

# FARMER'S ADVOCATE

PERSEVERE SUCCEED

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NO. 6

## The Farmer's Advocate!

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specially requested. Our correspondence is very heavy, and  
must be abridged as much as possible.

### Guelph—The Agricultural College, F. W. Stone's Farm, &c.

It is our intention, as time and means afford, to  
visit places that are of interest to our readers. On  
Monday, the 15th of May, we left this city with  
the intention of visiting the Government Farm in  
Guelph. A gentleman offered us a ride. We went  
as far as Mr. Stone's farm, which is a little fur-  
ther than the Government Farm from Guelph. Mr.  
Stone sold his old stock farm to the Government,  
purchased another one adjoining, and still carries  
on importing and breeding on as large a scale as  
ever. There is a marked difference in the appear-  
ance, cost and value of the stock on these two  
farms. Any person interested in this department  
should not fail to see, enquire and compare these  
two farms and their stock. They are both of very  
great advantage to Guelph, as they must draw  
visitors and purchasers from a long distance.

The most remarkable animal we noticed was  
Mr. Stone's old cow "Sanspareil." She is between  
16 and 17 years old; she has been a regular breeder,  
has raised three bulls and one heifer, successively for  
many years; she is now in calf. Every time we have  
seen her—that has been for many years—she has  
been rolling fat. She now carries about six inches  
of solid fat on her rump and about three inches on  
the loin. We could hardly have believed that a  
cow could have lived to this age and be a regular  
breeder, and carry such an amount of fat on her  
all the time. She is a large, fine animal. You  
must judge of her constitution from the above  
facts.

There is a large number of fine animals of this  
stock on the farm, some of which are being fitted to  
send to the Centennial. Mr. Stone has 70 breed-  
ing Shorthorns, besides young stock. The 3rd  
Duke of Springwood, a very fine red bull, stands  
at the head of his herd. He is a son of the 7th  
Earl of Oxford. There is also another bull of high  
pedigree in use on the farm, namely, Baron Berk-

ley, a good animal, bred by Earl Bective. This  
bull was imported last autumn; his pedigree is  
A 1. A J Cow, Queen of Weston, and a Craig's  
heifer, are among his importations for '75. Mr.  
Stone is importing seven more Shorthorns; they  
are expected in a few days.

We left Mr. Stone's, and then visited the  
Government Farm. The grounds in front of the  
College have been much improved in appearance.  
A new Mansard roof has been put on the College;  
a large building has been erected for the veterinary  
school. We met Mr. Barnes, the gardener. He  
appears to be making the best use of everything at  
his command to beautify the grounds. A new im-  
plement shed has been erected for him. We next  
met Mr. Brown, a gentleman who has been ap-  
pointed to superintend the farm management. He  
showed us some steers on which he was trying ex-  
periments in feeding turnips in different ways;  
also, sheep on which he had been trying different  
kinds of treatment. Mr. B. said he would send  
us the reports of the results.

Mr. Brown also showed us the stock, sheep and  
thoroughbred cattle. We cannot speak satisfac-  
torily in regard to them. A poultry house is being  
erected, having a hot air flue through each depart-  
ment.

At the time of our visit the Principal, Mr. W. John-  
stone, was delivering his lecture to the students. It  
was raining hard while we were there; having a  
cold and being wet, we did not call on this gentle-  
man this time, as we did not wish to sit or stand  
about while wet. We had previously seen him.  
He appears to be giving much greater satisfaction  
than the previous managers have done.

There are about thirty young men staying at the  
College. They are supposed to pay for their board  
by their work; they receive ten cents per hour  
while working on the farm, their time being di-  
vided, part of which is devoted to the study, and  
part to manual labor.

The next time we pay a visit to this farm we  
hope to have a finer day, and give fuller reports of  
its progress. The farm is a fixed fact. It has  
been established through much opposition, and  
there will be good and bad results and effects.

The Government has granted \$2,000 towards es-  
tablishing a library; also, \$10,000 for the purchase  
of stock.

Preparations are being made in Guelph for a  
number of new buildings to be erected. In fact,  
Guelph bids fair to outstrip most other towns and  
cities in the amount of improvements to be car-  
ried on there during this season.

