavy manure as soon as planted, but be sure to rake it off before they shoot in the early spring.

*Hyacinths* should be covered at least three inches under the soil, and can remain two years without being replanted. In selecting varieties, it is impossible to go into details, for they are all so beautiful and so numerous. The single and double can be purchased of the florists in separate colors unnamed at a much lower price than the named varieties, and they are quite as good for mixed beds of bulbs as the named sorts. The single species, as a general rule, bloom the earlier, and are far more desirable for house culture. These bulbs are more effective when planted in groups of three or five than when planted in rows or singly.

*Tulips* should be covered from two to three inches with soil. The early varieties, both single and double, should be planted by themselves; the double, being much later in flowering, should be kept separate from the single early-flowering varieties. *Parrot Tulips* are remarkable for their peculiar, irregular shaped petals, which are very brilliant in coloring,

and differently marked from the other kinds. They are both curious and picturesque.

The late-blooming *Tulips* are divided into three classes. *Rose* or *Violets*, having white grounds, feathered or striped with scarlet, rose, violet or crimson. *Byblæmens*, having white grounds flecked with purple, lilac or black, and *Bizarres*, with yellow grounds, feathered with white, crimson or purple. These can be purchased cheaply in mixtures, while named varieties command a much higher price; the former answer very well for planting *en masse*. They should be taken up and divided every two or three years, but not until the leaf stalks are entirely dry.

The *Narcissus* is divided into several classes; the *Narcissus poeticus*, and the double variety of it, are often seen in old country gardens, and should be cultivated in every garden, on account of their fragrance and beauty. The *Polyanthus Narcissus* bears several flowers on one head, and is very attractive. These bulbs should be planted somewhat deeper than the *Hyacinth*; cover them from four to five inches, according to the size of the bulb.

Jonquils belong to the *Narcissus* family, but the bulbs are much smaller, and should not be planted more than three inches in depth. *Crocuses*, brightest and earliest of all spring flowers, always excepting their pale sisters, the *Snowdrops*, should be planted in a sheltered location, where they will not be injured by the late spring frosts. They look finely in clusters of ten or a dozen bulbs, scattered about a green lawn. They can be purchased in purple, yellow, white, blue, violet and striped.

*Snowdrops* should be planted about two inches in depth, (and the same rule applies to the crocus) They should be set out in clumps or circles.

*Scillas*, in all their varieties, are very beautiful, and grow from six to eight inches high, bearing spikes of bell-shaped flowers of a lovely blue color; in planting cover two or three inches. *Anemones* and *Ranunculuses* are a very attractive class of bulbs, but success in their cultivation is rather uncertain in our climate, and it requires an experienced florist to bring them to perfection. We beg all our lady readers to cultivate a few bulbs both out doors and in; and in another article we will tell them how to treat them in "*Window Gardens*," where they are a decided addition, and are within the reach of all.

All our house plants have been carefully potted; it was done early in the season, and they have had six weeks to rest, so that some of them are now in full bloom, delighting all the senses. *Monthly Carnations* are most desirable for winter flowering—we have a pink and white species which are now in great beauty. We added one tablespoonful of "*Grafton Fertilizer*," to every good sized pot; it is death on all vermin, we have killed

all the red spiders which the intense drought of the summer had bred in legions. We scattered it over the leaves of *Fuchsias* and *Carnations* which were terribly infested with them, and nearly ruined; it, in its turn, scattered its forces, and the plants are now filled with buds and blossoms. We number ninety-five pots of all kinds of plants; more than we intended to attempt to winter, but a kind friend sent us by mail from the "*Innisfallen Greenhouses*," eighteen most lovely plants, *Geraniums*, *Variegated-leaved*, etc., etc., and we were charmed to receive them; and now fill five windows with plants in a most flourishing condition. We potted them all in the richest loam, with one-quarter silver sand, and the all-powerful fertilizer, which contains *Carbonic acid solidified*. Prof. Faraday tells us that in the coldest temperature and under the most heavy pressure, this article is produced, and this is mined where the mercury falls to 30° below zero, and under the tremendous weight of quartz rock. *Savants*, who declare that Carbonic acid exists only as a gas, had better test this "*Fertilizer*." At any rate, it does make plants grow with great rapidity, and for "*Window Gardening*" is unequalled. As yet there is none in the New England market for sale, but another season all can obtain it.

We must give our plants all the air, in these autumn months, that is not too chilly for their tender leaves. Light, air, and water are three essentials, without which no plant-life can flourish,—without them they are not properly colored nor vigorous. Very much may be done towards stimulating the growth of weakly plants, and assisting the flowering of healthier ones, by frequent waterings of liquid manure. It is an expeditious and immediately successful method of increasing the fertility of the soil, and forcing the plants. s. o. j.

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WOMAN'S SPHERE —Suppose it were possible to convert all the men in a single place, and leave the women just as they were; I believe that in the second generation you would find little or no improvement—the great wave of conversion would have passed over that place and left but little trace. But suppose the reverse of this. Suppose all the women were converted, and men left untouched. I think I should be found right in saying that a large portion of the second generation would be christian men and women, and an immense and permanent improvement would be found to have taken place. How is this? Simply because God has entrusted into the hands of us women the nursery, the house, the moral influence on, and the formation of, the character of the rising generation.

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—Edwin G. Saunders of Brewer, Me., a wide awake young farmer, has a pullet only 4 months old, which has laid sixteen good sized eggs.

## DOMESTIC RECEIPTS.

## HOP YEAST—TO MAKE IT AND DRY IT.—

Take of good hops one pint; put them in a thin bag, made for that purpose; put two quarts of water in your kettle over the stove; wet the hops and squeeze them to be sure that they will draw out the strength, as there is more or less air in them; drop your hop bag in the kettle, let it boil five minutes before putting potatoes in; have six large potatoes nicely peeled, drop them in the hop water, and let them boil until they are tender enough to mash; lift the kettle off from the fire, drain off the hop water into the yeast jar, which should be sweet of course; mash the potatoes fine, add to them one heaping teaspoon of salt, and stir into the potatoes, gradually at first, the hop water. Let this mixture stand until it is lukewarm, then add one pint lively fresh yeast, and let it stand over night; in the morning if light, you can fix it to dry. To dry the yeast, have sifted white corn meal, and stir into this light yeast enough meal to make it a soft dough; with clean hands make it into rolls on the molding board, cut it as thin as you can into cakes, (only for convenience in drying,) for as soon as you can turn it with a knife, do so; dry it in a free circulation of air, *without being in the sunshine*; in one day or less it will be dry enough to rub fine into powder, which if done will facilitate the drying process; in two days, if thinly spread and often stirred over, it will be nearly as dry as corn meal; in three days it will be dry. The sooner it is dried, the sweeter it will be. After you have it nicely dried, it is well to air it often, say twice a week, as it keeps better. This quantity is enough for an ordinary family three months; then renew it.—*Country Gentlemen.*

LIQUID FOR CLEANING SILVER.—Add gradually 8 oz. of prepared chalk to a mixture of 2 oz. of spirits of turpentine, 1 oz. of alcohol,  $\frac{1}{2}$  oz. of spirits of camphor, 2 drachms of aqua ammonia. Apply with a soft sponge, and allow it to dry before polishing.

SOAP WITHOUT LYE.—Mix ten pounds potash in ten gallons of water; let it stand over night and in the morning, boil it, adding six pounds grease; then put all in a barrel, adding fifteen gallons of water. Use soft water only, and you will have good soft soap.

TO RENEW KID GLOVES.—Make a thick mucilage by boiling a handful of flaxseed; add a little dissolved soap; then when the mixture cools, with a piece of white flannel wipe the gloves, previously fitted to the hand; use only enough of the cleaner to take off the dirt, without wetting through the glove.

CLEANING SILVER-PLATED ARTICLES.—White metal articles, electro-plated with silver, should be cleaned with the greatest caution. The use of soap gives to the articles a leaden appearance. If tarnished, rub them with a little whiting, wet with water; then

wash with clean, soft, warm water. Dry carefully, and polish with fine whiting on a piece of soft leather.

TO CLEANSE CARPETS.—First sweep the carpet well, and scour with warm water to which ox-gall has been added, in the proportion of one pint of gall to three gallons of water. This will cleanse a large carpet, and not only extract grease, but freshen the colors. Gall is a liquid animal soap.

THE VALUE OF CHARCOAL.—All sorts of vessels and utensils may be purified from long retained smells of every kind, in the easiest and most perfect manner, by rinsing them out well with charcoal powder, after the grosser impurities have been scoured off with sand and potash.

JELLIES.—In making jellies of apricots, quinces, peaches, apples or plums, peel, remove the stones or cores, cut in pieces, cover with water and boil gently till well cooked; then strain the juice gently through a jelly bag and add a half pint of sugar to a pint of juice. (For berries a pound of sugar to a pint of juice); boil till it ropes from the spoon, or from fifteen to twenty minutes. In making raspberry jelly use one-third currants and two-thirds raspberries.

PEACH JELLY.—Cut peaches in half, peel them and take out the pits from the stones, make a clear syrup of a pound of white sugar to half a teacup of water. When made and boiling hot put in the peaches and part of the pits—too many pits give a bitter flavor—boil gently ten minutes, then take half of the peaches on to a platter and boil the other half ten minutes longer; mix with the liquor of the peaches the strained juice of three lemons or oranges and one ounce of isinglass or Cox's Gelatien that has been first dissolved and strained; fill the moulds half full of jelly, let it stand till set, then add the rest of the peaches and fill the mould with jelly. One dozen peaches will make a good sized mould full. It is a very handsome table ornament, and very palatable.

FRUIT STAINS.—They are easily removed if attended to at once, but if left to dry for a day or two it will be a more difficult work. Stretch the stained spot tightly over a deep bowl or pail and pour over it *boiling* hot water, letting it filter through till the stain disappears. The water must be really *boiling*, not simply scalding. If the article has been thrown into suds before looking after the stains the hot water will not destroy them. In that case wet the stain, and while wet spread over the spot some chloride of lime, lay the piece on the grass or hang on the clothes line where the sun will strike through for a few minutes, and then wash and boil immediately. This is sure, but should be used with care and judgment or it will eat the cloth; but with proper oversight it is safe and reliable.—*Mrs. Beecher in Christian Union.*

## Youths' Department.

From the Bright Side.

### 'GRAN'MA AL'AS DOES.'

BY A. H. POE.

I wants to mend my wagon,  
And has to have some nails;  
Ju'st two, free will be plenty,  
We're going to haul our rails.  
The splendidest cob fences,  
We're makin' ever was!  
I wis' you'd help us find 'em,  
Gran'ma al'as does.

My horse's name is Betsy;  
She jumped and broke her head.  
I put her in the stable,  
And fed her milk and bread.  
The stable's in the parlor:  
We didn't make any muss.  
I wis' you'd let it stay there,  
Gran'ma al'as does.

's goin' to the cornfield,  
To ride on Charlie's plow;  
I s'pect he'd like to have me;  
I wants to go right now.  
Oh, won't I gee up awful,  
And whoa like Charlie whoas?  
I wis' you wouldn't bozzer;  
Gran'ma never does.

I wants some bread and butter;  
's hungry w-r-stest kind;  
But Faddie musn't have none,  
Cause she would'n't mind.  
Put plenty sugar on it;  
I tellya what, I knows  
It's right to put on sugar;  
Gran'ma al'as does

### THE FOX AND THE CRAB.

A young land crab once crept out of his pond to make a little excursion in a meadow and see what was going on in the world. A fox who happened to be passing at the moment, noticed the crab as he crept slowly along, and after having wished him good morning, added in a mocking tone, "Where are you going so slowly? When do you expect to get to the other end of the field? It seems to me that you go backwards instead of forwards."

Now this was a clever young crab, who had heard how sly foxes are, and he thought there would be no harm in playing this one a trick, so he answered politely "I am only a crab, it is true, and I cannot walk so gracefully as you, Mr. Fox, but I can run much faster."

Mr. Fox sneered, "Indeed!"

"Well" said the crab, "as you appear to doubt my speed, suppose we run a race for a wager. Have you any objections?"

"Nothing would give me greater pleasure,"

replied the fox, "shall we run from Berne to Bale, or from Bremen to Brabant?"

"Oh no, that would take up too much time. I suggest we try half a mile, or say a mile, that will not be too much for either of us."

"A mile," echoed the fox, as if he thought, "What is a mile to me? I can run that while the crab is getting ready to set off."

"I will offer you one advantage," added the crab, "which you must accept if I am to race with you."

"Well let me hear what it is," said Reynard, who was beginning to feel impatient.

"I will give you your own length start of me. Place yourself so that your hind feet touch my nose, and when I cry "away" you must set off."

This plan seemed to please Mr. Fox, and he answered, "I will do exactly as you wish." turned himself round, and placed his bushy tail within reach of the crab, who seized the long hair tightly with his claws, without the fox perceiving he had done so, and shouted at the same moment, "away!"

Off started Mr. Fox, as if the hunters were after him, his feet hardly touching the ground. As soon as he had reached the next milestone, he turned round and cried "Where are you Mr. Crab; where are you dawdling?"

Now as the fox turned round to look for his companion his tail touched the milestone and the crab, making the best of his opportunity, let go his hold, and answered, "Here am I, waiting for you. I was just wondering when you intended to make your appearance; you have certainly taken time enough to get over a mile."

Now, Mr. Fox, who had no idea that he had brought the crab all the way clinging to his brush, looked much astonished at seeing him there, not the least bit heated or tired, and not knowing what to say, he paid his wager and slunk home to his den, determined never to laugh at a crab again.

Those who are always trying to deceive others may expect some day to be caught by the very people they have been trying to dupe,

"A BOY'S COMPOSITION ON THE HORSE — The horse is the most usefull animal in the World. So is the Cow. i once had thirteen Ducks and 3 was drakes and a Skunk killed One. he smeldt Orful. I knew a Boy which Had 7 chickens but His father would not let him rais Them and so he got mad and so he boared a Hole in his mothers Wash tub. I wish i had a hors. a hors weights 1000 pounds.

# THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES. Boston, December, 1870. VOL. IV.---NO. 12.

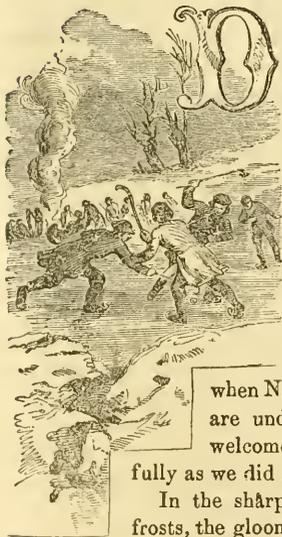
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MONTHLY.

SIMON BROWN, } EDITORS.  
S. FLETCHER, }

## DECEMBER REFLECTIONS.

"While thus revolving seasons roll,  
Obscured to God's wise control,  
Obedient to his plan;  
With silent eloquence they preach,  
The most important lessons teach,  
To every thinking man."—BLAKE.



DECEMBER, in the grand round of the Seasons, has come at last to close the Months that mark the rolling year.— Though sunshine and clouds seem striving for the mastery, and change is written upon the face of every thing, yet,

when Nature's operations are understood, we can welcome her as cheerfully as we did May or June.

In the sharp winds and keen frosts, the gloomy skies and leafless trees of December, we still find evidences abundant of activity and benevolence in the great controlling Power. Peep into the axils of a branch, and behold the dormant life there; or into the seeds floating about in the garden, on wings of down, seeking a place of rest, only to burst into active life again when the

genial suns and rains of Spring act upon them!

The flower-garden, perhaps, never gave a picture of greater pleasantness than now, if it has been managed with skill and care. "Nature wills that we shall enjoy her beauties during a certain period of the year, whether we use any efforts towards obtaining them or not; yet she lays it down as a general principle, in regard to her gifts, that to seek them is at once to deserve, to have, and to enjoy them; and that without such seeking, we shall only have just enough to make us sigh after more. Accordingly her sun shines with equal warmth upon the gardens of the just and the unjust, and her rains fertilize the fields of all classes alike. In short, as it is with all the loveliest of her works, Woman, her favors are to be obtained by assiduous seeking alone; her love is the reward, not of riches, nor beauty, nor power, nor even of virtue, but of love alone. No man ever gave a woman his entire love, and sought hers in return, that he did not, to a certain extent, obtain it; and no man ever paid similar court to Nature, and came away empty handed."

Many persons express feelings of gloom and discontent in December. Washington Irving, in one of his finely written papers, says,—“when nature lies despoiled of every charm, and wrapped in her shroud of sheeted snow, we turn for our gratifications to moral sources. The dreariness and desolation of the landscape, the short and gloomy days and

darksome nights, while they circumscribe our wanderings, shut in our feelings, also, from rambling abroad, and make us more keenly disposed for the pleasures of the social circle."

To a rightly constituted mind, there is truth in this view. We have all experienced that truth in many instances. But on the temper and feelings of the selfish and querulous, a very different effect would be produced. Such a person is too prone to exaggerate the inconvenience of the season; the storm is gloomy to him, and he invests it with his own deeper gloominess.

What all more or less need is a fixed *habit* of cheerfulness, which would constitute no small portion of the philosophy of daily life. Cheerfulness, when once it becomes a habitual feeling, finds food and nourishment in all scenes and seasons. Nothing will promote this state of feeling in the farmer, so much as the contemplation of the operations of nature in his animals and fields and fruits. "The man who is keenly alive to the sublime and the beautiful in Nature, frequently finds the cherished feeling of his soul ministered to by objects that to other minds have in them nothing to attract or enliven,—so the cheerful mind derives enjoyment from scenery the most unpromising, and perceives, even in the desolation of winter, a beauty and an expression of its own."

The bee extracts honey, and the spider poison, it is said, from the same flower. So may man extract joy or gloom from the landscape upon which he is looking, or from the circumstances by which he is surrounded. It is greatly a matter of *habit*. Let us see that *our* habit does not tend to extract the poison.

#### FARM WORK IN DECEMBER.

Mere suggestions are sometimes better than long sermons. In the midst of numerous cares, the farmer is apt to forget the importance of attention to certain things.

In the winter care of stock, for instance, there should be no guess-work as to feeding and tending them. The farmer should employ some portion of the winter evenings in learning their nature and habits, and the adaptation of certain kinds of food to their wants. How many times in twenty-four hours to feed them, is not an unimportant inquiry; nor is that as to the form in which it shall be

applied. The better he understands all details in relation to stock, the more profitable will it become to him.

We are inclined to think there is still great loss in our mode of feeding domestic animals. The food is in too crude and bulky a form; it is too coarse, dry and harsh. The natural food of the bovine race is grass,—rich, tender, succulent grass; but in a domesticated state we give them dry, harsh, and in many cases, musty hay. As we cannot supply them through our long winters with what they feed upon in a free state, in more temperate zones, it is our duty and interest to make such feed as we have, more palatable and nutritious. Let us suggest, then, that farmers give the matter more attention by study and experiment during the present winter.

Late roaming in the fields, exposed to high winds, and storms, is injurious to cattle,—especially to cows in milk. The feed they get has little or no nutrition, and the cattle are apt to get into wandering and unruly habits.

Bring them at once to winter quarters. Feed regularly and plentifully. Keep them clean, their skins soft and hair glossy, and with kind treatment otherwise, half a dozen head will yield more profit than twice that number under a loose and shiftless practice.

PERMANENT IMPROVEMENTS.—On every farm annual permanent improvements of some kind should be made, to the amount of from one to four per cent. of its value. Trenches may be dug and walls laid in them sometimes in December, and where wooden fences must be employed, nearly every thing may be done in relation to them excepting setting them up. Balks may be levelled, bushes cut and rooted up, when frosts have not been too severe. Drains may also be laid, trees pruned in pleasant days, and many other things done which will save time at more pressing seasons, and tend to give the farm an air of neatness and thrift, as well as actually to increase its profits.

PEAT.—A bank of good peat, hauled in and stowed away when dry, and used in the barnyard, under the cattle, in the pigsty and vaults, will yield a better dividend in cash, than a majority of stocks will in the market. Do not neglect this. These deposits have been stored up by a kind Providence, by which

we may restore the lands that have become nearly exhausted by the want of a foresight which it is singular we did not fully realize many years ago.

**MACHINES AND TOOLS.**—See, now, that every farm machine and tool is housed in some safe place. They should be put where they will not be trampled upon and upset by cattle and colts, where they will be dry, and where the small ones will not be taken out by the workmen, used a few times and then thrown down in the way. One hand rake in the barn-floor, through the winter, and one or two pitchforks are enough. If more are about they will be in the way, and are quite sure to be broken.

Remember that "order is heaven's first law," and that without it, on the farm, there is little reason to expect profit in anything.

