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{ WILLIAM WELD,  
Editor and Proprietor }

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Agricultural Clubs.

As the season of our greatest toil is passed, and comparative leisure is now at hand, it would be well for farmers to turn their attention to farmers' clubs. We regret there are as yet very few existing; among the best we may rank the Markham Club. The system of this club is to get as many farmers as possible to join, each paying a membership fee of 50 cents annually, which is expended for requirements of the club. Monthly meetings are held, and the various topics of interest in agriculture are discussed. Subjects for discussion are appointed by the members of the club at each meeting, and the discussions take place at the following meeting.

The club assembles at the houses of the different members—sometimes one member will invite them to his place, sometimes another—changing the locality each month. The most energetic and enterprising farmers keep up the club in this way.

The meetings are held on the first Saturday of each month. They assemble at 2 o'clock, p. m.; sometimes they break up between 5 and 6 o'clock; at other times they adjourn for tea and reassemble, and remain until late in the evening.

The object of these meetings is to discuss all agricultural subjects and matters connected with agriculture. They gain information from one another.

We attended the last meeting held by this club. It took place at the house of Mr. Milligan, at Milligan's Corners, about a mile from the station of that name on the Toronto & Nipissing Railroad. We drove from Toronto to the farm. After leaving Toronto about six miles behind us we passed through one of the best farming sections to be found in Canada; the farmers in this vicinity pride themselves on having the best ploughed land in Canada. If a bad ploughman was to show himself along this road we believe the farmers would drum him out of the section.

The houses, barns and farms are in good taste and order. Considerable tile draining has been done here, and has been found to pay, but there was a marked difference to be observed in comparing the appearance of this fine part of the country with some others we have seen less favorably situated; scarcely a shade tree was to be found alongside the roadside.—We well know that this subject has been discussed by the club, and that trees will form a beautiful avenue in a few years along the roadside, affording shade for stock, protection from the drying wind and cold blasts, and tend to increase the value of the crops.

Perhaps we have digressed from our subject, but fuller particulars of the meeting will appear in the next issue of the paper, all our space being filled in this.

Meanness of Official Bodies.

Mr. H. Anderson, the present superintendent of the grounds of the Provincial Exhibition, who was formerly Secretary to the Western Fair or East Middlesex Agricultural Society, knowing the necessity of having the horse ring enclosed by a picket fence, proposed to the Provincial Exhibition directors to have the fence put up, if the Provincial Board would pay half and the Western Fair Association the other half. The fence would cost \$120, making but \$60 each. The Provincial Board at once consented, but the Western Fair Association refused.

Mr. Anderson has got the fence up, but will pull it down again and sell it after the Provincial Exhibition, unless the Western Fair Board comes to time.

This looks mean of the Western Fair Association, especially as they wished to have it done last year for their own convenience; they have funds and they need the fence.

The County Council of Middlesex would not give a cent towards the Provincial Exhibition this year. The city of London is acting in a more honorable manner this year; the mayor and corporation appear to be doing their duty, but the county and East Middlesex Association deserve the commendation we give them. It may tend to bring them to time in future.

A Word with the Farmers.

We issue this number rather earlier than usual. Our general mailing week is the last week in the month, as we endeavor to have the paper in the hands of subscribers by the end of the month, but to avoid interference with our attention to the Provincial Exhibition, we publish a week earlier than usual.

The fall seeding is now passed, crops are secured, and the business of the Exhibitions and ploughing matches will be over next month. Then will commence the plans for another season's labors. You will have time to organize agricultural clubs, agricultural meetings, and to hold discussions on different subjects in connection with your business.

Do not enwrap your whole attention in the two powers that are struggling for supremacy—the Conservatives and Reformers—but let your platform for political action be agricultural interests, farmers' rights and farmers' power. Do not allow Conservative or Reform notions to interfere with your agricultural affairs.

We have ever since the commencement

of this paper endeavored to advocate agricultural interests. Because we have spoken against persons or measures that we have deemed tending against the agricultural interest, Conservatives in some sections have condemned us as being on the Reform ticket, and therefore have endeavored to check the circulation of this paper and the advancement of the Agricultural Emporium; again, many other persons have condemned us, our paper and enterprise as being for the advancement of the Conservative party. They may have hastily judged from a single article or from a correspondent's letter; some are so prejudiced that they will not listen to two sides of a question.

Let these be the leading questions:

Shall we as farmers have an agricultural paper free from politics and independent of politicians?

Shall we as farmers have a voice in Canadian agricultural affairs?

Shall we have a paper that advocates our interests?

Shall we unite and gain strength and power?

In some places the Agricultural Emporium question is being discussed, and we have been called on to address meetings, and shall as far as in our power attend at such gatherings when desired and suitable arrangements are made.

Seed Wheat.

In our last two numbers we called attention particularly to the Scott wheat.—We spoke strongly in its favor, and from the reports we have since heard of its hardiness and productiveness we feel convinced that those who have procured it will be satisfied with the result, if the season is at all to be compared with the two preceding ones.

We expected to have obtained a supply from parties whom we supplied with it last year, but instead of being able to supply us, we are asked by some of them what price we would give, as farmers in the different localities would take what they had to spare at the prices we would give, and at other places farmers sell it at the same prices we sell it at.

Some have raised over 40 bushels per acre of it, but such are rare exceptions, although it has in nearly every instance we have heard of yielded more than the Treadwell, Diehl or any other variety. We much regret that we were not able to supply all that applied to us. We sent out a great deal of wheat that will gain us credit, but to fill the unprecedented demands on our supply some orders were filled in our absence with wheat that was not quite as clean as it ought to be, although far cleaner than many lots we have received when we have imported it from

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other countries. We know a few have been disappointed in not receiving as much as they desired, and some have not received it as soon as they ought to have had it, but we have done the best we could under existing circumstances. The number of orders and the large quantity required more than doubled any demand we ever had before.

This speaks well for the Emporium business, but we feel the disappointment of those who were not punctually supplied more than the parties themselves.—The quantity that has been sent out we feel satisfied will be a material benefit to the country and will further the spread of it in sections where it had not been introduced.

To enable us to carry out the introduction and dissemination of good and proper seeds, and to aid yourselves, we would call your attention to the charter published in the June number. Let us farmers unite and have the Emporium carried on by ourselves. Let every enterprising farmer have a voice and an interest in the institution. Unity is strength; let us unite, and if the present management is not right let us make it better.

#### Col. Taylor's Sale.

This sale took place on the 12th instant; the attendance was not large. His Oxford and Dutchess bulls had caused a much more select gathering of short-horn men than had ever been assembled in this county.

The sale was conducted very quietly, no excitement being created. Although some of the stock hardly realized as much as the Col. expected, we think he has reason to be satisfied. There were no white-legs or buyers-in, and every animal was sold without reserve. One bull was put up, but no one made any offer for him, or he would have been sold: he was not a bad bull, but had a peculiar gait which did not take the fancy of the buyers.

The calves were very fine, showing the superior value of the bulls which had been selected; one calf brought \$600, and a better looking animal, to our judgment, brought only \$450, but its pedigree did not stand quite as high in the estimation of buyers.

The cows were only in milking or common stock condition, and brought what we thought very good prices for such stock.

The Col. provided a substantial lunch under a tent on the ground, for the visitors. The sale took place in a nice shady grove in front of his house.

Let the Government make a notice of the following remark:—

We do not believe that a single animal was purchased at this sale for the intent of improving Canadian stock for Canadians. Every animal was purchased either by the Americans or for the Americans by our breeders or dealers.

#### Crop Statistics.

In this number of the Advocate will be found a brief return of the agricultural statistics of Victoria for the present year from our Australian exchanges. The report is considered favorable, and, comparing the yield with that of last year, it is so. From the dryness of its climate Australia must always be inferior to Canada as an agricultural country. Its great wealth, independent of its mineral treasures, is in its unrivalled suitability for sheep pasturage and for the growth of the grape vine and cotton plant.

But it is not to Australia, its soil or climate that we wish at present to direct the attention of our readers—it is to the fact that they in Australia are in possession of the statistical report of the crops within a few weeks of the time they are harvested. We have in Ontario, as in the other Provinces, a Department of Agriculture, and the people and press of Ontario have not as yet been able to obtain a report of the yield of our harvest such as that which we have received from the antipodes. The Grand Trunk and Great Western Railway Companies do endeavor, as far as is in their power, to obtain for the country that information that we would expect to receive

through the Department of Agriculture, whose province it is to furnish it. It is a matter of the greatest importance that the earliest information on a subject so pregnant with great results, for good or evil, as is the year's product of our fields, should be given. And, to have this information truly valuable, it should come bearing the stamp of authority. The reports of individuals and of companies like the Grand Trunk and Great Western cannot have the fullness and completeness that are necessary, and they cannot possess that entire reliability that we would expect from returns issued by the authority of the Department of Agriculture.

To have these reports really valuable they should be issued at as early a period as possible consistent with accuracy. As yet we have but vague opinions and somewhat contradictory reports of the crops, though on these reports business men rely in making their calculations for the coming season, and, as is well known, the farmer is greatly guided in his selection of crops for the coming year, and his preparation for them, by the profit and loss of previous years, and especially the year immediately preceding. Instances of the farmer's being guided by this experience are familiar to all. The preference given to fall wheat or spring wheat, the sowing or not sowing of barley, the choice of what kinds of root crops is to be sown—turnips, or mangolds, or ruta bagas—is often left to be decided by the success or failure of similar crops the previous year. That the farmer may make his arrangements and preparations in time, it is necessary that he have early information of the success, or partial success, or failure, not merely on his own farm or in his immediate vicinity, but throughout the Province. In asking the Agricultural Department for this timely information, we do not require that which is impossible or even difficult to be obtained. The centralization that exists in every Department does away with any obstacle that might otherwise exist. A great central authority, with its many ramifications, can easily collect and arrange all necessary details in good time. It has been happily said:—"He gives twofold who gives readily." So may we say—reliable crop statistics, such as the country demands, would, by being given in time, possess twofold value.

Ass. Ed.

#### Notes from my Garden.—No. 3.

I have been very unsuccessful with my squash this year. My Hubbards, which are the cream of squash according to my idea, grew so much to vine that the bees and flies could not get in at the flowers to mix the pollen and fertilize, so that the result is that there is but one squash on my vines. Then the squash bugs did their work. They came along in thousands, and eat the stalks right off. They disgusted me of squash raising, for, notwithstanding that I have tried all the usual preventatives, I find nothing that will drive away the bugs which will not also kill the vines. What must I do? Give up raising squash, I suppose.

#### TOMATOES.

I am just as lucky with my tomatoes as I am unlucky with squash. The Canadian, Victor, of which I got the seed from you, have proved a decided success. They are not so much earlier than any other, but they are better in many ways. They are a good shape and smooth, with very few creases. Good, well-flavored meat and not a super-abundance of seeds. They are very prolific. I put them in hills about 5 feet apart each way, but the vines grew so profusely that I had to trim away more than half, and then they were too thick. Next year I propose to construct a trellis about 5 feet high, and tack up the vines to that. I will thus give them plenty of sun and air, and prevent the loss by rotting.

#### FRUIT TREES.

I notice in your last issue you speak of the Hawthorn Dean apple as a very desirable tree to plant out. I mentioned the subject to a friend of mine who is a nurseryman and does a large business. He says it is a very good apple, as you say, and, although it has been long on the market, and much pushed by Mr. Leslie, it has not been generally planted, from the fact that the trees are poor, scraggy looking things, and will not sell. This is the case with many of the best varieties of apples. The trees are of a rough, ugly shape, and, therefore, we are foolish enough to refuse them, and fill up our orchards with nice looking trees which will

bear only miserable apples. This is looking a little too much to appearances. Do not suppose that because the tree dealer sells to you an ugly looking tree that he is therefore cheating you. It may be the nature of that tree to have that shape, and to make up for appearances by bearing excellent apples.

My friend the doctor writes asking my opinion of salt for the garden. Now salt is one of my hobbies. I use it as manure, and I use it to kill insects, and find it good for both. All our land wants salt from the fact that we are so far inland that we get none of the salt breeze, therefore we do not receive the deposit of salt from the atmosphere which fertilizes land lying along the coast. Every article that grows takes salt out of the ground. The cattle want it also. We have, therefore, to return it to the land. I think that a good coating of salt to the garden in the fall and dug under shallow will kill off a good many worms and grubs, also some of the weed seeds, and will help the land very materially in the spring. Salt will save your onions from the onion grub, and your cabbage plants from being cut off by slugs. The doctor must, however, be very careful not to put on too much salt nor must he put any salt on the plants or leaves, as it is poison to vegetable life when it touches above ground. For your asparagus beds you must have salt and plenty of it. As a manure for the farm, salt is of great importance. If you are sowing any kind of grain which is liable to be weak in the straw, by all means put on salt, as it is a good thing for strengthening straw. Salt also will draw moisture out of the air, and will in that way prove beneficial.

The Squire does not like my ideas about hilling up potatoes. He says that his father always made high hills, and he does so too, and he "don't believe in these new-fangled notions about everything." "Why, when I was a boy," says the Squire, "we didn't have no trouble about all them new things. Here is all them new kinds ofatoes. Why my father had cups and pink-eyes one year after another, and we just put them in one way and took them out one way. Now you've got your early rose, and your prolific, and calicoes, and a thousand other kinds, and it puzzles a man most to death to know which is which, and now you want us to change our way of planting 'em." The squire don't take any farmers' paper, and all that he knows about these new things is to hear others who have read speak of them, and he is as much lothered as the boy who never read geography when he hears people talk of foreign countries.

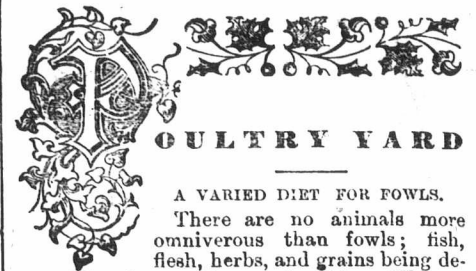
My idea of hilling up potatoes was that the hilling should be as little as possible. All the benefit in the hilling, to my mind, is that the soil is kept well stirred up. That is the profit. Kill the weeds and stir up the soil and you will have a good crop whether there is any hill or not. I have tried this and know it. The squire has a good many prototypes among our farmers. They don't care to keep up with the times. It is too much brain labor. Ask them something about politics and they are well posted and ready enough to discuss them. They will go a great distance to hear a political leader, and they are sure to take a political paper, but when it comes to agriculture—well they know enough themselves about that. They neither want to hear or read or discuss questions upon which depend their success in business. No art or science has made so much progress within the last fifty years as farming, and yet they are satisfied to go on and do everything as their fathers did, or at least to take improvements second hand and years after from their more enterprising and attentive neighbors.—PROGRESS.

#### HOW TO COOK LIVER.

Cut it into slices half an inch thick. Wash it well, and boil it fifteen minutes in water in which there has been thrown several tablespoonfuls of salt. Lift it out and sprinkle over it a little pepper, allspice and ginger. Roll it in flour, and fry in hot lard. Thicken the gravy with flour, and pour it over the liver before it is sent to the table.

A correspondent of the *Cultivator and Country Gentleman* writing to that paper, says:—

"It is my belief that there will not be 33 bushels of merchantable corn of the crop of 1873 where there were 100 of the crop of 1872. There is a full crop of nothing in Illinois this year except, perhaps, weeds, water melons, demagogy, potato bugs, mosquitoes, fever and ague, and cholera morbus."



#### POULTRY YARD

##### A VARIED DIET FOR FOWLS.

There are no animals more omnivorous than fowls; fish, flesh, herbs, and grains being devoured by them with equal relish. We say equal, for though they commonly pounce upon meat with greater avidity than upon grain, this is generally because it affords a rarity, and a flock kept for a while almost entirely upon animal food will show the same greed for a few handfuls of corn.

Now, those animals accustomed to use a varied diet should not be confined to an unvarying one. There are, indeed, some species which are naturally limited to one or a few kinds of food. Thus, cattle do well enough, although kept month after month on grass alone, and a tiger will thrive with nothing but lean mutton on his bill of fare. But with other animals, as with the human race for instance, the case is different, for no person can maintain the highest efficiency when confined to one article of food. No matter how fond we may be of a particular dish, we lose relish for it when allowed nothing else for a number of consecutive meals, and the intense craving for variety indicates as its source something more than mere appetite. It gives evidence of real necessities of the system which are constantly varying with the changing circumstances of weather, employment and other conditions.

The fondness for variety shown by fowls is as significant of real needs as we have found it to be in our-elves. In purveying for them, a judicious variety selected from the three general divisions—fresh vegetables, grain and animal food—is at all seasons absolutely necessary for young and old, in order to make them perfectly thrifty. True, they will not starve on hard corn and water, neither will they pay a profit so kept.—*Poultry World*.

##### RECIPE FOR KEEPING FOWLS HEALTHY.

There is a receipt for keeping fowls healthy, which has been sold under the titles of "Universal Poultry Drops," and "Poultry Keeper's Friend," and its use has been found very beneficial for all kinds of poultry. To half a lb. of sulphate of iron add one ounce of diluted sulphuric acid, and pour it into two gallons of water; let it stand fourteen days after bottling it, and then put a teaspoonful to every pint of water, every other day, and let the fowls drink it freely. Chickens should have the same amount about twice a week.

The effect of this stimulant is soon apparent; the feathers of the birds will assume a rich, glossy appearance, and the whole flock will be in the best possible health and spirits. If poultry are affected with the dry roup, this remedy will prove a cure, and will ward it off from flocks that are not tainted. With a little attention to cleanliness, large flocks of poultry can be kept free from disease, and either fattened for market or so fed that they will give a beautiful supply of eggs.

##### EGGS FOR BREEDING.

In selecting eggs for hatching all monstrosities should be avoided, as they will not hatch. The same hen will sometimes lay a very large egg, and another time a very small one. They will serve well to eat, but not for hatching.—What is wanted are eggs of the average size in appearance, peculiar to the variety from which you breed—nothing else. Very long, very short, or very rough eggs should always be avoided. Time will be saved, too, by not trying to select eggs which will bring either cocks or hens, as the art of telling the sex by the shape or color of the egg has not yet been discovered. This advice, of course, is for the average breeder—the fanciers and amateurs may experiment as much as they please, as they can better afford it.—*Country Gentleman*.

##### CHEAP POULTRY YARD.

Set posts firmly in the ground, six feet high, eight feet apart. Take No. 9 wire and stretch from post to post, outside, fastening with staples made of wire, driven into posts. Place three wires, one inch apart, one foot from the ground; another three at three feet ten inches from the ground; another three at top of posts. Take common laths and weave in, leaving three inches space between sides of each. This makes the fence four feet high. Then take other laths, picket one end, and chamfer the other like a chisel blade, and interweave among the top wires; then shove the chamfered edge down beside the top of the bottom lath, lapping under wires two inches.

This makes a cheap, durable, pretty fence, that is seven feet and ten inches high, and fowl tight. Wires should be left somewhat slack, as interweaving the laths will take it up.—*Poultry World*.

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## HOW EASILY BUTTER IS SPOILED.

A farmer's wife writes to an exchange: "Of all the products of the farm, butter is most liable to be tainted by noxious odors floating in the atmosphere. Our people laid some veal in the cellar, from which a little blood flowed out, and was neglected until it had commenced to smell. The result was that a jar of butter, which I was then packing, smelled and tasted like spoiled beer."

Another lady writer observes that there was a pond of filthy, stagnant water a few hundred feet away from their house, from which, when the wind was from a certain direction, an offensive effluvia would be borne on the breeze directly to the milkroom, the result of which was that the cream and butter would taste like the disagreeable odor coming from the pond. As soon as the pond was drained there was no more damaged butter.

## CARBON FOR STOCK.

There is a growing impression among stock owners that the health of sheep as well as cattle suffer from absence of carbon in their food; and it was suggested by a correspondent a few weeks since that the worm disease of sheep had greatly increased of late years because the pastures are not burnt as formerly. The ash or char of the grasses, it was asserted, gave the carbon of which they stand in need.

That the carbon obtained in this way does the sheep good is undoubted, because the animals go licking about a burnt place while there is plenty of good grass around, and they are not at all likely to choose what is not good for them under such circumstances. But if carbon is the ingredient sought after it can be given to sheep in other and less expensive forms, for frequent grass burning is most suicidal to the man dependent upon his grasses.

## HINTS TO DAIRYMEN.

The third annual report of the Vermont State Dairymen's Association for the year ending October, 1872, recently printed, is a pamphlet of 164 pages, and contains much valuable information.