Mr. Levi Cossitt, an enterprising manufacturer  
in this town, has a gang plow of which he has a  
very high opinion. He says he will send it to any  
farmer who has a gang plow or cultivator, or that  
needs one. He will guarantee it to do better work,  
to be easier worked by men, and easier on the team  
than any similar implement made; that the con-

struction is the simplest, and at the same time the  
most durable, that it will kill foul weeds better,  
that better crops will be raised by its use, that  
land will be much cheaper and better cultivated;  
and to clench his statement, he says he will send  
the plow free of cost, and take it back again if it  
does not in every way give satisfaction to the  
farmer ordering it.

Mr. Cossitt is a live Yankee, and the Guelphites,  
although boiling with the lion's blood on the least  
occasion, hail with pleasure Mr. Cossitt's achieve-  
ment in introducing and manufacturing this im-  
plement in their town.

We examined the plow. It has three plows,  
with steel mould-boards and wrought iron frame.  
The coupling is for elevating and lowering, and it  
is very complete. It has no tongue, which is also  
considered an advantage. Wrought iron handles  
are also used for guiding it. The cost is \$30. We  
consider it well worth the money, in fact the  
cheapest farm implement we have yet seen. We  
are pleased to see that our American cousins  
should manufacture their implements in Canada.

### Centennial Exhibition Notes.

Canada, we are pleased to hear, makes a very  
creditable display in the various departments. In  
fact, this Exhibition will show to the world that  
our country can compare favorably with any coun-  
try for progress and for productiveness, whether  
from the sea, forest, earth, machine shop or art  
departments.

We notice that some of the papers are complain-  
ing bitterly because the railroad companies will  
not make a greater reduction than one-third for  
the round trip. Railroad companies expect to  
make a haul. They might find it advantageous to  
act liberally.

The Live Stock Department promises to be of  
great interest. It is supposed about 1000 prizes  
will be awarded, but what amount or in what way  
is not yet generally known. A steamship is fitted  
specially to bring stock from Europe. The stock  
exhibition will take place from October 10th to the  
18th. Applications for exhibiting may be made  
until the 10th of June. We have not yet heard  
whose stock has been selected, except in a few in-  
stances. F. W. Stone will send seven Herefords  
and nine Cotswolds, and nine Southdowns. Mr.  
G. Rudd will send six Devons. Mr. G. Hood, six  
Galloways and four Herefords. Mr. J. S. Arm-  
strong, Mr. J. Hunter and Mr. Watt, we hear,  
will send Shorthorns, but the exact selection in  
this class we have not heard.

We hope Canada will be fairly dealt with at the  
hands of our cousins this time. We never yet  
have been. The Americans owe us a debt of  
courtesy and gratitude for the aid we have given  
them to reconcile bitter feelings. Canada has done  
her part well to make their great show a success.  
We hope it may be such.

**June on the Farm.**

This month retains much of the pleasantness of the "Merrie Month of May," more especially in its first week, before the heat of the mid-day sun in midsummer makes us prefer the shade to the open fields and meadows. But even in its hottest days, the labor of the country is pleasant in the early morning—the hours when the plowman is out a-fallowing from the early dawn and does his day's work while it is yet morning; and when the mower, before mowing machines were introduced, cut down his half acre of heavy grass, while it was dripping with dew.

There is plenty of work to be done this month. June is a busy season with the farmer. In it he may be said to begin his season's fight with weeds, but the drilling of crops has given him a great advantage in this labor. The cultivator and the horse-plow do the work effectually, with little manual labor. He can easily prevent the seeding of weeds; this is a great object—"One year's seeding, ten year's weeding."

The planting of corn should be completed by the middle of the month. This crop is valued highly by farmers of the States, particularly of the West. In our country it does not hold so important a place in agriculture. We find, with our soil, climate and modes of culture, other crops, as barley and peas, more remunerative. We should not, however, omit corn from the list of our farm products. It is very valuable for feeding stock, if for no other purpose. For cutting green, let it be sown in drills, that air, light and heat will have freer access to the growing plants, and they will be richer in nutritive properties. Western corn is generally planted as a forage crop, but others prefer the smaller, sweet varieties, as of better quality, though the bulk of food is less.

Turnips should be sown by or before the middle of the month. We are glad to see that the culture of this very valuable root is every year becoming more general. A great obstacle to success in turnip growing is the fly. A light sprinkling of lime or wood ashes as the plants first appear, is recommended as a preventative of its ravages; that may do on a small scale. The best remedy is to force the plants on to the rough leaf as early as possible; this is done by the application of some stimulating fertilizer. For this purpose we have found guano of great service; and the application of superphosphate, 200 pounds to the acre, is said to have an effect equal to the guano.