#### WOMEN AND GIRLS SHOULD READ NEWSPAPERS.

If we were a teacher in any school where the pupils could read, one of the most important of the daily exercises should be *reading the Newspaper*, and that should be one

"With news from all nations lumbering at its back;" not one with effeminate, sentimental stories, but filled with the business of the moving world,—accounts of floods and fires, earthquakes and cyclones; letters from the tropics and arctic regions, on politics, arts, religion, poetry and prose,—from legislatures and congresses,—from scientific and agricultural associations,—letters from the library, kitchen and parlor,—from the battle-field, and from all places where human industry, thrift and progress were lifting humanity into a higher scale of being.

The teacher should himself be familiar with such moving events, and able to enforce, by explanation or brief illustration, such principles of importance as are enunciated in its columns.

All the teaching of all the schools, from lowest to highest, would not give the mass of the people an education at all comparable to that which might be gained by these exercises. After a fair reputation, what gives a person, man or woman, a passport into intelligent society? Is it the book teaching of the schools, the deep mysteries of the scientist, or the lore of sages? These are all well for the few, but the masses need other discipline and other

mental food. In the battle of life, with them, a *general information*, and a power of adapting themselves to numberless circumstances, are essential to success. The most helpless being among us is he who emerges from the schools, buried in the lore of books, and ignorant of the ways of the world; knowing little of art or science, and who looks with surprise upon the active industry every where about him, and wonders what it all means!

We do not undervalue sound, practical learning; we would encourage it, and sustain it when acquired. But a vast power is wasted every day, even in the schools which, by the popular voice, are considered the best. Thousands of girls and boys are engaged, term after term, in studies which they will never call into practice. They do not intend to become teachers, yet spend more time upon mathematics than many of our best educated men and women did upon *all* their studies. And yet, of the common affairs of life, of the events and business which move the world, they know less than the backwoodsman who never attended a school of more than six weeks at a time in his life.

If a choice were obliged to be made, to accept the teachings of the common schools at the present day, and not read or *hear* a newspaper read, or to have the child peruse a good one, and have its articles properly explained,—we certainly should choose the latter. The newspaper not only gives the best portion of the books, but is constantly commenting upon what has been thought and done, in every branch of human knowledge. Most earnestly, then, do we commend to all, the truths in the following paragraph, which we find is going the rounds of *The Newspapers*:

**LADIES SHOULD READ NEWSPAPERS.**—It is a mistake in female education to keep a young lady's time and attention devoted to the fashionable literature of the day. If you would qualify her for conversation, you must give her something to talk about—give her education with this actual world and its transpiring events. Urge her to read the newspapers and become familiar with the present character and improvements of our race. Our thoughts and our concerns should be for the present world, to know what it is, and improve the condition of it. Let her have an intelligent opinion, and be able to sustain conversation according to the mental, moral and religious improvements of our times. Let the gilded annuals and poems on the centre table be kept part of the time covered with weekly and daily

journals. Let the whole family, men, women, and children, read newspapers.

#### NATURAL AND ARTIFICIAL EGG HATCHING.

One of the most interesting chapters in the history of birds is that which describes the construction and forms of their nests. Nearly one-half of the five-page article on Birds in the American Cyclopædia is devoted to this subject. But without any book-knowledge of birds, every country boy and girl has noticed the wonderful variety of materials used, and the great skill displayed by birds in building their incubators. A learned and grave professor in a London college, who has made bird's-nests a study, has arranged their builders in twelve groups or classes, calling them Miners, Ground-builders, Masons, Carpenters, Platform-builders, Basket-makers, Weavers, Tailors, Felt-makers, Cementers, Dome-builders, and Parasites, or those that use the nests of other birds.

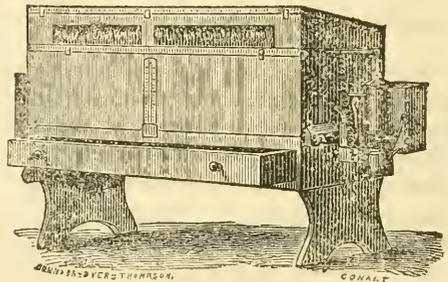
These different structures, thus various in form, material, workmanship and location, are not only most admirably adapted to the purposes of hatching the eggs and rearing the young, but at least one kind of bird's nests is used for human food, and is sold, it is said, in China for twice its weight in silver. These nests are made by the sea-swallows of the Malay Archipelago, which are a little smaller than our swallow martin. This bird gathers from the coral rocks of the sea, a glutinous weed or marine fucus, which it swallows and afterwards disgorges, and then with this vomit, constructs its nest, which is about the size of an ordinary coffee cup. When freshly made it is of waxy whiteness, and is then esteemed the most valuable as an edible luxury.

But notwithstanding the wonderful variety and perfection of the modes which nature provides for the incubation of the eggs of the different varieties of the feathered races, man has sought out many inventions for hatching eggs by artificial means. In Egypt they are hatched in underground ovens which are heated by burning a fuel made by mixing the offal of animals with water and straw, and forming it into cakes. According to recent statistics published by the government of that country, the number of establishments for hatching eggs in Lower Egypt was 105 and in Upper Egypt 99. In all these establishments

17,418,973 eggs were hatched, and 8,785,527 eggs were spoiled.

Some years ago we published an account of a contrivance for hatching eggs by artificial heat, with an illustration of the machine or incubator used. Some of our good practical readers, who believed that the time of a live Yankee man or woman ought to be worth something more than a sitting hen's, cracked some jokes at our expense for occupying the columns of the FARMER with a description of a substitute for the duties of an old hen.

At the risk of a few more jokes we venture to allude once more to the subject of artificial incubators. We have just been examining an invention which has been advertised in our columns several weeks, and is now in operation at 26 North Market street. Its outward appearance may be represented thus:—



This is by no means a particularly attractive picture. The one that we printed several years ago made a better show. But that failed, practically, and so have all other hatching machines that had been invented prior to this one, devised by Jacob and Henry Graves. This failure resulted from an inability in the machines to regulate the heat and moisture, which are naturally supplied and regulated by the organization and instinct of the mother hen. In the old incubators, with much care to regulate the heat and to moisten the eggs by hand, incubation was more or less successfully effected, but the chickens seldom came out of the shells in a healthy condition. The outer shell was too hard, and the inner lining was too dry and often adhered to the chick. These fatal defects in the operation of previous incubators are now remedied, and the Messrs. Graves claim to have succeeded in producing a machine that is *self-regulating* as to heat, moisture and ventilation, and consequently one that produces healthy, spry and lively chickens.

The heat is produced by lamps at each end of the cabinet, as seen in the cut; but we shall not attempt a description of the ingenious means by which this self-regulation is effected further than to say that a glass tube filled with spirits, inside of the cabinet and connected with a column of mercury on the outside, furnishes the moving power by which one valve increases or diminishes the volume of flame, as the inside temperature rises or falls below the desired degree of warmth, and by which other valves which regulate ventilation and moisture, are opened or shut.

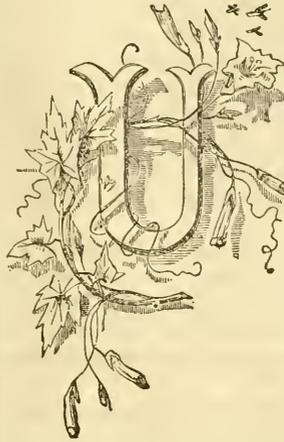
So satisfactory is the operation of this self-regulating apparatus that it has run, in one case at least, forty-eight hours with a variation of only two degrees. The same principle is also applied to what is called an "Artificial Mother," a box or coop lined with lamb's wool, for brooding the chickens.

The chicks which we saw just out of the shell, appeared to be as healthy and smart as those hatched by a hen.

Whatever may be thought of the practicability or economy of artificial incubation, this machinery is certainly ingenious and interesting.

**GET LEATHER BITS.**—One of the cruelest things done to dumb beasts is putting hard frozen iron bits into a horse's mouth. It is not only painful but a dangerous act. For every time living flesh touches a metal much below the freezing point, the latter extracts the heat from the former and freezes it. Thus a horse's mouth becomes frozen by the cold iron every time it is put into it; each time causing these freezings to go deeper and deeper, to end at last in extensive ulceration. With such a sore mouth the poor horse refuses to eat and pines away, which calls the horse-doctor in. They call it bots, glanders, horse-ail, etc., and go to cramming down poisonous drugs, in doses; and the next you know of the poor abused creature, he is trotted off to be food for fish or the crows. Many a valuable horse has been "mysteriously" lost in just that way. Thinking and humane people avoid this by first warming the bits; but this is much trouble, and sometimes impossible as in night work, like staging and physician's work. Now all this trouble and loss are entirely avoided, as we have found on large trial, by getting the harness-makers to get leather bits for winter use, so made that no metal substance can touch the flesh. They are durable and cost only half a dollar. We wouldn't exchange ours for a gold one, if it couldn't be replaced. Don't fail to try it.—*Rural World.*

#### CROPS IN SPIE OF DROUGHT.



NDoubtedly all the changes in the operations of nature, have their compensations. Storms tear up the trees and sometimes demolish our buildings or destroy life, but they equalize in the end the currents of air by scattering their impurities, or

change them into healthful breezes. In the rains that undermine bridges and destroy other works of art, come many elements that descend into the soil and fit it to sustain the plants we rear. The whirlwind and earthquake, sand-storm and lightning's flash, do not destroy, but change things from one form into another, and the result of all is the general good.

So it is with the drought. If he will but give attention to it, the farmer will find compensations in the operations of nature themselves, and in the practical lessons which he may draw from them.

Some twenty years ago, the opinion was common that deep ploughing tended to produce large crops; that is, ploughing from nine to twelve inches in depth. That opinion was adhered to quite steadily until recently, when many doubts have been expressed as to its soundness.

At the December meeting of the Massachusetts Board of Agriculture in 1867, when the subject of ploughing was discussed, a majority of the speakers expressed themselves as opposed to the practice of deep ploughing. At the winter meeting of the New Hampshire Agricultural Society in 1869, the prevailing opinion was, that deep ploughing is essential to profitable farming.

It seems as though this question ought to be settled by this time, so that every beginner may enter upon the work without a shadow of doubt on his mind whether he shall plough deep or shallow.

A careful observation by the farmer will

soon convince him that plants thrive best where they stand upon a deep and pervious soil; one which rain water, and also the air and the sun's rays can readily penetrate. The roots of plants travel in search of food, and in so doing, if they approach a dry, compact soil, they will turn aside and seek a way which is more easily penetrated; and that way will be one which will usually be moist and afford the most food.

We are clearly of opinion, that soils which are made up of less than fifty per cent. of sand, drained and ploughed 12 inches in depth, finely pulverized and well manured, will bring a fair crop any year, be the weather wet or dry.

If too much rain falls, such a soil will allow it to pass readily down out of the way. If too dry, it will retain and use all the dew that settles upon it. If too dry and hot, the evaporation on the surface will cause the water to ascend from the porous subsoil; this water always brings with it a quantity of saline matter, which it leaves behind when it rises in vapor. The longer, therefore, the dry weather and consequent evaporation from the surface continues, the larger will be the amount of saline matter coming towards the surface.

The saline matter is just what the plants need, and it will certainly come to them if the soil is in a condition to admit its passage up. These views are corroborated by a very able writer, C. C. Langdon, of Mobile, Ala., which we find in the *Rural Carolinian*, one of our most valued "exchanges," published at Charleston, S. C. He says:—

"In a soil thus prepared, the roots not only descend without obstruction to a depth sufficient to be beyond the reach of the burning atmosphere, but the moisture from below it is raised to the roots by capillary attraction in time of drought, while, in seasons of too much rain, the water is made to sink below the roots by the attraction of gravitation. A familiar illustration of the *modus operandi* of these important and interesting agencies is thus given: 'If you immerse a compact loaf of sugar in water, it will require many minutes for the fluid to penetrate through all its parts; but, if you reduce it to powder before applying the water, it will be saturated in a few seconds. Just so it is with the earth. If you break it shallow, and leave it in clods, it will be slow to absorb the moisture from below; while, if you plough it very deep and close, and thus separate its particles thoroughly, it will, like the pounded sugar, take up the moisture with very great facility.' Every year we hear complaints of injury or destruction of crops by drought. It is time for intelligent farmers to understand that all this is the result of a defective system of culture, and that it is entirely within their power to guard against any such calamity. Examples are nu-

merous of the entire success of the system, and it is founded in reason and sound philosophy. There is nothing at all mysterious about it, and nothing to prevent its universal adoption."

OLD MORTAR BY THE ROADSIDE.—Notwithstanding all that has been said with regard to the value of lime added to the soil, there are many persons who do not use it, even when it is in their way and must be disposed of. It is not uncommon to notice a cartload or two of old mortar, carried out from a house that is undergoing repairs, and dumped down by the roadside! Here it remains for years, perhaps, in the way, and an unsightly blemish upon the premises. We know of such heaps on farms now, where they have been lying for a long time, and this, too, where the owner raises wheat. Broken up and spread where wheat is sown, we have known it to add materially to the crop, and so we suppose it would benefit any of our old gardens, if made fine and mingled with the soil. On clay or peat lands, the sand contained in the mortar would be of essential service.

#### WINTERING SHEEP.

Winter is near at hand and every owner of a flock of sheep should make his arrangements for it. In most of the Northern States an exaggerated feeling of discouragement still pervades the growers of fine wool. Many of them wintered their flocks poorly last winter, on the ground that they could not afford to feed them well—and probably will do the same this winter. This in our opinion is a cruel and suicidal policy. Less returns are thus obtained from a given amount of food. Thirty half starved sheep will produce less good merchantable wool than twenty properly kept ones; will lose twice or three times as many by death; and will not raise half as many lambs. And what farmer possessing a spark of humanity is willing to see these poor defenceless animals slowly growing thinner and weaker—all of them tottering before March closes—many of the inlambd ewes incapable of rising with their burthen, and dying in parturition. A more painful spectacle of brute suffering than a flock in such condition near the close of winter, cannot be witnessed, and we believe that morality has a voice in this matter as well as humanity.

Every flock master who has more sheep than he can keep properly or sell, should kill the surplus when winter sets in, if he gets nothing from them but the pelts.—*Dr. Randall, in Rural New Yorker.*

—William A. Wheeler writes to the New York Farmers' Club that he has known a very foul cask to be entirely cleansed by filling it with dry earth and leaving it four or five days. The earth treatment, followed by scalding lime-water, will sweeten anything but a very old and rancid tub.

**TO KEEP CELLARS FROM FREEZING.**

An untold amount of labor is annually expended in New England in banking up with earth about the dwelling to keep the cellar from freezing. That process has already been commenced all about us, and is a dirty and expensive one; and one which, when the work is well done, does not always accomplish the end sought.

The method adopted, as described below, was tried by a gentleman with the cellar of an outhouse, in which, on several occasions, vegetables had frozen, although the cellar was fortified by a process well known to farmers as "banking." The mode of proceeding is given by the *Scientific American* as follows:

The walls and the ceiling were pasted over with four or five thicknesses of old newspapers, a curtain of the same material being also pasted over the small low windows at the top of the cellar. The papers were pasted to the bare joists overhead, leaving an air space between them and the floor. He reports that the papers carried his roots through last winter, though the cellar was left unbanked, and he is confident they have made the cellar frost proof. We do not counsel the special use of old newspapers for this purpose. It is just as well or better to use coarse brown paper. Whatever paper is employed, it will be necessary to sweep down the walls thoroughly, and to use a very strong size to hold the paper to the stones. It is not necessary to press the paper down into all the depressions of the wall; every air space beneath it is an additional defence against the cold.

Banking up a house, is not only laborious and expensive, but the earth coming against the wood work, keeps it wet through the winter. The wood dries when the earth is removed, and this change going on from year to year, not only rots the clapboards and boarding, but it is extended to the sills of the house. They become rotten, give way to the weight resting upon them, and then the floors become uneven, the doors will neither open nor shut, and the whole house is in a state of ruin. Such are some of the results of banking up the house!

We have no doubt that the process described above will prove efficacious. Try it. It is inexpensive and easily done. Riding in the cars between Boston and New York on a cold winter night, we suffered exceedingly with cold feet. A fellow-traveller suggested that they would soon become warm if wrapped in a large newspaper! We did so. In half an hour they were warm, and we fell asleep. Many times since the newspaper has been used where a blanket was needed, from which decided comfort was obtained.

Writing the above quite near a large window against which the cold November wind is beating, we became quite chilled, although the temperature of the room is nearly 70 degrees in the centre. Hanging a newspaper against the window, we are no longer chilled, let the wind blow as it will. So, if you value your potatoes, apples, and a warm floor under your feet, put the newspapers in place at once, and thank the thoughtful and painstaking person who made the discovery!

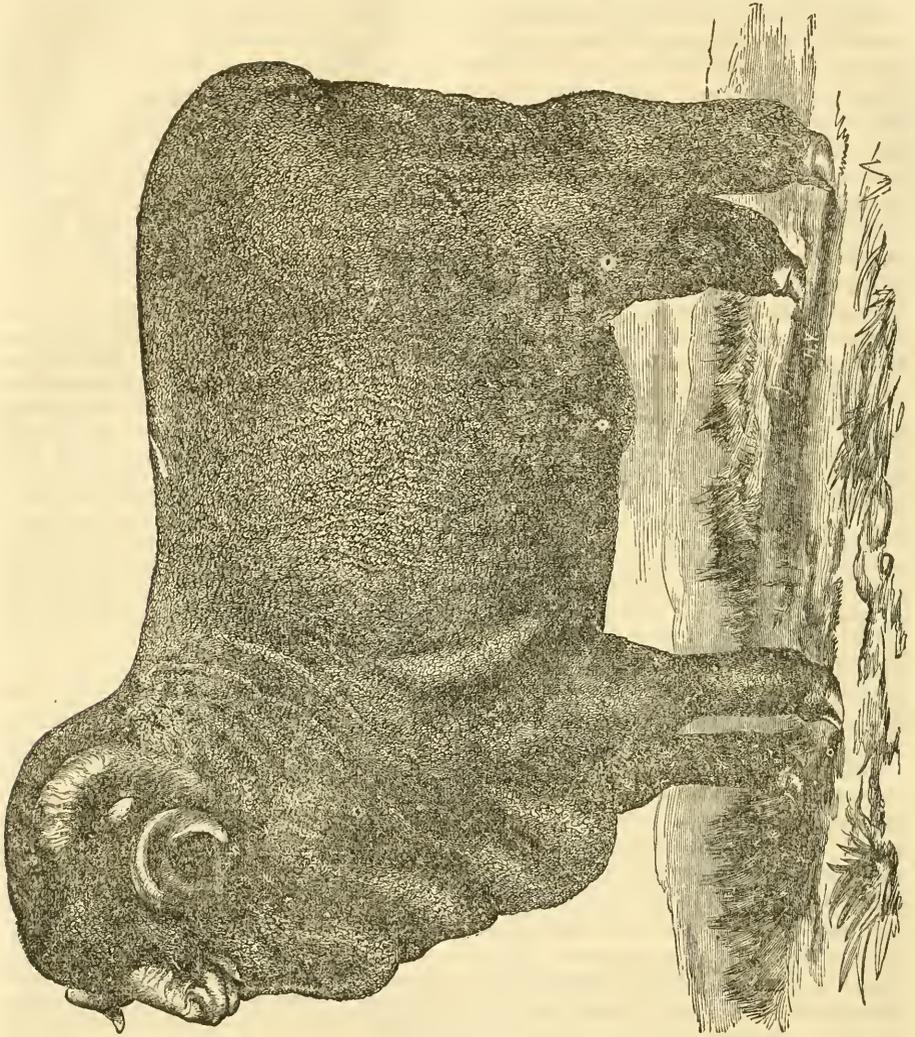
**CO-OPERATIVE DRAINAGE.**—In 1869 a law was passed by the legislature of New York, which provides that, where there is any low, wet land belonging to several persons that needs draining for the sake of the public health, or the benefit of agriculture, any freeholder interested can petition the County Judge to have the land drained, and have the expense assessed on the property benefited. The County Judge appoints three Commissioners, one of whom shall be a civil engineer, and none of whom shall be personally interested in the work. These Commissioners shall examine the land, and, if in their judgment the work is necessary, they have power to borrow money and commence operations at once.

**CHANGE OF TIME.**—At a recent meeting of the Massachusetts State Board of Agriculture the winter session at Framingham was changed from the 6th, 7th and 8th of December, to December 13, 14 and 15.

**PORK FATTENED ON WHEY.**—In some remarks on feeding hogs at cheese factories, in a late article in the *Rural New Yorker*, Mr. X. A. Willard says:—

In feeding whey to hogs, bran, ship-stuffs, or some kind of meal should be mingled with the whey. When this is done, a good quality of pork is made, and considerable profits often are realized from the whey. We do not approve of keeping hogs exclusively upon whey. It does not contain the elements of nutrition in the right proportion to preserve the animals in good health and make the best quality of pork.