The report opens with the address of President Mason, who makes some pertinent remarks in regard to the loose way in which many dairymen keep an account of their farming operations and the cost of the articles they have to sell. The same applies equally to farmers engaged in other branches of farming. He says:—

We dairymen are a stubborn class to learn. We do not accept facts without a good deal of proof and persuasion, and in too many cases work out our own injury through a fear of being too easily deceived. This is a progressive age, and those who allow themselves to fall in the rear in the march of improvement must be content to occupy second-rate positions, and be satisfied with small pecuniary rewards. It is somewhat surprising that, notwithstanding the improvements in dairy farming, so little has been effected towards inducing dairymen to perform their operations in a more systematic manner and keep a regular record and account of their dairy business generally and specifically.

For one who practices such a method ninety-nine keep all their accounts 'in their heads,' as it is termed, and are rightly called 'guess dairymen,' for they never know anything, and only guess it is so-and-so. They don't know whether this, that or the other mode of dairying pays the best; whether they can afford to sell their produce at a given price or not; they cannot tell whether it is for their interest to continue in the dairy business or not, nor even at the end of the year are they sure whether their names should be on the loss or profit side of the ledger. Having kept no record of their doings, they are almost wholly in the dark. They can only guess 'it's about so.' It is high time for all such to take 'a new departure,' and commence a thorough reform. Of course, keeping such records occupies some time, but how can it be better spent than in thus obtaining a better knowledge of our profession and the working in that special branch in which we may be engaged?

Farmers should keep an exact account of everything connected with their dairy, so that at the end of the year they can sum it all up and know all about it and not have any guess work. They should be able to show just what it costs to make 100 pounds of cheese or butter. Then, and not till then, can they tell whether it pays to continue dairying. They should also keep a similar account in all other farm operations, and then there would be an end of the continual guessing and thinking and ignorance in regard to those things we should know all about.

## KEEPING BUTTER IN WARM WEATHER.

A simple mode of keeping butter in warm weather where ice is not handy, is to invert a common flower-pot over the butter, with some water in the dish in which it is laid. The orifice at the bottom may be corked or not. The porousness of the earthenware will keep the butter cool.

## "READY PROFIT" SHORT-HORNS.

In his 81st year Mr. Thomas Garne passed away at his bleak primitive home in the valley of the Windrush, Gloucestershire. He went from Ald-worth at Lady-day, 1825, to the exposed farm at Broadmoor, on the northern side of the valley. He had all the admiration for a good beast that had run for generations in his family, and Mr. Nathaniel Stilgoe fostered his inclination for the then rising Short-Horn which Sir Charles Morgan and the Strickland family had been the first to bring into the district. As is usual with young breeders, he got a pure bred bull of Mr. Attenborough's blood, through Mr. Stilgoe, and this bull was followed by Edgar of Mr. Champion's breeding. Mr. Stilgoe, who subscribed to the second and third volumes of the "Herd Book," finding his farm at Chapel Ascote unsuitable for breeding, sold the best of his cows to Mr. Garne. From Lord Sherborne, his landlord, Mr. Garne bought Pye, when a fortnight old calf, for 20 gs., and she produced a large family. He also got some other females from Lord Sherborne, and with them rested contented, never purchasing any more females.

Mr. Garne was more fond of his herd for its ready profit, and that innate pleasure which the breeding and development of young stock unconsciously gives. He would rise at three in the summer and watch his ailed cattle then. Constitution he would have above all things. Circumference was a great word with him, for with that and thick hairy coats came that hardness that must be had to withstand the cold situation. "Big loins, big chests, round ribs, plenty of muscle, and a clean bag," were points he insisted strongly on, and in bull-buying his maxim was "beast first, pedigree afterwards."

Mr. Stratton and other breeders bid money for his stock, but he was chary of selling; he liked to keep his best, and if they went wrong the feeding stalls were the fittest place for them. Size was also aimed at; the bull calves were allowed to suck, the heifers raised by rail and hand until yearlings, when they were turned out, and in proper season a bull taken out to them and they calved in the fields. So for nearly half a century Mr. Garne laboured diligently with his kine, producing animals that hundreds in the south have admired, and many a one has crossed to our Australian and Canadian colonies. Cattle for cattle's sake, robust health and ready profit, and a strong aversion to all fashion and new-fangled ways were his doctrine.

Peaceably he passed away, inheriting a good name and leaving it after him, in that bleak, cold, desolate valley of Gloucestershire.—*Thornton's Circular.*

## MILK.

Considerable has lately been said in medical journals concerning the value of milk as a remedial agent in certain diseases. We notice an interesting article upon this subject that lately appeared in the London *Milk Journal*, in which it is stated, on the authority of Dr. Benjamin Clark, that in the East Indies warm milk is used as a specific for diarrhoea. A pint every four hours will check the most violent diarrhoea, stomach ache, incipient cholera and dysentery. The milk should never be boiled, but only heated sufficiently to be agreeably warm, but not too hot to drink. Milk which has been boiled is unfit for use.

"It has never failed in curing me in six or twelve hours, and I have tried it, I should think, fifty times. I have also given it to a dying man who had been subject to dysentery eight months, and it acted on him like a charm. In three weeks he became a hale, fat man, and now nothing that may hereafter occur will ever shake his faith in hot milk."

A writer also communicates to the *Medical Times* a statement of the value of milk in 26 cases of typhoid fever, in every one of which its great value was apparent. It checks dysentery and nourishes and cools the body. People suffering from disease require food quite as much as those in health, and much more so in certain diseases where there is rapid waste of the system. Frequently all ordinary food in certain diseases is rejected by the stomach, and even loathed by the patient; but nature, ever beneficent, has furnished a food that in all diseases is beneficial—in some directly curative. Such a food is milk.

Dr. Alexander Yale, after giving particular observations upon the points above mentioned, viz: its actions in checking diarrhoea, its nourishing properties, and its actions in cooling the body, says: "We believe that milk nourishes in fever, promotes sleep, wards off delirium, and, in fine, is the *sine qua non* in typhoid fever."

We have also lately tested the value of milk in scarlet fever, and learn that it is now recommended by the medical faculty in all cases of this often distressing children's disease. Give all the milk the patient will take: even during the period of the greatest fever it keeps up the strength of the patient, acts well upon the stomach, and every way is a blessed thing in this sickness. Parents, remember it, and do not fear to give it if your dear ones are afflicted with this disease.—*The Household.*

## STOCK AS A DESTROYER OF THE CURCULIO.

I planted a small orchard of plum, apricot and nectarine trees, adjoining my barnyard, and pastured it with hogs, and ewes and lambs—(the lambs bark the trees)—driving strong locust posts around the young trees, to prevent injury by the hogs rubbing against them. The result was, that the fruit ripened untouched by the curculio. I offered this to the Ohio Horticultural Society for their premium of \$100.—Their reply was through the *Western Horticulturalist*, edited by D. Wadler, that there was nothing new in it but the use of sheep. A lady whose mother had a fine green house, the plants of which had been much injured by insects, which she could not get rid of until she used sheep manure, which completely drove them off.

Such had been my experience when the buds of grafts were eaten up by insects. The application of sulphur, soot, snuff, &c., had no effect, but on applying powdered sheep manure on the buds and grafts when moistened from dews, and coarse manure around the small trees at the ground, the insects disappeared immediately. The oil left on the body of the trees by the sheep rubbing against them, the effluvia from the sheep and their manure is offensive to many insects, and then feeding the grass close to the ground, gives the buds a better chance to feed on the insects and exterminate them. Their manure and that of the hogs produces a healthful growth of the trees—the hogs destroy insects in the grub—premium for reclaiming old orchards.

If of inferior fruit, one-third of the top may be taken off and grafted in the spring or fall, with a healthy annual bearing kind, and next year then another third of the top grafted, and the third year the under third may be grafted in this way, and you will soon have bearing trees. If the trees are of fine varieties of fruit, shorten the old and feeble branches, and encourage young shoots. For this mode, Forsyth, of England, received a pension from his government, and from several of the Continental governments. This system of renewing old orchards was termed Forsything. The ground may be plowed shallow, and subsoiled deep— with the coulter plow, shortening the outer roots somewhat, but not destroying the rootlets under the tree. *Cor. Fruit Recorder.*

## MILK.

A case of scientific investigation at Cornhill University, by Prof. Low, is full of interest to farmers and especially dairymen. The milk furnished by the milkman attracted the attention of the Prof. by the peculiar appearance of the cream, which had a rosy look. When subjected to a powerful microscope there appeared a large number of organisms in different stages of growth. The investigation was pushed by the Prof. and the cause ascertained. The milkman admitted that he allowed his cows to take their drink from a stagnant pool, instead of giving them good, pure water. It was shown that the foul organisms taken up by the cows when drinking such water pass into the circulation, enter the blood and even taint the secretions, making the milk a mass of filth. This fact has before been brought to the attention of dairymen, and cannot be too carefully attended to by those having the care of cows for dairy and domestic purposes.

An artificial cooking butter is largely sold in Paris under the title of "Margarine." It is prepared from raw ox-tallow by gently heating it with water, potash, and macerated tripe; the purified, cooled and salted product is then submitted to hydraulic pressure to remove the stearine; the result is a yellow substance, very much resembling butter that has been heated. It is said to be more durable than the natural product. A similar substance may be made by treating the tallow with a diluted, heated solution of carbonate of soda—one part of carbonate of soda to thirty parts of water—and then washing the product, first with water containing one per cent. of hydrachloric acid, to remove the alkali, and then with pure water. It is said that butter prepared by this latter method was used by the citizens of Paris during the late siege.

A few roots fed daily in winter with hay, will keep a sheep in good condition to care for her lambs in the spring. The lambs need looking to the first few hours after birth; most of them, however, will not need it, but occasionally one will be found that will not be strong enough, or from some other cause will fail to obtain its natural supply of milk, and will require assistance.

The sheep business in parts of New Mexico is in a discouraging condition this season, for the reason that the fall of snow and rain during the fall and winter was uncommonly light. For the same reason farming is depressed, since the mountain streams do not afford the usual supply of water for irrigation, and farmers have not planted. Where streams come out of the snowy range water is abundant.

## Agricultural Items

The Buffalo Board of Health has voted the cattle yards a public nuisance and will insist upon their removal or perfect renovation.

In 1871, England sent to the United States books of the value of more than a million dollars in gold. She received from that country less than \$6,000 worth.

Grasshoppers are committing great depredations in New Hampshire; oats, beans, and, in fact, all green things, falling before them.

Owing to the failure of the blue plum crop in the Niagara district, common plums bring as high as \$4 per bushel.

The *Guardian* (Richmond, Q.) says:—Notwithstanding the dry season, the farmers hereabouts speak in the most satisfied terms of both their hay and harvest crops, while the potato and root crop is said to be above an average.

The appreciation of American agricultural collegiate education by farmers is shown by returns from Cornell University. It graduated two agricultural students in June last.

H. S. Thompson, of Kirby Hall, Yorkshire, states in the Royal Agricultural Society of England's Journal that his favorite fertilizer for grass lands is 1 cwt. nitrate of soda, 2 cwt. mineral superphosphate, and 3 cwt. of kaimite per acre. These cost about \$40. For mowing land he would increase the quantity of nitrate to 1½ cwt. per acre.

HARVESTING OVER.—From all quarters we hear that the harvest is nearly over, that there never was better harvesting weather, and that, all things considered, crops are somewhat over an average. There are no complaints of overgrown wheat or any other damage to this year's crop.

It is a remarkable fact that in Buffalo just now a ton of hay brings twice as much as a ton of corn. Abundance of corn can be had for \$15 per ton, while hay readily brings \$30 per ton.

The farmer who has barns ample enough to house all his stock, has the means at hand to give the same stock an unfailing supply of the best water the year round. The rain that falls on the roof, if caught in cisterns, will water all the stock the roof can comfortably shelter.

A gentleman addicted to scientific inquiry has discovered that thirty-three days complete the cycle of the potato bug generation; that 700 of the critters are the average product of one female, from which the family grows in the second generation to 245,000, and in the third to 82,700,000.

It indicates a low state of farming when the farmer carries his grain to market full of foul seed, shrunken grains, or several varieties mixed, and it is one of the best evidences of high farming when all his grains are put in the market clean and pure. Will not our readers give this subject a careful consideration, and see if it does not indicate a way for the improvement of farming?

The bugs have been indefatigable in their efforts to prevent the growth of the potato this year, and we thought at one time, with the assistance of the drouth, they would eventually succeed; but by the persevering efforts of the farmer and his family in picking them off and sprinkling the vines with Paris green, and having the late fine showers as an auxiliary, there is a good prospect of an average crop.—*Clinton New Era.*

A New Jersey correspondent of the *Country Gentleman* that in his neighborhood the pea bug had been gotten rid of by threshing peas, cleaning them, and then putting them in a heap on the barn floor and sprinkling them at the rate of a quart to five or six bushels, with spirits of turpentine. Leave the peas a few days to dry, after shoveling the heap over to mix them well with the turpentine. Barrel them, and the bugs are never heard of again.

Long continued observations show that harness and other leather exposed to the action of ammonia, continually given off in stables, becomes weak and rotten sooner than other leather. Even when care is taken to protect them with grease this takes place. Prof. Artus recommends the addition of a small quantity of glycerine to the oil or fat employed in greasing such kind of leather, asserting that it keeps it always pliable and soft.

The Grand Rapids, Mich., *Democrat* says:—No one having lived in Western Michigan a quarter of a century has failed to observe the great change in the climate of this region. Our winters are colder and our summers dryer and hotter. Is this change to be permanent? If so, why? Will the change that is going on in time affect what is known as the fruit belt of Western Michigan, destroying the hopes and expectations of those who have invested largely in lands to be converted into peach and apple orchards and gardens in which to cultivate the smaller fruits?



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THE GATHING TABLES is now borders are to this month the few month ing them need will require le every hour will farm.

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In the FARM made. Never though in it, weather fit for crops to be st there must be Potatoes must time. It is of done in dry dry and the w is done, and weather and n are better th continue grow we prefer on ground till N greater as the Farm stock s ally fattening animals. It is up their condi good condition their food. I true to the ol going and you horses." Fall paration for ploughing be s rough and co The storms o large clods and mellow for t how frost ente and overcomes

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GARDEN AND FARM.

HINTS FOR THE MONTH.

In the garden as well as the farm there is still employment for busy hands. Throughout the entire year they whose occupation is gardening find plenty to engage their whole time. This is more especially the case with those engaged in the nursery business, but for us and our agricultural friends generally there is little gardening after November. Some seasons an early winter forbids our gardening even so late as that. It is well for us then to give up every hour that we can spare to the garden in doing what is still to be done. We have to prepare for the near approach of winter, and we can also make preparation for the ensuing year.

THE GATHERING AND STORING OF VEGETABLES is now to be attended to. Walks and borders are to be cleaned and dressed. After this month they will require little labor for the few months that remain, and by keeping them neat and in good order now they will require less care in the early spring, when every hour will be so valuable for garden and farm.

TRENCH THE GROUND from which the crops have been removed. This we have always practised with great advantage. It cultivates the subsoil, pulverizes by exposing it to the frost and snow, and it will give us twelve or more inches of garden soil instead of six or eight. The advantages of a deep, mellow soil are known to all who are conversant with gardening. The greater portion of the subsoil brought to the surface in the fall, if it be for the first time, should be turned down again in the spring, so that the old surface soil be the seed beds for the young plants. But a portion of the mellowed subsoil mixed with the surface will freshen it, and the more manure you can apply to it so much the greater quantity of the subsoil may be advantageously used.

FALL MANURING the beds intended for some spring crop we have practised with great advantage. This we have found especially serviceable for carrots, parsnips and beets. Having dug the ground the right depth, we apply a good coat of manure, and then cover it up in ridges with earth from furrows trenched deep six feet apart. When the season for sowing the seed arrives the soil is dry and mellow, and it is tilled easily and expeditiously with a digging fork, and the manure being so thoroughly amalgamated with the earth, we have no forked roots.

SOWING RYE to be turned down in the spring should be attended to in ground not designed for being trenched. It does well when sown in October.

In the FARM every preparation should be made. November is a very uncertain month, though in it, too, we have often favorable weather fit for field work. There are autumn crops to be stored, and till they are secured there must be no intermission of our labor. Potatoes must be dug at the earliest fitting time. It is of great importance that this be done in dry weather. When the ground is dry and the weather is fair much more work is done, and done better than in muggy weather and muddy ground, and the potatoes are better throughout the season. Turnips continue growing throughout this month, so we prefer on the whole to leave them in the ground till November. Their growth is greater as the days and nights become colder. Farm stock should be well cared for, especially fattening stock, milch cows and young animals. It is of great importance to keep up their condition. Let cattle be housed in good condition and they will amply pay for their food. Keep the ploughs going. Be true to the old proverb.—“Keep the plough going and you will never want corn for your horses.” Fall ploughing is an excellent preparation for the spring crops. Let the ploughing be strong and deep, no matter how rough and coarse the ploughed soil be left. The storms of winter will break down the large clods and heavy scores, and will make it mellow for the spring. You have all seen how frost enters into the stiffest clay banks and overcomes their cohesiveness.

Planting shade or fruit trees, if it be not thought better that it be deferred till the spring, should be attended to at once. When the wood of the trees is ripe you may

safely transplant them, though the leaves have not fallen. There is a difference of opinion as to the best time of planting, some advocating fall planting, that the transplanted trees, having taken root in the fall and early winter, will be better able to withstand the drought of summer. Others maintain that there is uncertainty in fall planting from the severity of our winter. Were the trees to be transplanted raised from the nursery bed in the fall and heeled in with due care and well covered and then transplanted in the spring, they would have the advantages of a fall planting with little of the risk, as, after being heeled in, they would form the rootlets that trees must form when transplanted, and they would at once commence growing on being planted in the spring. For planting fruit trees, at whatever time it be done, the ground should be well prepared.

Ass. Ed.

The Horse.

CARE OF HORSES.

All horses must not be fed in the same proportion, without regard to their ages, their constitution or their work—the impropriety of such a practice is self-evident. Yet it is constantly done, and is the basis of disease of every kind. Never use bad hay on account of its cheapness, because there is no proper nourishment in it.

Damaged corn is exceedingly injurious, because it brings on inflammation of the bowels and skin diseases.

Chaff is better for old horses than hay, because they can chew and digest it better.

Hay or grass alone will not support a horse under hard work, because there is not sufficient nutritive body in either.

When a horse is worked hard its food should be chiefly oats—if not worked hard its food should be chiefly hay, because oats supply more nourishment and flesh-making material than any other food—hay not so much.

Mix chaff with corn or beans, and do not give the latter alone, because it makes the horse chew his food more and digest it better.

For a saddle or coach horse half a peck of sound oats and eighteen pounds of good hay are sufficient. If the hay is not good add a quarter of a peck more oats. A horse which works harder may have rather more of each; one that works should have less.

Rack feeding is wasteful. The better plan is to feed with chopped hay from a manger, because the food is not then thrown about, and is more easily chewed and digested.

Sprinkle the hay with water that has salt dissolved in it, because it is pleasing to the animal's taste, and is more easily digested. A tablespoonful of salt in a bucket of water.

Oats should be bruised for an old horse, but not for a young one, because the former, through age and defective teeth, cannot chew them properly; the young horse can do so, and they are thus properly mixed with saliva and turned into wholesome nutriment.

PLANK FLOORS RUINOUS TO HORSES.

Can't some genius invent some kind of stable floor that can be kept clean without too much labor and will not ruin the feet of horses standing upon them? If not, every horse-owner whose horse or horses are obliged to stand still much of the time had better have a yard convenient to the stable into which the horses can run when neither at work nor eating nor sleeping.

We have had some experience in this line. Our horses have not much to do in the winter season, and we have noticed a tendency in them to become lame, but as they got over it upon driving we paid but little attention to the matter. The past winter we kept but one horse, and, as a public conveyance ran between our place and office, we preferred to patronize that and let our horse stand in the stable. After the sleighing disappeared and the roads became bad he had but little exercise, and we noticed that he was becoming lame. Supposing that he would improve as soon as spring work commenced, we paid but little attention to it until he became so lame that he could not strike a trot, and his limbs seemed weak and tender, although we could find no sore or tender spot, nor where his limbs were swollen. We consulted a veterinary surgeon, who could neither find cause for lameness nor prescribe a remedy.

We determined to try an experiment. We made a fence enclosing a small plot of grass, and turned him out, cutting grass for him. Now for the results. For three or four weeks before turning him out he had been getting lamier and lamier until he became unable to trot. In one week from the time we turned him out

he could trot off quite lively, and now he has nearly recovered. He seemed to be lame in every foot and especially in his hind feet, and we have no doubt that standing idle on a plank floor caused his hoofs to become dry, hard and contracted so that they pressed upon the tender frog. We have here suggested one remedy for hard floors—namely, a yard. If any of our readers know of a substitute for plank floors that will obviate the difficulties we have presented we should be glad to hear from them.—*The American Rural Home.*

FARM TEAMS.