Sheep washing and shearing, when not done earlier, are to be attended to as early in the month as the weather is favorable; but it is of great importance that the work be not done where the cold might lead to dangerous diseases. The sudden change from wearing a warm covering of wool to nakedness, is very trying.

Clover seed is the first crop saved this month. It has become a considerable item in our farm products. This year it has been a very profitable crop. Since January last over 6,000 bushels of clover seed have been shipped from Ontario to Britain, averaging \$7 per bushel, and amounting to nearly half a million of dollars. The great demand is owing to a short crop in Europe, and the price has gone up there to \$8.50.

Pastures now are in their prime in Canada; as May in Britain is the butter month for quality as well as quantity, so is June in our later climate. Even now, when pastures are at their best, the farmer will find it to his advantage to have some green food to cut for his cattle. Pastures, if heavily stocked, soon become bare when cattle feed on them only, and it is not well that grass land should ever be bare. Fall rye, and after that, oats

and peas mixed, are excellent soiling crops, to be followed by clover and then corn. If cows are bloated from eating clover unwilted, a good remedy is charcoal given in water, an average sized teacup for a cow—more or less according to the age and size of the animal.

**What of the Markets?**

Our market is England. We have an extensive territory of fertile soil, teaming with partially developed wealth, and capable of supplying tens of millions with food and employment. We have breadstuffs to sell, and the people of Great Britain want breadstuffs and meat, and are able and willing to pay remunerative prices. The demand goes on from year to year increasing. Her agriculture is steadily increasing; but her population and wealth increase in a still greater ratio than the products of her fields. We need entertain no dread of an overstocked market for our meat.

We have before us the returns, from the English Board of Trade, of the imports and exports of agricultural products for the first quarter of 1876. A mere glance over its columns demonstrates the purchasing capacity of England, and the advantages of sending our surplus products direct to that market in which the purchasers are customers and the payment is sterling money. The increase in the importation of live animals will be seen from the following table.

	Three months Ended Mar. 31, 1874.	Three months Ended Mar. 31, 1875.	Three months Ended Mar. 31, 1876.
Oxen and Bulls	15,814	24,811	29,855
Cows	5,148	5,617	8,746
Calves	4,178	3,417	3,891
Sheep and lambs	125,923	159,905	203,380
Swine	7,343	7,343	5,001

These figures show the constantly increasing demand for live animals for food, and this will be still more apparent from the second table—the cost of the imported animals—given below.

	Three months Ended Mar. 31, 1874.	Three months Ended Mar. 31, 1875.	Three months Ended Mar. 31, 1876.
Oxen and Bulls	£304,073	£556,183	£643,530
Cows	100,562	108,302	166,838
Sheep and Lambs	281,065	346,152	418,841
Calves	20,026	18,587	15,545
Swine	94,111	21,561	17,398

Referring to these returns, the *Farmer*, England, remarks:—It is clear, from the figures, that our imports of live animals for food are increasing enormously, and that this increase is, in spite of the growing tendency, to be severe in the examination and restriction of imported stock.

We pass on from the imported live animals to the imports of dead meat, and we find also a large increase over the same period of the previous year. The imports of bacon had increased from 793,013 cwt. to 880,884; of salted beef from 70,393 cwt. to 79,175; and of beef, fresh or slightly salted, from 17,066 cwt. to 24,084 cwt.

We perceive also, from the returns, that the demand for tinned meat, instead of increasing, has decreased, showing that Englishmen require to have their beef in the joint or steak, whether imported living or slaughtered, a fact in favor of our exportation. Australia is too far from the market to furnish the supplies fresh. From Canada the transit is shorter than from any other country that can supply the market with meat; and in feeding beef for shipment to England, and in making more cheese of the best quality, the Canada farmer will, for the future, realize his greatest profits.

**Flax Growing in America.**

The culture of flax, though becoming more general in Canada than it was before, is still very little known in many parts of the country. It is, we see, numbered among the agricultural products of parts of the Huron District, and some few flax mills are erected, and, we doubt not, when the

profits of flax growing are better known it will not be confined to a few localities. Knowing the advantages of a diversity of crops, as far as suitable to soil and climate, and having known from experience the profits of this one, we would be much pleased to find that Canada were as favorably known for flax among her textile fabrics as she is now for barley among the cereal products of her fertile fields.