It is true, hogs will live upon whey and take on fat, but the pork is soft, watery and of inferior quality. It is doubtful whether such pork is a healthy article of food, as swine fed exclusively on such watery slop soon show symptoms of disease. Still, many dairymen keep a portion of their hogs on whey alone, and sell in early fall to the butcher or packer. We notice that those who make a practice of feeding swine exclusively on whey do not generally put up such pork for their own consumption.



**A THREE-THOUSAND-DOLLAR AMERICAN MERINO BUCK,**

OWNED AND KEPT BY ROLLIN OLEASON, BENSON, RUTLAND COUNTY, VERMONT — [See page 561.]

FARMERS' CLUBS. There will probably be more Farmers' Clubs in operation in New England this winter than ever before. The State Board of Agriculture of Maine set the ball in motion in that State pretty effectually, last winter. The objections that such associations frequently run out, or their exercises run down, is entitled to less consideration than it receives. We learn to walk by repeated falls. "Up, and try it again," and avoid the misstep this time that caused the stumble before. The new Board of Agriculture of New Hampshire are

about to prepare notices which will be sent to different towns, in which some one or more persons will be requested to move for the organization of clubs in their respective towns.

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—The census takers have found a little paradise on an island in Narragansett Bay. All the men and all the women work; the climate is good, the soil grateful, and there is not a criminal, a pauper, or a house-servant on the island.

## MEAT AND PROVISION MARKETS OF BOSTON.

DEPARTMENT OF AGRICULTURE,

Washington, D. C., Oct. 8, 1870.

EDITORS AND PROPRIETORS NEW ENGLAND FARMER, BOSTON, MASS.

*Gentlemen*:—I desire to collect information concerning the market system of our principal cities with especial regard to abuses in the usages of commission dealers and other middle-men, and respectfully ask attention to the following points:

1. Number of days in the week and hours of the day in which farmers are permitted to sell from their wagons.

2. Amount of space at the market-houses and on the streets, which they are allowed to occupy.

3. Price obtained by middle-men or hucksters compared with the rates allowed by them to producers.

4. The bearing of prevalent usages of commission-men upon the interests of producers.

5. Amount of license (if any,) required of farmers, and other municipal restrictions or requirements in respect to their sales.

An article in your paper giving an account of the characteristic features of the markets of your city, and bearing on the above particulars, would be a valuable contribution to the object which I have in view. Will you have the kindness to consider the subject, and in case you publish such an article, forward to me a marked copy of the paper containing it.

Yours very respectfully,  
HORACE CAPRON, *Commissioner*.

REMARKS—Before proceeding to answer the foregoing questions, it may be well to allude briefly to the history of markets in the city. It would seem that, from the earliest times to the present, public opinion has been divided as to the proper course for the authorities to pursue in this matter, and as to the effect of the various systems which from time to time have been adopted.

Taking our figures mainly from a report of a joint committee of the Council and Board of Aldermen, on the subject of markets; made in 1865, we learn that market places were first established by the city authorities in 1733, when the population of the town was but 15,000, and buildings were erected in three localities. Every day was market day, from sunrise till one o'clock. Forestalling was prohibited, and also purchasing marketable articles elsewhere than at the markets. Public feeling, for some unexplained reason, revolted against this plan, and in 1737 the Centre market was pulled down by a mob, and the town voted to appropriate the other two to different uses.

In 1740, Peter Faneuil offered to build a market-house in Dock Square, which offer was accepted by a vote of 367 to 360; and, in 1742, "Faneuil Hall" was erected.

In 1746, a vote was passed to shut up the

market-house, and it remained closed till the next spring, when the town went into the market business itself, employing three butchers to bring in a supply of meat, and allowing them five per cent. on the sales for their compensation. Afterwards the offer was added to the commissions of the butchers. This plan continued till March, 1749, when £1,000 was voted to the clerk of the market to settle up its accounts, and Faneuil Hall Market was opened again. In 1752, it was again closed, complaints being made of crowded streets and nuisances.

In March, 1753, it was voted to lease the stalls in Faneuil Hall Market. In 1757, a committee reported that high prices were caused by too long market hours. In 1761, the market-house was destroyed by fire. In 1763, forestalling was again complained of, but no action was taken. In 1767, the town was requested to build a fence, and to charge fees for stands inside of it; and the citizens were requested not to purchase of "disorderly persons" outside. In 1778, a committee reported against forestalling, and the inhabitants agreed to make two dinners a week on fish, and not to have more than two dishes of meat the same day, and to avoid poultry. A few days afterwards the fishermen were complained of for exorbitant prices. In 1779, regulations were adopted forbidding purchases elsewhere than at fixed localities.

In 1805 Faneuil Hall was rebuilt and enlarged, covering nearly twice its former area. This with the surrounding streets answered as the market place of Boston, till, under the mayoralty of Josiah Quincy, Sen., the new building was erected in 1825. Though the legal and proper name of this structure is Faneuil Hall Market, it is often called Quincy Market, in remembrance of the exertions and wise foresight of Mayor Quincy. Up to this time those who occupied street stands paid a fee therefor, and the streets were uncomfortably crowded.

The new building is 535 feet long, and 50 wide, with streets on each side, known as North and South Market Streets, 100 feet wide, the whole length of the building. At first the new building furnished more stalls than were required, and those under Faneuil Hall were given up and the space divided and rented by the city, for stores. But the demand for stalls having increased, the lower story of old Fa-

neuil was re-opened for market purposes in 1858, and is so occupied at present.

These two buildings, separated only by a street, together with the cellars and the adjoining streets, constitute Faneuil Hall market, which is the only market owned and controlled by the city. In the new building, there are 132 stalls; in the old, 32; total 164. These stalls and the cellars are let at a fixed rent, for a term of years, to tenants for selling at wholesale and retail all kinds of meat, fish and provisions. The adjoining streets are occupied by farmers and others without fee or rent.

The Superintendent or Clerk of the Market divides the space thus assigned into six divisions. We are indebted to Mr. Rice, the present Clerk, for the following table showing the number of wagons that have occupied these street stands during the month of September:

First Division—Varieties*	1223
Second Division—Dressed Hogs	18
Third Division—Dressed Beef	1277
Fourth Division—Vegetables	3320
Fifth Division—Tripe	76
Sixth Division—Mutton	623

Total number of wagons during the month, . . . 6342

As to the value of these stands, we may remark that one individual who occupies one of them, and also one of the inside stalls, said that his outside privileges were worth more to him, though free, than the inside, for which he paid a heavy rent.

Although the city owns Faneuil Hall Market, there are no restrictions on private enterprise in the construction of other and competing markets, stores or stalls for the sale of meats, vegetables, &c., all of which are as free from municipal restrictions, except as to selling unwholesome articles, as is the traffic in groceries or clothing.

We have obtained a list of the following "markets" built by individuals, in which stalls are rented by the owners thereof in a manner similar to those in Faneuil Hall Market:—

Pickstone, 72 to 92 Ellickstone Street, . . . . .	Stalls, 19
Boston, corner Washington and Boylston, . . . . .	20
Central, 60 North, . . . . .	21
Lakeman, corner Ellickstone and North, . . . . .	32
St. Charles, Beach, corner Lincoln, . . . . .	14
South, Portland, corner Sidbury, . . . . .	24
Union, Union, between North and Hanover, . . . . .	24
Washington, corner Washington and Leach, . . . . .	90
Williams, Washington, corner Dover, . . . . .	28

Total stalls in these nine private markets, . . . 271

Total in Faneuil Hall Market, . . . . . 164

Total in all the "Markets," . . . . . 435

Showing that the city controls little over one-third of the stalls in the markets within the limits of the city proper. South Boston, East Boston, Cambridge, Charlestown, &c., have spacious markets, not included in the above list.

Washington Market, a fine structure at the south part of the city, with its 90 stalls, was built by Wm. Evans, Esq., the past season, and we understand that most of its stalls are already rented, and that it opens with the most encouraging prospects of success, and of being a great accommodation to that part of the city. The lot on which it stands is 300 feet deep by 116 front, and 130 rear. It has a yard 240 by 60 feet, intended for the accommodation of wagons, for the use of which it is proposed to charge a small fee. As elsewhere, wagons will probably be allowed the ordinary street privileges.

Boylston Market has been occupied about 60 years, and wagons have always had the privileges of occupying a portion of the adjacent streets, and venders the space in front for temporary stands.

From the reports of the police for the present year, it appears that the number of private establishments for domestic supply, is as follows:—

Stores for the sale of meat, . . . . .	25
Stores for the sale of vegetables, . . . . .	51
Stores for the sale of meat and vegetables, . . . . .	219
Stores for the sale of groceries and provisions, . . . . .	322
“ “ “ groceries and vegetables, . . . . .	323
“ “ “ vegetables and fish, . . . . .	65

We will now answer as well as we can the direct inquiries of Commissioner Capron.

QUESTION 1. Number of days in the week and hours of the day in which farmers are permitted to sell from their wagons.

Farmers are allowed to sell in the streets adjoining Faneuil Hall Market every day in the week, except Sundays, from 2 o'clock to 11, A. M., and from 2 o'clock P. M., till sundown. Here farmers from any distance may sell their own products, or those of their neighbors, in such quantities as they choose, from a cent's worth to a whole load, and to whoever will get up early enough in the morning or stay late enough in the day to trade with them. Farmers or "any other person," may also peddle from house to house in all parts of the city, meat and provisions, with no restriction as to the articles being produced by the one who offers them for sale. In confirmation of these statements we quote the

\*Beginning at the head of South Market Street, the first division is assigned to the sale of poultry, butter, apples, berries, &c., and is called the "Variety Stand."

following State law, passed in 1859, and still in force:—

SECT. 1. The City of Boston shall make no by-law, ordinance or regulation excluding from the occupation of street stands, within the limits of Faneuil Hall Market in said city, as the same are or may be defined in the city ordinances, for the sale of fresh provisions and perishable produce, any persons taking such stands for the sole purpose of selling such fresh provisions as perishable produce; *provided* the same are the product of the farm of the person offering them for sale, or of some farm within ten miles of the residence of such person; or are to be sold at wholesale only by the party offering the same for sale on commission for, or as agent for some person or persons not residing or having a usual place of business within eight miles of said market; or are meats to be sold at wholesale only by the person who slaughtered the animals of which the same was a part. Approved, April 6, 1859.

And also the following city ordinance passed Dec. 14, 1857:—

Any person may offer and sell, from house to house, in any of the public streets, lanes, alleys or squares in this city, from carts, wagons or sleighs, any meat, poultry, vegetables, fruits, or other article of provisions, on all days when Faneuil Hall is open.

In the 34th section of the city regulations in relation to carriages, it is provided that the rule forbidding vehicles to stop in the streets more than five minutes, without some suitable person to take care of them, or more than twenty in any case, shall not apply "to the vehicles of market or provision men who may stand with the same without the limits of Faneuil Hall Market until eleven o'clock in the forenoon, at such places in the city as the board of aldermen may designate, for the purpose of vending provisions."

That the provisions of these laws relating to peddling in the streets of the city are not dead letters, though not extensively practiced, probably for the reason that families prefer to obtain their supplies in other ways, is evident from the fact that from 20 to 40 peddler's carts are filled every morning at Faneuil Hall Market, as may be seen by any early riser who will visit the market about day light; and from the fact that the police officers report that in May last there were 93 wagons going from house to house in different sections of the city.

QUESTION 2. Amount of space at the market houses and on the streets which they are allowed to occupy.

There is no space in the buildings appropriated to this purpose. In the streets adjoining Faneuil Hall there is room specially designed for this purpose sufficient to accommodate

about 200 wagons; but sometimes as many as 500 find accommodation by using a portion of Commercial, Blackstone and other adjacent streets. Here, as elsewhere in Boston, business lacks elbow room, and farmers, teamsters, and even pedestrians are somewhat accommodated thereby.

QUESTION 3. Prices obtained by middlemen or hucksters compared with the rates allowed by them to producers.

We have not the data for a reliable answer to this question. Statements have been made of a great advance in selling, over buying prices, in some cases, and instances have been related in which articles have been sold much under cost. We know of no market regulation or practice which gives undue advantages to "middlemen or hucksters." Here, as in all other branches of business, sharpers and tricksters occasionally show their hands, but not more often, we believe, than in other departments of trade.

QUESTION 4. The bearing of prevalent usages of commission-men upon the interests of producers.

We know of none that have an injurious effect. No farmer is obliged to employ them. Any one can do so who chooses. A large amount of business is done by them. They at least furnish the second string to the bow of farmers. If not satisfied with the prices offered by buyers at home, farmers send their produce to the commission dealers, whose terms and conditions of doing the business are, or may be, well known. Farmers, we think, are also benefited by these commission dealers, in their tendency to destroy the effect of combinations among the ordinary dealers. A farmer comes to market with a load of butter, pork, beans, potatoes, apples, beef, mutton or other produce. He does not wish to retail. The wholesale buyers are ugly. They offer lower prices than he thinks they ought to pay. The commission houses give him a chance of testing the market by the use of their facilities; and whether he get more or less than he was offered by regular buyers, he is better satisfied than he would have been to accept what he believed was less than market price. A drover finds a sticky market; there is no "turkey" in all the talk of the butchers; they don't want his cattle or sheep at any price. He thinks they are bluffing, and turns over his stock to be butchered and marketed on commission.

The present rates of the commission dealers are 50 cents per 100 lbs of beef; veals 30 cents, and sheep and lambs 16 $\frac{2}{3}$  cents per carcass; potatoes and apples 25 cents per barrel; poultry, butter, beans, &c., five per cent on sales, which are guaranteed; that is, if the articles are trusted out, it is at the risk of the commission man. The farmer or consignee is paid the full amount as soon as a sale is effected, and often a portion of the money is advanced on receipt of goods.

For the past ten years we have met the sellers of live stock at this market weekly, many of whom sell that of their own raising. We have heard them discuss very freely all the regulations and practices of the market, and if any "prevalent usage" of commission-men or others was antagonistic to their interests we should have heard of it. The "prevalent usages," and whatever there is of "system," are such rules and regulations as parties have established for their mutual benefit, and which are changed as convenience and interest requires. The simple fact is that the market was never *established*; it *grew* up, and whoever investigates the subject will be surprised to find how nearly the thing still "grows of itself." A farmer who wishes to come to market with a single car-load of cattle or sheep or swine pays no more for transportation or yardage than a regular drover, and he has the same rights and facilities for selling his own stock that a drover has, excepting, perhaps, experience in the business, and the same is true of other kinds of produce.

QUESTION 5. Amount of license (if any) required of farmers, and other municipal restrictions or requirements in respect to their sales.

There is no market license required by the city. The other part of the inquiry has been answered already, as far as we are able to do so.

Some five years ago, while the question of a free market was under consideration by the city government, the following petition was signed by Jeremiah Russell, of West Cambridge, who had then been in the business thirty-four years, and by fifty-one others, and presented to the committee to whom the subject had been referred:—

*To the Committee on Free Markets:—*

*Gentlemen:—*We, the undersigned market men, from the towns and farms in the vicinity of Boston, being in the farming and producing business, and bringing our produce and that of our neigh-

bors to Faneuil Hall Market for sale, would respectfully represent to your Honorable Committee that the privilege that we now have at the market is all that we ask. We dispose of our produce just as we please, from one cent's worth to the whole load, as it suits our convenience and interests. We have the privilege of standing with our wagons at the said market as long as it is necessary for the sale of our produce, and, if we prefer, we can retail from house to house all over the city. We, therefore, most respectfully request that the present regulations of said market may remain as they are at the present time, believing them to be all that the producers need or ask for.

And the following by S. F. Woodbridge, who had been in the business twenty years, and by thirty-nine others:—

*To the Market Committee:—*

We, the undersigned beef and mutton butchers, being in the business of buying and slaughtering beef and mutton, and bringing the same to Faneuil Hall Market for sale, would respectfully represent the present regulation of the market is all that we ask for, and that any alteration in the present system would not be of any benefit to either seller or purchaser. We most respectfully request that the present regulations may be continued.

#### UNION CATTLE MARKET.

Cambridge Cattle Market is soon to be given up. The division of the estates of the old proprietors, Messrs. Porter and Meacham, together with the demand for the land occupied by the yards for building purposes, have made the abandonment of this market necessary. Anticipating this event, the managers of the Fitchburg railroad purchased in Watertown, several years ago, some thirty acres of land well located and admirably adapted to the purposes of a cattle market. Having received notice that the yards at Cambridge must be closed, President W. B. Stearns of the Fitchburg Railroad, with some of the directors, visited some of the principal cattle markets of the country to examine the plans and arrangements which have been adopted for the convenience of buyer and seller, and for the comfort of the beasts. The proprietors of the present Boston cattle markets have been slow to adopt the modern improvements that have been enjoyed for some time at Albany, Chicago and elsewhere, particularly in regard to shelter of animals from storms. But in the grounds at Watertown it is the object of those who have the charge of the work, not only to adopt the conveniences of the best markets, but to make such improvements as experience here and elsewhere have suggested.

At the commencement of operations at the Union Cattle Market, a stone culvert the whole length of the ground was laid. Into this, pipes will discharge the drainage of the yards, which are to be constructed, not on the surface soil, but on gravel, under much of which is a layer of broken stone. Both stone and excellent gravel are found on the grounds, and a large amount of grading is now being done.

We visited the location a few days since, but as

our stay was brief, we rely on the correspondents of the *Advertiser* and *Journal* for most of our figures. The wharf or landing, full half a mile in length, is built of stone with its foundation below the reach of frost, with hewn granite blocks for cap-stones. Between this landing and the Shute yards is a passage or space ten feet wide. Each of these landing yards is to be equal in length to that of an ordinary stock car. The gates of these receiving yards will open each way so as to form a fenced passage from the car to the yard; an arrangement which it is believed will prove very useful to the drover in unloading stock.

These receiving yards open on the opposite side from the cars into a regularly laid street, made of choice gravel and macadamized stone, forty-five feet wide; this street is to be lighted with gas, as well as the interior of the sheep houses. From this street stock passes into sale yards, as well as into the sheep and swine houses, which are large, monitor roofed, well ventilated buildings. The sheep houses are divided into pens that will admit from 125 to 150 sheep, with every convenience; sheep racks, troughs and shelves for salt and other food. There are twenty-six double pens in each house, giving each dealer an opportunity to assort his flocks. Platform scales are situated at the junction of the different entrances in the centre of the buildings, and will admit 200 sheep at a single draft.

The double cattle yards, with sheltered roofs, are in close proximity to the sheep houses, extending from the main street, up the gradual rise of land, with ample accommodations for food and water. There are also fine accommodations for hogs and calves, and everything possible is provided for the comfort of man and beast.

The Corporation have also erected a hotel three stories high, with French roof, and basement, containing 100 rooms. The office will be situated on first floor, 41 by 32 feet, with another room equally as large for the drovers' and butchers' especial use.

There is also to be connected with the market a hay barn, 70 by 100 feet. The office is in a central position, easy of access, with large platform scales. There is also a brick building, directly back of the office, containing a tank and calorific engine, to supply the yards with water. An abundance of the needed article is obtained from pipes driven into the ground, and through the help of the engine and iron pipes, every yard receives a sufficient supply.

The whole site is protected from northeast winds by a rise of land. Before commencing operations on these grounds, it was thought they might be ready by the first of October, but the amount of grading, underdraining, building, &c., is so great that even with the large force now employed the work will hardly be completed before the first of January.

### STRAWBERRY BEDS.

Most persons who have land, now raise strawberries, many or few. They are found not only in the gardens of the rich, and in the snug and highly cultivated patch of the mechanic, but have at last found their way to the farm, where a plot of ground is made fertile and devoted to this rich and wholesome fruit.

An opinion was common some years ago that the strawberry does not require a rich soil, but a great abundance of water. It certainly does like the water, and we are quite sure that it likes to luxuriate in a rich, deep, and mellow soil. The crop will generally be in proportion to the richness of the soil. We may be told that they grow luxuriantly in meadows. So they do. But those meadows probably abound in the very elements which the plant needs.

Before the ground freezes, it will greatly promote the crop the coming summer, if the weeds and grass are taken out from among the plants, and the ground made light and fine among them, and well manured. Somebody—we do not know who—has given good advice below, which many may profit by in acting upon it, though a portion of the advice comes rather too late.