The treatment of farm teams is a matter of great consequence to the farmer, for the same principle which requires that the driver of a steam engine should keep every part of his machine well oiled and in good adjustment, and that he should keep his boiler well supplied with fuel and with water, should actuate the farmer in keeping this most valuable and really expensive assistant to his labors in efficient condition by careful grooming, judicious feeding and attentive oversight.

Very much of the value and availability of the horse depends on the quality and quantity of his food, and on the manner in which it is given to him. Too much food at one time, too little at another, food of improper kinds or in a bad state of preparation are the foundation of one-half the ills that horse-flesh is heir to. There is no worse economy than the stinting of food or the administering of bad food because it is cheap. Also, there is no more wasteful practice than the giving of too rich and expensive food. Neither is there any greater source of loss in connection with the keeping of farm horses than the neglect to which they are systematically treated. The horse, even in the rudest state, is of a most delicate organization. His powers are very great—greater than is generally supposed; but, in order to their development and to their long endurance, it is necessary that he be fed with the greatest care and with an ever-watchful judgment. Probably the capital invested in farm horses in the United States would go twice as far—that is, the animals would last in a useful condition twice as long—if they were thoroughly well fed and cared for.

At the National Horse Show at Springfield several years ago Mr. Lewis R. Brown, of New York, exhibited a four-in-hand team which trotted around the course in about three minutes. The united ages of the four amounted to more than one hundred years, and even the oldest of them remained useful for a long time after that. Indeed, Mr. Brown told me that he did not consider it of much importance that a horse should be less than twenty years old. Yet, as we look over the farms of even our best farming districts, how few useful teams do we find that are more than fourteen or fifteen years old. Deducting the years of their colthood, we see that the period of their possible usefulness is reduced fully one-half by careless and injudicious treatment, and especially by stingy or indiscreet feeding. To go over the whole range of directions for feeding, from the time when the mare is first got with foal until the foal is worn out by years of service, would require more space than can here be spared. Concerning farm horses the following directions from Herbert's "Hints" will be found useful:—

“With regard to mere farm horses, it is usually the habit to feed them entirely on hay or cut straw, with now and then a mash, giving them little or no oats or corn. It is certain, however that this is a mistake. That the value of the work which the horse can do and of the horse himself, arising from his improved condition and increased endurance, will be materially raised, while the actual cost of his keep will not be very materially increased by the diminution of the quantity of the cheaper and less nutritious food given to him and the addition of a smaller or larger portion of the more nutritious grain, which furnishes stamina and strength in a degree greatly in excess of its own increased value, may be assumed as facts.

“Slow-working horses do not, of course, require so much nutriment of a high quality as those which are called on to do quick work and perform long distances; but, as a rule, all animals which have to do hard work and much of it must necessarily be so kept as to have hard flesh, and they cannot be so kept unless they are fed on hard grain.”—*Waring's Handy Book of Husbandry.*

HOW TO FIT COLLARS TO HORSE'S SHOULDERS.

It is very important to have a collar fit nicely and snugly to the shoulders of a horse. It enables him to work with a great deal more ease, and to apply a great deal more strength. It prevents galling and wounding, as the friction is avoided. Collars are so made, or should be so made, as to throw the chief force on the lower part of the shoulder. The horse can apply but little strength on the upper part, and, for this reason, breast-collars are coming greatly into vogue, as the strength is exerted on the lower part of the shoulder. But we started out to tell our readers how to make a new collar fit the shoulder of a horse. The collar should be purchased of the proper size. Just before putting it on the first time immerse it in water, letting it remain about a minute, and immediately put it on the horse, being careful to have the hames so adjusted at the top and bottom as to fit the shoulder, and then put the horse to work. The collar, by being wet, will adapt itself to the shoulder, and should dry on the horse.

When taken off it should be left in the same shape it occupied on the horse, and ever after you will have a snug-fitting collar and no wounds.—*Valley Farmer.*

CAUSES AND CURE OF POLL EVIL.

Editor *Western Rural*:—I send a few words on the causes and treatment of inflammation of the neck and its concurrent extension—poll-evil. The causes are—Carrying the check rein too tight, wet pastures, chronic indigestion and pressure from the main ligament on the first vertebra of the neck. It is seldom caused by a direct bruise.

Preventatives—The discarding of the check rein, the avoidance of wet pastures, if you feed cut grass give but little water and avoid frightening the horses when in the stable, thereby possibly causing him to strike his head.

To treat the malady—Apply a slight blistering liniment of iodine and cantharides with tartrate of potassa once a day, and foment twice a day with strong soft soap suds hot. As soon as you find a fluctuating place lance the affected part effectually, and put into and to the bottom of the canal a piece of nitrate of silver nearly one half an inch long. Let it dissolve, and repeat every two weeks until healthy action is established, when the wound may be healed.

If the operation requires to be more extensive cut the main pipe or canal square lengthwise, beyond the extension of the cavity, to get a free discharge of the pus, which will enable it to heal at once.

If your subscriber at Oneida, Ill., who has a horse with a swelling on his neck, (*Western Rural*, of July 5 h), does not find the case yield to the treatment prescribed, he should cut at right angles on the withers through to the prolongation of the vertebra in order to cure his horse.

A. B., V. S.

Grand Rapids, Mich.

LAMPAS OR LAMPUS.

W. E. Mintzer, veterinary surgeon, St. Paul, Minn., says this complaint is common to all young horses, but it is cruel and unnecessary to burn or cauterize for it. By passing the finger nail up between the gums and the teeth it may be loosened, which is all that is necessary. But even this is not necessary, except in extreme cases, for if corn in the cob is fed to the animals for a few days the effort to shell it will cause the gum to be loosened just the same as with the finger. A horse has a strong memory, and, once burnt in the mouth, he is apt to be chary of your meddling with it in any way, and many ill-halter tricks are the consequence.

VEGETABLE ORIGIN OF THE EPIZOOTIC.

The fungoid origin of the epizootic is treated of by Mr. Moorhouse, of New York City, in the *American Naturalist*. He found three distinct vegetable organisms in the nostrils besides the regular pus exuding therefrom. One of these was a minute lichen (*Nicotaria scruposa* of botanists), in every form of development and in large numbers, hundreds in a single drop. Another was an unknown species of *Aspergillus*, also in progress of development. The third form was a species unknown to the writer. It has not been hitherto discovered. In order to demonstrate that these spores were floating in the atmosphere, they were caught on moistened glass in the vicinity of the disease.

This does not prove that the fungi is the real cause of the disease. The spores may simply have found a favorable nidus for development in the matter given off by the disease. It is nevertheless interesting, as it brings the vegetable origin of the disease nearer towards demonstration, and, it is to be hoped, will be followed up by further experiments.



## AGRICULTURAL.

## GRASS FOR HAY.

F. G., in the *Country Gentleman*, writes:

"Grass obtains nearly all its strength from the atmosphere. It is for this reason that natural pastures sustain themselves, and the more of the growth that is left on the ground the richer it becomes and the better the growth; hence the fertility of the prairies; hence also the rich muck beds which are sometimes found on the poorest of land. And so our farms may be improved by simply leaving part of the crop—the more that is left the better for the land. This I will say—and I wish I could reach the ear of every farmer in the land and induce him to test the matter—that we have grown and seen grown for many years in succession, good crops of timothy averaging two tons per acre, and varying but little from it, on land that was light and had produced but moderate crops, running out grass in a few years, and this alone by leaving the aftergrowth; not a hoof was permitted to touch it.

"Heavier crops are realized from better land. The secret of this is the reproduction of the crop, the aftermath. The growth retained not only protects the roots of the grass, but it rots down and forms pabulum in the spring for an early start and for further growth. This, lying on the ground, comes in direct contact with the roots, and there is an immediate benefit. In some winters and localities the grass (aftermath) keeps green, and thus has a start in the spring, and advances at once, occupying the soil before the coming hot sun strikes it, and thus warding off drouth."

## THE PEACH BLOW vs. PEERLESS POTATO.

Shelbyville, Ky., April 29, 1873.

MESSRS. EDITORS.—I see an article under the above caption in your issue of April 10, in which the writer endeavors to laud the peach blow potato to the detriment of other varieties. Of the peach blow I have nothing to say in regard to their eating qualities, but experience with us proves them not productive, liable to be affected by fall drouth, and the vine subject to be eaten up by the potato bug before the tubers are formed—on account of their late maturity—while the early rose, russet and peerless are our dependence for a main crop in this locality, more particularly the peerless, which three years' experience has proved them to be the opposite of what the *Journal of Agriculture* asserts. We have found the peerless productive, a good keeper, mild and mealy throughout the year. Out of 1,000 bushels I raised last year not one was found hollow. The same is the experience of all my neighbors. For seed this spring they sold at \$1 to \$1.50 per bushel, while other varieties would not bring over 50 cents; and are considered by all who have tried them as the coming potato. The writer in the *Journal of Agriculture* has either never seen the peerless potato or soil and climate has much to do in their growth and eating qualities.

Yours truly,

J. D. GUTHRIE.

[Here is thoroughly reliable evidence further corroborating what was said in our last issue on the subject of the peerless potato, a variety the great general merits of which are now all but established in so far as this section is concerned.—From the *Home Journal*.

## PLOUGHING UNDER GREEN WHEAT.

Long experience and close observation have convinced me that buckwheat is the best and cheapest plant known to turn under to enrich the soil. Clover is much better to fertilize land than any other crop, but it will not grow in poor land, or, if it does grow, will amount to a poor crop—not one-fourth as much as buckwheat—consequently not so profitably adapted to the purpose of promoting fertility. Buckwheat is only the best crop because there is no other plant that will grow so luxuriantly on very poor soil. In the list of plants to plough under in a green state for manure, besides buckwheat and clover, we might name oats, rye, corn, turnips, &c., any of which will answer a good

purpose, but not so reliable as the two above named, owing to the superabundant saccharine matter they contain, which is apt in certain stages of growth, and the circumstances of too much moisture or coldness of the earth when ploughed under, to make the land sour, and to do more harm than good.

My plan would be to plough and harrow the land fine and mellow, then saturate the buckwheat seed with stale chamber lye or greasy pickle from the mackerel barrel, then dry with hickory ashes—a peck or half bushel to every bushel of buckwheat, which will be pabulum to the infant germ, directly in contact, to give it a vigorous start. After the buckwheat is a few inches high, sow a bushel of gypsum to the acre as late in the evening as possible can be sown, or sow a compost over it made with slacked lime and swamp muck or road scrapings, three parts of the earth to one of the lime, either of which will make buckwheat grow on poor land. In case the soil is very dry at seeding time it is best not to sow the prepared seed in the hot earth in the morning or the middle of the day, but wait till the evening and let it lie all night, then harrow it and roll it with a heavy roller very early in the morning while the soil is wet with dew.—*Ex.*

## TO PREVENT CLOVER GROWING TOO COARSE.

It is sometimes objected to clover that it is too coarse as a feed, this being the case where it is grown on strong ground, making a large stalk. This can be remedied by sowing thick, and thus getting a fine-stemmed crop, also shorter in length, the stalks varying from fifteen to twenty-five inches, according to the quality of the land, the season and whether plaster has been used.

But the point is to sow thick—from ten to twelve quarts per acre, evenly scattered on even, mellow soil, and brushed in if sown with spring grain. This forms a close growth, and must be cut before it lodges much, and this is generally about the time of flowering. Else, if lodged badly, and permitted to remain so for some time, it will partially rot, and lose much of its value as a feed. But harvested in good time, and well cured, there will be no deterioration of the high value which this plant has obtained among our best dairymen.

Three tons per acre may thus be realized, and, if the season is a good one, the amount may be doubled by two cuttings, and clover should always be cut twice, each time about the blossoming period.

We prefer the medium size or June clover, as it is earlier and finer-stemmed than the large kind, and less apt to lodge, and always permits of two cuttings. On poor land clover may be grown successfully, improving the land. But it may be raised on the richest of land with the most gratifying results, only get it close so as to have it fine-stemmed, and cut it in time.—*Country Gentleman.*

## WORKING HARD.

Working hard is not always working to the best advantage. A man may work very hard chopping wood with a dull axe, or pumping water with a pump that "sucks air," but he is not working with economy.—A man gets pay, or ought to get it, not for "working," but for what he accomplishes. This is as true of the farmer as of his hired man, though we do not feel its force so fully in the one case as in the other. We do not like to pay a man for carrying one pail of water when he might just as well carry two, or for plowing or harrowing with one horse when he might just as well drive three. But farmers themselves often do things equally wasteful of time and labor. Do we never take a load to the city and come back empty, and then go empty to the city to bring back a load, and thus lose half our own time and that of the team, and pay double toll into the bargain?

All analysts agree that old, brack swamp muck contains just about the same ingredients as the solid excrements of horned cattle when hay or grass fed, except that the soluble alkalies of the former—potash and soda and a little common salt—have been washed out, while they remain in the latter. This shows for swamp muck a considerable value, since the addition of a little wood ash, very little common salt, and a little lime to neutralize its acidity, all costing but a trifle, make it almost the equivalent of manure from under the stable window.

## ROYAL AGRICULTURAL SOCIETY'S SHOW.

The Exhibition of the Royal Agricultural Society at Hull, England, is said by the *Magnet* to have been of more than usual interest. The entries amounted to 1,145; of these 281 represented horses, 308 cattle, 365 sheep, and 191 pigs. The Short-Horn bulls above three years old were a capital class.

The Short-Horn cows are said to have been much the best collection ever brought together in England, and the yearling heifers were also good. The Herefords, although not half as numerous as the Short-Horns, were of the highest quality, among them five splendid Hereford cows. The Devons numbered thirty-one—a small number but again of the best quality. Sheep were a fair average as to quantity and something more as to quality. Mention is then made of a potato planting machine on exhibition:

"The machine opens a couple of channels in worked ground, sows artificial manure along the bottom, and drops the potato sets and covers them over at one operation. The sets are deposited at tolerably even intervals, excepting when two small-sized potatoes occasionally chance to fall in place of one set; and hence, in practice, the rows will probably be left open for a lad to correct by hand-basket."

The department of seeds and vegetables, especially roots, is always an important one at the English Agricultural Exhibition, and the great contributors upon former occasions were not absent upon the present one, their respective stands attracting as usual crowds of admiring visitors. In this connection it would be well for American farmers and gardeners to take a lesson from their English brethren. Farm products should be one of the most important in the category of exhibits at our State Fairs, and yet it is seldom that more than mere samples are offered, and these not always of excellent quality.

## VAGARIES OF THE POTATO DISEASE.

Notwithstanding the prevalent idea that nature places things just in the exact places where they are best fitted, it does not seem to be a truth always borne out by experience, whether we regard the animal or vegetable worlds. The writers on American weeds tell us that foreign varieties which come over here and contest the palm with our own native pests usually grow better than they do in their own country, and it seems to be true with our relatives when they go making an European tour. There has, for instance, been a discovery lately of an insect injurious to the roots of the grape vine, called the *Phylloxera*, which is supposed to be one cause why some of our grapes do not do so well. It does not, however, entirely destroy our grapes. But this American has been journeying across the ocean with our Catawbas and Isabellas, and is giving the English what our small boys call "Hail Columbia." Wherever it sets its little feet the grape vine is completely done for, and there is rising up in England a prohibitory cry and a "stamping out" agitation such as marked the early history of the cattle plague.

The potato fungus is said to be of American origin, but, bad as it has been with us, it has never been so serious a trouble as it has been found in British experience. There are acres of potatoes, one day in vigorous healthfulness, will, within a few days, have the whole field of stems blackened and filling the air with an odor of seething rottenness; and the tubers are seized and decay as rapidly. So great is the damage done by the disease that it is becoming customary to plant much more than will be required in order to allow for the disease. The increased price of potatoes in a short crop makes up for the loss if there be any. A recent writer says that the usual full crop of an English potato field is from five to seven tons per acre. The disease, he says, has thinned out the crop terribly, but, even though the final result should be but an average of two tons to the acre, there will yet be enough for the demand, if not, indeed, potatoes to spare.

## MANGE IN SWINE.

Upon the first indication of mange in swine wash the hog thoroughly with a strong suds of Castile soap and water, and then apply an ointment made by adding to each pint of hot lard, one ounce of carbolic acid, stirring the whole until cool. Apply this thoroughly to the hog, rubbing it well into the skin. Two or three applications will usually cure the subject.

## BEET SUGAR.

A company has been formed in the Town of Cobourg for the purpose of manufacturing sugar from the sugar beet. Seed has been imported from France, machinery has been purchased for the factory, and experiments already made have proved highly satisfactory.

## SMALL FARMING.

The Paw-Paw *True Northerner* says: As an evidence of what may be done on a "Small Farm" the following exhibit of the productions of a small portion of the farm of Hiram Jacobs, of Prospect Lake, may be of interest to some of our readers. From three acres of raspberries he gathered and sold the present dry season 3068 quarts, which sold for \$320. From one-fourth of an acre of strawberries he sold last year 912 quarts for \$100.35, and from the same plot he sold this year 546 quarts, which brought \$82.50. He has a plot of one-fourth of an acre of blackberries which the severity of the last winter killed. He makes the cultivation of small fruits a specialty, and will supply those in want with choice varieties of raspberries, blackberries, strawberries and the choicest varieties of currants.

## SALT FOR CUT WORMS.

A great deal of attention is attracted to the application of salt to corn hills to prevent the attacks of the cut worms. The late Isaac Newton, Commissioner of Agriculture, said:—"Take one part of common salt and three parts of plaster or gypsum and apply when the plant first makes its appearance about a tablespoonful around every corn hill. It will be found a sure protection. The mixture should not come into contact with the plants, as it may destroy them." This method has been tried over and over again by some of our best farmers, and, when properly applied, has never failed. Newton further said that he tried this in alternate rows, which completely proved its efficacy, as, while those where it was not used suffered greatly from the grub, not a plant in the other rows were touched. Let it be tried, as it can be so easily done by those who are troubled with cut worms in the corn-field about these days.

## UTILIZING CARCASSES.

In answer to the question how is the best way to dispose of dead animals, the Massachusetts *Ploughman* says: "The most economical way is to cover the carcass six or eight inches deep with muck, and let it lie and decompose. It may take six months or more. It is better to put it within sight of the house if possible, so that it may be watched a little to keep the dogs and crows off. The muck or loam will absorb and retain the gases which are given off in the process of decomposition. After it has lain through a summer, fork over the mass and throw out the bones, add half a bushel of plaster or gypsum and another load of earth; let it lie a month or two longer, when it will be fit for use. The bones can be broken up as much as practicable, put into a cask and covered with ashes, to be kept moistened from time to time till they are softened. Every dead animal is worth saving, and it is very poor economy to haul it off to one side of the farm and leave it for the dogs and the crows.

## BONE DUST BRICKS.

An Australian paper, speaking of the vast quantities of bones that have been accumulating in Melbourne since the meat preserving occupations commenced there, says: "The Militaries, bound for London, has on board a shipment of 100 tons of bone dust, prepared for exportation in an altogether novel manner, and one which promises to come into extensive use. To facilitate the trade, an apparatus has been contrived for compressing bone-dust into half its original compass, reducing it at the same time into a form very convenient for shipment. By means of strong pressure, the crushed bones are moulded into cakes of six inches square and three inches thick, something like flooring tiles, each cake weighing a little over 4 pounds. These bone-dust tiles are just adhesive enough to admit of their being handled freely—thrown about like bricks, if necessary—and are yet so free, that when required for use they can readily be crushed, or melted by the application of a little hot water. A ton weight of the manure measures 26 cubic feet, and contains 252 of the cakes.

## CLEANING

The idea of wheat, as degenerated into another employment. If absolute cleanliness is the product of the growth, constantly brought under the control of agricultural agencies, and remaining called into existence.

We will not, however, be roughly (perhaps it over), and this care, if thought he with foul from the barn yard been carted deeply under the soil for at least a portion—the soil.

common water, but their spread.

As a rule careful in most thoroughfests were the most few of their pains from the well these ket purposes do it admichine that manner as ever, may to the va and perfect. With the a large ad prices on a clean.

One of the from grain thoroughly sieves for grain, since seeds is very wheat. In form of the rye, rendition. But difficulty ytion, and t by much e

There are in a single tersely used ness where so importa have certa on experie of busines almost ass cannot do happen to over dry, are plague times with of these Trouble ne will succ the young by misfor fail. We city work had origin and had al to it as so to warrant put away t only six happened in terrible ence, and and this, a new and himself w dollars, and cates of th —German

CLEANING SEED FOR SOWING AND MARKET.

The idea that certain of the foul seed in wheat, as chaff for instance, is produced by degeneration in the changing of one variety into another may easily be settled by the employment of a good fan in cleaning grain. If absolutely clean seed be sown in soil certainly known to be free from other seeds, the product will be like the seed sown. One of the great difficulties is that the soil is constantly filled with the seeds of weeds, brought and retained there by various natural agencies, some of them, like purslain, chaff, and other weeds of persistent vitality, remaining for a long time in the soil, until called into growth by favorable circumstances.