"Don't delay attention to your strawberry beds, if nothing has been done to them since fruiting season. Go to work and plough or spade up the ground between the rows thoroughly. Work up the soil in the rows with a fork, hoe or spade, cleaning out all weeds; cut off all the old tops, and scatter a liberal supply of well decomposed manure among them—nothing better than hen manure and ashes mixed with mould from the woods. It is also a good plan before spading or ploughing the soil between the rows, to scatter a compost on and turn it under. The roots are greatly benefited by coming into contact with such.

If your bed has been allowed to grow "hilterskilter" heretofore, and covers the entire surface, simply draw a line and cut it with the spade to show where the edges of the rows are to be, and then spade under the vines between the rows, leaving rows about six inches in width and eighteen inches apart from centre to centre. If the plantation is left in its present condition, it will be of no value another season. Remember, the more new roots the plant forms this season before winter sets in, the larger the crown will become, and the more fruit stalk germs will be formed this fall, and the greater the crop another season. It is a mistaken idea with many that the fruit germ is formed in the spring. Feed them well now and they will feed you in return next season."

THE JERSEYS NUDGED.—Mr. C. L. Flint, who has imported one or two lots of the little Brittany cattle into Massachusetts, in speaking of them recently said: "Nothing is superior to the butter from Jerseys, so far as looks and texture are con-

cerned; but it is probably well known that it lacks flavor. The distinguishing characteristic of the butter from the Brittany cow is a certain sweet, delicate, nutty flavor, in which it is as much ahead of any Jersey cattle I ever saw, as the Jersey butter is ahead of any other *in looks*."

#### SHARP STICKS UNDER MUCK.

Our correspondent, Norman Call of Allentown, N. H., has been at work, as have many other farmers this dry fall, on his muck bed. The muck is nearly four feet thick, and solid enough to bear up a team, and it lies on a bed of white sand. We find the following statement in the Keene *Republican*:

In the course of the digging, large numbers of sticks, about two inches in diameter and from six inches to two feet long, have been found on and driven into the sand. The wood can be easily distinguished by the eye, as maple, hemlock or oak, and the remarkable part of the story is that each and every stick is sharpened at each end, as if by a tool with a poor edge. One of these sticks was driven into the solid sand a foot and a half, six inches being in the muck. On being taken up, the wood becomes very dry, cracking badly lengthwise and growing as light as charcoal.

The questions, Who sharpened these sticks, and for what purpose were they driven into the sand so long ago as to allow of the accumulation over them of a stratum of muck four feet in thickness, are asked, but not answered.

#### AGRICULTURAL ITEMS.

—In Connecticut and New England generally, that of 1870 has been the hottest July for 92 years.

—The California steam plough is one of the attractions at the Cincinnati Industrial Fair.

—An exchange says Mr. Frank A. Danforth has engaged 5000 bushels of cider apples at 20 cents a bushel, delivered at the mill at Norway, Me.

—Prof. Hilgard of Mississippi says that cotton seed takes nine times as much nutriment from the soil as the lint.

—In Marshall County, Kansas, a field that received no rain from sowing to reaping, yielded 31½ bushels of wheat per acre.

—The beet sugar business prospers in California. That State has 400 acres in beet and a factory costing \$20,000.

—S. F. Browning of Northfield Farms, Mass., has raised 65 bushels of wheat this season on a trifle less than two acres of land, after tobacco.

—Prizes and medals amounting to \$8,505 were offered by the New York State Agricultural Society this year.

—On a ranch on Carson river is to be seen a herd of 26 camels, all of which but two are native Californians.

—The St. Joseph (Mich.) *Herald* says:—"The destruction of potatoes by the potato bug has been so complete that potatoes have retailed in St.

Joseph at \$1 80 per bushel. At least one-half the whole crop of Western Michigan has been destroyed."

—The estimates of the Agricultural Bureau place the present year's wheat crop at 210,000,000 bushels—48,000,000 less than that of last year.

—A Connecticut man writes the *Country Gentleman* that two applications of salt water cleaned his hogs of ticks, with which they were covered this summer.

—Tennessee is becoming a great potato growing State, and has a very large crop this year, which is also of fine quality, the potatoes in some fields averaging a pound apiece.

—The Briggs Brothers, of Marysville, Cal., have cultivated the present season about one hundred and fifty acres of castor beans. Somebody has got to suffer.

—A farmer of Goshen, Conn., one of the best dairy towns in the State, doubted if the cows in that town would average two quarts of milk to a milking, during the latter part of the late drought.

—The New York *Horticulturist* says we have never discouraged the planting of fruit, but the indications at present show that it is sometimes slightly overdone.

—Ploughing up potato fields late in the season, will be the means of killing a great many potato beetles by freezing; the ground in some sections is full of them already.

—A correspondent of the *Prairie Farmer* says an individual is travelling through Iowa, claiming \$5 of farmers who have drive-wells, as license for using the patent.

—On one farm in Scotland, which does not exceed five hundred acres, there were over four hundred miles of drains, several years ago, and the work was not then regarded as complete.

—A horse owned by the Belfast and Rockland Stage Company, Maine, travelled from Belfast to Rockland and back, 56 miles, every day for six consecutive days. He was thus driven to decide a wager on his endurance.

—A correspondent of the *Southern Cultivator* recommends cobs as manure. He furrows out his ground, places three cobs at the distances he wishes his hills, say three feet apart, hauls on the earth and plants corn over the cobs.

—Hon. Judson Lee, who was raised a farmer's son on the Pelham, Mass., hills, but was afterwards Mayor of the city of New York and member of Congress once remarked, "My father left me an independent fortune—fifty cents in money, and industrious habits."

—Mr. I. T. Tillinghast of Factoryville, Penn. recently undertook to watch some bees working freely on white clover, with the view of ascertaining how rapidly they gather honey. Selecting a bee that looked quite empty, he watched her just

an hour, in which time she visited five hundred and eighty-two clover heads, when he lost sight of her in flying over some weeds, and does not know that she was even then fully loaded.

—The next meeting of the Maine State Board of Agriculture will be held in Farmington village, at the Court House, about the 1st of January. In connection with this meeting the Farmers' Convention will be held. We shall give further particulars hereafter.

—A few days since, at an auction sale in Bangor, Me., 43,000 acres of timber land were sold at prices varying from \$1.48 to \$1.75 per acre. The aggregate sum realized was about \$70,000. This was one of the largest sales of timber land ever made on private account in Maine.

—Mr. J. A. Harwood of Littleton, Mass., has a fine young peach orchard of nearly two thousand trees, about two hundred of which are in bearing. His crop this year amounts to about one hundred and fifty bushels, which he sold for not less than \$6 per bushel, amounting to \$900 or more.

—The cattle disease, which broke out in Egremont and the western part of Great Barrington last summer, is still prevailing, and extending its ravages among horses, sheep, and swine as well. George M. Hollenbeck of Egremont has lost nearly \$1500 worth of stock, and several other farmers have lost five or six hundred dollars' worth a piece.

—The farmer who raises produce for a distant market is limited to a few articles, such as wheat, corn, rye, &c., which greatly exhaust the soil—while he who has a market near at hand can cultivate any product for which his soil and climate are adapted, and can have a thorough rotation of crops, so necessary to preserve the vitality of the soil.

—The *Maine Farmer* discusses the value of sawdust for bedding as follows: There is a great difference in the value of the different kinds of sawdust. For example, while hard pine sawdust from the shipyard is pure and sweet, even fragrant, and readily takes up the urine, it is not so valuable or good for the soil as hard-wood dust, or even our native soft-wood dust from spruce, hemlock, &c. The reason is, because the pine is full of resin, which is almost water and rot proof. It will last quite a time and not decay, whereas the hard wood readily and rapidly decays, thus furnishing a small amount of manure to the soil.

**CARROTS GOING TO SEED.**—In reply to a complaint by some one that his carrots went to seed the first year, a correspondent of the *Country Gentleman*, who was formerly a seed grower in England, says, that the best carrot seed will occasionally produce nothing but seed the first year is a fact. In 1865 a meeting was held in London, Eng., on the above subject, and attended by men who had made a speciality of raising carrot seed for fifty years, and the experience of these men was,

that the purest strain of carrot seed would sometimes produce nothing but seed the first year, but they could give no reason why it should be so.

*For the New England Farmer.*

#### EARLY FRUITS AND VEGETABLES.

It is a fact that cannot be denied, that with many farmers too little attention is given to the culture of early fruits and vegetables. This is the result arrived at after extensive observation and considerable acquaintance with farmers. If they plant their usual extent of corn and potatoes; sow their ordinary breadth of oats and rye, and sometimes a piece of wheat; see that their mowings are in ample order, and make provision for a suitable supply of fall and winter fruit, they have done all that is necessary to satisfy their own and their families' future material wants, and to ensure a fair degree of temporal success,—but they do not seem to realize the advantage derived from the culture of the tender and delicate productions of the garden and orchard, for these are almost wholly vegetables. This is not the case with all farmers. There are those, even in the back country, and far from any market, who make it a matter of prime importance to provide themselves with an adequate amount of early fruits and vegetables. And this they do from a sense of duty as well as pleasure,—not that they will afford a large margin of pecuniary advantage, for they do not cultivate them for sale, so much as for use, though they receive more than their full value in the increased health and happiness of their families and friends. They know the luxury and advantage of a liberal supply of early fruits and vegetables and they take the necessary steps to secure them, and generally they are not disappointed.

While this is the course of some, there are others who, for want of thought or interest, seem utterly indifferent to the whole matter, and practically ignore it. In proof of this we have only to visit their farms in summer. Scarcely an early fruit tree can be found on their premises, and their garden is a mere apology for one. They may have some of the ordinary early potatoes and beans, in some convenient spot; perhaps a bed of beets and onions, a few hills of winter squashes, and a row or two of cabbages and turnips, to fill out the allotted space; of early vegetables there is not a solitary representative. Not that these farmers are idle or lazy; they are intensely active about the weightier matter of agriculture, but of the lighter and minor ones—though of equal importance—they have no just conception, or taste, and so deprive themselves and families of comforts which, by a little forethought and labor, they could richly and freely enjoy.

To show that I do not speak at random, I will briefly relate a conversation I recently had with a young man who came from the city to

spend his vacation on a farm in the country, during the last of July and the first of August, that he might enjoy the luxury of early fruit and fresh vegetables; but he has been greatly disappointed, for he said that with the exception of a few peas and berries, he might as well have boarded with the farmer in January; for not another early vegetable had he seen or tasted, and he should be obliged to return to the city without getting what he greatly desired, and what he had come into the country to obtain.

This was a severe criticism upon the farmer's system of living and husbandry; and is, doubtless, true of many intelligent, industrious and successful farmers; as this very season, after some of the earliest kinds of apples had come and gone, and some of the later kinds were in full maturity, there were those who occupied places that had been owned and kept in the same family for more than fifty years who had not, as late as the middle of August, seen or tasted any ripe fruit, when, by those who had attended to its culture, it had been a constant luxury for nearly six weeks.

Where one has but recently occupied or come into possession of a farm, there are good and sufficient reasons why he should not have an abundance of delicious fruit; but when one has been upon the same place for fifteen or twenty or more years, the lack of a supply of fruit, so essential to health and comfort, during the extreme heat of our summer season, is hardly excusable. B.

*Massachusetts, 1870.*

*For the New England Farmer.*

#### CLEARING PASTURES.

If a man is clearing up a new-land farm for a home, it is usually necessary to be expeditious, so that a crop may be realized as soon as possible, to pay for the labor and give a living to the laborers. To that end the forest is chopped down when in full leaf in June, and in the sultry days of early autumn, fire is set so it will run through the fallen timber. A good burn clears the land wonderfully and sometimes leaves but little for the pioneer to do before grain is sown or corn planted.

Now while this is a quick way to clear land, it is objectionable from the fact that a large quantity of rich soil of vegetable matter is burned, and the ashes left soon expend their strength. In a dry season, several inches in depth of the surface is consumed in common woodland, while in duffy or scurfy soil, composed of the leaves of the spruce, fir, cedar or pine, a foot in depth is burned, and I have seen muck consumed more than two feet deep. Such extreme cases may be rare, but usually such a sweeping fire destroys much vegetable matter, that would be valuable to crops.

Therefore, after sufficient land has been cleared for fields, it would be better to clear the land for pasture, without fire. The branch-

es of the maple, birch, beech and elm decay in a few years, and if the bodies of the trees can be drawn away for fire-wood or other purposes, and grass seed sown upon the land, the cattle will keep down the sprouting wood, and turf will be formed, yielding abundance of feed. There are in all parts of the country small pastures cleared in this way that are estimated to yield from double to six times the feed that is grown upon land near by, that was severely burned.

The foregoing remarks refer particularly to the first clearing of land, but are equally applicable to the improvement of pastures grown up to cedars, elders, white birch, cherry, shrub oak or pine. Whatever may be the bushes that are growing in the pastures, they should be cut. Do not depend upon cattle or sheep to destroy the larger growth, as a man with a sharp axe and bush scythe can improve pastures more economically than grazing animals. Cut down the useless shrubbery, but be not anxious to have a great wide-spreading fire. If fire is used at all, let it be to consume snugly-built piles. Leave as much vegetable matter as convenient on the soil, as it is difficult to replace it if once removed. The wealth of the land is a rich soil, abounding in organic matter.

The crop desired in a pasture is grass; therefore sow as much seed upon the land as necessary to give a good turf, cover the seed by harrowing or by drawing a small evergreen tree over the ground. If there are small branches of trees left to rot, so that it is impracticable to use barrow or brush, then sow the seed and turn in the cattle. J.

#### KEEPING MILCH COWS.

We take the following from the *Country Gentleman*, and commend it to all keepers of milch cows, and especially butter makers. We believe that the use of grain in feeding milch cows is becoming excessive, causing garget and other prevalent diseases, and that the remedy is to be found in a better quality of hay. It was stated a few days since by a large butter dealer in Boston that not more than one-tenth of the butter in the market this season is a prime No. 1 article, owing to the poor feed caused by the drought. Grain will not supply the defect of poor feed. This was probably unavoidable this season, but an important lesson may be learned from it.

"Friend Sharpless gives us a nice picture of his cows in the *Country Gentleman* of Sept. 15; but the cost,—40 cents a day,—will that do? The amount for seven months is \$84, far beyond the average income of cows, and, if we add the summer keeping, the best dairies will fall below it.

It is an axiom among our dairyman here, in southern Herkimer County, that much grain fed to stock will not pay—that is to keep it; fattening it is a different thing, and may pay or may not. Sometimes it does not, and generally not too much. For milch cows it does not pay,—so it is thought here.

There is one thing that will pay. It is the feeding of green, tender hay, cut green and young, and then from such hay—it may be said grass—butter is made equal to fall and summer butter—not equalling June butter. The quantity of milk is large in November and December, and again at calving time there is an excellent flow of milk, not quite so rich, perhaps, as grain would make it, but rich and copious; and it was brought without the great expense, the cost not being more than one half.

When summer opens, your cow is still strong, and will continue in that condition on good feed,—that is good pasture,—and when getting short, fed on *corn-stalks* provided for her, *which is but a continuation of the green pasture*. And when winter comes your cow will still be sound and strong,—not over fed, not over strained with grain, but what a cow should be—a quiet domestic animal, supporting the dairy, intended for milk, not to be driven too hard by the boys, or yoked as in Europe. Such a cow, a milk-giving mother needs but sufficient strength for her purpose, and that is not much in her quiet routine. She needs good treatment; that is the great point. She grows under it, but deteriorates with abuse, and that rapidly. Give her warm winter quarters, and plenty of water with her grass hay.

## TWO PICTURES.

BY MARION DOUGLAS.

An old farm-house with meadows wide,  
And sweet with clover on each side;  
A bright-eyed boy, who look'd far out  
The door with woodblue washed about,  
And wish'd his one bright day!

"Oh! if I could but fly away  
From this dull spot, the world to see,  
How happy, happy, happy,  
How happy I should be!"

Amid the city's constant din,  
A man, who round the world has been,  
Who, and the tumult and the throng,  
Is thinking, *THINK!* gaily:  
"Oh! could I only tread once more  
The fields to the farm-house door,  
The old green meadow could I see,  
How happy, happy, happy,  
How happy I should be!"

**CARBOLIC PLANT PROTECTOR.**—Our experiments with this article (referred to in our July No.) were continued for a period of several weeks, in order to test its efficacy as to the destruction of noxious worms. We found that for the large measure worm, which so often infest our city trees and grape vines, a

decoction of the plant protector, sufficiently strong to kill or dislodge the worm itself, was strong enough to scorch and injure the leaves of the vines also. But for bark lice, and more tender worms or insects, it was a most beneficial agent. We think it especially useful as a *preventive* against future attacks of insects. If plants are syringed freely once or twice a week, the odor alone will repel insects, while there is no doubt the eggs of future progeny are destroyed also. Our first application to the grape vines destroyed the worms, but scorched the leaves and retarded the ripening of the fruit. The odor remained in the garden and on the ground for several weeks, and we never had an attack of worms of any description. We also discovered some caterpillars' nests, and a thorough soaking with the solution soon placed them all out of danger.—*New York Horticulturist*.

## EXTRACTS AND REPLIES.

### MUST SCALE OR SACCHAROMETER.

In an article on wine making in the Department Report on Agriculture for 1859, mention is made of an instrument used in Europe, invented by Dr. Gall, or used by him, to ascertain the amount of acids which grapes, &c., contain. Is any such thing in use in this country? If so, where can it be obtained, and at what cost?

What is the best manure for grape vines on sandy land? A SUBSCRIBER.

*Williston, Vt., Oct. 13, 1870.*

**REMARKS.**—The instrument referred to is called the "Oechsle's Must Scale." Mr. Hussman says that it is indispensable to the wine maker, and that it may be obtained in most of our large cities from prominent opticians. We do not know the cost.

Wood ashes, bone-dust, lime, gypsum, the refuse of the wine-press, soap-suds, &c., are recommended as fertilizers for the grape, and on sandy land, a dressing of clay or other heavy soil will prove valuable.

### JERSEY BUTTER—TEST OF OXEN.

An hour upon the grounds of the Merrimac County Agricultural Society during the fair held this week, was only sufficient to get a glimpse of the good things of the County represented there, of which others have spoken.

Among the noticeable articles on exhibition, were the tubs and jars of butter. Anticipating the report of the Committee, we venture the remark that the butter from the dairy of Nathaniel White suited our taste best. It was free from the *guilty* appearance of some other butter, though from a herd of pure or grade Jerseys. The butter had been made within a few days; was of a straw color, *sweet* and salted with less than one ounce of salt per pound, judging by the taste. How butter from sour cream can ever be sweet is beyond my comprehension, unless sour milk is sweet. I have seen sour milk drank and called very sweet. The juice of apples, so sour that no man would eat them, makes "sweet cider," and is as well entitled to be called sweet, as butter from sour cream. Probably those who had butter in competition for premiums would have

fended if they had been told by the judges that their butter was not sweet, when its origin (sour cream,) could have been declared by the sense of smell alone. Mr. White's dairywoman very modestly attributed the superior quality of the butter to the breed of cows—Jerseys; but a few moment's conversation convinced us that she, rather than the Jersey cows, was entitled to the credit. Were Mr. White obliged to change dairywoman we think it doubtful that the reputation of his Jersey cows would be sustained.

We happened to be upon the ground while they were trying to make their oxen pull a drag loaded with pig iron. Why they were doing it was more than I could discover. Big oxen and little oxen all had to pull the same load, or the crowd did not cheer. It could not have been to test the comparative strength of the oxen, for the drag was on uneven ground, requiring much more strength to move it in some places than in others. When on the summit of a little mound well grassed, it was easily moved. When in a hollow, four oxen were required to draw it out. Nothing was determined, so far as I could learn, but the patience of the ox beneath the tortures of the goad.

There were several addresses delivered during the brief time I was there, which drew crowds of attentive listeners.

*Mast Yard, N. H., Oct. 7, 1870.*

#### SELLING HAY AND STOCK TO PAY DEBTS.

I noticed in my last week's FARMER an inquiry about selling hay and stock to pay debts. Having been "through that mill" myself, I will relate my own experience for the benefit of the inquirer. In the first place, I would say that no one is more opposed to selling hay than myself, and yet I have done it to pay off debts. Where one is so badly in debt as not to be able to put his fences in sufficient order to keep his neighbor's cattle from feeding his mowing, it is as bad for the land as selling hay. In the year 1860, I bought a farm of C. O. Perkins, Esq., containing two hundred acres. I paid a few hundred dollars down to bind the bargain, and had sixteen years to pay the balance in. In 1863 I sold all my stock and hay at auction and paid for the farm. But where a man has other debts beside that for the purchase money of the farm, he will find that as soon as he sells, Tom, Dick and Harry will demand payment, and he may be worse off than he was before. Thus, circumstances alter cases, and every one must act accordingly. Hoping that if your correspondent sells off his stock and hay to wipe out his indebtedness, he will have as good luck as I did, I remain the well-wisher of every farmer who is struggling under a heavy load of "annual interest."

MICHAEL McNERNEY.

*Becket, Mass., Oct. 17, 1870.*

#### CONSTRUCTING DRAINS.

Much of what will in future be our most valuable grass lands are at present lying in a comparatively worthless state for want of suitable drainage to render them available. On a soil suitably undrained, or of itself dry, irrigation will produce great results; but on land of itself wet, it is but adding fuel to the fire. Yet we sometimes see fields under irrigation which were too wet before to produce enough to compensate for the labor of harvest. Why is this?

Inasmuch as others have set forth their method of constructing drains, I will cast in my mite on this subject, which is becoming more generally and better understood each year. In sections where stone are scarce, tile may be resorted to, and will form a durable drain; but where stones are plenty I prefer using them, thereby "kill-

ing two birds with one stone." Brush, boards, poles, &c., being perishable materials, we prefer stone to any of these. We know of stone drains laid twenty years ago which are still as good as new. They were constructed after this simple manner. Commence the ditch so high above where the water appears on the surface that it will enter at the bottom. Open, at least, three feet in depth to two feet wide on the top; then fill by throwing in small stone promiscuously to within fifteen inches of the surface, and if flat stone can be obtained, cover with these, and a little straw or leaves to keep the loose dirt from sifting in between the stones until it becomes settled. Cover all nicely, and a durable drain is constructed. C. B. FISH.

*Brookfield, Vt., Oct. 14, 1870.*

#### PIPES FOR AQUEDUCTS.

In deciding what kind of pipe to use for aqueducts many things must be taken into account. Having occasion to lay one some time since, I was sorely perplexed to know what to use.

An old lead pipe which was laid more than thirty years before, had wasted away until it was so thin as to be worthless. Indeed, the part that was in the well had entirely disappeared. This confirmed my impression that lead pipe might be poisonous, and induced me to look for a substitute.

I had a very small supply of water, though it was lasting, and as it was to come to both house and barn, and the fall was great, it must be conveyed without waste. These considerations led me to discard wood, as I feared water might escape at the connection, under so much pressure.

Several patent pipes passed in review, but on inquiry I found they had not proved satisfactory. At length I concluded to try either "Livermore's Continuous Cement," or the tin-lined pipe, manufactured at New York. Both I supposed harmless, but fearing the cement might burst under the pressure, or be so porous that water would work through it, the tin-lined pipe was used.

I have since noticed that Dr. Nichols, of the *Journal of Chemistry*, asserts that wherever this kind of pipe is joined by soldering, or there is any defect in the tin lining, it will waste away rapidly under strong galvanic action, and that in some instances holes have been entirely eaten through the pipe in a period of six months. He regards it as even more injurious than lead. Concerning these objections I know nothing, but if I were to lay another should connect the ends by what plumbers call a wiped joint. In my own case the corrosion may have been going on more slowly. I can only say it has been in use three years and for aught I know is sound.

The Livermore pipe, where it has been properly laid, on a good hard bottom, below frost, and the water has not been let on too soon, has, so far as I know, been entirely satisfactory. H.

*New Hampshire, 1870.*

#### HOOVE IN CATTLE.

A mode of cure from the *Southern Cultivator*, in the February number of the Monthly FARMER, brings to mind a remedy suggested by Dr. Allen, (well known in his day in the western part of Massachusetts,) which, it is presumed, must be much less disagreeable as well as less distressing to the suffering animal.

Some forty years ago my father, seeing a bloated ox released from the yoke in front of his office, offered to treat the case, as no person present had any means of cure to propose besides the barbarous and ineffectual methods then usually resorted to. Acting upon the suggestion of Dr. Allen, he pulverized a lump of pearl ash the size of a hen's egg, dissolved in water and adminis-

tered it from a junk bottle. Business then called him away for a short time, and on his return he found that the ox had been re-yoked, and the team driven on with its load. A little laudanum could have been added to the solution of pearlsh if it had been at hand.

\* This alkali (pearlash) stopped the fermentation of the clover in the rumen (stomach) of the ox; and from the immediate relief afforded, it may be inferred that the gas generated by the fermentation was carbonic acid, and that it immediately combined with the alkali of the solution by which its volume was reduced to nothing, virtually, as this combination would not increase the volume of the solution in an appreciable degree.

While pen is in hand let me add that a farmer on line of the Western railroad (Worcester to West Stockbridge,) when that road was building, had a sheep so badly poisoned that it was given up as lost. A civil engineer, boarding with the farmer, knowing that many poisons were acids, proposed to make an experiment with an alkali. The proposition was immediately acceded to, and a dose of saleratus was given, with immediate relief and complete cure. F. J. C.

Springfield, Mass., Oct. 12, 1870.

#### TO CLEANSE BARRELS—WINE FILTER.

How can I cleanse old cider barrels so that they will be perfectly sweet? How shall I make a filter for elderberry or tomato wine; and how coarse should be the gravel used. SUBSCRIBER.

Health, Mass., Oct., 1870.

REMARKS.—Musty barrels cannot probably be made "perfectly sweet" by any process. Put in a pint of unslacked lime and a common trace chain, with a string attached for pulling it out, then add three or four gallons of hot water, and roll and shake the barrel about until the mould is worn off, then rinse well, and it will probably be considerably sweetened.

We find the following directions for making "a filter," but whether it is suitable for the purposes of wine-making we do not know.

Take a flower-pot, or any other vase having a hole in the bottom, fill the bottom with large round pebbles, cover these with small pebbles, then with coarse sand or fine gravel, and finally with four inches of pounded charcoal. The charcoal may be placed in a bag and broken with a mallet or hammer, then sifted and the finest dust rejected. Lay a clean flannel over the charcoal, held down by stones on the corners.

#### GAME LAWS, AND QUOTATIONS OF PARTRIDGES.

I would like to inquire through your valuable paper why birds called partridges are quoted in the price current? As I understand the Bird-Law no one can take, kill or destroy any of the so-called birds before the first day of October in each year, without being liable to a fine of twenty-five dollars.

Shrewsbury, Vt., Oct. 3, 1870. A READER.

REMARKS.—We understand that our market-men are subject to a similar law against selling. We commenced our quotations Sept. 24, at which time they were on sale at this market.

#### STEAMING FEED FOR COWS AND HORSES.

I wish to ask you, or some of your contributors, for information in regard to the increased value

of feed for cows and horses by the use of steam to cook it with; also, the best and cheapest apparatus for steaming the feed for, say, fifteen cows and four horses; also, the best grain or meal for milk and beef combined? H. B. CANFIELD.

Stanstead, P. Q., Oct. 20, 1870.

REMARKS.—The economy of cooking feed for stock has been considerably discussed, both in this country and in England, but our impression is that this plan of preparing food is not gaining favor rapidly with practical feeders. We shall be pleased to publish the experience of any who have tried the experiment of steaming or cooking in any way, cattle or horse fodder.

#### DOG WITH SORE EARS.

What is the matter with my dog, a large one not yet two years old, whose ears are sore, and he is continually scratching them until they bleed? He has been troubled thus some six months. I should say he had got the itch. Is there any such thing that dogs have? What will cure him?

Ashfield, Mass., Oct., 1870.

READER.

REMARKS.—Why should dogs be exempt from the ills to which other animals are subject? Try an ointment of lard and sulphur. For mange on dogs, Frank Forrester's Dog-book gives as a cure, "one ounce of salts for a dog of moderate size. Then rub well with one quart of train or tanner's oil, a wine glass of spirits of turpentine; sulphur sufficient to let it just run off a stick,—all well mixed."

#### WATER-PROOF CEMENT.

I would like to ask through the FARMER for a receipt for water-proof cement. Any one that can give it will greatly oblige E. F. G.

Marlboro', Mass., Oct., 1870.

REMARKS.—Will not hydraulic cement answer? In Haswell's Engineers' and Mechanics' Pocket Book the following is given for cisterns and water casks:—Melted glue, 8 parts; linseed oil, 4 parts; boiled into a varnish with litharge. He says this cement hardens in about 48 hours, and renders the joints of wood cisterns and casks air and water tight. Who knows of a better water proof cement?

#### WEANING LAMBS.

I believe it is the common practice for persons having lambs that they intend to winter, to allow them to run with the ewes without weaning them; thus keeping the ewes poor, without much benefit to the lambs. Perhaps it is not generally known how easily they may be weaned. All you have to do is to separate them about thirty-six hours, and the work is done. There is no patent on this receipt, and all who have lambs are advised to try it.

Wilmington, Vt., Oct., 1870. B.

#### WATER-PROOF BOOTS.

To have dry feet, and durable and water-proof boots during winter, I set them in a shallow pan or dish, in which is just enough boiled linsed oil to cover the bottoms without touching the upper leather, and let them set there two days. If the oil gets into the upper leather, it makes them hard. I then put on the boots, wet the uppers, and let them dry on my feet, which gives me a perfect and easy fit. I then take tar, wa

it and rub in all I can, holding the boots to the fire the same as I would do while greasing them. Try this and you will not be troubled with wet feet or with hard or stiff uppers; it also preserves the leather and the thread, and I am sure that all who are much exposed to slops and snows will be greatly benefited by trying the experiment on a single pair of boots.

OLD SUBSCRIBER.

Heath, Mass., Oct., 1870.

#### TO SWEETEN FROWY BUTTER FIRKINS.

To a correspondent who asks how to extract the taste of the wood from butter firkins, I would say that sweet or sour milk will do the work much better than salt or saltpetre. There is nothing which absorbs smell or taste so quickly as milk, cream or butter; and there is no agent so desirable to use in extracting the wooden taste from all new utensils. A churn can have the taste of wood wholly taken out by it.

S. O. J.

### A TRIP IN RUTLAND COUNTY, VT.

#### Rutland Village.

While waiting at the railroad depot in Rutland, Vt., for a train to Fair Haven, we had an opportunity, a few weeks since, of contrasting that place as we had previously seen it, and as it now is. In 1831 we spent a few weeks in the village; and our impression on a subsequent visit in 1845 was that population and business had decreased during the intervening period, and that it was then one of the duller and least stirring towns in the State,—everything indicating a standstill or retrograde.

Ever since that time our recollection of Rutland has been associated with that of Irving's Sleepy Hollow. But this association is now broken. While the bugle blast of the brave Antony Van Corlear was unheeded alike in Petticoat Lane and Sleepy Hollow, the first locomotive whistle that stirred the air of Rutland must have brought every man to his feet. For, now, in place of the quiet, rural town of perhaps 2700 inhabitants, we find a commercial city of ten thousand wide awake people, with new streets stretching out, and new buildings rising up, in all directions.

#### West Rutland Marble Works.

In many places in Rutland as well as in Middlebury, Brandon and other towns through which we had just passed, the ground is white with blocks, slabs, and chips of marble, showing that the Green Mountains were not made for the sole purpose of holding the world together.

At West Rutland we visited several "marble works," at one of which we understood that some 200 men were employed in mining and fitting the product for market. Here, at a depth of some 150 feet, steam engines were aiding the workmen in cutting blocks from the solid mass of geological loaf sugar that was deposited there, for ought we know, "in the beginning." Other steam engines were pulling away at huge metallic ropes which raised the blocks from their beds below to the bright sunshine above, where once more steam "shaketh the saw" that shapes the marble to the various forms required for use and ornament.

There is a marked difference in the tiers or layers of which these beds are composed—as many as eighteen being counted in some mines,—which are characterized as white, gray, mottled, striped, saccharoidal, laminated, friable, compact, &c. The market demand, at present, is mainly for the white.

#### Fair Haven Slate Works.

Passing on to Fair Haven we found slate works instead of marble. Near the station is a mill or factory where slate is planned to desired thickness and then by narrow, or "key-hole" saws, cut into elegant forms for mantel-pieces, jambs, and other interior decorations, as well as split thin for roofing.

This is the centre of the slate region, and we understood that Vermont slate was rapidly becoming popular, not only in the cities and villages of our own county, but that builders in England, to whom specimens had been sent some years ago, were so well pleased with it that several large orders have been received from there, and a thousand "squares" have already been shipped to London, and fifty to Bangor, Wales, the centre of the Welsh Slate region.

#### Farm of John Balis and Son, Benson.

From Fair Haven we passed over a good farming country, with a clay soil, to Benson, a distance of some ten miles, by stage. Benson lies on Lake Champlain and is consequently one of the Western towns of the county. We spent several days in the eastern part of the town, with John Balis, Esq., and Son, who own and carry on a farm of 1400 acres, a large portion of which is in view from the elevation on which the homestead buildings stand. We noticed that the elevations in this township trend generally north and south, consequently the east and west roads are more hilly than those which run north and south. Mr. Balis has faith not only in farming, but in farming in Vermont; and as his neighbors have successively caught the Western, or other migratory fevers, and offered their farms for sale, he has bought them out, one after another, until his present farm embraces territory on which ten families formerly had independent homes. He has been led into this territorial expansion by the good trades that have thus been offered; but now, wishing to live easier, he would dispose of a part of the estate, and has offered to sell to the directors of the Vermont Horse Stock Company 1000 acres, with several buildings thereon, at \$30 per acre, which, on account of its distance from railroad facilities, may not be purchased by them. An offer of land in Shelburne, without buildings, at \$70 per acre, has also been made to the company. With a railroad through Benson, of which there is considerable talk, Mr. B. believes that the difference in price between Benson and Shelburne land would at once be greatly equalized. The real value of the land for ordinary farm purposes, however, would not be materially affected by the proposed

road, though its nominal value would be. As some account of Mr. Balis's farm, stock and general management, was published last year in the *FARMER*, it is less necessary to enter into details at this time. As we rode over his fields, which are surrounded by excellent fences, we were reminded of the estates of the English noblemen, of which we have read descriptions. And we do not see why the possession of these broad acres, which had been acquired from the proceeds of farming, and by one who has "worked his passage," thus far in life, was not as good evidence of "nobility" as are the estates of English land-holders, whose title descends from father to son. At any rate we think it must be regarded as an exception to the general rule that farming is unprofitable in New England.

#### Farm and Stock of Rollin Gleason and Father, Benson.

While looking about in this neighborhood we saw a herd of Devon cattle on one farm, that attracted our attention. On inquiry we were told that the stock and farm belonged to Rollin Gleason, E. q., and his father,—the latter having resigned the management mostly to his son; and were told that we should see some fancy stock, worth looking at, by calling on them. This we subsequently took occasion to do, when a closer examination of their Devons fully confirmed the favorable impressions they had made when seen at a distance. The Messrs. Gleason have several herd book animals of great excellence, and others that will appear in the forthcoming volume.

Their stock bull, "Helena's Huron, 6th," which received first premium at New York State Fair, 1869, as a bull calf, was by Queen Ann's Huron (320,) by Huron (604,) by Exeter (198;) dam Helena 16th (148,) by Omar Pasha (513) imported by C. S. Wainwright, Rhinebeck, N. Y.

Also, with W. R. Sanford, of Orwell, they own "Meriden" (67,) sire Cornet (162,) dam Fairy (696,) both the latter imported by Linsley Brothers, West Meriden, Conn.

A fine cow "Coles Helena 4th," sire Iroquois, bred by Hon. E. G. Faile, Cayuga, N. Y., 2d sire Cayuga (287;) dam Nemophilla, by Omar Pasha, (473) 2d dam Norina (1521) by May boy (71.) This cow had a fine bull calf by her side, a few weeks old, by Queen Ann's Huron (320,) the style of which we think must please the admirers of Devon stock.

They have other stock descended from W. R. Sanford's old imported Beauty (504). Their whole stock are Devons, and the character and style of their herd may be inferred from the few animals thus particularly noticed.

But these Devon cattle were not the only "fancy" stock we found on this farm. Here were the lusty Cotswold sheep and lambs from the flock of T. L. Hart, of West Cornwall, Conn.; as well as Leicester and Oxfords from Huntington, Can., but

name of breeder not recollected. They were in fine order.

But while trying the coarse wools and mutton breeds, the old-fashioned Merinos are not abandoned nor neglected, as a flock of 150 head are still kept on this farm of some 200 acres. These sheep, from the Hammond and Sanford stock, were at pasture, and we did not see them.

#### A Live Three-thousand-dollar Buck.

We did see, however, at the barn, a venerable representative of one of the "best families" of the American Merino. On another page we present a truthful likeness of this animal, for a half interest in which fifteen hundred dollars were once refused! Look at the picture. Could an artist personify Meditation more successfully, to say nothing of those "points" on which the fancy of breeders may have been somewhat unsettled of late? After giving his visitors a hasty look, his buckship nearly closed his eyes, and apparently resumed at once the broken thread of his cogitations. But what the drift of his meditations were, we will leave for solution by those who have more time to study his physiognomy in the picture, than we had when we saw him in the body. Possibly he was thinking,—as others have had occasion to think,—of the instability of earthly glory and popular applause; or of the vanity of praise and admiration generally; or of friends more abundant in prosperity than in adversity!

But cattle and sheep were not the only "fancy" stock on the Gleason farm. And if we were not making our story longer than our visit, or in danger of being "too familiar on short acquaintance," we should like to say something about a fine Blackhawk mare for single driving; of pure bred Chester White pigs, from F. Stinson, a careful breeder of Brandon, Vt.; of a splendid stock of Light Brahma fowls, from J. S. Ives, of Salem, Mass., which at the time we stood in the yard were just going to roost, in a neatly fitted up poultry house, with the low roosts which befit birds which carry the avoirdupois of poultry that was under their feathers; but this would lead us to say something of the substantial and convenient character of the other buildings, of the nice garden, neat wood-pile, door-yard, and of the orderly condition of everything about the premises of these "fancy" farmers; and we should want to notice some 200 bushels of "Bresce's Peerless," or No. 6 potatoes, some 300 of the Early Rose, the corn crops, and the like,—and where should we stop, if not right here, and just now?

#### Marbleized Slate.

During our visit in Benson, our young friend, John Balis, Jr., made up a party for a day's excursion. The two-horse family carriage was well filled with gentlemen and ladies, including Francis Pratt and family—(Pratt & Whitney, machinists,) Hartford, Conn., and Nathaniel M. Pratt, of Philadelphia, with a vacant seat for ourself, and the essentials for a picnic, which was enjoyed on

the shore of Bombazine Lake, in Hubbardton. We also passed "Screw-driver," and one or two other smaller lakes or ponds, whose names we have forgotten. The residence of Albert Bresee, of Hubbardton, the originator of the Early Rose and other popular varieties of potatoes, was also passed on our way.

In Castleton we examined a large establishment for "marbleizing" or enamelling slate for table-tops, mantel-pieces, jambs, &c. The nature of this stone is such that the materials used for glazing adhere to it in the several processes of baking to which it is exposed, as does the enamel to the clay of which fine earthen ware is made. We saw specimens of the work of great beauty and high finish; exceeding in these respects the most costly marble, and we understood that it could be afforded at one-fourth the price of marble. Any shade or variety of coloring can be given. Without enameling, the slate looks very rich, when polished, and is largely sold with this finish. Roofing slates are also manufactured to a large extent in this place.

#### Slate Pencils.

In Hubbardton we visited a slate pencil factory. Here the steam engine was whirling the saws, shoving the planes, and operating the other machinery necessary to convert a mountain of rock into pencils for the boys and girls to cypher with! Men and women, girls and boys, were here at work, as busy as bees, and all were breathing an air so filled with the dust of this "clay slate formation of western Vermont," that we should think but a few days would be required to change the lungs, if not the heart, of every workman into stone. After being mined, the stone is sawed and split and planed into pieces about six inches long, four or five wide and of a thickness required by the diameter of the pencil. These pieces are very rapidly put through one machine which cuts grooves half the thickness of the slate; they are then turned over, when corresponding grooves are cut on the opposite side, and of the same depth, and the plate of stone becomes a row of well formed pencils, ready to be put up by the gross in pasteboard boxes, which are then packed in wooden boxes for transportation. Notwithstanding the large force employed, we understood that orders were ahead of production. The waste of material is large—one of our party estimating it at 90 per cent. We were told that this debris had been used for the manufacture of alum, but to what extent and with what success we are not informed.

The country through which we passed this day was "diversified," and exceedingly interesting. Hills and rocks of a most rugged character marked part of our way, while in other places we passed fine farming sections. But as we were on the move nearly all day, we had no opportunity for anything more than the most casual observation of the farming interests of this section, but we thought the general aspect was that of prosperity and progress.

MASSACHUSETTS AGRICULTURAL COLLEGE.—The conductors of the *Amherst Record* have assigned a portion of the columns of that paper to matters pertaining to the Agricultural College, to be conducted by the Senior Class, of which W. H. Bowker, Wm. Wheeler, S. H. Richmond, L. B. Caswell, G. W. Woolson, and W. C. Ware are named as Editors. In the issue of the *Record* of October 26, the College Department is well filled; most of the space being occupied by an Introductory, an article on the Darfee Plant-House, and one on Drainage.