We will give a single instance to illustrate the point. The farmer cleans his seed thoroughly, (perhaps goes to the trouble to pick it over), and sows it, and, notwithstanding this care, finds the crop, the seed of which he thought he had so carefully gone over, is filled with foul weeds. The chaff or tailings from the fanning mill were thrown into the barn yard to be mixed with manure, and had been carted on the land and perhaps plowed deeply under, to remain—a portion of it—in the soil for years perhaps before it germinates. Or birds may have eaten the seed, and a portion—undigested—has been scattered on the soil. These are but two of the more common ways in which foul seed is disseminated, but are striking enough to account for their spread.

As a rule those farmers who are the most careful in cleaning their seed grains and the most thorough in their cultivation have the fewest weeds to contend with, and such are the most fully compensated in the end for their pains. One of the most prolific sources of the spread of weeds is sowing directly from the threshing machine, for however well these machines clean the grain for market purposes—and the better classes of them do it admirably—still there is no power machine that will clean seed in so thorough a manner as to fit it for sowing. This, however, may be accomplished by cleaning by the more modern fans, having sieves adapted to the various sizes and shapes of seeds and perfectly controlled by the blast given. With the use of these we have often secured a large advance over the ordinary market prices on account of the seed being perfectly clean.

One of the most difficult seeds to separate from grain is cockle and chess, and to do so thoroughly it is necessary to have proper sieves for separating these from the good grain, since the specific gravity of these seeds is very nearly that of barley, rye and wheat. In the case of chess the peculiar form of the seed, being long like wheat and rye, renders it especially difficult of separation. But with the modern fans but little difficulty will be experienced in their separation, and the value of the seed will be thereby much enhanced.—*Western Rural*.

PROFITABLE FARMING.

There are too many men who put their all in a single venture, and if that fails, are utterly used up. There is, perhaps, no business wherein "two strings to one's bow" are so important as in farming. Other pursuits have certain rules which have been founded on experience, and which the shrewd man of business can take advantage of with an almost assured certainty of success. But we cannot do this. We cannot tell what will happen to our crops. Sometimes it will be over dry, sometimes over wet, sometimes we are plagued with swarms of insects, at other times with blights and mold. Against none of these do we get the slightest hint. Trouble never strikes everything alike. Some will succeed. But independent of all this, the young farmer should not be cast down by misfortune. It is here where so many fail. We knew one once who had made by city work some eight thousand dollars; he had originally been brought up on a farm and had always made up his mind to return to it as soon as he had accumulated enough to warrant him in making a start. But he put away two thousand dollars, and invested only six in the farm and stock. It so happened that the next two years found him in terrible losses, but they brought experience, and he fell back on his small reserve, and this, with his new experience, gave him a new and a good start. He now considers himself worth about twenty-five thousand dollars, and is one of the most ardent advocates of the position that farming will pay.—*Germantown Telegraph*.

CANADIAN PRODUCE IN ENGLAND.

Mr. Potts, in an address at Macclesfield, England, speaking of the resources of Canada, showed that the United States frequently got credit in England for Canadian produce. The apples of Canada, now highly esteemed in England, were there supposed to be the produce of the United States. The following, from an English journal, is an extract from Mr. Potts' address:—

"There was a wrong impression abroad in this country as to the productiveness of Canada, and he might tell them that, if the Canadians had bought American produce and sent it over to England, the purchasing people in this country would have had a different idea of the Canadians. But what had Americans been doing? They had simply been buying Canadian produce and selling it in England as their own. A few days ago he went with a gentleman through St. John's Market, Liverpool, and they were admiring some "stands" piled up with apples. He asked the keeper of the "stand" what kind of apples he sold, and he replied that they were American. He turned to his friend and said, "There is not an American apple on the stand, as that gentleman understands America." They were nothing else than Canadian apples, and he ventured to say that in Macclesfield at present there was not an American apple to be found, though people imagined that they were all the while eating United States apples. Perhaps it was not generally known in England that the Americans themselves had to get their apples from Canada. The climate of America was generally so hot they could grow luscious apples, but they would not keep, hence the Americans were obliged to come to the Canadians for their winter stock.

DO PLANTS GROW IN THE NIGHT?

The popular teaching is that plants do not grow in the night. This doctrine is accepted, I believe, by vegetable physiologists in general. The theory is that during the day or in the presence of sunlight the leaves of plants inhale or absorb carbonic acid gas, and expelling it and appropriating the carbon to the structure of the growing plant, while the oxygen is expelled again. But in the night—in the absence of sunlight—this operation is reversed, and the plant really loses instead of gaining substance. A little experiment that I recently made seems to show that some plants, contrary to the common belief, do grow in the dark.

I selected a stalk of growing Indian corn (*Zea mays*) about two feet high. Choosing the centre blade, the tip end of which was just making its appearance, I set a stable by it and marked its height at sundown. The night was very warm, clear and sultry. The moon shone a part of the night. At sunrise the blade had grown one and a-half inches. The next day was warm but cloudy, with a light shower early in the morning. During the day it grew one inch. The next night warm and cloudy; growth one inch. The second day warm and clear; growth one and a-half inches. The third night warm, with thunder clouds in the horizon the most of the time; growth one and a-half inches. The third day was warm and clear till 3 o'clock, when a light thunder shower came up; growth this day was one inch. It will be seen that during the three days and nights the blade increased in length four inches during the night and three and a-half inches during the day time, showing a greater increase during the night than day. The time of measuring in each case was at sunrise and sunset.

I find the opinion quite common among our farmers that warm nights are necessary to make corn grow well, and that it makes a large portion of its growth in the night. The above experiment seems to confirm this idea. But, if this be true, what becomes of the doctrine of the absorption and elimination of the atmospheric gases during sunshine and the reverse during the night? Are the doctors mistaken, or are we mistaken in our observations of the teachings of the plant itself? *L. J. Temple, in Rural New Yorker*.

There has not been such a crop of beechnuts, hazel-nuts, butter-nuts, cherries and other wild fruit in the woods of Central Canada for years as there is this season. Bear, partridge, deer and all kinds of game will be in splendid condition in consequence when the shooting season commences.—*Ottawa Citizen*.

BUTTER CONSUMPTION.

It is estimated that each person in this State (Chinese excluded) will consume on an average one pound of butter per week. This would make at least 25,000,000 pounds per year, or about \$7,500,000 worth at 33¢ cents per pound—about the average price. So the butter making, it is easy to see, is no insignificant part of farming, and, as butter is a cash article always when a good article, there is no deception about its value or the profit of its manufacture. At 100 pounds of butter a year as the produce of a dairy cow, it would take 250,000 cows to supply the demand in California.—*Cal. Agriculturalist*.

MIXED HUSBANDRY AND ROTATION.

The following is an extract from a speech delivered before the Maine State Board of Agriculture:—

"No one crop is safe enough for a speciality. Take any crop you please and see if this is not true. Specialities look well on paper, are fine in theory, but are poor in practice. The husbandry of England is due to a judicious rotation for its excellence. The climatic conditions that are favorable to one crop militate against others to some extent. The price demanded for skilled labor will not admit of specialities being generally followed. If we run to a speciality and that fails we are out in the cold. It takes more skill to run a speciality than mixed husbandry, and it will not pay to run specialities except with skilled labor. Near good markets this course may do, but for the farmers of the State as a whole it will not do.

ABOUT DRAIN TILE.

1. How deep should drain tile be laid to effect a thorough drainage on loam soil surface nearly level and no surface water only in a wet time? 2. Where can drain tile be bought? 3. What is the cost per foot or rod? 4. What size tile would I need for main drain, 50 rods in length? 5. What size for side drains 20 rods in length?—*L. M. W.*

In reply, we would not lay tiles less than three feet deep. We cannot answer where the tile can be bought, nor the cost per foot, for the cost will depend upon the size and the distance they must be transported. For main drains we should use 2½ inch tile; for side drains, 1½. In the soil you describe, perhaps inch tube would answer for the area you desire to drain for the side drains, and a two-inch tube for the main drain. We should think it would. You ought to be able to get the 1½ inch tile and collars at not over 20¢ per rod.—*Rural New Yorker*.

HOME-MADE CHLORIDE OF LIME.

Prof. Nash gives the following directions for making this very useful disinfectant and fertilizer. Take one barrel of lime and one bushel of salt; dissolve the salt in as little water as will dissolve the whole; slack the lime with the water, putting on more water than will dry sick it so much that it will form a very thick paste; this will not take all the water; put on, therefore, a little of the remainder daily until the lime has taken the whole. The result will be a sort of impure chloride of lime, but a very powerful deodorizer, equally good for all outdoor purposes with the article bought under that name at the apothecary's, and costing not one-twentieth part as much. This should be kept under a shed or some out-building. It should be kept moist, and it may be applied whenever offensive odors are generated with the assurance that it will be effective to purify the air, and will add to the value of the manure much more than it costs. It would be well for every farmer to prepare a quantity of this and have it always on hand.—*Home Journal*.

WILD MUSTARD.

A correspondent of the *North British Agriculturalist* writes:—In the summer of 1866 I had a field of 15 acres of oats very bad with wild mustard. When the oats were cut I observed the seed of the wild mustard lying thick upon the surface of the ground. Immediately upon the crop being removed, I set to work and harrowed the stubble well, the consequence of which was in a short time a fine growth of mustard made its appearance, and which in course of time was plowed down, and since that time there has been next to none in this particular field.

The production of beet-sugar during the last season in the north of France was estimated at over 350,000 tons, and the farmers there at preparing for a much larger return this Autumn.

FALL SEEDING GRASS.—Good farmers in the West are becoming, year by year, more convinced of the inutility of spring seeding to get a good stand of grass when sown with another crop, particularly if that crop be oats. The reasons are simple, the principal one being that the young grass, being smothered by the crop, grows spindling and with but little root, and the usual drouth of summer, after the grain crop is gathered, often kills it entirely; or, if it does not, it is so weakened that the subsequent freezing and thawing of winter heaves it, or freezes it to such an extent that it takes sometimes years to fully recover. This is obviated if the seed be sown after the crop of grain has been harvested. The land should be lightly plowed, harrowed and rolled until perfectly smooth. Upon this sow the seed at the rate of twelve quarts of timothy, unless clover be used on the field, in which case eight quarts will be about the quantity for ordinary seeding. It is true many good farmers sow less, but experience has shown that ample seeding gives the better and more equal stand. The seed being sown, harrow again with a light smoothing harrow or some other implement that will not clog, but will leave what trash may be brought to the surface equally distributed over the field. The seeding for grass should be made in the latter part of August or beginning of September; indeed, the earlier the better if seasonable rains occur, so that the grass may get a good root-hold before the ground freezes. If it be intended to sow clover as a part of the meadow or pasture, six to eight pounds should be seeded the following spring just as the frost is coming out of the ground; and this need not be harrowed in. When the land becomes settled it is good practice to roll it with a moderately light section roller, to compress the earth about the roots of the grass and clover.

FIRST PRIZE REAPING MACHINES.—The French Government, recognizing the importance of improved agriculture, especially at the present time, issued a few months ago a programme of the international trials of reaping machines on the Government farms at Grignon. These prolonged trials have just concluded.—The American and English makers were there in full force; the former were Burdick, Johnston, Whiteley and Wood; the latter were Horsely, Howard, and Samuelson. They also sent over their own trained horses and men.—All the machines were severely worked for several days in heavy crops of winter and summer wheat and oats, a good deal laid and twisted, and after varied and protracted tests the judges—all of whom were appointed by the Minister of Agriculture—made the following award:—Howard, of Bedford, England, first; Burdick, of Auburn, America, second; Wood, of Hoosick Falls, America, third. Further trials were then gone through with selected machines in the English and French sections, and the judges gave Howard, in addition to the first prize, the gold medal of honor for the best machine in every class.

LOCUSTS AND CROPS IN AUSTRALIA.—The grain fields near the Bertha promise an abundant yield this season. Our Koorringa correspondent writes on the subject and about the insect nuisance:— "The frequent rains, although not heavy, have caused a luxuriant growth of all the early sown wheat, and even that which was put in late may amply repay the farmer. Locusts are often talked of, and frequent alarm is expressed about the eggs laid last year germinating when the warm weather commences. In patches of burnt ground and in sheltered situations a considerable number have not been seen, but these would probably have not been noticed in other seasons. That the pests are in full array in the Murray Scrub is probably true. That, however, is generally the case there at this time of year."

AGRICULTURAL EXHIBITIONS.—ONTARIO.—Provincial Exhibition, London, Sept. 22, 23, 24, 25 and 26. Guelph Central Fair, Sept. 16, 17 and 18. Hamilton Central Fair, Sept. 30, and Oct. 1 and 2. North Riding of Oxford, Woodstock, Oct. 6 and 7. South Riding of Oxford, Ingersoll, Oct. 2 and 3. Mitchell, Sept. 29 and 30. St. Mary's, Sept. 30 and Oct. 1. Wingham, Oct. 2. Stratford, Oct. 2 and 3. Seaforth, Oct. 2 and 3. Hilbert, Oct. 7. West Zorra, Oct. 10.

WHITE CLOVER AS A HONEY PLANT.

White or Dutch clover is the queen of honey plants. It is widely cultivated in this country, and continues to flower a long time. In Scotland, the farmers use more white clover seed in laying down the land in grass than the farmers of England, hence the clover fields are better there than here.

England raised 16,000 bushels of wheat a century ago—now 100,000,000 a year. How came the increase is suggested in part by the fact that since 1837 she has imported over \$150,000,000 worth of bones as fertilizers.

DEEP vs. SHALLOW PLOWING.

There is still a difference of opinion in this country as to the policy of deep plowing. The shallow plowing advocates claim the acquisition to their ranks of men who have long advocated deep plowing. We believe that the difference of opinion, and in the results of experiments, is largely due to lack of knowledge as to how and when and where deep plowing should be performed. In England a Mr. Evershed has been opposing deeper cultivation of the soil. Mr. Meechi thinks he is thereby doing much harm to the cause of agricultural progress, and insists that the present disturbance of soil is too shallow. We copy Mr. Meechi's interesting article. He says:—I say "soil" because in Nature it comprises what we call soil and subsoil. The more proper definition would be "disturbed and undisturbed soil." Why plants or trees prefer the upper and disturbed soil is obvious. Disturb, aerate and manure the subsoil, and then the plant or tree will multiply its fibers of roots in that lower soil, especially as the surface becomes more heated and dry. I have a striking proof of this in my backyard, where there was once a piggery. I filled up the space some six feet deep with ordinary clay soil, and planted on it some aucubas, laurels, bays, arbor vites and box, in order to hide a stable wall. Although the plants were small, their growth has been so rapid and luxuriant that they are from ten to fifteen feet high, and they absolutely wedge or press each other with a development which surprises, and also proves that if the lower soil is both disturbed and amply manured a small surface space is sufficient to maintain an immense vegetable growth. They have found in the deeper soil the needful food in some droppings from the ancient piggery. As regards the removal or transplanting of fruit trees, it is only another proof of the necessity for more deeply disturbing and manuring the soil. By removing them after having exhausted their surface food, they thus go to a new supply and prosper accordingly. The removal would not be necessary if they had an ancient piggery or well manured soil to feed on deep below the surface. Said my bailiff to me this morning, "Do you know why these cabbages don't grow as they generally do?" I said "No." "Well," he replied, "because we omitted to follow the plow with a second one going some inches deeper. We were busy and could not spare the horses, and now the roots are on an untilled bottom."

The fact is, the plowmen are always too glad to escape the subsoiling because it is harder work. The loss in crop by late and shallow plowing is, taking the whole country, something fearful. The roots of crops soon strike through the thin furrow slice and come on to what I call a paved floor, and then the pale and sickly plants give evidence of their uncomfortable and unprofitable condition. Many a mangel crop has failed to make its appearance because the thin furrow slice has been dried through. We never miss our plant of mangel because the soil is deeply double or trench plowed before winter, and it thus holds and gives moisture as well as being a good filter in wet weather.

I attribute the general satisfactory appearance of all my crops to very deep cultivation, and I would make it much deeper had I steam power, keeping, however, the lower soil still under the older cultivated surface.

I consider it both a national misfortune and disgrace that our general agricultural pie crust is only as thick as an old family Bible. It ought to be as deep as our talents are high, and it is so in the case of Mr. Campbell, of Buscot, who, after draining four feet deep, cultivates with thirty-horse power engines thirty-six inches deep.

We are now about to manure and plow our land for transplanting cabbages after green tares mowed off. After spreading twenty loads per acre of good, rich shed manure (no rain on it), two horses will be on the first plow, the second one, without its breast, following in the track of the first one, and drawn by four strong horses. This is the way to grow maximum crops. Draining, where required, should precede deep cultivation.

It should always be remembered that we cannot mature the subsoil through the top soil, for a few inches deep of the latter have the power to arrest and fix a much larger quantity of manurial elements (especially

ammonia, phosphate of lime and potash) than is ever applied in ordinary farming. This is why clover and other deep-rooted plants can only be grown at long intervals, for only a very small portion of manurial elements can pass the surface soil or escape being fixed by it. The raw and unaltered appearance of undisturbed soil immediately beneath the plowed land gives unmistakable confirmatory evidence of the fact stated. Liebeg and Way explain the cause of this fixing.

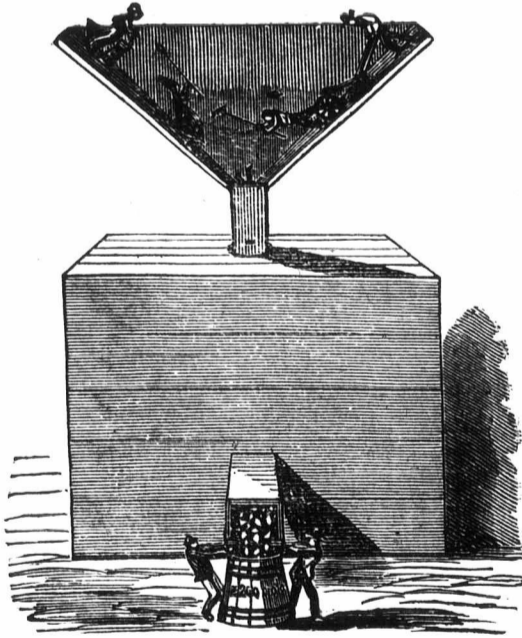
It is, therefore, quite certain that if we desire to manure the subsoil the manure must be incorporated with the subsoil, or the subsoil must be intermixed with the surface soil. The Rev. S. Smith, of Lois-Woodon, used to throw away the cultivated soil and incorporate the manure with the undisturbed subsoil.

TO PLOW DOWN GRASS.

To do this effectually is one of the apparent impossibilities of modern farming. Every farmer knows it from experience. Notwithstanding the utmost pains and care in plowing grass, especially if long, will bristle up in beards and tufts here, there and everywhere, injuring alike the appearance of the field and its capacity for growth; for this grass, instead of being visibly present to draw nourishment for itself and impede the growth of something else much more profitable, should be buried beneath the surface to mature the soil and assist in the growth of its betters. Well, do you wish to remedy this great difficulty? If so, use the chain and ball to your plow. No matter what kind of a plow you have, try them. A piece of ordinary trace chain will do very well. Fasten one end of it to your coulter, and to the other end attach a round iron ball of from two to three pounds weight, having the chain long enough to permit the ball to reach back to about the middle of your mold-board, and there let it drag along on the off side, of course. This is not a new idea—in fact, it is a very old one—but, like wine, age only improves it. Just try it once and we have no fear of your verdict. It may not do the work to absolute perfection, but it will perform it at least fifty per cent. better than you can do without it.—*Canada Farmer.*

SEED CORN.

We have much complaint about seed corn this spring. Now, I take this occasion to tell my fellow farmers how they may avoid



that great draw-back on a good crop of corn, our great Iowa staple. Select your best ears before they are injured by the frost. If the season is favorable it may be put off till gathering time. Put it in a situation that the heat of a fire will strike it—hung about a kitchen stove, on shelves or in the loft above—leave it till the moisture of the cob is entirely dried out. It may lay then all winter, or it may be shelled and put in barrels or sacks and stored in any dry place, and it will certainly grow; even if planted in March it will lay quiet until it has a chance to come up. I have never known it fail after a long experience. It is worth much to any person who will try it.

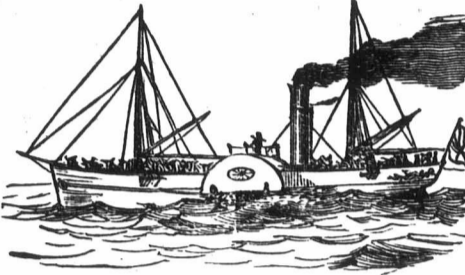
W. W. W., in Iowa Homestead.