To sustain such a department in a weekly paper, creditably to the Senior Class and to the institution to which they belong, will require an amount of labor which we fear will be hardly consistent with a thorough prosecution of their studies. We agree, however, fully with the editors in the opinion that if this department is well sustained it will accomplish one at least of the objects which they propose, that of placing "the college in its true light before the people, and thus to render it more useful to the agricultural community."

#### FALL PLOUGHING AND MANURING.

We are more and more convinced of the utility of fall ploughing. At this season the plough may with more safety be put in deeply, and a portion of the subsoil be brought to the surface. The rain and frost, and air and sunshine, will pulverize it, and prepare it to be mixed with the surface soil in the spring by the plough, the harrow and the cultivator, and to yield its nutritive elements to the growing plants.

When a subsoil is brought up in the spring by the plough, it takes nearly the whole season for it to become fine and mellow, and to be of much value to the growing crops. It is not enough that a subsoil be made fine by mechanical means. It needs the ripening, perhaps the chemical influence of light and air, to change and render more soluble the salts it contains.

Many farmers object to ploughing up the subsoil. They say it is of no value to the crop planted upon it,—that it is often positively injurious. When a heavy subsoil is thrown up in the late spring, and immediately sowed or planted, this is doubtless true, and if it is because these same farmers confine their ploughing to the spring, that they have become prejudiced against deep ploughing. If they had allowed the winter to act upon the subsoil, they would have found the following season, not only a deeper tilth, but a mellow soil capable of mixing with the manure, and yield-

ing nutriment to the crops. They would have a deeper soil for the roots to work in, which, in a season like the past, is a matter of vital importance. We need not only to plough deeper, but to plant deeper as a safeguard against our frequent droughts. To be able to do this, we must have a deeper soil.

An observing Irishman on digging our potatoes in a dry soil, remarked, "they are so deep in the ground that they do not appear to have suffered from the drought." The soil was in good condition, and had been ploughed deeply for some years, when the potatoes were planted; furrows were made with the same plough with which the ground had been ploughed. The seed was put at the bottom of the furrow, and a handful of ashes and bone meal was thrown upon each piece. At the first hoeing the furrows were filled level; at the second, the potatoes were slightly hilled. They did not appear to have suffered from the drought, but were well grown and smooth.

Every one who has observed the superiority of the wheat crop put in two or three inches, by the drill, over broadcast sowing, and of corn and potatoes put in a furrow, and well covered, over the same crops where the seed was dropped on the surface, and slightly covered, would expect just such a result. In a wet soil this cannot easily be done; but then a wet soil should never be used for wheat or corn, but should be used for grass or oats, or for crops that may be planted later in the season, after it has become dry. In a well drained soil the ground may be worked as deep as we need, and the seed put in early, as deep as necessary.

Even in a drained soil, fall ploughing is of great value. In such a soil, the harrow or cultivator may often take the place of the plough in the spring; and thus much labor be saved, especially in sowing the small grains and grass seeds.

In ploughing stubble land in the fall, green or uncomposted manure may be spread on the surface and ploughed in. In this case the land should be ploughed in the spring, to bring up near the surface and mix the manure more thoroughly with the soil. It will be crumbled by the frost; will have lost its adhesiveness and mix readily with the soil; or it may be spread upon the surface immediately after the fall ploughing, and covered with the harrow. The weather will then act upon it,

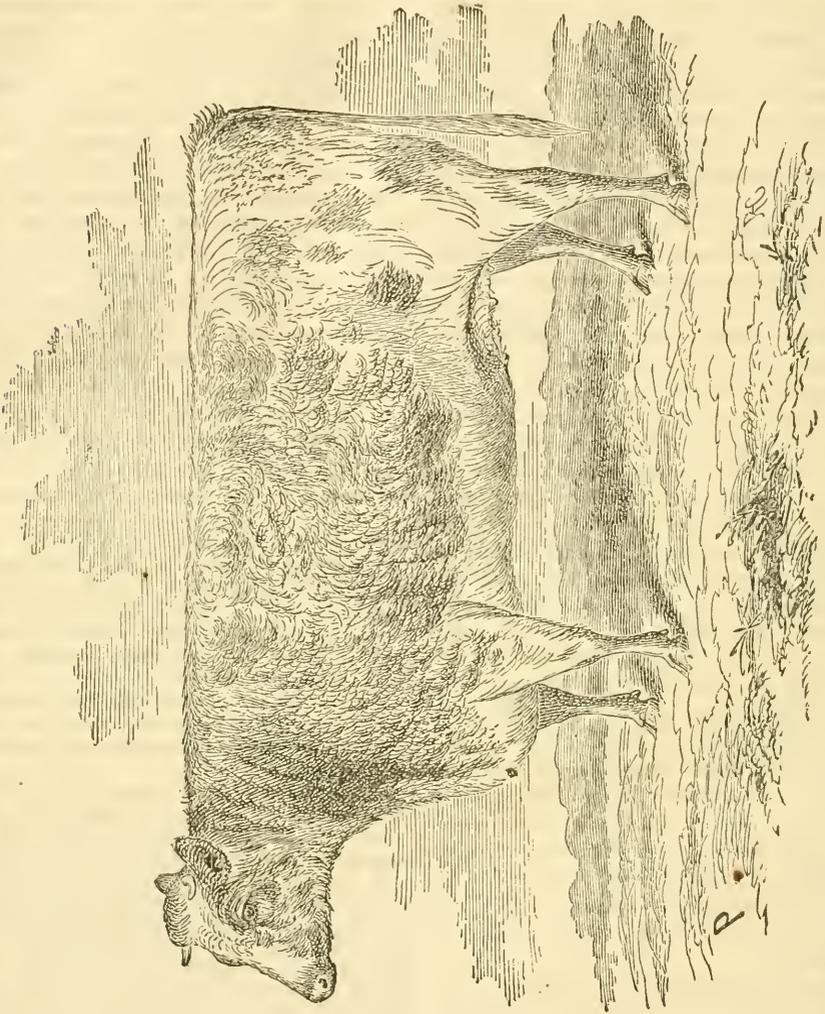
and what is leached out of it will be absorbed by the soil. Very little if any fermentation occurs in manure in cold weather, especially when spread in thin layers, and on level ground there is little or no loss. Manure in heaps will heat and give off its gases, and there is often more loss when it is deposited in heaps than when it is spread and slightly covered.

By thus spreading green manure in the fall, the labor of composting is saved, and the spring work greatly facilitated; and the land will be found mellow in the spring and ready for the seed some days earlier than when this course is not pursued. We have heard some good farmers object to fall ploughing. When the soil is a thin sandy loam, there may be less advantage from it; but in a good stiff soil, which it is desirable to deepen and prepare to seed down or to plant with corn, we cannot too strongly recommend this treatment.

**FIX UP FOR WINTER**—A spare day can be profitably spent in repairing the stables and barns. Much feed is wasted every winter, by having barns and stables so open that every chilling blast of wind reaches the animals sheltered. Young stock, especially, are very sensitive to cold, and they must be sheltered, or their growth will be retarded. Aside from this, a farm with snug, neat out-buildings, looks better and adds to the value of the farm.

Make your poultry houses as warm as you possibly can, with proper ventilation; and when eggs get up to forty or fifty cents a dozen, they will repay you for all your care and expense. If possible, place their house on the south side of the barn or sheds, so that it will be protected as much as possible from the cold, bleak north and northwest wind. A good plan is to plank up the outside with plank, and upon the inside nail up with any odds and ends of boards, and fill the space with sawdust, shavings, mortar, or in fact anything that will keep out the wind. Keep everything thoroughly clean about poultry.—*Kansas Farmer*.

**BLIND STAGGERS IN PIGS.**—The question is asked "What will cure hogs that are taken with blindness and that go around in circles for a time and then die?" The disease is doubtless the blind staggers. Having had much to do in the raising of swine and the fattening of pork, I have ascertained, to my satisfaction, that too high feeding is the cause of the disease. As a preventive, withhold their food for a day or two and feed them with sulphur and charcoal. Also bleed them a little in the ear.—*Joel Draper, in Rural New Yorker*.



SHORT-HORNED HEIFER "LUCY,"

BRED AND OWNED BY J. A. HARWOOD, ESQ., LITTLETON, MASS.

An illustration of Roan Prince, the sire of this beautiful heifer, was given in the FARMER in 1867, (Monthly, page 444.) and we had the pleasure this fall of seeing him at the State Fair of Vermont at Burlington, where he was exhibited with the herd of twenty-three Short-horns owned by G. L. Reynolds, of Burlington, who had purchased him of Mr. Harwood.

The above cut of one of his descendants was engraved for the last Report of the Secretary of the Massachusetts State Board of

Agriculture, forming the frontispiece of that volume, and was drawn from life.

This heifer "Lucy," received the first prize of the Middlesex County, Massachusetts, Agricultural Society, as the best heifer under three years old. We copy from the Report the following description and pedigree:—

"Lucy," a roan heifer, was calved May 10, 1868; got by "Roan Prince," 6,370, out of "Flirt," by "Marmion," 1843,—"Lady Sale Ninth," by "Comet," 3,772,—"Lady Sale

Sixth," by "Red Knight," 890.—"Lady Sale Third," by imported "Duke of Cambridge," 1,034 (5 941.)—"Lady Sale Second," by "Earl of Chatham," (10,176.)—"Lady Sale," by "General Sale," (8 099.)—"Clara," by "Napier," (1 238.)—"Maid of Orleans," by "Mameluke," (2 258.)—"Helen," by "Waterloo," (2,816.)—"Moss Rose," by "Baron" (58.)—"Angelina," by "Phenomenon," (491)—"Anne Boleyn," by "Favorite," (252.)—"Princess," by "Favorite," (252.)—"Brighteyes," by "Favorite," (252.)—"Beauty," by "Masterman's," (273.)—"Tripes," by the Studley bull, (621.)

#### VENTILATION OF BEES IN WINTER.

One of the principal causes of loss in the culture of bees is the want of a proper ventilation of the hive in winter. In the first place, bees are usually confined to a space altogether too small. That is, they do not need much room for placing their combs and performing their work; but they do need wider and more ample surroundings. In their natural condition in a hollow tree, the actual space they occupy may not be larger than one or two cubic feet, while the space above and below may be several feet. In this case, the moisture escaping from the bees finds ample room to pass off, without becoming condensed and *falling back upon them*, as it often does in most of our artificial hives. When this takes place, even in only a slight degree, it becomes fatal to the family. The cold water wets and chills them so that they will not move to feed; mould soon ensues, and is extended through the whole mass of bees, and they die. Formerly we lost swarms every winter in this way.

An upward ventilation is objectionable, because it carries off the heat which is indispensable to the bees, and a side ventilation is found difficult to secure. What is needed is to find some mode of retaining the heat, and at the same time allow the moisture to escape so as not to return in a condensed form upon the bees. These points are pretty well secured in the Torrey hive, but not perfectly.

It is stated by Mr. J. H. Thomas, of Brooklyn, Ontario, N. Y., that these essentials may be secured in the following manner:—

"Cover all upward ventilating passages or openings, with some warm material that will absorb the moisture, but retain heat. Thick flannel or woolen

cloth, an old bag, or quilts made for the purpose, will answer. Hence, if the top coverings of the hive are removed entirely, and a frame covered with wire cloth or strong linen put on instead, and over this some warm material, the moisture would entirely escape, leaving the bees and combs dry, while all the heat would be retained."

This would be easily done, and it seems to us would prove effectual, if the covering used were coarse woollen, so that the escaping vapor would readily pass through it into the open air. If striking on a surface as firm and smooth as stout linen, we should think it would condense there and fall again.

Another error is found in most hives. The bottom board comes too near the combs. The castings of the swarm accumulate there and sometimes becoming moist, form a mass of filth which must be highly offensive to such neat and orderly creatures as bees. The space below the comb should be two or three feet instead of as many inches, as is often the case.

#### PREMIUMS FOR FOREST TREES.

The Massachusetts Society for promoting Agriculture has awarded to Major Ben: Perley Poore of Indian Hill Farm, near Newburyport, the premium of *one thousand dollars*, which it off red in 1853 for the best plantation of forest trees, planted before 1860 and growing in 1870. The first premium for forest trees offered on this continent was by the Massachusetts Society for Promoting Agriculture, in 1797—a gold medal worth two hundred dollars. It was awarded to Col. Robert Dodge, of Hamilton, who was Major Poore's grandfather, on the mother's side, and this prompted the Major to compete for the premium last offered by the same society.—*Daily Paper*.

REMARKS.—Egypt and some other countries in the old world are treeless, and the climate and the people suffer much in consequence thereof. But we do not share the fears that have often been expressed of danger that a like calamity will occur to New England. We have had to fight the encroachments of the forest on cultivated land adjoining strips of wood, and on pastures and mowing lots, too much to apprehend a failure of bushes or trees in New England. We have also seen too many of our hill farms abandoned to a thick, spontaneous growth of soft and hard wood, to think there is any great need of special encouragement of tree planting among us. We know of one school district in which there were boys and girls enough to fill an ordinary country school house when we were young, in which at the present time there is not a single family,—the whole territory being devoted to pasturage and the growth of forest trees.

—A farmer in Boone county, Mo., says his oat ground ploughed in the fall produced one-third more than that ploughed in the spring.

*For the New England Farmer.*

### VARIETIES OF CORN.

HON. S. BROWN, ED. OF NEW ENGLAND FARMER:—While we were at the late agricultural fair, Hillsboro' Bridge, you spoke of husking some large corn a few days since, saying many of the ears of which were twelve inches long. I remarked that I had grown corn this year, many of the ears being fifteen inches in length. From the "twinkle of your eyes" when I made the statement, I inferred that you thought I was "speaking unadvisedly."

To convince you that I did not overstate, I forward with this an ear of said length. A few days ago I plucked an ear measuring *plump* 17 inches, while lying in an outer room. Some one took the liberty of snapping off about four inches, and the broken portion was not to be found, thus missing the chance of sending it to you.

Originally, this variety was the Brown or King Philip corn. Over twenty years ago, seed was carried to New Jersey for re-planting, where the corn was found missing at the first hoeing. It has been planted there annually as a field crop ever since, and has attained the large growth and late maturing habits of the New Jersey corn. Last winter a farmer in that State sent me, per mail, a splendid ear measuring 14 inches. About the 20th of last May I planted a part of the seed. It grew from nine to ten feet high, and was harvested a few days since. Very few ears were ripe enough for good seed. I forward a portion of the ear received from New Jersey, from which you will be satisfied it is a lineal descendant of the once famous Brown corn of Long Island, Lake Winnipiseogee.

I also forward an ear of corn grown from B. F. Johnson's "Hundred Days Dent Corn." Mr. J. forwarded me a few ears last winter. He has for some years been carefully selecting the best and earliest ripening ears for seed, ripening, in Champagne County, in Illinois, in 100 days from planting the seed. Some of the stalks I grew the past season were eleven feet high, and six and a half feet to the top of some of the ears. The ears of some of mine were longer and larger than the ones he sent me. In ordinary seasons, say like that of 1868, it would have scarcely got into the milk when we had a severe frost, 17th of September.

From the above experiments it will be seen that there is nothing to be gained by our farmers obtaining seed corn very far south of their place of residence.

I also send an ear of the variety grown on my farm. It speaks for itself, though it is not so large a variety as is grown by many of our farmers whose farms are on our hills. The frost holds off much longer on the hill farms than on those in our valleys, as it does on mine.

P. S.—I also forward some twenty or more pounds of the "Grafton Mineral Fertilizer," with a circular, signed by numerous farmers and others, testifying to its great value as a fertilizing or manurial agent. Yours truly,

LEVI BARTLETT.

Warner, N. H., Oct. 7, 1870.

REMARKS.—We are obliged to friend BARTLETT for his kind attentions in sending us samples of corn and the "Grafton Mineral Fertilizer." The corn is very fine, and shows what New Hampshire can do, even in a drought. From statements made to us upon the most reliable authority, we should think the fertilizer alluded to would prove of vast benefit to the New England States at least. We understand that the quantity is unlimited, is accessible, easily quarried and not far from railroad communication. We are informed by those who tested it on many crops last summer, that it had a wonderful influence in promoting their growth and in perfecting seed. If permitted to plant again, we hope to test it in various ways.

*For the New England Farmer.*

### "GILT-EDGED BUTTER."

This term has been lately applied to butter of a fine nutty flavor and a firm consistency; but very little of it is ever seen in the markets of our cities, for the manufacturers of such butter usually procure regular customers, who take it at a price much above the market. It has been said by good judges that not one tub in ten of strictly good butter is ever found among the wholesale dealers. Why is this so? This question is very pertinent to all butter makers, and they should endeavor to answer it.

The manufacture of cheese has greatly improved of late years. The factory system has produced great skill in that branch of the dairy; but butter is made principally by owners of dairies, and there is little "system" pertaining to it. Butter making is more difficult than cheese making, because it is subject to so many varying influences—temperature, churning, salting and working are all to be considered, and are very important details.

There is nothing in nature which so readily absorbs taints as milk, cream and butter. Cleanliness and neatness are the *alpha* and *omega* of "gilt edged" butter. Clean, sweet dairy-rooms are an *absolute necessity*. Slats should be used instead of shelves, because the milk will cool much sooner if the air circulates about the bottom of the pans.

Mrs. A. has a reputation for making the best flavored butter in the village, and always commands from five to ten cents per pound more

than her neighbors. We will visit her milk-room and learn her secret. How deliciously sweet it is! What does give it such an odor of the hay-fields? We notice bundles of dried herbs hanging from the walls fastened upon nails, and learn that they are made of the branches and blossoms of the tall, feathery "sweet clover." Mrs. A. tells us that it will retain its fragrance the year round; and she thinks that it possesses an antidote against mould. We cannot say as to that; but we do know that it perfumes a dairy deliciously, and that cream which imbibes that flavor must needs make sweet butter.

"*Cleanliness is akin to godliness.*" This is Mrs. A.'s favorite maxim, and she practices what she preaches. The slatted shelves, table and floor are models of neatness! A large cream jug stands by the netted window; it is covered with a wire fly-cover—not kept closed from the air. When the first cream is put into it, one heaping table spoonful of saltpetre is stirred in. Every morning and night, when additions are made to it, the whole contents are thoroughly mixed together. The stone jar holds three gallons of cream; when two-thirds full another table spoonful of saltpetre is added. This keeps the cream perfectly free from a bitter taste, and does not harm the butter-milk in the least degree. It has been used for years, and the buttermilk is drank and used in the family without any deleterious effect. Mrs. A. skims her milk before it clabbers; as soon as the milk has grown slightly acid the cream is removed. She keeps four cows—Alderneys—and during the summer churned every fifth day, averaging 36 pounds at a churning. Milk and cream were freely used in the family. Her dairy is on the north side of the house, its window shaded by trees. Not a fly dares enter its walls. Not an article is kept in it but milk, butter, pans, flour and sugar barrel. Several firkins of butter stand ready for market. Those filled in June and July were packed in larger sized firkins, and surrounded with rock salt—several inches of it were placed over the covers—and the good woman assures us that they will come out "gilt-edged." We do not doubt her assertion. The room is its guarantee! She shows us her "Patent" churn. Her husband purchased it for her this season, and she declares it has been *hands, arms and muscles* for her!

"I'm a feeble woman, as women go, and after working my butter I was allers good for nothin', now I aint one bit tired. My boy, Joe, does the churnin' and the workin'; I do the saltin', weighin' and packin'."

She wraps up in snowy cloths several lovely butter cakes, stamped with roses and lilies, for us to carry home. We bid her adieu, having learned her secret.

A few days after we called on Mrs. D. As we entered the room we heard high words,—cross tones,—evidently *Paterfamilias* was "on

a rampage." Mrs. D. was too excited to smooth down her ruffled feathers at once, and receive us as a guest. She was not city bred; had never learned the lesson of concealment; could not smile when full of woe. So we learned that Mr. D. was indignant at the price he had obtained for the butter she had toiled so hard to make. "Only thirty-five cents, and Mr. A. had received fifty-five! Was there ever such a difference made before?"

We endeavored to calm our friend's troubled spirit by drawing her attention to other subjects. But in vain; "butter" was the theme upon which her tongue would dwell. At length we thought it best to ask to see her "milk-room."

Oh, what a sight was there! A large room enough,—ten feet by twelve,—but crowded with everything! In place of the "sweet clover," codfish was hung on the walls, baskets of apples stood under the table, half mouldy squashes mingled with the *debris*. Oh, it was pitiful! What wonder that soap grease instead of "gilt-edged" butter issued from that dairy! We pitied those who would eat of that butter at thirty-five cents per pound. The flies were *everywhere*; they were drowned in the cream and blackened every place. We would not have taken all the product of that "milk-room" for a gift! Half under and half out from the table stood an open churn with a crank, to be sure, but yet a very poor concern.

We asked if she had never tried the new churn.

"No; Mr. D. had no money to spend on 'novelties.'"

"Does not he buy or hire a mowing machine and a horse-rake?"

"Yes, he hires 'em; he says they save a heap of work; but some men, farmers at least, think wimmen's work needn't be saved. There's enough o' them. If one dies,—why wives are allers to be had! Costs a little to bury 'em, perhaps, but they like novelties in the shape of wives!"

Alas! I could not dispute that statement. Wives are always to be had; servant girls of a good quality are the scarce articles! Mrs. D. looked so fragile and worn as she talked and sighed, that I thought it might not be long before Mr. D. tried a "novelty" in flesh and blood. She had five little children—the oldest ten years. She made butter from five cows; kept no servants; did all the household work! Could one expect that she could make "gilt-edged" butter?

We staid an hour or so with her; and when her grievance had subsided, we told her of Mrs. A.'s dairy; of the delicious fragrance of the room; of the perfectly kept milk shelves, table and floor; of the ease with which her butter was worked; and of the perfect neatness which pervaded all parts of her kitchen, pantry and dairy. She listened silently. She felt the force of the contrast between the two

houses; but, alas! she had but one pair of hands and feet to accomplish all the daily work, while Mrs. A. was blessed with two daughters who had left school, and were willing and able to aid her. We wished that we could inform Mr. D. wherein the secret of high priced butter lay. Of course, it was in superior cleanliness, but he also needed to learn that one woman can never do the work of three, and not leave a great deal undone! He could not do the work of two men on his farm—could not mow and reap, sow and hold the plough at once; yet his wife was expected to do more than this—to do more than mortal woman could ever do *well*. We left her with a sore heart.

At Mrs. A.'s all was bright and cheery. She told us that all the product of the butter belonged to her and the "girls." Mr. A. had all the butter, cream and milk he desired; the family were well supplied with them, and then the rest was sent to the city. A high price was always obtained; and they enjoyed the money. Their house and appearance testified to the truth of the statement. Several of Prang's delicious *chromos* hung on the walls. Instructive books, entertaining magazines and papers, were upon the table—among them a copy of one of the leading agricultural papers of the day.

"I took that paper for 'father.' Gave it to him for a Christmas present. He sets lots by it. I shall allers take it," said Mrs. A.

In this family the sons do not leave the farm for the dazzling temptation of the city. Do you know the reason? Their home is where the heart is, and they are allowed a regular share in all the profits of farm and dairy. Therein lies the secret. S. O. J.

*For the New England Farmer.*

#### A HUSKING PARTY.

I have seen, in an old book, a picture representing one of the time-honored institutions of New England—the husking party. The men, in high-collared coats, and bell-crowned hats, form a circle around a miniature Monadnock of ears, which seem to retain their perilous position with wonderful tenacity. I am sure that anywhere but in a picture, there would be a "land slide" among the ears. Two square box lanterns cast a great deal of light over the scene; in fact it seems to be nearly as light as day there. (By the way, we have one of those lanterns, which would make quite a respectable "tiniment" for a moderate sized family.) The countenance of one of the workmen is overshadowed, not by grief or care, but by a suspicious looking tumbler. It is presumable, however, that this is all right, as we are told in the description, that "while the sparkling cider is freely circulated, the work goes bravely on." We are also informed that "the bounteous banquet is not unfrequently followed by a ball; as most

of the young men are accompanied by their favorite lasses."

Last evening I had the pleasure of attending a husking party. In the many years that have elapsed since the above mentioned description was written, some changes have taken place; but the essentials, the work and the banquet, remain the same. The "hall" was illuminated by kerosene instead of tallow, and the corn, instead of being formed into romantic mountain ranges, was thrown into plain matter-of-fact baskets, and ultimately deposited in the grain room. The lasses, "favorite" and otherwise, instead of idling away the time in the house, marched bravely to the scene of action, and remained until the work was done. Those interested may be assured that they accomplished their allotted tasks in a very creditable manner. Fair hands performed the unaccustomed labor with a skill and celerity that would have astonished more than one *paterfamilias* could he have witnessed the performance. As it had rained during the day, a part of the corn, which should have been in the barn, was still in the field, unfortunately for the display of our industry. Our task was therefore finished in good season, and we adjourned to the house, where a bountiful supper, worthy even of the culinary skill of our hostess, awaited us. This received as much attention as was compatible with the lateness of the hour. We then assembled in the parlor, ranging ourselves against the walls, like so many children at their first party. You can imagine just how we looked. In one corner was a group of lads who evidently wished themselves somewhere else. Young ladies, and ladies *not* particularly young, (the subscriber belongs to the latter class,) conversed in low tones with their nearest neighbors. "Ah, passing few are those" who have sufficient bravery to commence a general conversation in a company of more than a dozen persons. Those few are generally present however; and their endeavors in this case to "draw out" the company, were highly praiseworthy, though only partially successful. The hour of departure soon arrived, and bidding our friends good night, we returned home. So ended the husking party. MATTIE.

*Marlboro', Oct. 13, 1870.*

OUR RECEIPT FOR CURING MEAT.—To one gallon of water, take 1½ lbs. of salt, ½ lb. of sugar, ½ oz. of saltpetre, ½ oz. of potash. In this ratio the pickle to be increased to any quantity desired. Let these be boiled together until the dirt from the sugar rises to the top and is skimmed off. Then throw it into a tub to cool, and when cool, pour it over your beef or pork, to remain the usual time, say four or five weeks. The meat must be well covered with pickle, and should not be put down until at least two days after killing, dur-

ing which time it should be slightly sprinkled with powdered saltpetre, which removes all the surface blood, &c., leaving the meat fresh and clean. Some omit boiling the pickle, and find it to answer well; though the operation of boiling purifies the pickle by throwing off the dirt always to be found in salt and sugar.—*German town Telegraph.*

#### "WHAT AILS THE COWS?"—COW-POX.

A correspondent at Almont, Mich., writes us as follows:—"I have two young cows apparently in good health, except a breaking out of sores on the udder and teats. One cow four years old came home one night with one quarter of her udder swollen very badly, and she appeared to be in great pain for nearly a week. At times the swelling would go down and then it would swell again as bad as ever. Previous to this her teats were covered with scabs, which did not appear to be very sore, nor anything more than mere surface sores.

"My other cow was troubled with the same kind of humor but it seemed to go away of itself. Out of twelve or fourteen cows in this neighborhood, nearly all were troubled with this humor. Now, my cow last mentioned has large sores coming out on her teats and udder which look very bad. Some say that it is the cow-pox. If it is, or whatever it may be, let me know through your valuable paper, and prescribe a remedy, so that I can cure them."

REMARKS.—The description of the eruption and sores above given, indicates that the disease is cow pox, which appears first in the form of pustules on the teats, which are easily broken in milking, and which if left alone, break of themselves, and discharge a thin, unhealthy fluid. The pustules are surrounded by a broad circle of inflammation, and if neglected or roughly handled, sometimes run into ulcers, very foul and difficult to heal. If the disease is cow-pox, the hands of the milk-er will be affected by it. Pustules appear on the joints of the hands, and the ends of the fingers, and there is sometimes considerable fever. The pustules burst in three or four days, and sometimes become troublesome sores, which are communicated to any part that they touch.

There is another eruption on the teats of the cow which bears much resemblance to cow-pox, and is often confounded with it. The pustules are smaller, but are not so round or so deep, and have not the blue color of the true cow-pox. The following recipe has been frequently used with good effect for cow-pox; Sal ammoniac, a quarter of an ounce; white wine vinegar, half a pint; camphorated spirit of wine, two ounces; Goulard's extract, an ounce. Mix, and keep the lotion in a bottle for use.

For ordinary sore teats the following ointment is a remedy: Elder ointment, six ounces; bees-wax, ten ounces. Mix, and add an

ounce each of sugar of lead and alum, in fine powder—stir them well together until cold.—*Western Rural.*

#### DOES DAIRYING IMPROVE LAND?

In reply to a question as to the effect of dairying on the general fertility of the farms in Herkimer County, N. Y., or elsewhere, Mr. X. A. Willard replies as follows in the *Rural New Yorker*:—

There is no question but that lands may be kept in fertility and increased in productiveness with more ease and with less expense under the dairy than under a system of grain growing. The dairy farmer has the means at his command for making large quantities of manure. That he is wasteful of this material, and injudicious in its application it may be often, and perhaps as a general rule, is charged against him. Still, under all mismanagement in this regard, it is believed that dairy lands are steadily improving in the elements of fertility, and are now in better heart for grain crops than when grain-growing was made the business of the farm. It is true that upon many farms the yield of grass is much less than it should be, but this is not so much on account of any lack of fertility in the soil as from neglect of proper culture—allowing weeds to creep in, overstocking pastures, feeding down the aftermath of meadows, cutting grass when over ripe, and other abuses which, in time, have served to lessen the product. When farms have been properly managed, and have received the liquid and solid excrement of the stock judiciously applied, they have been wonderfully improved, and are annually yielding immense crops.

The dairymen of Central New York, where dairying has for a long time been followed as a specialty, are generally "well off as to worldly goods," and in wealth will compare favorably with farmers in any other part of the State. Dairy lands we think have increased in value more rapidly than the grain lands of the State.

Herkimer County, the oldest cheese dairying county in New York, contains about 278,000 acres of improved land. This is divided up into two thousand farms of fifty acres and over, and a thousand farms running from three to twenty acres; or in all, say about three thousand farms. The value of products taken from the farms in 1864, according to the State census, was as follows:—

Dairy products . . . . .	\$3,157,179
Grain products . . . . .	1,169,751
Some thirteen other products . . . . .	2,524,822

Total agricultural products for one year. \$5,791,751

Now, if this sum was equally divided among the 3000 farms, it would give each farm \$2263 as the average income. But as there are 1000 farms that run from three to twenty

acres, or that are under fifty acres each, some idea may be had as to whether the farming is as productive in its results as in other sections. If we have figured correctly, the average product per acre in 1864 amounted to some \$24. The highest annual product of cheese sold from the county has been a little above 18,000,000 pounds. In 1864 the cheese crop was only a little over 13,000,000 pounds.

#### AMOUNT OF BUTTER IN MILK.

With the view of learning the amount of butter to be obtained from a given quantity of milk, I have recently tried the following experiment at my creamery in Otsego County, N. Y., where I receive milk from three hundred cows.

The milk delivered at the factory on Saturday evening, July 30th, and Sunday morning, July 31st, amounting to 5729 pounds, as soon as received, was run into deep cooler pails, and these were set into the tank of spring water. The temperature of this water is maintained at a uniform temperature of 53 degrees by the introduction of an inch stream of water from the spring.

In this vat the pails remained for about thirty hours, when they were removed in order that, by a free exposure to the atmosphere, the milk might be soured. It might have produced a better result if the pails had been allowed to remain immersed in the water until the milk became loppered, but we feared that so long an exposure of the milk and cream to such a degree of cold would cause a bitterness of flavor to the cream and the butter made therefrom.

When about forty-eight hours old, the milk having soured and thickened, the cream was removed and kept until the next day. On Wednesday churning was done in large dash churns operated by steam power. From this 5729 pounds of milk there was produced 232 pounds of butter. This shows an average of 24.69-100 pounds of milk as being required for a pound of butter, very closely meeting the opinion generally held, that two and a half times as much milk is used in making a pound of butter as in producing a pound of Cheese. At the season of the year above named a yield of one pound of cured cheese from ten pounds of milk is very satisfactory. This would have produced 573 pounds of cured cheese from the milk used in this experiment, which gave me 232 pounds of butter.

Cheese at that time was worth 14 cents a pound. Butter to pay as well as cheese at this price, would need to sell at fully 35 cents a pound, allowing that the material used in making and packing butter cost one half cent per pound more than those required for cheese.

From this loppered milk, which in my case, went to the pigs, there is sometimes made a kind of cheese used mainly by the German

Jews. The curd is heated to a high temperature, is not salted, but is placed in small bags holding about one-half a pound, and subjected to moderate and long continued pressure. When removed from this pressure, the cheese is cone shaped, two sides being flattened, salt is rubbed upon the outside and the curing is done in a cool damp place, as is the case with Limburg cheese. There is small demand for this kind of cheese, and if there was a large demand, the prejudice of the Jews will allow them to eat only that which Jewish hands have made.—*Gardner B. Weeks, Syracuse, N. Y., in Western Rural.*

#### FALL MANAGEMENT OF BEES.

All honey for market should go this month. Any honey leaking from the glass boxes should be wiped away before packing. Paste heavy paper over the opening, to keep out dust and insects. The cases to carry it in should be small, holding about fifty pounds, as mentioned last month. Boxes should not be packed one on the other, and the cases, instead of being just twenty-six inches long, by a foot wide, may be made to suit the size of box, varying from that length, if need be, one inch or two wider or longer. An exact fit should be made so that no sliding can take place in the cases. In handling, never allow the case to drop, even one inch, never slide it on the floor, allowing it to strike on something solid, breaking the combs, ruining their beauty, and wasting the honey. Give the carriers to understand that these things *must* be observed, and if they are, it will go safely. Send by canal when practical. Until beekeepers are convinced of the necessity of removing *all* infected colonies by this time in the season at least, we must expect a continuation of the spread of the disease. We will not discuss its origin; we know it is contagious; we know too if put out of the way on its first appearance, that it cannot spread. Bees must not be allowed access to a particle of the contents of such hive until purified. The hive may be cleansed for further use by thorough scalding or exposure to the weather for one winter. Those who wish to get their bees in larger hives can do it better now than in severe cold weather. It is much less trouble to transfer than one without experience would suppose.

The experience the past summer, of Hazen, Novice, Hetherington, and Quinby & Root, indicates that if our bees pay us liberally, we must be liberal to them. Provide *plenty* of room, *convenient of access*, which room we propose to supply with *furniture* in shape of artificial comb ready for use, never doubting that our industrious little friends will show their sense of indebtedness, by immediately acceding and using it to the best advantage.

Our bee-men, with small means that can afford room for only a few combs and bees,

and very little honey, and are very incommoded by the crowd, would do well to provide for better accommodation for their tenants, or fall behind progressive bee-keepers.—*M. Quinby, in Bee-Keeper's Journal.*

**NEW PUBLICATIONS.**

**BEAUTIFYING COUNTRY HOMES.** A Hand-book of Landscape Gardening. Illustrated by Plans of Places already Improved. By J. Weidenmann, Superintendent of the City Park, and of Cedar Hill Cemetery, of Hartford, Conn. New York: O. Judd & Co. 1870. Boston: A. Williams & Co. Quarto, price \$15.

Castles in the air and gardens on paper may look harmonious and attractive, but at the same time be impracticable by the workers in wood and stone or by the diggers of the soil. We commend, therefore, the principle adopted by the author of this book of illustrating his theories and directions by specimens of landscape gardening which have been executed for occupants of country homes, and of giving the location of places thus embellished, with the names of the owners thereof, that those who would beautify their own places may have an opportunity of seeing the effect of the modes recommended, before they incur the expense of applying them to their own premises.

In this volume we have twenty-four full-paged, colored lithographic plates of improvements that have been made on estates in the vicinity of Boston, New York, Hartford, Albany, Chicago, Cincinnati, Philadelphia, &c.; as well as a large number of fine wood cuts illustrating the several processes of the work of improvement.

As our eye has never been entirely satisfied with the results of the modern system of Landscape Gardening, we opened this beautifully executed, elaborate and costly work with the hope that we should here find a statement of the reasons on which the system is based that would better satisfy us of the correctness of those principles of taste which are involved in the popular modes of improving our grounds. But instead of this, we meet in the introductory remarks the following announcement:—"As it is necessary to be brief"—[a necessity not evidenced by the large number of blank pages in the volume]—"we shall not give the arguments in favor of the methods recommended here, but confine ourselves to such instructions as our own personal practice, as well as the experience of the most eminent landscape architects, both in this country and Europe, have taught us to be the best."

But "the best" teachings of these "eminent landscape architects" differ very much at different times. Some years ago their "experience and practice" resulted in geometric squares, oblongs and triangles. This "mode" was adhered to till the eye was offended by mathematical stiffness. To avoid this error, the modern landscape gardener, it appears to us, has gone to the other extreme, and good taste is offended by the invariable squirming irregularity of outline. The old system

of gardening has been criticised as a mere extension of the plan of the dwelling; but if the present principle of beautifying country homes, were to be applied to our residences, should we not find ourselves burrowing like woodchucks?

Is it impossible to combine the good points of each system into one harmonious and pleasing whole? May not the geometric and the "natural" be united in landscape gardening, with a better effect than is produced by a close adherence to either?

But what is *natural*? Trees and shrubs may grow in clumps, and brooks may run in winding channels; but in many of the various manifestations of Nature a wonderful sympathy with the laws of "geometry" is displayed. The trunk of our trees, the straw of our grain, the crystals of our salt and of our rocks; the lightning that angles across a dark cloud; the architecture of the honey bee and of the spider, are conformed to mathematical laws, but are they any the less natural, or any the more offensive to cultivated taste?

**RELATIVE VALUE OF DIFFERENT ARTICLES OF FOOD.**

In reply to an Illinois farmer who asks which is the cheapest feed for fattening sheep, corn at 60 cents per bushel, oats at 40c, barley (No. 2) at 75c, oil cake \$35, or bran at \$15 per ton, Mr. J. Harris says, in the *Agriculturist*, that assuming the value of the manure from a ton of corn to be worth six dollars, the following statement may be made:—

	Price per ton.	Value of manure.	Actual cost off od.
Corn at 60c per bu., or \$21 50	\$21 50	\$3 65	\$14 85
Oil-cake . . . . . 35 00	35 00	19 72	15 28
Bran . . . . . 15 00	15 00	14 19	0 41
Oats . . . . . 25 00	25 00	7 70	17 30
Barley . . . . . 31 60	31 60	6 52	25 34

Mr. H. adds, "I do not think there is much difference in the *nutritive value* of a ton of corn, oil-cake, oats, or barley, and consequently, leaving the manure out of the question, corn at the above prices, is the cheapest food, and, with the exception of bran, it is also the cheapest article to feed, even after deducting the value of the manure."

Though this estimate is based on Illinois values, it may afford New England farmers a test by which to try their own experiments, and perhaps induce some one to make a statement from the teachings of his own experience.

**SOCIETIES, CLUBS, &c.**—We have received a very neatly printed pamphlet of forty-eight pages, from the Agricultural Commissioner, giving a List of the Agricultural, Horticultural, and Pomological Societies, Farmers' Clubs, &c., on the Books of the Department of Agriculture, July 1, 1870, together with the name of the President and Secretary of each. By a rough estimate, we find that about 1600 associations are included in the list. It will be valuable for reference. The post-office address of the secretaries is also given.

### ABSORBENTS IN THE BARN YARD.



ANY times while visiting among farmers we have gladly accepted an invitation to look at the stock of cattle, but in a few cases we have found it difficult to get across the barn yard without floundering through mire, specimens of which, though on ones boots, would scarcely be appropriate in the parlor.

This certainly is a sign of slack, if not poor management. The only profitable farming in New England must spring from high manuring, and high cultivation. Without this, good crops may occasionally be obtained, but they will not generally be profitable ones. The first essential, then, to profitable farming is the manure.

There is no other place where a large amount of coarse materials can be so profitably worked up into good manure, as in a barn yard that was formed so as to be disbing in the centre. Where cattle are yarded at night, it is especially important that the yard should be covered with something which will not only absorb their droppings, but will serve as a dry and easy bed for them to sleep upon. If the litter of one kind and another is a foot thick, so much the better. All the waste straw, hay, orts left by the cattle, corn butts, and every refuse from the barn may appropriately go to the barn yard. To these should be added, in the summer, brakes and rank meadow grasses before they go to seed, tufts in abundance and peat from the meadows. All this material will be kept moist by the rains and droppings of the stock, and when mingled and pulverized by their feet, will furnish a most valuable mass that may be removed at least twice in the year. The summer season is the best time, because the process of fermentation goes on then more freely.

New materials should be added every week, and no work on the farm will pay better than strict attention to this, which is the main source of all success. It will not be found necessary to fill the yard at once, to the exclusion of all other duties, but make it a standing rule to occupy every hour that can be spared in keeping the yard properly supplied with such materials as will increase the bulk and value of the mass.

An occasional ploughing will assist both pulverization and fermentation, as it will lighten up the materials, let in sun and rain and break up the coarser particles.