The Government Agricultural Farm.

PREVENTION BETTER THAN CURE.

We attempt to prevent an injury being done to us farmers by the vast expenditure of Government money against our interests.

The Hon. D. Reesor, at the last meeting of the Farmers' Club at Markham, gave some new information regarding the fitting up of a vessel expressly for importing cattle by the Government. We give the accompanying illustration to show the commencement.



Here is the Ship bringing over the Government Cattle.

The second illustration shows the cattle all being driven across the lines for the benefit of the Americans, or perhaps rather for the dealer who imports them at our expense, and receives the Americans' money for them.



Here are the Cattle and somebody making a good thing on them.

The third cut represents the Government machine into which us farmers are tumbling or rather forced. We shall have a pretty good squeeze put on us to pay for the importation of cattle for the Americans.

The annexed is the Government Machine squeezing the farmers to pay for the cattle.

Every real farmer and every breeder well knows that there is no necessity for the Government expending our money for stock. The breeders that have their capital invested in stock can supply far more and better cattle than are now required by our farmers; in fact, by far the majority of our best bred cattle go to the stables and will go there, and we have plenty left. They can be raised as fast as our farmers are prepared to take care of them. This fancy breeding and these fancy prices are connected with forced breeding such as will not stand for ever. It is another division of the race course speculation; it is a species of gambling. Should the Government use our money for such a purpose?

We should not touch on this so strongly, but the Minister of Agriculture informed us of the intentions of the Government and we at once told him it was not required; that it would tend more to injure than to benefit. Farmers, let us have your opinion on this subject.

The Farmers and Road Companies.

We all need good roads; we would like to encourage the making of more gravel roads, and would like to see a law passed enabling the enterprising farmers in different sections who are willing to do their share towards making gravel roads, to do

so by making the proprietors of lands whose property would be improved by the gravel roads, pay their fair share towards such improvements.

The Toll Gates we should abolish. We have to pay double the price we have any occasion to by keeping Toll Gate keepers, Toll Gate houses and worse, the Toll Gate speculators, whereas, by direct taxation the roads might be kept up at less expense than at the present time.

There are many companies that receive money for which they give no proper equivalent; for instance, we were travelling on the road between Chatham and Charing Cross, in the County of Kent, a distance of six miles, during the summer, and a lot of large projecting stones were constantly coming in contact with the wheels of the vehicle, making it very unpleasant riding and very liable to break the vehicle. We went from this gravel road to the common roads, which were much easier for man, beast and vehicle, and yet a toll was exacted on the gravel road. The reason of this road being so unusually bad is that the company being desirous to retain the toll, keep up repairs in the following manner:—A lot of round stones about double the size of a man's fist were put on the road, making a thin layer; these were covered with clay or soil from the roadside, and then a little fine gravel or screenings were thrown on the top, and this they call a gravel road and collect toll for. Every one knows the large stones will come to the top, and the small gravel lost in the mud, when the road can not be efficient.

We saw another road in Markham, not far from Toronto, that was not much better. Some roads in Middlesex we have seen much out of order, and tolls collected when they ought not to be. We wish to strike a blow at those companies that receive toll and have improper roads, and we wish to see the Toll Gates abolished.

If a road is not in proper order, one or a few farmers may apply to their Reeve; the county engineer may be called in and the road condemned, when the road may be travelled free of toll. Farmers, get the toll roads condemned as soon as you can, and apply for an act to enable you to compel Mr. Slow-coach to pay his share of a new gravel road, if you wish it, and let us pay the expense of keeping up the roads direct from taxation, and abolish the toll gates.

DISINFECTANTS.

Herr Eckstein, of Vienna, strongly recommends chloride of lime as the cheapest and best of all disinfectants. His experiments with various substances used for this purpose show some curious results. Thus, two pounds of sulphate of iron, dissolved in water and poured into a saucer, at first liberated sulphuretted hydrogen, and after twelve hours no longer produced any effect; a solution of sulphate of copper behaved in the same manner; two pounds of crystals of green vitriol retained its action for two days; a mixture of sulphates of iron and copper and carbolic acid lasted two days; sulphurous acid was suffocating, and produced a worse odor in the house than the bad gases that proceeded from the sewer.

A LESSON IN FRICTION.

The United States steamship Saragossa was lately put upon the ways at Baltimore, supposed to need only new caulking and copper. The caulkers got to work, and the seams between the planks were dressed out preparatory to driving in the new oakum. One day the iron, subjected only to a feeble blow, went clear into the vessel. A closer inspection revealed, and it was discovered that for a distance of eighty feet on each side of the keel, and beneath that portion of the ship where the boilers rest, planks which eight years ago were three and one-half inches thick, were now mere boards of one-half inch in thickness. They were not worm eaten, and to all appearance were sound as when first spiked and bolted to the huge skeleton of the ship. Beneath the boilers of the Saragossa it was discovered that particles of coal had dropped from the vessel to time, and the mere motion of the vessel, as she rocked at sea, had shaken the pieces of mineral from side to side on the planks, and worn them to the thickness of boards used in an ordinary skiff.

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Recipes.

PUMPKIN PIES.

Cut the pumpkin into small pieces. Take out the seed and inside, but do not pare it. It must be well grown and thoroughly ripened, and not watery. Put the pieces in a sauce pan, with only a few spoonfuls of water—not more than four; cover close, and let it cook gently, so as not to scorch, until the water has all evaporated, and the pumpkin has cooked quite dry, and of a rich, dark, orange, color. While hot sift it through a coarse sieve. Season only as much as you are needing for the day.

For one large pie—one egg, one tablespoonful of molasses, four tablespoonfuls of condensed milk, and enough new milk to make it as thin as you wish, or, if you have it, half milk and half cream, instead of condensed milk; sugar and spice to suite the taste. Bake till a clear, rich brown, but do not blister or scorch.

A NEW PRESERVE.

Sister Bodkin had a new kind of preserve that we all liked very much. While she was washing dishes I wiped them so that I could have the chance of asking her how she made them. She said—take fair, sweet apples

with firm flesh, pare them nicely, cut them across the core in slices the fourth of an inch thick, remove the seeds but not the core, as it improves the appearance of the preserve. Boil very gently in a little water until tender, and then lift them carefully on plates. Take half the number of lemons that you had of apples, cut them across the core in slices the same thickness of the apples, remove the seeds, and spread the slices on earthen platters. Take pulverized loaf-sugar—the weight equaling that of the fruit before boiling—sprinkle half of it over the lemon slices, let it stand a few hours till liquid enough has formed to cook them in, then drain it off and put it over the fire in a porcelain-lined kettle with the rest of the sugar. When it boils drop in both lemon and apple slices, and boil gently until the fruit is clear. For those who dislike the flavor of lemon peel, the apples can be used as above, substituting lemon juice for lemon slices, or the apples can be left whole if the cores are carefully cut out.

THE SUN CHOLERA MIXTURE.

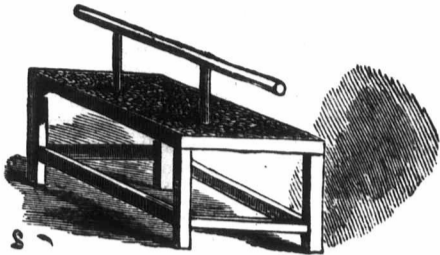
More than forty years ago, when it was found that prevention for the Asiatic cholera was easier than cure, the learned doctors of both hemispheres drew up a prescription which was published (for working people) in the New York Sun, and took the name of "the Sun Cholera Mixture." Our contemporary never lent its name to a better article. We have seen it in constant use for nearly two score years, and found it to be the best remedy for looseness of the bowels ever yet devised. It is to be commended for several reasons. It is not to be mixed with liquor, and therefore will not be used as an alcoholic beverage.

- Tinct opii,
- Capsici,
- Rhei co.,
- Menth pip.,
- Camphor.

Mix the above in equal parts: dose, ten to thirty drops. In plain terms, take equal parts tincture of opium, red pepper, rhubarb, peppermint and camphor, and mix them for use. In case of diarrhoea take a dose of ten to twenty drops in three or four teaspoonfuls of water. No one who has this by him and takes it in time will ever have the cholera. We commend it to our Western friends and hope that the receipt will be widely published. Even when no cholera is anticipated, it is an excellent remedy for ordinary summer complaint. *Journal of Commerce.*

Model Poultry House.

Nowadays barns cost as much as churches used to, and poultry houses are sometimes more roomy and better built than oldtime dwelling houses. So much attention is given to improved poultry, and the demand at re-



munerative prices is so great, that comfortable buildings for fowls can be afforded. The elevation and ground plan presented in this number represent the fowl house erected by Mr. S. J. Bestor of Hartford, Ct. It is 21 ft. front and 32 ft. deep, and the upper story is a pigeon loft, every window of which opens inward like a door, the opening being covered with wire netting, 2 inch mesh. The whole of the building is well ventilated, the cupolas at the peak and air holes below, which can be regulated at will, admitting fresh air to both stories. Pure water is also supplied in ample quantity, as a stream runs

—tables covered at the top with zinc, and coated with loose sand 1/2 an inch or so deep, renewed every morning. The vigor and thrift of Mr. Bestor's poultry show the value of cleanliness, pure air, water and good accommodation in general.

[We procured this illustration from the Buffalo Live Stock Journal Company. None of our Canadians, that we are aware of, have as yet quite as expensive a house for their poultry, but many contemplate building poultry houses, and some have good ones now erected. The plans adopted in these illustrations may be carried out advantageously without quite as expensive a building. We do not doubt but that ere many years, Canada will show a better one than this.]

DESTRUCTION OF CROPS BY INSECTS.

Horace Greeley, in his essay on "What I Know about Farming," says:—

"If I were to estimate the average loss per annum to the farmers of this country from insects at \$100,000,000 I should doubtless be far below the mark. The loss of fruit alone by the devastations of insects within a radius of fifty miles of this city must amount in value to millions. In my neighborhood the peach once flourished, but flourishes no more, and cherries have been all but annihilated. Apples were till lately our most profitable and perhaps our most important product, but the worms have taken half

very least, and the loss to the southern cotton-growing States the present year within a single fortnight by a single insect (the cotton worm, *Anomis Xylina*) was lately estimated at twenty millions. There is not the least doubt but that the damage inflicted by insects on the farmers of the United States exceeds tenfold the united damages of all other animals put together. It is rarely (if ever) that entire crops are destroyed by birds, rats or squirrels, yet we all know that a single minute insect—the Chinch-bug—often so injures a crop of wheat that it is not worth the cutting. —From the Western Planter.

From our Australian Exchanges.

AGRICULTURAL STATISTICS OF VICTORIA FOR 1872-73 ABRIDGED.

The agricultural statistics of Victoria for the year ended March 31, 1873:—

Land in Occupation, Enclosed and under Tillage, 1873.  
Land in occupation, acres..... 10,741,745  
Enclosed, acres..... 9,789,592  
Under tillage, acres..... 963,091  
Average of Wheat, Oats, Barley, Potatoes and Hay for 1873.

Crop.	1873.
Wheat, 326,504 acrs.	
Oats.....125,505 "	
Barley.. 21,251 "	
Potatoes 38,517 "	
Hay.....121,375 "	

There was a decrease in 1873 compared with 1872 of 8,045 acres in the wheat, a decrease of 50,439 acres in the oats, an increase of 4,479 acres in the barley, an increase of 547 acres in the potatoes and an increase of 18,169 in the hay. But the decrease of these crops was much more than made up by the increases on other crops, particularly on the permanent artificial grasses, which show an increase themselves of no less than 54,439 acres.

Yield of Wheat, Oats, Barley, Potatoes and Hay for 1873.

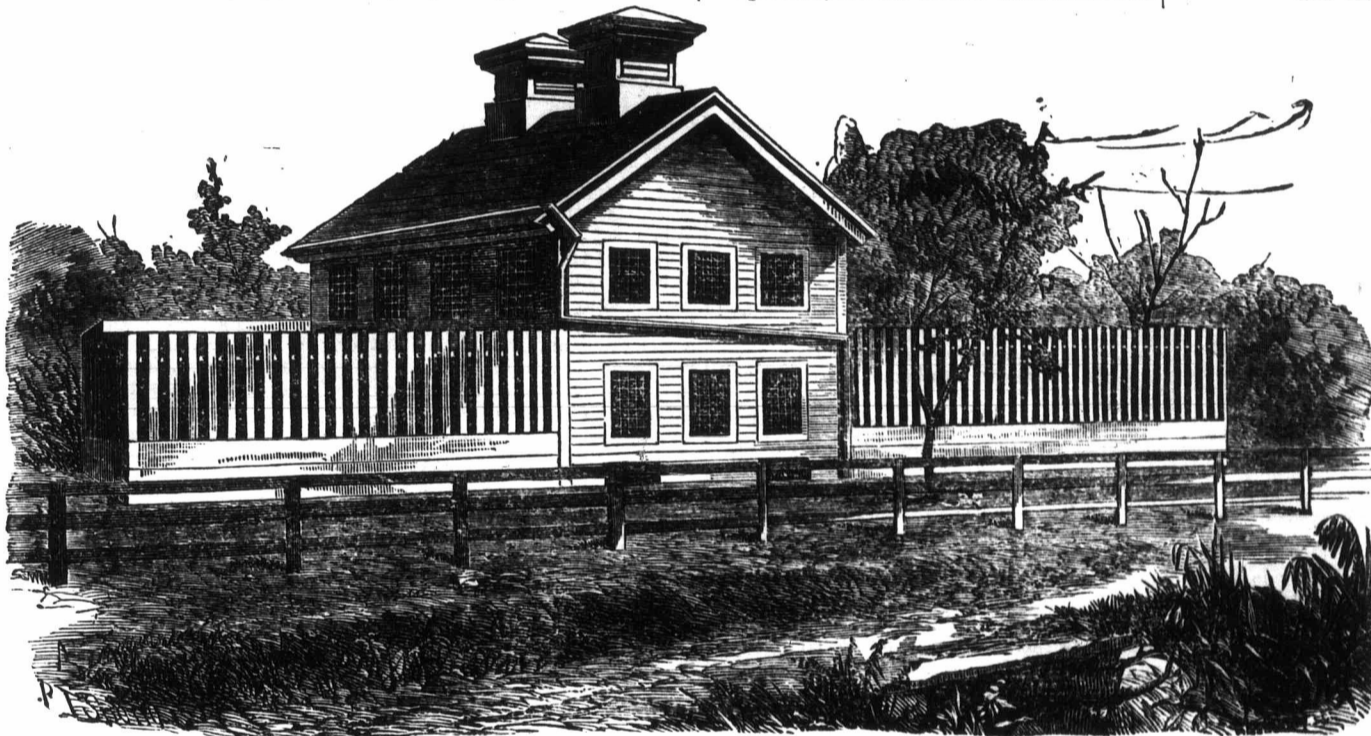
Crop.	1873.
Wheat.....5,341,104 bushels.	
Oats.....2,454,225 "	
Barley.....443,221 "	
Potatoes.....132,997 tons.	
Hay.....159,994 "	

Hence, while wheat fell off in its annual acreage in 1873 to the extent 8,045 acres, it increased in its yield to the extent of 890,309 bushels. That was owing to the very splendid season, not confined to Victoria, but experienced throughout all these colonies. So with regard to oats.

The average yield of wheat this year was 16.5 bushels to the acre; of oats, 19.6 bushels to the acre; of barley, 20.8 bushels to the acre; of potatoes, 3.5 tons to the acre; and of hay 1.3 tons to the acre. This, with the exception of potatoes and hay, is much above the average of 1872. —South Australian Chronicle.

CURE FOR BEE STINGS.

A correspondent of the *British Gardener's Magazine* writes:—"On the 15th of April last a young man, employed near bees, had the misfortune of being stung. No remedy being near at hand, I remembered Mr. Gordon's note on the cure of bee stings, at page 461 of the *Gardener's Magazine* for 1872. I recommended him to apply the common soil to the wound, as described by Mr. Gordon, and it immediately relieved the pain and prevented the swelling. Such a receipt is more valuable than gold to all who have anything to do with bees. I formerly used common blue for bee stings, but common soil is preferable."

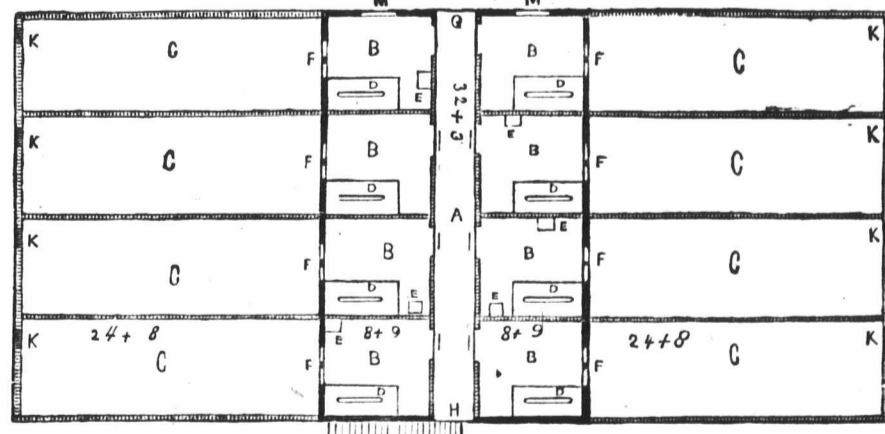


S. J. BESTOR'S POULTRY HOUSE, HARTFORD, CONN.

through a trough lined with zinc, in each yard. The partitions of the building and yards are of slat work. The outside fences around the yard are slat work at the top, built upon a base of boards 3 ft. high, the whole being 8 ft. 9 inches high. The rooms in the building are 8 x 9 ft. The yards C C, are each 24 x 8 ft. K K are small doors in the base board for the exit of fowls when desirable. G represents a large window at the

our average crop and sadly damaged what they have not utterly destroyed. Plums we have ceased to grow or expect. Our pears are generally stung and often blighted. Even the currant has at last its fruit-destroying worm. We must fight our paltry adversaries more effectually or allow them to drive us wholly from the field."

The above estimate, great as it seems, is, I believe, far below the mark, and, indeed, it



end of the passage, opening like a door; H is the main entrance. I I are doors leading from the passage to the rooms B B. At F, the lower and center pane of glass is removed for exit of the fowls. M, windows; E, movable nests; L, stairway. The perches are at D. The first cut represents one of the roosts

is only when we begin to make careful computation of the average annual loss to this country by insect depredations and express the sum in round numbers that we can form any intelligent conception of its magnitude. The State of Missouri alone loses annually from fifteen to twenty million dollars at the

## Garden, Orchard &amp; Forest.

## TREATMENT OF THE TOMATO PLANT.

This delicious, delicately acid, cooling, healthful, and now almost indispensable fruit, whose hygienic qualities have been tested by the human system (that most perfect of laboratories), is, by careful culture, being brought to perfection; and instead of coarse, unsightly, spongy, seedy, ill-flavored tomatoes, the desirable qualities of earliness, productiveness, size, solidity, paucity of seed, evenness of form, richness of flavor, and beauty of color may be secured.

## Pruning.

The advantages of pruning have been questioned, but our tomatoes grow best when well pruned. Cut out all suckers and non-bearing branches. Let in light, air, and sunshine. Most of the fruit grows on the lower parts of the vines, and there will be no loss by shortening them; for nutrition will then flow to fruit instead of making fibre.

Supporting the vines—keeping the fruit clean—training.

It is sometimes thought well, in garden culture, to support the vines by brush or other refuse material, or by training, which may be done by setting poles twelve feet apart, the tops five feet out of the ground. Attach wires to them horizontally. Thus the fruit is exposed to the free action of sun and air.

## PRUNING EVERGREENS.

The *Country Gentleman* says no evergreen appears well when sheared smooth like a wall, and that it much prefers an uneven surface. It is also true that to a cultivated taste all unnatural shapes of evergreen trees are not pleasing. It is quite possible, with some evergreens, to so prune that the top of the tree shall be a ball resting on the apex of a pyramid, and this on a square base, but we do not know why any one should want such a tree.

## APPLES AS FOOD.

It is stated that by a careful analysis it has been found that apples contain a larger amount of phosphorus, or brain food, than any other fruit or vegetable, and, on this account, they are very important to sedentary men, who work their brains rather than their muscles. They also contain the acids which are needed every day, especially for sedentary men, the action of whose liver is sluggish, to eliminate effete matter which, if retained in the system, produces inaction of the brain, and, indeed, of the whole system, causing jaundice, sleepiness, scurvy and troublesome disease of the skin.

## HOUSE PLANTS IN WINTER.

Jas. Vick says the temperature for house plants should not be above sixty-five in the day time or forty at night. The leaves should be sprinkled every morning, and they should be covered when sweeping or dusting. The main thing is even temperature, moist atmosphere, and freedom from dust. For the green fly or aphid, wash frequently with soap suds and occasionally with tobacco juice. The red spider shows the atmosphere is too dry. Burn a little sulphur under the plants, and afterward keep the stem and leaves well moistened.

## ONE WORM DID IT.

One day I was walking with some friends through Sudbrook Park, in Surrey, when Dr. Ellis drew our attention to a large sycamore tree, decayed to the core.

"That fine tree," said he, "was killed by a single worm."

In answer to our inquiries we found that about two years previously the tree was as healthy as any in the park, when a wood-worm, about three inches long, was observed to be forcing its way under the bark of the trunk. It then caught the eye of a naturalist who was studying here, and he remarked, "Let the worm alone and it will kill the tree." This seemed improbable; but it was agreed that the black-hearted worm should not be disturbed. After a time it was discovered that the worm had tunneled his way a considerable distance under the bark. The next summer the leaves of the tree dropped off very early, and in the succeeding year it was a dead, rotten thing, and the hole made by the worm might be seen in the very heart of the once noble tree.—*Ec.*

## SAVING AND PLANTING FOREST TREE SEEDS.

**Maple Trees.**—There are several varieties of the maple, and their time of ripening varies much. The seeds of the sugar, English and Norway maples ripen in the autumn, and they can be sown at that time, or mixed in a box with sand, and in some latitudes kept until the following spring, because the very severe winters of the north might injure the vitality of the seeds, and the young seedlings will come forward more rapidly in a freshly dry soil than in one which has become hardened and baked by the heavy rains of autumn and the snows of winter. Yet in the south and west the seeds should be sown directly. The seeds of the red and silver maple ripen in June, and as they do not improve by age, it is better to sow them as soon as they are ripe. They germinate very quickly, and if sown in a light but fertile soil will frequently grow from two to three feet high in one season.

**The Oak.**—Acorns can be sown as soon as they fall, in a light soil, and not covered more than two inches in depth, or they can be mixed with dry sand and kept in a cool place until spring, when they can be sown in drills and lightly covered with some friable soil.

**The Elm.**—This tree ripens its seeds early in June, and they can either be sown directly or preserved in moist sand in a cool place. They are very light and delicate in structure, and an inch of soil is deep enough to cover them. If planted directly after a rain they will sprout in a few days, and make a rapid growth the first season.

**The Ash.**—These seeds ripen in the autumn, and can be sown directly in a rather moist soil, and about an inch in depth. They grow most easily and can be preserved for months in moist sand.

**The Chestnut.**—Every one knows that this tree ripens its nuts after the first frost. But if they are sown in the autumn the field mice may destroy them; so it is better to mix them with sand in a box and bury them in the ground, and in the early spring sow them in drills. If allowed to become dry they will not sprout.

**Butternuts and Black Walnuts.**—Should be gathered in piles and allowed to decay so that their thick coats can be removed easily. Then plant them either in the ground or mix them with soil and keep them in a box in the open air all winter. They will germinate as easily as chestnuts if not permitted to dry up, and become shrivelled. Beech nuts should be treated like chestnuts. Hickory nuts will grow if the husks are removed and they are planted in the autumn, or preserved in sand and allowed to freeze.

The buttonwood, red cedar, tulip-tree, magnolia, horse-chestnut, Judas-tree, spindle-tree, coffee-tree, bladder-nut, hop-tree, and the yellow and honey locust all ripen their seeds in the autumn, which should be sown at that time. The seeds of the catalpa and paulownia ripen so late in the fall that they can be kept in a dry state until spring.

In transplanting forest trees one must do it with care to ensure success. The tiny roots must not be injured, as they are the feeders, and if cut off or bruised it hurts the tree.

In digging up a tree always turn the side of the spade to the stem of the tree, and lift out the earth carefully, and the small rootlets will thus be loosened and preserved uninjured. The chestnut and the hickory send down one long tap root, and are much harder to transplant than those trees where the roots spread nearer the surface like those of the maple and oak. In the nurseries they often dig up a chestnut or hickory tree when one year old, and cut off a small portion of the tap roots. This makes the tree send out a bunch of fibrous roots at the point cut off, and in two or three years more it can be transplanted with more hopes of success.

In planting the seeds of forest trees one needs to keep the young plants free from weeds, by running a cultivator through the drills, or hoeing them every little while. It is useless to plant the seeds and then permit them to be choked to death with weeds.

Such trees as the aspen, willow, cotton-wood, Balm of Gilead and Abele can be as easily raised from cuttings as currants and gooseberries; and as they grow very rapidly, in from six to ten years they will yield good fencing material, and also fuel.

Pine seeds can be planted from the cones in the autumn, and in fifteen years will supply a good sized grove.

There are many sandy, barren wastes throughout New England and the Middle States which would grow pines to great advantage, and prove very remunerative to their owners. I know of a merchant who planted several bushels of white pine cones some fifteen years ago, on the sandiest barren that the banks of the Connecticut River can show, and to-day they are from sixteen to eighteen feet high, and their stems as large as a fat man's wrist.

The fall is the best time for transplanting all trees. Commence the work as soon as their leaves fall, and they will have time to become used to their new homes before the ground freezes.

In November and December you can move trees from thirty to forty feet high, by digging about them, and allowing the ball of earth to freeze solid, and then remove them to the desired location.—*S. O. J., Country Gentleman.*

## HOW TO GET AN ORCHARD.

After selecting the ground for an orchard go to work and dig and haul all the stones and stumps from it. Plough deep and level the land off, and you are ready for the fence. Put on a good substantial fence that will not admit any creature, only by the way of the gate or bars, and suffer no cattle to enter the enclosure, only for the purpose of labor. This fence built, you will plough your ground again, and harrow and work in manure to your liking. Sow your ground and seed down the same. Pick up all the stones and sticks that lie on the ground, so that it will leave a smooth surface. Select the best trees you can find—those that are young, straight and sound. When you take them up be careful and do not break any of the roots, for they have none to part with. When set they want to be so near each other that they will shade the ground well. When it is necessary to cut limbs, cut them when small. Let the lower limbs be so high from the ground that a tall man can pass under them and not hit his beaver. When you prune, be careful and let no two limbs in the top chafe each other; cut off one of the two.—*Prescott Tribune.*

## WAY AND TIME TO PLANT PEACHES.

The stones of the peach, plum, apricot, and other drupes, may be spread thinly over the surface of the ground, in autumn, and covered with an inch or two of earth so that they may be kept moist, and in that condition subjected to frequent freezings and thawings. Or if a few inches of half rotten leaves, straw, or other litter be strewn over them instead of dirt, they will be more likely to be preserved in a moist state.

1. Another way, when many are to be planted, is to put them in boxes, in alternate layers of earth and stones, and placing the boxes where the stones may be kept moist, and exposed to the extremes of the weather. The object in exposing them to the frost is that they may be cracked open, so that the meats can be easily removed in the spring. A few days before the time of planting arrives the stones should be overhauled, the meats removed from the open shells, and if any are not open they should be cracked. There are nut-crackers adapted to the business. The meats should be mixed with moist dirt a few days, and allowed to sprout before being sown in nursery rows, and then nearly every one will come.

2. Cuttings of hardy shrubs should be made in autumn, before hard freezing weather, put in boxes in layers with dirt, and buried in a pit below the reach of frost. The pit should be filled and rounded up on top to shed the water, and it is not a bad plan to scatter some coarse manure over the pit, to more effectually exclude the frost. The cuttings will very probably be calloused over by spring, and little rootlets started or just ready to start and grow when planted in trenches.

## LAWN GRASS.

We have found simple green grass—*Poa pratensis*, make excellent lawns without any other mixture, or in some sections rye grass—*Lolium perenne*. Mr. Saunders, in a recent *Horticulturalist*, gives the following which he has found to make a good mixture:

- 1 Bush. *Agrostis vulgaris*,
- 2 Bush. *Poa pratensis*,
- 1 Qu't. *Panicum pratense*,
- 2 Lbs. White Clover.

This is for an acre.—*Gardener's Monthly.*

## PRUNING INJURED TREES AND VINES.

Mr. M. B. Bateham, in the *Northern Ohio Journal*, referred to the extent of the damage done to fruit during the winter and the propriety of subsequent pruning, says:

We find a much greater amount of injury than we at first supposed, done to fruit trees and the grape vines by the freezing (or thawing?) last month. It is probable that many peach and cherry trees are entirely killed, and still more will have to be cut back very severely. But we advise the owners to let them alone a month or two longer, till the extent of the damage can be more clearly seen. We have known peach trees to recover when they seemed almost hopelessly ruined. All the varieties of grapes in this region are injured somewhat, the Concord least of any; but most of them will no doubt recover, with only the loss of part or all of the season's crop, according to the extent of the killing of the buds and young wood. Where these are a good deal injured it is best to prune quite severely, especially old vines and such as have made large growth, cutting out a good share of the old wood, and leaving the best new shoots that come out nearest the ground, and shortening these to a foot or two in length, or even less if the buds seem mostly dead. Then after the new shoots have come out in June any remaining dead wood can be cut away.

Prof. Holmes, of Michigan, on the "yellows" in peach trees, made a very lengthy report, principally of correspondence from all the peach growing sections of the States, which were in some sense conflicting regarding the presence of the disease at certain points. It was strongly contended by some that the dread disease has not been on the east shore of the lake, but that the symptoms and appearance of the trees is directly attributable to the fact that the trees planted on naturally thin and quick soil matured rapidly and bore heavily until they exhausted the soil (which was not fed) of its nutriment to the tree, hence it had to succumb, after a short, fruitful period. There seems but little doubt but the failing condition of many of the peach trees in the older districts is attributable to this cause primarily, while actual disease may have followed.

## HOW TO WATER A GARDEN.

Get a vessel made of suitable size, or take a water-tight barrel and put it on a platform six feet or more high, and at the bottom of this affix a common faucet. Now procure rubber hose long enough for the purpose, and at one end of the hose have a fine spray nozzle that can be taken off or put on. At the other end have a burr with a thread cut to fit one that must be cut on the faucet. Now you are ready. Fill your vessel with water in the morning, and let it stand exposed to the sun all day. In the evening fasten on your hose, turn on your faucet, and water the plants. Evening is the proper time to do the watering. Into this vessel you may put ammonia, iron, or any chemical that you desire, and when it is mixed with the water it may be applied without further trouble. Iron scraps may be left in the vessel all the time. The cost will be but a trifle, which it will treble repay in one season.

## SHELTER OF FRUIT TREES.

The shelter of a timber lot on the farm of H. B. Norton, of Genesee County, N. Y., caused the adjoining four-acre pear orchard to ripen its fruit earlier and to give pears of better quality, his pears usually bringing from \$5 to \$7 per barrel at Batavia and \$8 to \$14 in New York. We often hear doubts as to the distance which the protection of the tree belts extend, but this experiment would show it to be several times as far as the height of the trees. Some years ago the late Isaac Pullen, of New Jersey, informed us that his evergreen belts, then about twenty-five to thirty feet high, benefited both fruit and farm crops to a distance of at least twenty rods; and we have known other instances where spaces abroad have been protected when planted with farm crops.—*Rochester, N. Y., Rural Home.*

A tract of pine land in Lapeer Co., Mich., comprising 2,400 acres, two years ago sold for \$72,000. It was estimated at the time to cut 40,000,000 feet of lumber. A careful estimate lately showed there was 80,000,000 upon it, and the undivided one-half sold for the amount originally paid.

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SALT FOR STRAWBERRIES.

D. Stewart, of Upper Alton, Ill., believes in salt. He says: "I believe in it as a heavy dressing. I find on manuring the ground that I have applied salt to strawberries at the rate of fifteen and a half bushels to the acre. I did this early in the season to kill the beetles, and the leaves of the strawberries were not injured. The cut worms were doing great damage to my asparagus beds, eating into the crowns of the plants; and I applied salt at the rate of twenty bushels to the acre. I consider salt as a perfect remedy against any injurious insects, as well as an excellent manure for the land."

WEED AND MANURE THE GARDEN.

There is one important fact to be borne in mind, and it is this, that neither small fruits nor choice vegetables will thrive in a very poor soil or with indifferent culture. If white clover is allowed to take possession of the strawberry patch, the berries will very soon grow small in size and few in numbers. In like manner, if purslain is permitted to grow up in the onion bed, the onions will prove an unprofitable crop to raise. Those who would have fine crops of fruit and vegetables should use plenty of manure before planting, and then keep the weeds down by frequent disturbances of the surface soil. This is one of the branches of industry connected with farm life that every one should put in practice, and once the habit formed, it is sure to be kept up.—*Tribune.*

ENGLISH IVY.

The use of English ivies for the purpose of decorating living-rooms is more extensive every year and cannot be too highly commended. Being very strong, they will live through any treatment; but study their peculiarities, and manifest willingness to gratify them, and they will grow without stint. Most houses are too hot for them, as indeed they are for their owners. Neither plants nor people should have the temperature over 65° Fahrenheit. Take care not to enfeeble your ivies by excessive watering or undue heat, and you will see they will not seem to mind whether the sun shines on them or not, or in what position or direction you train them. Indeed, so much will they do themselves to render a room charming that we would rather have an unlimited number of them to draw upon than anything else in nature or art.

Do you wish the ugly plain doors that shut off your tiny entry from your parlor to be arched or curved, like those in the drawing-rooms of your richer neighbor? Buy a couple of brackets, such as lamps for the burning of kerosene are sometimes placed in, and screw them in the sides of the door. Put in each a plant of English ivy, the longer the better; then train the plants over the top, against the sides, indeed any way your fancy dictates. You need not buy the beautiful but costly pots the flower dealers will advise; common glazed ones will answer every purpose, for, by placing in each two or three sprays of Coliseum ivy, in a month's time no vestige of the pot itself can be discerned through their thick screen.

The English ivy growing over the walls of a building, instead of promoting dampness, as most persons would suppose, is said to be a remedy for it, and it is mentioned as a fact that in a certain room where damp had prevailed for a length of time the affected parts inside had become dry when ivy had grown up to cover the opposite exterior side. The close overhanging pendent leaves prevent the rain or moisture from penetrating to the wall. Beauty and utility in this case go hand in hand.—*Journal of Horticulture.*

Experience has satisfied us that fresh saw dust, shavings, tan bark, and the like, are not good for mulching. If used for bedding horses or thrown into piles with manure and turned over once or twice until decomposed they answer well for working into the soil to loosen it up and make it more friable. Lime scattered through it sweetens it. The great objection to such is it lays too close to the surface. The best mulch is coarse straw or corn stalks scattered over the ground, just enough to hide it from the sun. Care must be taken not to put on too much, especially where snow is liable to drift, as the plants may be "smothered" out. In such locations it is well to throw on some coarse brush over the mulching, to prevent the snow laying too close and heaving, and as soon as spring opens take off the brush and stir up the mulch a trifle.—*Fruit Recorder.*

A LADY'S EXPERIENCE WITH ROSES.

Last spring I procured a box 12x18 inches and three inches deep, and filled it nearly to the top with clean paving sand, into which I placed cuttings from my neighbor's best stock, about fifteen in number. These were all quite young shoots, three to five inches long. The box was kept all through the summer in the most exposed position in the garden, and was filled every morning with water, which kept the sand constantly and thoroughly wet. Excepting in two cases they all lived nicely, and by the setting in of fall had roots two or more inches in length. I then potted them off singly, in sand, loam, and manure mixed in three-inch pots. On the approach of winter the pots were immersed to the tops in sand and covered over with brush, over which I placed a layer of leaves and fresh horse manure. Three weeks ago they were all exhumed, and only two of the pots found to be broken by frost, whilst all the plants were green (excepting the absence of leaves) as the day they were buried. Up to this time they have been exposed in a window fronting south, and not one of them contains less than fifty leaves, and have a fair prospect of budding within a fortnight. I have learned more from an experience like the above than I have gained in poring over a learned treatise. If any beginner can be benefited by it, he or she is doubly welcome.—*North Western Farmer.*

EFFECTS OF TAR ON FRUIT TREES.

I wish to state a curious effect of tar upon fruit trees which came under my observation this year, and I hope it may prove a warning to all your readers who may think of painting trees to prevent hares or rabbits from barking them, or for any other purpose. These trees were painted from the ground upward, one or two feet; and almost every tree—apple, pear, peach, quince and all—ceased to grow painted, while that part of the body above the painted portion continued to grow, expand, and thrive, as if nothing had happened—bark, branches and leaves all looking very thrifty. A few of the trees died suddenly while in full leaf; the others are now fine-looking above, but the body, where the tar covered it, looks as though it had a lead jacket of iron around it for one year and is a half inch or more less in diameter. I think the whole orchard will finally die; for some of the trees, from weakness of the stem below and growing weight above, are toppling over. Does this not show that the entire bark of a tree as well as the leaf is an organ of respiration? I shall continue my observations, and give you the result.—*R. N. J. Wilson, in Southern Farm Home.*

TULIPS.

Messrs. Briggs & Bro., in their catalogue, have the following upon tulip culture. The *Western Rural* would not advise the removal of tulips as there directed unless the space be especially wanted for other bloomers, since they are much finer if allowed to remain. They need not be separated and re-planted oftener than once in three or four years. It is better that the bed be covered with mulch during the winter months to prevent deep freezing of the ground: The tulip has long held sway as queen of the bulbous flowers, and for generations has been emphatically the chief "florist's flower" among bulbs. Its gorgeousness in colors is all that could be desired by the most fastidious, and by its bold, brilliant appearance it recommends itself to all. Planted in beds or glassed, the effect is most striking, unique and complete, and cannot fail when so treated to give the most entire satisfaction. The tulip is by far the most easily grown and satisfactory of all bulbs, and as it does not deteriorate, a good stock will last for years. The tulip will succeed in almost any good soil; still it should be borne in mind that not only the tulip, but all bulbs will succeed best in bright rich soil. Plant them three inches deep and six inches apart, and if convenient mulch the bed with coarse manure, etc., during winter—the effect when in bloom will be much higher. When the plants are thoroughly blooming they may, if desired, be carefully lifted and re-planted thickly together in any convenient spot in the garden, where they may remain until again wanted in the fall, and the bed from whence they were removed be used with summer flowering plants. Some people prefer, when the foliage begins to lessen, to take them up, dry them and keep them in the house until they are again wanted.

TRANSPLANTING PIR PLANT.

The *Western Pomologist* says: "We have cultivated pie plant extensively for market, and find the best time to transplant is in the fall after the first frost. If the stools are large and require a division do not dig them up but divide them as they stand with a spade by cutting off or dividing through the centre of the plant, leaving the part in the ground undisturbed. By this method you will have a good crop the next spring on those left in the ground, and the balance you can divide up and reset, and they will bear a good crop the second year but not the first. We have plants now standing ten years, divided in the above manner, (when they get too large) and each year produce a good crop. The ground cannot be too rich, but must not be wet, or the plants die out."

Mr. Stall, who has lately conducted a series of experiments with a view to hastening the ripening of fruits, announces that this result may be obtained by lessening the depth of the earth about the roots of the fruit-bearing trees. As an instance, it is stated that the ripening of pears upon an early tree was hastened by simply removing the earth for a circuit of fifteen feet about the roots, the soil being left about two or two and one-half inches above the roots. The theory is, that by thus exposing the roots they receive more warmth from the sun, and these, by the frequent application of water, are more active in supplying the life-giving sap to the fruit above. Interesting as these results appear, we confess that we are hardly prepared to endorse them, and yet the repetition of the experiment may so readily be accomplished that any interested reader might with little difficulty aid toward the establishment, or, if need be, the demolition of this new theory of growth.—*Appleton's Journal.*

SHEEP IN ORCHARDS.

J. Higgins stated, at a late meeting of the Alton Horticultural Society, that he had long been in the practice of turning sheep into his apple orchards, and, as long as they have green pasture they will not touch the bark of the trees, but they are carefully watched. He has one old sheep only that knows how good apple bark is. When there is snow on the ground the sheep will of course eat the bark. But the only time when the presence of the sheep is needed is in summer when the wormy fruit is dropping. We know a farmer in Western New York who turns his sheep into his large orchard during the day and into another field at night. They never touch the trees, and he finds the codling moth growing scarcer each successive year.

BIRDS VS. GRASSHOPPERS.

Small birds which somewhat resemble sparrows have appeared in great numbers in Texas, and devouring the hitherto prosperous grasshoppers.

A correspondent of the *Horticulturist* writes thus:—

One of the lessons the past winter will teach us is to thoroughly mulch in September all young stock in nursery, vineyard, and garden, to prevent root-killing by the effects of dry falls and hard winters. Once in seven years we have one of these extremely hard winters, and occasionally a dry fall between. The extent of injury to roots of pears, apples, grape vines and small fruits, is far greater than the injury to the tops, and greater than at present believed. Experience is a hard teacher, but let us heed and learn to be wise.