The common want among farmers, all over New England, is larger quantities of something that will enrich the soil. Pressing and important as this want is, many of the means common to all,—and well understood by all—are greatly neglected. Were the barn yards, barn cellars and pig styes properly supplied and managed, the manure on our farms, generally, might be increased from one-third to one-half.

Autumn is an excellent time to commence the good work.

### EXTRACTS AND REPLIES

#### SAMPLES OF PEAT.

MR. BROWN:—I send three specimens of my peat muck. No. 1 is the top stratum, generally about two feet deep. No. 2 is the middle stratum, and of about the same thickness as No. 1. In some places there is another variety resembling No. 2, but tougher; the roots much less decayed, and in color just like old cider pomace. No. 3 is the lower stratum, and from three to eight feet in depth. I want your opinion of its value, also the relative value of the different specimens.

REMARKS.—We are always glad to notice an increased attention given to the subject of peat. The deposits of this material in New England are not only to become of vast importance as manurial agents, but as an article of fuel. It is already pressed into the form of bricks, dried in the sun and used for household purposes. In some instances it is thrown, fresh from the pit, into furnaces under steam boilers, and performs an economical service there; even the "water it contains being made to contribute to its heating effect." In Germany the most beautiful oils have been obtained from peat; and also coal, illuminating gas, paraffine, kreosote and water, containing from one to three per cent. of ammonia. All these substances are susceptible of useful applications in one art or another.

But it is in an agricultural point of view that we wish to consider the matter at present.

The three samples of peat forwarded by our

correspondent have been carefully examined. They are all well worth digging, and carting a mile, for use on the farm. Sample No. 1 is the most highly decomposed, and undoubtedly the most valuable of the three; but even this, upon wetting and rubbing it between the fingers, is found not fine and unctuous to the touch as peat is often found. It is sufficiently fine, however, to be used in any compost. The samples two and three, would be excellent for the barn yard and pig sty; or for bedding under cattle; or as an absorbent in the trench behind them.

A thorough analysis of peat would require a somewhat long and expensive process. This is not essential in your case, nor in that of most farmers, as you can experiment with all the varieties of peat you may have, upon small plats of ground. Be careful, however, that the peat is not mixed with other substances, or if it is, made all alike, and put it all on the same kind of soil. Leave a space of a rod or two between the plots, and cultivate one plot as much as the other. Such tests will show the value of the peat.

#### INTERCHANGE OF VIEWS AND EXPERIENCES.

I value the NEW ENGLAND FARMER, as it is so good a medium for farmers to interchange their thoughts and experiences. When I am in want of instruction in agriculture, I seek it through the columns of the FARMER. I like also to read the reports of weather and crops in different sections.

REMARKS.—Thanks for your favorable expressions of the FARMER. If sound information cannot be gained from the scores of its intelligent and practical correspondents, it will scarcely be found anywhere.

#### PLOUGHING AND SOWING TO KILL BUSHES IN A PASTURE.

I have a side hill in my pasture, which I wish to plough to kill the bushes. Now what grain is the best to sow for feed, and when the best time to sow it,—early in August or early in the spring?

REMARKS.—It is somewhat perplexing to determine what is best to be done with such a pasture as you describe. If there are many bushes, the usual way is to cut and burn them, and if not too stony, plough and plant potatoes one year before seeding to grass. If not very stony, and thoroughly burned over, perhaps a good harrowing would prepare the surface for grass seed and grain to be sown together early in the spring. We have not known this process tried, but it seems feasible, and if successful would save the cost and delay of ploughing. We should be glad to learn the result of such an operation. Sow oats, rye or barley, and cut green for fodder.

#### ALSIKE AND COMMON CLOVERS.

I also want information, concerning the Alsike clover. How much seed is required to the acre, and what is the cost per pound, and will it be good to stock down a pasture? I am almost discouraged with the common clover. Fifty years ago my father would seed to clover, and I have known it to produce a good crop the third year. Now, on the same land I can get no clover the second year,

and yet I get larger corn than my father did. Can you tell the reason that clover dies so quick now?

REMARKS.—The Alsike or Swedish clover we have not seen growing, but learn that it promises to become very useful. Only about four pounds of seed are sown to the acre. The foliage is said to be more abundant than our red clover, and does not turn dark to the same extent when the plant has matured. The flowers are very beautiful, of larger size than white clover, of pinkish color and very fragrant.

If our common red clover is cut before the seed ripens and falls, and what grows the second time is fed off or cut off before the seed ripens and falls to the ground, the clover crop will at once die out. But with such re-seeding it will continue for many years.

#### DROUGHT AND ITS EFFECTS.

Here the drought has been severe. I do not think the oldest people ever knew its like. Streams that commonly supply ample water for mill purposes are now almost dry. We have not had a rain to thoroughly wet the soil since early in April. Corn and potatoes have suffered badly in dry soils; to the extent of one-half in some fields. Some years I mow ten tons of rowen; this year about half a ton. And yet at Ashfield, less than twenty miles distant, south westerly, no crops have been injured by the drought. ELIJAH GUNN.

Montague, Mass., Sept. 19, 1870.

#### APPLE POMACE.

Is there any value in apple pomace for manurial or other purposes? What is it worth per ton?

Marlboro', Mass., Oct., 1870. SUBSCRIBER.

REMARKS.—Pomace is usually thrown from cider mills into the highway, streams and elsewhere as though it was generally thought to be worthless. Still we have seen cattle nibbling at these piles, which would seem to indicate that "unerring instinct" detected value in the mass. A friend says that he knows one man who buys all he can get for feeding purposes. But how much he pays, or how he feeds it, our informant could not tell; probably, however, in small quantities, and perhaps as a relish or seasoning for other food.

Applied in large quantities, in its crude state, apple pomace is not unfrequently fatal to vegetable life, in consequence of the superabundance of acid (tartaric) which it contains. Elder bushes and bushes even more tenacious of life than the elder are often completely deadened in a single season by covering the soil around the roots by a layer of pomace four or five inches deep. But after this acid is neutralized, by quick lime, it becomes a valuable manure, especially for apple orchards, and is highly prized for that purpose in France. Where lime cannot be easily or cheaply obtained, the pomace may be deposited in some low place where it will not be liable to wash away, and what wood ashes is at hand mixed with it, with five or six times the amount of pomace, of old, well-dried meadow-muck. Let it lie at least a year, turning the mass over two or three times,

and a few months before using, mix in a load or two of barn manure by way of leaven, and you will have some good manure.

#### PORK TAINTED JUST AFTER BEING DRESSED.

Last fall I had a hog butchered in the afternoon, and the next morning the lean had begun to putrefy, and by night the spare rib and the lean, clear back to the kidneys, smelled so as to be offensive. The hog had been perfectly well, never refused to eat a meal and was butchered and dressed with others, and all hung up through the night. The others were all right, and mine spoiled. If you or any of the readers of the FARMER can tell me the cause, I should be very much obliged.

*Manchester, N. H., Oct., 1870.* A READER.

REMARKS.—We have known several similar cases. They sometimes occur when the hog is dressed in a moderately cold day; just cold enough to dry and contract the skin, but not sufficiently so to cool the inner portions of the flesh. To prevent the taint, as soon as the hog is dressed, split the body down through the backbone, and unless the animal is a very large and fat one, it will cool sufficiently quick to prevent any injury. Even if a hog is not a large one, it is always safer to split the carcass down, although it may not be quite so convenient sending it to market as when whole.

Possibly the man who dressed the lot of hogs of which yours was one, allowed yours to lie upon the ground, after being stuck, while he was dressing the others. Sometimes pork will be tainted by lying in that condition only an hour or two.

We are not certain but there may be some atmospheric influence which induces the taint, for more cases occurred last fall than we have known in a life time before.

#### PREPARING A HOLLOW FOR TREES.

I contemplate filling in a hollow for setting out fruit trees. I have plenty of gravel, sand, loam and swamp mud. Please inform me through your paper the best way to do it.

*Fiskville, R. I., Oct., 1870.*

SUBSCRIBER.

REMARKS.—It is difficult to say what material you had best use without seeing the spot itself which is to be filled.

If it is loose gravel, fill with loam; if sand, fill with loam and muck; but if an adhesive clay soil, fill with sand and loam, and plough deeply so as to mingle them thoroughly before planting the trees.

#### A STUB IN THE HORSE.

My brother has a nice five-year old horse which was injured two years ago by having a stub jammed in his side, back of the shoulder. The wound materated, the stub come out, the sore healed up and left a scar. This summer a bunch has gathered near this scar about the size of a goose egg, and is hard and loose. He has tried a number of remedies but it still remains. Can you give us any information of its cause, or any means of cure?

ELBRIDGE KINGSBURY.

*Roxbury, N. H., Oct., 1870.*

REMARKS.—If the horse is a valuable animal, and the bunch is loose, we should advise you to employ the best surgical skill you can get, and

have the bunch taken out. The bunch was probably caused by the stub. The operation need not be a long nor painful one.

#### APPLES AND CIDER.

Apples, cooked or raw, are to most people very wholesome. Sweet apples contain considerable nutriment and add some vitality. Why don't farmers raise more sweet apples? This is being an uncommon year for this fruit. Every family who has a supply of apples should dry a good stock, and should prepare a goodly quantity of "cider apple sauce," or "apple butter." It is very wholesome, especially with meats; ten times more so than tomatoes. Apples keep the best in cool, dry cellars. As apples are a natural fruit of this latitude, the expressed juice (cider) is the natural spirit of this climate. It should never be made in any but a wooden mill. Every one who has a suitable cellar to keep cider in should bottle up a few gallons for future use, as cider is of great medicinal value and it can be kept for years. Boiled cider is of much medicinal worth. Take sweet cider just from the press, boil four barrels down to one, put it in kegs or jugs, cork tight, put it in a cold place and it will keep good for years. No family should be without boiled cider or a tub of "cider apple butter."

DR. BOYNTON.

*Lawrence, Mass., Nov., 1870.*

#### SHARP STICKS UNDER MUCK.

If Mr. Call will view critically the surroundings of his muck bed, he will see that running water was there in the olden time, and that the beavers constructed there a dam. If he will also examine closely the sharpened end of the sticks, when freshly drawn from the mud, he will perceive plainly the marks of the beaver's teeth. A number of years ago a townsman brought to me a bushel of just such sticks as are described in the item in the FARMER of October 29, and which he excavated while ditching a meadow. The sticks were whole in form and apparently pretty sound when I first saw them, but after a few days of exposure to the atmosphere they cracked and crumbled away into dust. The print of the beaver's teeth was as plainly to be seen where the stick had been cut off, when they were first drawn from the mud and for some hours thereafter, as the nails on my fingers. The wood had been preserved in form by its constant contact with wet earth, for perhaps 200 years; but exposure to drying air in the course of a few days resolved them back to their original elements. There is not the least doubt in my mind that Mr. Call struck an old beaver dam, constructed perhaps centuries ago.

JOSIAH D. CANNING.

*Gill, Mass., Oct. 29, 1870.*

REMARKS.—We have also received from a Montpelier, Vt., correspondent, a similar explanation of the "sharp sticks" mystery, together with some interesting facts in relation to the habits of beavers as observed by the writer while among the Rocky Mountains, which we shall publish soon.

#### CHALLENGE CROP OF APPLES.

October 27th, I gathered from a single tree forty bushels of apples, barrel measure; thirty-seven bushels of which were stored in my cellar, and three classed as cidr apples. The tree is a seedling, and the fruit rather small, and in common seasons will keep till May.

#### PROVIDE BEDDING FOR STOCK.

Now is the time to fill a large pen with leaves, to which you can go for an armful to make a dry,

warm bedding for the animals next winter. If you can get sawdust by going not over four miles for it, lay in a quantity of that also. It is good as a bedding, and as an absorbent of urine. Thus you will add to the comfort of your animals and to the size of the manure heap. "The merciful man is merciful to his beasts," and here in New England we must learn to be merciful to the soil.

#### CLAY AS A DRESSING.

If clay can be procured by carting not over one mile, and on a road not too steep for drawing a decent sized load, I can recommend, from experience, its application in small quantities to all lands except those wet or already sufficiently clayey. Now is the time for carting it. The frosts of winter will prepare it for spreading in the spring.

#### BE GENTLE WITH ALL ANIMALS.

Boys, if you start with the milk pail in a bad humor, remember that the great law, Do unto others as you would that they should do unto you, should govern your conduct towards the dumb beasts under your care, as well as towards your equals. When your fingers are cold and stiff a hard and rough squeeze of them gives you pain; the same is true of the teats of the cow you grasp to milk in a frosty morning. Be gentle, be reasonable and considerate.

O, ye people, who profess righteousness, and believe that you shall be judged by your works, don't abuse by kicking, striking, starving or exposing to cold or storms, any of the noble, but patient animals, that are dependent on you for comfort or discomfort,—for pain or pleasure, during the long days and cheerless nights of the coming winter.

T. A. C. NICHOLS.

*Plymouth, N. H., Nov., 1870.*

#### DR. SHURTLEFF'S SEEDLING PEARS AND APPLES.

I send you a few specimens of my Seedling pears, and a Seedling apple that I call Trout; also, an apple which I call Victoria, that came from the western part of the State of New York.

The *Pemberton Pear* is a rich fruit, and the tree a good and regular bearer. The *Manning* is a good and handsome pear. The *Admiral Foot* is a good bearer, and a sweet and vinous pear; also my seedlings, Gen. Grant and Shurtleff's Favorite. The one unnamed is also a rich pear.

L. A. SHURTLEFF.

*Spring Grove, Brookline, Mass., 1870.*

REMARKS.—The fruit was received in good order, and our venerable friend, who, though seventy-eight years of age, is still active in his efforts to improve fruit and benefit his fellow men, will please accept our thanks for his kind remembrance, and for the pleasure which so rich a box of fruit affords both eye and taste. The New York apples are very large;—one weighing 12½, two full 10, and one 9½ ounces; flatish, but of handsome form; very light green, striped or splashed most beautifully with red. Altogether the *Victoria* is a splendid apple.

We do not know that we can add anything to Dr. Shurtleff's description of his seedlings, and will only say that the *Pemberton* is a green pear with dark red cheek; the *Manning* a light yellow, with a pale blush on some specimens, and of good flavor; the *Admiral Foot* is dark green, russet at the crown, and specked with brown; the variety unnamed is dark yellow, shaded with dark red, crown light russet. The *Gen. Grant* is a large

handsome yellow pear, handsomely dotted, and a little russet about the stem. *Shurtleff's Favorite* is smaller, also yellow. At the late Pomological Convention at Philadelphia, the president, Hon. Marshal P. Wilder, spoke of the forty or more varieties produced by Dr. Shurtleff, mentioning particularly the *President*, *Gen. Grant* and *Admiral Farragut*, as large. He said they were generally vigorous, and all about alike in quality. On account of the large size of the varieties above named, he advised their trial by fruit growers.

The seedling apple is mostly red, somewhat mottled and specked with light yellow. Mild, sub-acid, and we should judge ripe in October.

#### GARGETY COW.

I have a splendid cow, four years old, that has a swelling of the udder. The first that I noticed of the trouble was a bunch in the teat, near the middle, about the size of a bean. This increased till it shut off nearly all the milk in that quarter, and the bag swelled considerable. In a few days it commenced in another teat in the same manner. It has now taken the third teat, and the milk is not fit for use. The cream was quite stringy sometime before I noticed the bunch.

*Zoar, Mass., 1870.*

A. A. HAWKES.

REMARKS.—We presume that the trouble with your cow is what is usually called garget, which may possibly have been induced by high feeding, as you remark she is a splendid animal. In the bound volumes of the *Monthly Farmer* much has been published on the treatment of this disease. Prof. Law recommends a dose of one pound of epsom salts, to be followed the next, and for a few successive days, with an ounce of nitre and a drachm of iodide of potassium. Also to rub the udder daily with an ointment composed of one part of iodine to twelve parts of lard.

Since writing the above we have received the following:—

#### CURE FOR GARGET.

Give the cow three or four quarts of strong tansy tea, which she will drink freely if troubled with garget, and it will effect a cure. I have tried this remedy several times with good success.

*East Rumford, Me., 1870.*

A SUBSCRIBER.

#### OATS AND EARLY ROSE POTATOES.

Several months ago I noticed a suggestion in the *FARMER* that your correspondents record their failures as well as success in their farming operations.

Acting upon that suggestion, I will give you an item or two from my experience. Many friends, whose solicitude for my welfare was equalled only by their anxiety to dispose of the grain in their possession, have advised me to cultivate the *Norway oat*, extolling its enormous yield, weight, superior quality of straw, &c., while I, crusted over by old fogeyism, turned a deaf ear to their importunities. Thus the matter stood until sometime in the month of February last, when suddenly, as if by magic, in the columns of nearly every journal in the land, there appeared a coarse wood engraving representing a man standing between two massive columns towering majestically above his head, said to be a couple of bundles of *Norway oats*. "That was the unkindest cut of all." "Photographed from life," said the veracious ad-

vertisement. I looked and was lost! Twelve dollars of my hard earnings went in exchange for six bushels of oats bearing a striking resemblance to hedge-hogs' quills. I sowed them in due season, and watched the development of the crop with much interest, and I must say that I was disappointed with them in every way. They smutted badly, the tremendous yield per acre was dwarfed down almost to the "teens," and common oats, sowed side by side, same soil and cultivation, did just as well, if not better. But after all, I do take a sort of grim satisfaction at times in viewing my bin of oats. Their peculiarly sharp and rakish appearance invests them with a sort of personality that one must admire. However, I rate them as the Peter Funks of the vegetable kingdom, and moralize on the gullibility of the human race.

Such is my experience with Norway oats, and allow me to add, that my experiments with early "Early Rose" potatoes have turned out in about the same way, and so No. Two's have multiplied more in name than reality. CENTRE BIT.

Bristol, Vt., Oct. 8, 1870.

P. S.—Since writing the above, a sympathizing friend, who sells oats of a tawny hue, tells me I have been cheated, and didn't get the simon pure Ramsdell Norway oats; he recommends that I buy seed of him and try my luck once more. I have the matter under consideration (?) C. B.

#### PREPARING TUBS FOR BUTTER.

Will some butter-maker tell me how to prepare my tubs so that my butter will not taste of the wood? I scald my tubs, let them stand till cold, then empty and fill with brine and let them stand a few days. Before packing the butter, I pour out the brine and rub the tub thoroughly inside with salt, with which is mixed a little saltpetre. My butter seems nice when packed, but after a few weeks, tastes of the tub. Is there no way to remedy it? If there is, what is it? LEARNER.

Waitsfield, Vt., Sept. 12, 1870.

#### LAMOILLE CHEESE FACTORY.

The Lamaille Valley Cheese Factory of West Milton, Vt., received in June 351,167 pounds milk, making 34,921 pounds cheese. Amount of sales for month at the factory \$4516.40. Also received in month of July, 329,807 pounds milk, making 32,066 pounds cheese; amount of sales for the month at the factory \$4244.81. Whole amount of sales for months of May, June and July, \$12,242.01. They have now on hand about 800 cheese of August and September's make.

D. L. FIELD, Ag't.

West Milton, Oct. 4, 1870.

#### AGRICULTURAL ITEMS.

—Mr. Jonathan Green, on Moultonborough Neck, N. H., has a hog, that in the last six years raised 108 pigs, and these pigs have been sold for not less than \$4 each or \$432.00 in all.

—A correspondent of the *Maine Farmer* says, "Were the average product of hay per acre in Maine one ton, we should enjoy a higher state of farming than we now do. Far too many farmers get from one-fourth to one-half ton per acre."

—A correspondent of the *Rural World* says that by placing any of the larger seeds and grains on a hot pan or griddle, if the vitality is perfect, the grain will pop or crack open with more or less noise. Where the vitality is lost, it lies immovable in the vessel.

The *London Field* gives a list of stallions, famous as winners of running races, but who proved failures or, at the most, only moderately successful in the stud. It says no one of the double winners of the Derby and St. Leger, has ever produced a winner of either race.

—Trees draw up from the depths of the earth, and that without the subsoil plough, moisture that, charged with animal or other impurities, would otherwise appear in miasmatic exhalations; the moisture oxygenized by vegetable action is liberated into the air free from taint, and fit for human lungs. Trees present in their myriad leaves an immense evaporating surface, and the influence they exert on climate is greater than is commonly supposed.

—The single discovery of coal-oil not only introduced a new business, which has rapidly grown to large proportions, but has given rise to more than a thousand inventions, over three hundred of which have been patented for lamps to burn it in. Many new and useful chemicals have also been produced from it. Cochineal, which was formerly employed in dyeing the various shades of crimson and scarlet, is now almost superseded by aniline, a new product from coal-oil, which gives every shade of purple, every variety of blue, and all the gradations of scarlet and crimson.