Cutting off large canes of the current season's growth and stripping off the foliage that the sun may have fair access to the fruit, are practices that are reprobated by all good cultivators. Superfluous growth should be checked by pinching when it first manifests itself, and the direct rays of the sun should never reach the fruit.

Dr. Hall says the best medicine in the world, more efficient in the cure of disease than all the potencies of the materia medica, are warmth, rest, cleanliness, and pure air. Some persons make it a virtue to brave disease, "to keep up" so long as they can move a foot, or crook a finger, and it sometimes succeeds; but in others, the powers of life are thereby so completely exhausted that the system has lost ability to recuperate, and typhoid fever sets in and carries the patient to a premature grave. Whenever walking or work is an effort, a warm bed and a cool room are the very first indispensables to a sure and speedy recovery. Insistent leads all beasts and birds to quietude and rest the very moment disease or wounds assail the system.

Correspondence.

MR. EDITOR,—

Enclosed you will find an account of the last meeting of the North Norwich Farmers' Club.

Subject:—Canada thistles. John Ray, President.

The President said some advised cutting in the full of the moon and some in the new of the moon. He thought both times were good, and would advise cutting at any time and every time they were seen. Said he had had considerable experience with Canada thistles. Had lived on a rented farm that was overrun with the pests. Lived now on a lot that was noted as a thistle patch, and said to be the first farm in Norwich on which Canada thistles appeared. As for that he could not say, as he had lived but a short time in Norwich. Had killed many patches. Plan as follows:—breaks up a sod, and sows to peas the first year; the second year he summer fallows, and sows to fall wheat. The summer fallowing does the business of killing, but it must not be a half-way fallow nor a common fallow. It must be plowed five times when the patches exist, and three times when not infested. Besides this the ground must be cultivated and harrowed several times. To accomplish this he plowed the patches just before spring seeding; then after seeding plowed the whole fallow; then cultivated and harrowed, and plowed again after planting; then, a couple of weeks before plowing for seed, he plowed the patches again, and their fifth plowing was given in plowing for seed. Thinks the whole secret consists in keeping them out of sight.

Mr. Losee had not much experience with Canada thistles, but believed Mr. Ray to be right.

Elias Mott agreed with Mr. Ray. Thinks spring crops disseminate the thistles. Said the seeds perfected best in a wet season. The next best method to a summer fallow for destroying thistles he considered to be a well tilled corn crop, because we kill the weed and get paid for doing it. Thinks mowing is the third best way. Said the law with regard to Canada thistles is a dead letter, and should be rigidly enforced. Besides the seeds are disseminated from the highway more than from the farms.

Mr. Gillan and J. Pollock endorsed all that had been said.

F. Wasley thinks mowing is the best wholesale way of destroying thistles.

E. C. Palmer said a common summer fallow made the thistles four times worse than they were before. Thinks a good tough sod and mowing the best and most practicable method.

F. Barns thought corn the best crop to put on a thistle patch. A well salted pasture he considered good.

W. S. Moon endorsed Mr. Ray's views. Thinks corn is not suitable, because it cannot be attended to during haying and harvest.

Action by the Club before the Council was deferred until winter. The Club is pledged to enforce the law next year.

The Club held a picnic in the grove of H. T. Losee, Esq., on Saturday, August 30th. The ladies were the chief promoters of the affair, which was an undoubted success. Feasting, music and speaking was the role of the day. The Club was greatly encouraged by speakers who were not members to pursue the course they had thus far pursued.

B. J. P.

New Durham, Sept. 1st, 1873.

(TO THE EDITOR OF THE FARMER'S ADVOCATE.)

SIR,—In the last annual report of the Agricultural Mutual Assurance Association of Canada, I find the following remarks on the proposed new Insurance Bill:—

"One is now before Parliament to regulate Mutual Insurance Companies. Your Directors will not go the length that many persons do and say that it is brought forward with the intention of hampering and belittling Mutual Insurance Companies, with the intention of building up a certain stock company of recent origin in which it is alleged that the promoters of the Bill have personal interest. But, certain it is, that if the Bill

becomes law in anything like its present shape the mutuals will be depressed, and the said stock company, for a while at least, be lifted up, and then the farmer may look out to have to pay heavy premiums like as in the old time, for it is impossible for a stock company to make money and deliver dividends at the rates that mutual companies now charge for insurance. To show the animus of its originators, section 10 provides that, for a mutual even to convene the annual meeting your Directors have now the honor of addressing, it would cost this company in postage alone the sum of \$1,810, drawn from members' pockets, and for what? Your Directors will not suggest the answer."

If proof were wanting that farmers will never get that justice which they have an undoubted right to claim, the foregoing extract would supply the want; but, till our Canadian farmers learn that union is strength, they will ever be at the mercy of unprincipled politicians who care only for their own interests. Surely there must be but few counties in Ontario that do not contain at least one farmer sufficiently qualified both by ability and education to discharge the duties of a legislator in a creditable manner at least in the Provincial Legislature, and, wherever such a man can be found, the farmers generally should support him independently of his political sentiments, and not allow themselves to be led astray by every specious stump orator who may endeavor to distinguish himself at public meetings. Even the agricultural laborers in some parts of England are combining together to secure the return of at least one member in each electoral district, and why should not our farmers go and do likewise. I would suggest that you should endeavor to procure some information respecting the constitution and mode of working of the Farmers' Granges in the Western States, which are rapidly extending, and at present bids fair to exercise a controlling influence in the States where they exist at the next Congressional elections. In a recent number of the *Toronto Globe* I observed a statement that some rich Englishmen and Canadians, accompanied by the Hon. Mr. Christie, had visited Kansas with the view of selecting land there. I believe the Hon. Mr. Christie has for several years been acting as agent for a Kansas land company, in which he has an interest, and seeking to induce immigrants to select Kansas for their future abode instead of Canada, thereby, as much as in him lies, hindering the settlement of his own country and assisting to build up a foreign country at the same time he holds the office of Senator of the Dominion. The hon. gentleman may be loud in his professions of loyalty, but actions speak louder than words, and he would act more consistently if he were to pack up bag and baggage and be off to Kansas himself. The Province had better have twenty open enemies than one traitor in the camp.

The fall wheat in this part of the country is nearly all secured in good order. It is a little infested with midge and weevil as it was last year, but not enough to do much harm. I have also heard complaints of the spring wheat being troubled by these insect pests, but I do not anticipate much damage, as the wheat is ripening. The crops are generally good and of excellent quality. Peas are nearly secured, and generally speaking, a good crop, as are also barley and oats. Potatoes promise good returns. The potato beetles are more numerous than last year, but have not done much injury. The beetles are rather sluggish, and not soon provoked to bite, but the bite is poisonous, and is said, in some instances in the States, to have resulted fatally. The remedy is to lay a leaf of tobacco moistened with water on the bite, and keep it moist. This will neutralize the poison, and no ill effects will follow. The early rose potato does well here. Where can any of the late rose variety be obtained in the fall?

E. J.

[This essay on Canada thistles was awarded the premium from the FARMER'S ADVOCATE by the committee appointed for the purpose. We propose to make use of the several essays in a future number. The writer of this essay will please correspond with us.]

HOW TO DESTROY THE CANADA THISTLE.

MR. EDITOR.—Having always lived in a community infested with the Canada thistle, and having witnessed with much interest a multiplicity of experiments having for their object the extermination of this pestiferous plant, I proceed to offer you the result of my

observations. It must be extremely irritating to those who make laborious efforts to rid themselves of this pest to witness the carelessness of his less thoughtful or indolent neighbor in letting them propagate seed for the multiplying of the species. It will be impossible for the careful farmer to rid himself of them until the law for the "Prevention of the Spread of the Canada Thistle" is vigorously enforced.

There are several methods of destroying them which are only practicable where they exist to a very limited extent, most common of which is, and, perhaps, as effectual, the following:—Cut the root about six inches into the ground and apply salt to it. This will, no doubt, kill them, but, as I before intimated, it is impracticable where they exist to any great extent. The cheapest and only method of banishing them from the soil where they exist in wholesale quantities, if the term may be used, is summer following. Immediately after harvest "skim" plow the ground, repeating the operation in about three weeks, and, three weeks later, plow deep. This will suffice until frost sets in. The succeeding season plow before the thistles show themselves above ground, and repeat the operation several times during the season, not allowing the plant to appear above ground. The ground may, when the weather is warm and the growth consequently rapid, need plowing once in two weeks. By this system not only are the roots of the old plants killed, but any seed which may be in the ground will, by the frequent pulverization of the ground, germinate, and will also be destroyed before they have made any material progress. I have seen this system tried, and can therefore with confidence testify to its efficacy. The principle upon which it depends is that plants in order to live must have air and be exposed to the action of the sun, for there is no nourishment in earth, air and water as they are but must undergo a digestive process similar to the food which we ourselves take into our bodies before it can nourish the plant, and this digestive process cannot be carried on in plants without the action of the sun. It is impossible for the root to live a year without the stem and leaves as it is for the stem and leaves to live without the root, as neither can by any possible means obtain proper nourishment alone, and must, therefore perish. Of course there is a wise and beneficent provision in the "God of Nature's" law by which the roots of biennials may live through winter in a hibernating manner similar to the bear, but could no more live through the summer without food than the bear.

I am aware that there are many who will object to the system because they have tried it and failed; but, if they have, the fault has not been in the system but in themselves, in not properly carrying it out. Others may say it is too expensive to them. I put the question:—Is it not more expensive to go on year after year raising crops of half grain and the other half thistles than to take one year to the thorough eradication of them from the soil.

### The Greatest Cattle Sale of the World.

#### CAMPBELL'S SALE OF SHORT-HORNS.

Good reader, did you ever purchase a cow? No doubt many of you have purchased and owned fine creamers which you valued very highly. Possibly you may have invested from \$50 to \$150 in something what you considered very fine stock for dairy and breeding purposes, but we do not believe that any of our friends ever before heard of

#### A COW VALUED AT \$10,600.

A cow for which this sum was paid was included in Senator Samuel Campbell's herd of pure bred Short Horns, which was sold at public auction at New York Mills, two miles from Utica, recently. Senator Campbell's prize cow is known as

#### THE 5TH DUCHESS OF GENEVA.

It is a beautiful creature, red and white, was calved July 28, 1865; got by 3rd Lord Oxford and is recorded as "22,200" in Coates' Herd Book.

#### THE WINNER OF THIS PRIZE

was T. Davis, of Gloucestershire, England, one of the three famous English stock breeders and fanciers, who were present at Senator Campbell's great sale.

#### THE OBJECT OF THE PURCHASE

was to restore to England the valuable blood which this breed contains, and which Senator Campbell was fortunate in being able to purchase a few years ago for a price of about

\$10,000. We are informed that Lord Skelmersdale and Messrs. Davis and Berwick were determined that the 8th Duchess of Geneva must go back to England at all hazards, and that

#### MONEY WAS NO OBJECT

to prevent the carrying out of this plan. The Englishmen had powerful competitors in the persons of a number of

#### CELEBRATED KENTUCKY BREEDERS,

who "saw" their \$1,000, \$2,000 and \$3,000 bids and called them at the rate of \$5,000 a bid each time. The Kentuckians desired this cow as much as the Englishmen, but John Bull's persistency and well filled bags of sovereigns carried away the prize. It was a most exciting contest.

#### THE GREATEST EVER KNOWN,

and it is not surprising that the exclamation—"\$40,000 for one cow"—was heard in the streets at almost every turn in the afternoon and evening.

#### THE ATTENDANCE

to witness this sale was exceedingly large. The curious from Utica flocked thither, and together with buyers from England and far-off sections of our land, made an assemblage which must finally have numbered fully 1,500.

#### A GRAND FEAST

served in right royal style, about noon, put the gathering in the best state of after-dinner satisfaction, and sent smiles rippling all over their faces.

#### THE SCENE

at the opening was a novel one. The Senator had arranged everything possible which could add to the comfort and convenience of his guests. A miniature grand stand was erected at the south end of the enclosure in which the favorites were to be exhibited. On the north side was a private box for the Senator's own use. In the grand stand were several of the ladies of the Walcott and Campbell families, with a number of lady guests. All the ladies seemed as much interested as the gentlemen, and they were profuse in their compliments to "THE BEAUTIFUL CREATURES,"

which were worth about their weight in gold. At the end of the enclosure were the English gentlemen mentioned above, and Alex. McGivern, Bedford, and other famous Kentucky breeders, with substantially built representatives from other States.

#### IN THE CENTRE

of the "bull ring" was a small stand on which stood the auctioneer, J. R. Page, of Sennet, Cayuga county, N. Y., who is a famous Short Horn breeder. He understood every point in cattle, and is a shrewd judge of cattle fanciers. In a quiet, easy way he drew out bids ranging from \$1,000 to \$5,000 at a time, and did not seem at all surprised, but he certainly did not expect to hear

#### THE HIGH FIGURES

which individual sales brought. Miss Middy Morgan, the celebrated lady stock reporter, sat at his feet taking notes and eating grapes. The cattle were led in by their keepers from the handsome and comfortable barns in which they have been cared for as tenderly as the most darling child in the country.

#### THE LORD'S COW.

Lord Skelmersdale paid \$30,600 for the 1st Duchess of Oneida, red and white; calved January 24, 1870; got by 16th Duke of Thorndale.

#### THE GOLDEN CALF

of this sale was purchased by Alexander, of Paris, Kentucky, for \$2,000. It was the Duchess of Oneida, red and white; calved April 7, 1873, (which makes it but five months old); got by 3rd Duke of Oneida.

#### WIFE OF THE MARK.

A funny story is told in connection with this calf. A butcher who has been buying calves for the lovers of veal in Utica at \$4, \$6 and \$8 per head got his eye on this plump, sleek creature without being told its value. Supposing it would be sold with the beef cattle, he called upon Senator Campbell and said he liked the looks of this calf, and was willing to pay a good price for it. Would the Senator give it to him for \$12? The Senator smiled at the offer but said nothing. That butcher was at the sale yesterday, and he was astounded, when he followed its mother was valued by a Canajoharie butcher at twelve shillings when he first saw it. When it was bid off at \$1,300 this verdant butcher opened his eyes, put two extra turns of his shoe-string around his calf-skin wallet and stepped back from the ring.

We quote a few of the prices:— 8th Duchess of Geneva, red and white; calved July 28, 1858; got by 3rd Lord Oxford; dam 1st Duchess of Geneva, by 2nd Grand Duke, Duchess 71st by Duke of Gloster, Duchess 66th by 4th Duke of York, Duchess 53th by 4th Duke of Northumberland, Duchess 38th by Norfolk, Duchess 33rd by Belvedere Duchess 18th by Second Hubback, Duchess 12th by the Earl, Duchess 4th by Ketton 2nd, Duchess 1st

by Comet, Duchess by Favorite, by Daisy Bull, by Favorite, by Hubback, by J. Brown's Red Bull. P. Davis, Gloucestershire, England, \$40,600.

16th Duchess of Geneva, roan; calved May 15, 1867; got by 2nd Duke of Geneva; dam 5th Duchess of Geneva, by Grand Duke of Oxford. M. Berwick, England, \$35,000.

1st Duchess of Oneida, red and white; calved December 15, 1869; got by 10th Duke of Thorndale; dam 8th Duchess of Geneva by 3rd Lord Oxford. Lord Skelmersdale, England, \$30,000.

3rd Duchess of Oneida, roan; calved March 19, 1871; got by the 4th Duke of Geneva; dam 1st Duchess of Thorndale by 3rd Duke of Airdrie. T. Holford, \$15,000.

White Empress, white; calved December 6, 1871; got by Royal Briton; dam Empress of Accom by Lord Blithe. Simon Beattie, \$1,000.

4th Duchess of Oneida, red; calved January 18, 1871; got by 4th Duke of Geneva; dam 13th Duchess of Thorndale by 10 Duke of Thorndale. E. J. Bedford and Thomas McGibbons, Ky., \$25,000.

7th Duchess of Oneida, red and white; calved August 3rd, 1872; got by 2nd Duke of Oneida; dam 1st Duchess of Oneida by 10th Duke of Thorndale. A. G. Alexander, Ky., \$19,000.

8th Duchess of Oneida, roan; calved November 18, 1872; got by 4th Duke of Geneva; dam 16th Duchess of Geneva by 2nd Duke of Geneva. Mr. Berwick, \$15,000.

10th Duchess of Oneida, red and white; calved April 7, 1873; got by 3rd Duke of Oneida; dam 8th Duchess of Geneva by 3rd Lord Oxford. A. J. Alexander, \$27,000.

#### CHANGING A HORSE'S GAIT.

In Barbary pacing horses are held in such high estimation that the method of making a spirited trotter shuffle like a boat in a chop sea is reduced to a science. To make him rack easily a sing of lead covered with leather is put around each hoof, a cord from each weight ascends and is fastened to the saddle, from the rear next a strap runs horizontally from the fore to the hind foot on both sides. Being rather short it is impossible to make a long step. Restraint compels the animal to adopt a new gait to progress at all. As soon as a practice is established of going ahead thus tethered the desirable amble is fully and permanently accomplished.—*Spirit.*

#### IMPORTATION OF BEES.

Another modern improvement in apiculture is the importation and breeding of superior bees. Bees, like larger stock, deteriorate by in-and-in breeding, and may be improved by cross-es. There are inferior and superior breeds of bees, just as there are of poultry, swine, sheep, cattle and horses. For a few years past Italian bees have been largely imported, and though it may seem an extravagant thing to give five or ten dollars for a queen bee—a little insect only about an inch long, it is no more so than to give a hundred dollars for a superior bull calf or ram lamb. The Italian cross has greatly improved common black bees, by giving them a dash of fresh blood, as stock-breeders would express it, and by imparting to them desirable qualities. The Italians are a hardier race; "busier than the little buzz bee" we have known from childhood; more prolific, more beautiful in appearance, and less inclined to sting.—*American Bee Journal.*

LIGHT AS A CURATIVE AGENT.—The statement has been made that Sir James Wylie, late physician to the Emperor of Russia, having attentively studied the effects of light as a curative agent, in the hospital of St. Petersburg, discovered that the number of patients who were cured in rooms properly lighted, was four times those confined in dark rooms. This led to a complete reform in lighting the hospitals of Russia, and with the most beneficial results. In all the cities visited by the cholera, it was universal found that the greatest number of deaths took place in narrow streets, and on the sides of those having a northern exposure, where the salutary beams of the sun are excluded. The inhabitants of Southern slopes of mountains are better developed and more healthy than those who live on the northern sides, while those who dwell in secluded valleys are generally subject to peculiar diseases and deformities of person, these different results being attributed to the agency of light.

—The value of printed books exported from Great Britain in the last seven months was £471,633; in the like period last year was £442,755.

—A baby was found in a railroad depot in Boston recently, and on its dress was pinned a card, which stated, "This baby belongs to Mr. Dane, of Lowell. I took it in a fit of insanity." Mr. Dane was summoned by telegraph, the baby was recognized as his property, having been stolen from his house a short time previously, and it was speedily returned to the maternal arms of the sorrowing Mrs. Dane.

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MINNIE MAY'S DEPARTMENT.

"It never rains but it pours." Hitherto you have been all so "backward about coming forward" with recipes, &c., that I began to think I should never hear from you, but this month I have plenty of letters full of excellent advice.

I thank all my correspondents for their favors, and hope they will continue to aid in this very important department.

MINNIE MAY.

Southwold, Sept. 10th, 1873.

Dear Minnie May,—It pleases me very much to see that my old friend the ADVOCATE has a place in its columns for the farmer's wives and daughters, and I mean to do my share in filling it up.

I send you a good idea for

CLEANING STOVES.

Stove lustre, when mixed in turpentine and applied in the usual manner, is blacker, more glossy, and more durable than when mixed with any other liquid. The turpentine prevents rust, and when put on an old rusty stove, will make it look as well as new.

I wish you would let me ask my sisters in the great 'Advocate' family to send you good receipts for taking out grease spots.—They are the plague of my life.

Your friend,

MAGGIE KNOWLTON.

Clinton, Sept. 3rd, 1873.

My Dear Minnie May,—Would you be kind enough to tell me how I am to avoid CHAPPED HANDS. I am always troubled with them in the fall, and when I have chaps on my hands I fear I may not please the other chaps.

In return for this information I will tell you how to make

PARSNIP FRITTERS.

Boil the parsnips in salted water, so as to flavor them thoroughly. Make a light batter, cut them in long slices, and dip in the batter. Have hot lard ready. Take them up with a tablespoon, and drop them in the lard while boiling. As they rise to the surface turn them, and when browned on both sides take them out. Let them drain, and set them in the oven to keep hot. Serve them with broiled or fried meat, or fowls.

Now, Minnie, do not fail to give me the information I want. Yours expectantly,

MARY L.

Here are two recipes for Mary:

CHAPPED HANDS.

The following is said to be a sure recipe for the cure of chapped hands:—Dissolve clarified beeswax in pure sweet oil, by heating over a moderate fire. Apply at night before retiring.

The easiest and simplest remedy for chapped hands is found in every store-room.—Take common starch and pulverize with the blade of a knife until reduced to the smoothest powder. Every time the hands are taken from the suds or dish-water, wipe them, and while yet damp rub a portion of the starch over them, thoroughly covering the whole surface. The effect is magical.

Chatham, Sept. 6th, 1873.

Minnie May,—You will excuse me for trying to come into your column, being one of the despised MALE kind. However, I have a question which I want you to solve for me: "How shall I manage my wife?" She has just got it into her head that she has just as much authority in the house as I have, and I want to let her know that the man is intended to be always the superior, and that his will is law.

Now, I know that if you will only take my side and show her that I must be right, and she must obey, why things will again be all happy in the house of

Yours truly,  
JOHN K.

I don't give John's full name as I know he will get hauled over the coals rather roughly by my correspondents, to whom I hand him over. Let me hear your opinions of this man. The idea, indeed! Obey!

Riverside Farm, Sept. 13th, 1873.

Dear Minnie May,—Many thanks for the good things which I always find in your column. Let me do my share towards helping it along. Here is a good recipe for

WATERPROOFING BOOTS AND SHOES.

Before applying, warm the boots a little, but take care not to hold them too near the fire. Melt together half a pint of boiled linseed oil, two ounces of suet, half an ounce of beeswax, and half an ounce of rosin.

I always look at Minnie May's Department first thing when the ADVOCATE comes home. Christmas is coming, and, Oh dear! it is so hard to decide what to make for everybody for Christmas presents. I have no great purse of money to spare, you know, so I must make up the most of my presents myself. Now, Minnie, like a dear, kind creature, help me; give me some ideas.

Your loving friend,  
ANNIE LONG.

Sombra, Sept., 1873.

Dear Minnie May,—I appreciate the good work you are doing in your department, and much wish to help you. I have four girls growing up and make them read your letters every month. Jane will send you some recipes next month. We have just got through with our preserving, and if I had thought of it in time, I would have sent you a description of my way of doing such work. Here is my way of

PICKLING GREEN TOMATOES.

Cut the tomatoes in slices and seal them in weak salted water. Drain, and lay them in a jar, sprinkling each layer with sugar and a trifle of ground mustard and cloves. Scald sufficient vinegar to cover them, and pour it over while hot. After eight or ten days drain off the vinegar and reject it. Scald a fresh supply and pour over them hot. If horse-radish is available add a few pieces, first washing thoroughly and splitting through the centre.

If you are ever down our way give us a call, and you may be sure of a hearty welcome.

Your well-wisher,  
HARRIET E. CHASE.

Willowdell, Aug. 31st, 1873.

My Dear Minnie May,—I am so glad that you have a column in the ADVOCATE. I know you are a good housekeeper and a good wife, and I want to be both. I am always on the look out for something to please my husband with, and your recipes have always turned out well with me. James is not hard to please, but I always know when he is extra well pleased. Here is something he likes:

POTATO BREAD.

Take six good-sized potatoes, boil and mash very fine. Add three pints boiling water.—Stir flour in till it makes a stiff batter.—When lukewarm, add your yeast and set in a moderately warm place. In the morning knead in flour and salt as stiff as you can.—Set in a warm place to rise; knead again, adding as little flour as possible. Let it rise again and then put it into your pans, making them half full. When the loaves have risen to the top of the pans, bake them to a good brown.

Now, dear Minnie, go on with your good work, and we will all help you.

I am your loving friend,  
EVA J. ALLEN.

Here is from one of Mr. Weld's correspondents:

"Aunt Minnie wishes to know how to get rid of the flies; she has probably observed that about sunset the flies settle on the ceilings and walls of the rooms; well, then, let her open the windows on one side of the room, then take a towel in each hand, and beginning on the side opposite the open windows, drive the flies out of the room and close the windows; the night air kills them. However, I would not advise her to get a big boy to help her, as in the excitement and hurry two heads might come into contact, and I would not answer for the consequences."

C. J.

Uncle Tom says I had better let him help, but indeed I won't. I hope to receive many letters from you all this month, and will always be pleased to help you in any way possible.

MINNIE MAY.



UNCLE TOM'S COLUMN.

My niece Clara says she likes the geographical puzzles very well; so do I, but then my children send in so few of them that I have none for this month. Here are some selections from a very nice letter I received this month:

Dear Uncle Tom,—It was I who sent you the letter without a name, but it was unintentionally done. It is the first time in the course of my correspondence that I have done that trick. I am always interested in your monthly visitor, as I have and always had a great taste for puzzles or anything that leads one to think and search. If I can at any time drop a line or two to interest the younger portion of your readers it will give me pleasure to do so. I will endeavor to imitate the little corresponding spider. I would have you thank Minnie May for me, for her information relative to frame making. I am a frame maker myself, but mine are made out of strips of paper we framed into a star, and the stars are woven together, but I think Minnie's would be nice for a change. I would like to tell F. E. Chittenden that I guessed the answer to his puzzle the first time reading over, and as I am well acquainted with an eastern portion of the island. I claim to be one of England's daughters, and I love the home of my childhood, for in it I spent many happy hours.

I must say that I agree with Clara Thomas in thinking that you are a jolly old gentleman, and are still fond of fun, and I like to see old people so too, for they must remember that they were young once and the adage "You cannot put an old head on young shoulders" is very true.

Paris, Aug. 28, 1873.  
I want Lizzie to read below Katie R's letter about the picture of Uncle Tom's family. I want her in it. She sends the following puzzles:

126. Spell BUTT with fourteen letters.  
127. Find the circle of sciences in "a nice cold pyc."

Clara L. Boake sends the following along with answers:

128. I'm large, small, black, white, King, queen, emperor, knight, Man, woman, husband, wife, Sometimes when the latter the plague of your life.

129. Before I'm anybody, Behind I'm nobody.

Barbara Stratton, Dundonald, sends answers and puzzles. A subscriber, Fullarton, also sends some puzzles, but I have had them all in before.



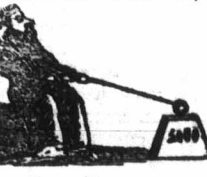
130. A continent.  
Another of my very little nieces has been distinguishing herself: "Mamma," said she "they sang 'I want to be an angel' in Sunday School this morning, and I sang with them." "Why, Nellie," exclaimed mamma, "could you keep time with the rest?" "I guess I could," proudly answered little Nellie. "I kept ahead of them most all the way through."

Lavilla Heacock writes me a nice letter this month. She says she did not get the seeds I sent her this year. Well, if she will remind me of it at the proper time next spring, they will be sent to her again. Here is one of her puzzles:

131. Make one word out of NEW DOOB!

The following puzzle has been sent in by several of my nephews and nieces:

132. There is a word of plural number, A foe to peace and human slumber: Now any word you choose to take, By adding S you plural make, But this, how strange the metamorphosis, By adding S plural is plural then no more, And sweet what bitter was before. If from six you take nine, And from nine you take ten, And from forty take fifty Half a dozen will remain.



AMELIA CAMPBELL, Terrytown.

134. A Canad an city.  
My ever-welcome niece, Mollie, writes this pleasant letter:  
Myrtleville Farm, Sept. 10th, 1873.  
Dear Uncle Tom,—You will think your niece Mollie has forgotten you, but such is not the case. I take great interest in your column, but am not clever enough to send answers to all your puzzles. I think you should have your photograph taken the time of the Fair, with your large small family about you. Would it not be fun?—Good bye, Uncle. From your little niece,  
MOLLIE GOOD.

I do want to see the faces of my large small family, and I know all of you would be interested by such a picture. My far-away niece, Katie R., suggests a very good way to get it up. Here is her letter:

Fast Bay, Nova Scotia, Aug. 20, 1873.  
Dear Uncle Tom,—

I like your column better and better every month. It is so pleasant and chatty that I feel as if I was hearing you talk. Now, I live a long way off from you and from all my cousins, and don't suppose I shall ever see you or them, so I have been trying to think up a way by which I might get a sight of the pictures of you and your large family; here is my idea, and please do, dear Uncle Tom, agree to it:

Let each of us send you our photograph, one of the card kind, and then take them all, put them together with yours in the centre and Minnie May's there too, if she will only agree to it. Then have a photograph taken of the whole picture, and send a copy to each of us who sends fifty cents for it, for you can get them made for that. Now, would not that be splendid? We could then, all of us, have a picture of yourself and all our dear cousins. I will send my picture and fifty cents in about a week, and you must agree to my proposal.

I don't like to refuse Katie's request, so if enough of you comply with it and send in pictures and money, why we will get it up as she says. If not, I will send back the money, but I want the pictures for myself anyway.

Next month I will tell you about prizes, so be preparing; I am looking around now to find something good to offer for prizes, and will decide by that time, so be preparing.

Louis B. D. Smcke says:  
135. Why is a hen the most profitable thing a farmer can raise?  
136. Subtract 45 from 45 and have 45 left.

137. If the B M T, put : If .  
AMELIA BOBBER.

Dear Uncle Tom,—I am a little boy. I have a great many uncles now, but the more the merrier, so I wish to add you to the list. Pa takes your paper and likes it very much, and I have a little sister who takes more interest in reading it than any other paper or book either. I hope you will receive me as your nephew.

AMASA B. MILLER.

Certainly I will, and your sister will be a niece.

ANSWERS TO SEPTEMBER PUZZLES.

118. Because he drops a line by every post. 119. When it is a little reddish (radish). 120. When he makes a poke R and shove L. 121. England. 122. Fiddle-de-dee, because it is spelled with more ease (e's). 123. P.G., which is Pig without an I (eye). 124. Adder.

—Translations of important Assyrian and Egyptian texts in the collections of England and the Continent are to be published under the auspices of the Society of Biblical Archaeology. Nearly all the principal translators have offered their services, and while each author will be alone responsible for his own portion of the work, the general arrangement of the materials will rest with the president of the society.

SOCIALITY BEGETS KNOWLEDGE.

The temper of men depends largely upon their knowledge. Ignorance renders them suspicious. A farmer who does not read the papers, who does not study the markets, is likely to be suspicious of whoever offers him a price for his products, and his ignorance and suspicion combined are quite likely to lead to an excess of credulity when once thrown off his guard.

WHAT FARMERS OUGHT TO TEACH THEIR CHILDREN.

One of the great weaknesses of human nature is to make material welfare the all absorbing thought and aim of life, to the detriment of the higher callings for which man has been placed in this world.

Of course young men should aim at an independence, acquire business habits, be industrious and persevering. By these acquirements they will be fairly placed on the road to prosperity and have ample time to improve their mind, making it susceptible to the enjoyments of the pleasures as are derived from such culture.

To cultivate such tastes fathers should provide their sons with ample interesting and instructive reading matter. If the taste for reading has once been awakened, the future culture of mind and tastes will no more be a labor but a pleasure.

BREAKFAST.—Epps's COCOA.—GRATEFUL AND COMFORTING.—By a thorough knowledge of the natural laws, which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills.

MARKETS.

London, Sept. 15th, 1873.

GRAIN.

White Wheat, new, \$1.20 to 1.27; White Wheat, old, \$1.00 to 1.10; Red Fall Wheat, \$1.18 to 1.20; Spring, \$1.15 to 1.23; Barley, 80c to 90c; Peas, 50c to 60c; Oats, 35c to 45c; Corn, 65c; Buckwheat, 55c.

PROVISIONS.

Eggs, fresh, per dozen, 12c to 15c; Keg Butter, 15c to 18c; Roll Butter, per lb., 15c to 25c; Crock Butter, 14 to 18c; Cheese, factory, 9c to 10c; Lard, 8c; Honey, 15c to 20c; Tallow, rendered, 6c to 7c; Tallow, rough, 4c.

HIDES.

Sheep skins, 35c to 80c; Lamb skins, 50c to 60c; Pelts, 25c to 50c; Hides, 6c to 7c; Calf skins, green, 10c to 11c; Calf skins, dry, 20c.

PRODUCE.

Hay, per ton, \$15.00 to 17.00; Potatoes, per bushel, 60c to 75c; Wool, 35c to 37c.

Liverpool Market.

Latest time of going to press. Breadstuffs quiet at unchanged rates.—Flour 30s; Red wheat 12s, 8d; Red Winter 12s 6d; White 13s 2d; Barley 3s 6d; Oats 3s 4d; Peas 38s.

Buffalo Live Stock Market.

Buffalo, Sept. 15th. Cattle—The receipts of cattle to-day including 39 cars reported to arrive, have been 850 head. The market is dull at 12 1/2c off on good cattle, with common entirely neglected.

Sheep and Lambs—The receipt of sheep and lambs to-day have been 3,200 head, making the total supply for the week thus far 20,000 head. The market is slow and weak at yesterday's prices.

Hogs—The receipts of hogs for to-day, were 4,900 head, making the total supply for the week thus far 17,900 head. The market reacted this morning, and prices declined 20c per cwt.

HEATH & FINNEMORE, WHOLESALE AND RETAIL SEED MERCHANTS.

SOLE AGENTS FOR McMASTER AND HODGSON'S CELEBRATED LIQUID ANNATTO, RENNETS.

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Nov & Dec Feb, Mar, Apr & May



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free, or three copies of different months for ten cents, or we will send the paper for next year and the balance of this year for the regular subscription price, \$1.00.

"Small Fruit Instructor,"

price 25 cents, postpaid, than from all these books combined. Send for a copy and be convinced. It will tell you just how, when and what to plant for a family supply of fruit, or how to proceed to set out a market plantation—how to market, &c. &c.

Address, A. M. PURDY, Palmyra, N. Y. sept. & oct

50 ACRES FOR SALE IN DORCHESTER Township, 10 miles from London, 3 1/2 miles from Dorchester Station. Price, \$3000. Six acres wood. Frame House, 6 years old, painted and papered throughout. Good stone collar. 4 acres orchard; grafted fruit, best kinds. Outbuildings good and large. Barn about 65 feet long, with good granary attached. A good creek runs through the farm. Corners on two gravel roads. Well fenced.

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Also, another farm, half a mile from the above mentioned lot. This farm contains 175 acres good land, well adapted for grain or dairy. Price, \$35 per acre.

Also, 1 Durham Bull, took first prize at Provincial Exhibition; 7 Durham Cows; 2 Yearling Heifers; 7 Calves; pedigrees furnished. This lot may be had with either or both the farms. Price of Durhams, \$2000.

These farms we have personally inspected, and can safely say that they are offered at a bargain.— They must rapidly increase in value; we believe they will be worth double the price asked in 8 yrs from this date.

Applicants must send 25 cts. for further particulars. Address FARMERS' ADVOCATE Office.

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For full particulars enquire of A. E. TOUZALIN, Land Commissioner, TOPEKA, KAN.

SIXTH ANNUAL SALE OF THORO'-BRED STOCK AT "THISTLE HA,"

Twenty miles east of Toronto, on the Grand Trunk Railway, Dublin's Creek Station, and ten miles from Markham Station, on the Toronto & Nipissing R. R., the valuable SHORT-HORN CATTLE & COTSWOLD SHEEP, the property of JOHN MILLER, Brougham, Ont., Canada, Will be sold without reserve on THURSDAY, 23rd day of OCTOBER, 1873.

FAT RBANKS, JR., AUCTIONEER.

TERMS.—All sums of \$100 and under, cash; over that amount Eleven Months Credit will be given part a furnishing satisfactory security. Discount at the rate of 7 per cent. per annum allowed for Cash.

Carriages will be at Dublin's Creek Station, Grand Trunk Railway, the night previous and the morning of the Sale, to carry parties to the farm.

CANADA LIFE ASSURANCE COMPANY.— Established 1847. Assets including Capital Stock 2 1/2 Millions. Cash Income about \$10,000 per week. Sums assured over \$1,000,000. Over \$900,000 have been paid to the representatives of deceased policy holders since the formation of the Company. The following are among the advantages offered:—Low rates of Premium; Canadian Management and Canadian Investments; Undoubted Security; Policies absolutely secured to Widows and Children; Policies non-forfeitable; Policies indisputable after 5 years in force; Policies issued on with profit system receive three-fourths of the profits of the Company; Policies purchased or exchanged or loans granted thereon. Premiums may be paid yearly, half-yearly or quarterly, and 30 days of grace allowed for payments of all premiums. Tables of rates for the various systems of assurance may be obtained at any of the Company's offices or agencies. A. G. RAMSAY, Manager and Secretary. R. HILLS, Assistant Secretary. Hamilton, July 3, 1873. 1y

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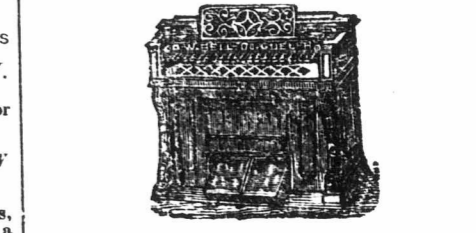
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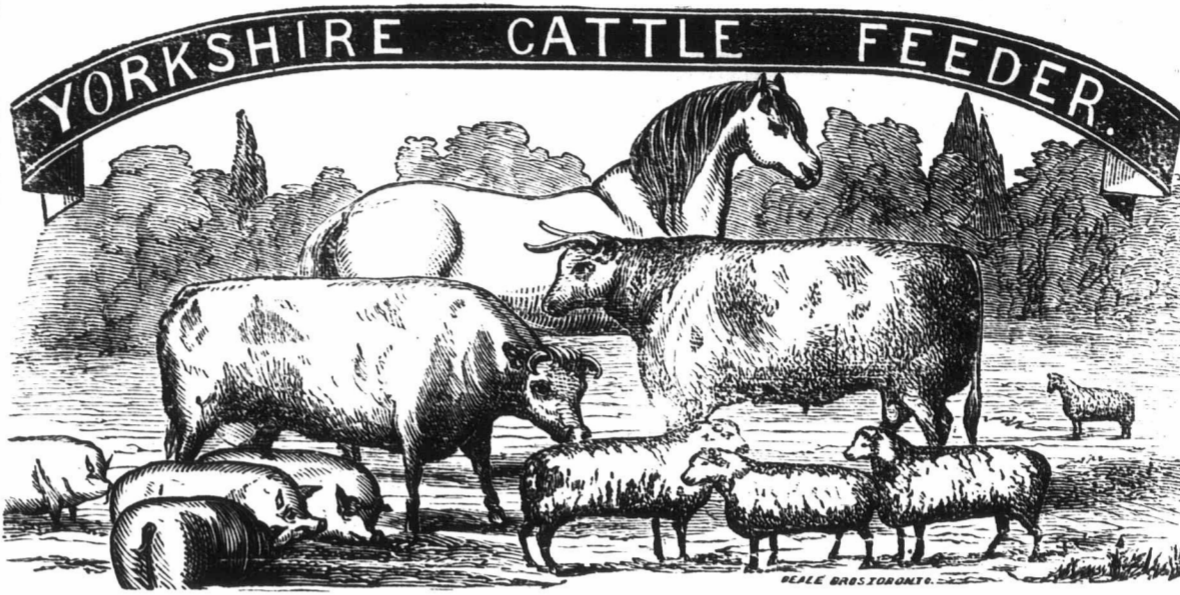


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Bow Park, Brantford, 7th July, 1873: Messrs. Hugh Miller & Co., My Dear Sirs.—Your Yorkshire Cattle Feeder is all and more than it is represented to be; a table-spoonful daily works marvels; it sharpens the appetite, helps digestion, and gives a healthy tone to the whole system. Yours truly, GEORGE BROWN.

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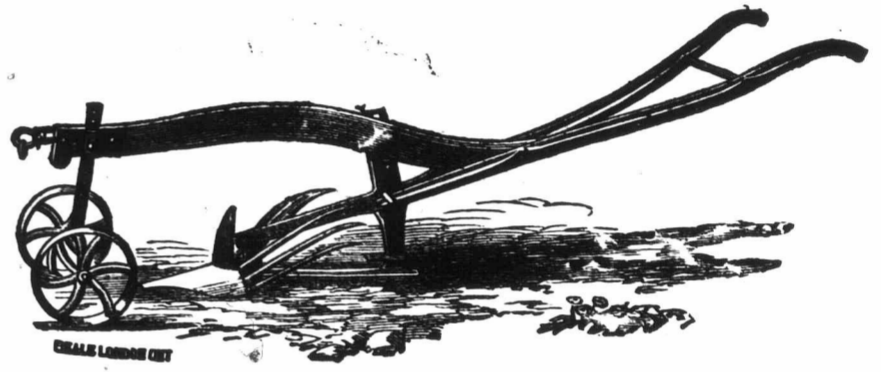
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Bow Park, 19th July, 1873. 8-11

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