To form some reliable estimate of the profits to be derived from a flax crop we refer to the United States Agricultural Report: "Ten bushels of seed and six hundred pounds of fibre are good average crops. But frequently as many as twenty bushels of seed are grown on the fertile lands of Illinois." Twice the average here given may, we believe, be raised with proper tillage. The average is not more than half equal to the best crops, as the majority return a very light yield. We have, besides, the testimony of our own experience, flax having been a part of our rotation in farming for some years. Less than one thousand pounds of fibre we would not call a good crop. But let us take the average:—600 lbs. fibre at 22c. per lb., amount, \$132; Seed, 10 bush. at \$1.60 per bushel, \$16.00. Total value for an average acre of flax, \$148. From this is to be deducted the cost of labor and seed, and after the deduction the farmer who has yet to make his first experiment in growing flax in Canada, will see sufficient encouragement for making a trial.

Russia exports flax in large quantities to Scotland, and there has been a steadily increasing demand for the American, and a growing of it for home manufacture. The great Scotch flax merchants, Messrs. Miller and Fleming, say that samples of Ohio flax shown them is better and cheaper than the flax of the North of Europe; and would take at once \$100,000 worth of it. They annually use 5,000 tons of flax and 3,000 tons of tow.

The growing of flax has been objected to from its being an exhausting crop, but it is not more exhausting than wheat, and we always found it an excellent crop to sow clover and grass seeds, the ground being in such good tilth.

We always sowed late in April or early in May, but American agricultural writers say it should not be sown until the time the soil is in condition for corn. Our advice to any one thinking of sowing flax is to include it now in their intended course of crops for the next season, and in the fall to plow the ground, thus taking the first step for its cultivation.

A great benefit that we would expect from a more general growth of flax would be from the greater use of the seed in stock feeding. There is no other cattle-food so beneficial as flax-seed (or lintseed as it is more generally called), whether in meal or cake. Fibre, oil expressed from the seed, and oil-cake from which the oil has been taken, all these have ready markets at good prices.

**What is to "Buy in the Cheapest Markets."**

In an article entitled "Trade and Commerce," in the *Telegraph*, St. John's, N. B., we meet the following significant paragraph:

"Whether the fact that a large part of the stock (breadstuffs) is unsound will help to keep up the price of good flour, remains to be seen. There are some enquiries from the United States whether unsound flour can be sold here. We have endeavored to warn consumers in respect to this matter, but probably the cheapness will in some cases be considered rather than quality."

This is one instance of the devices of our neighbors over the line to undersell our people in our own market, and we regret to say that in their

endeavors they are too often successful. Commodities of every variety, agricultural as well as manufactured, are continually sold in our markets, while our workmen, farm laborers and mechanics are standing idle at the corners of streets, only desirous of work, and no man to employ them; while their wives and children are sometimes driven by cruel necessity to crowd around the soup kitchens to accept as alms food that should be procured by the work which the country should provide for them. But the theory must be carried out to buy in the cheapest market—cheapest—aye, unsound flour and other such articles that should not be offered for sale in any market. We read a few months since of an article called butter, of United States manufacture, being sold in the Montreal market, and this, too, to be shipped to Liverpool to be sold as Canadian butter. There is no possible way by which our farmers and others could better prove not only their patriotism, but we may add, their common sense, than in giving every encouragement to home industry. Are we to go on purchasing unsound flour from the farms and mills of the United States, instead of good, sound flour produced by labor of Canadians?

**Evergreen Trees.**

The value of evergreens for shade and ornament is not apt to be overestimated. Designed as they have been for the good of cold northern countries such as Canada, they are, as might be expected, indigenous throughout the country in their many varieties, and hence they are more lightly esteemed than they would be if rarely seen. Wherever we have an opportunity yet left us, let us, by all means, leave windbreaks, in belts and clumps, standing in suitable places. As a means of warding off the severe storms of winter, and moderating its extreme rigour, the value of a screen of evergreens can hardly be rated too high. There is a perceptible warmth under the pine or other evergreens, and in its near vicinity in the coldest weather.

Wherever there is no such shade, we should lose no time in securing it, especially for gardens and orchards. The whole cost is the few hours spent in bringing the young trees from their native woods and transplanting them where required. Even were it necessary to purchase in the nursery, they are worth all they may cost many times told. But some complain that they have planted and the trees have died. They can have no success in planting. To encourage you to persevere, to "try, try again," we tell you of our method of transplanting young trees taken from their native woods. First, we have had the place designed for them in a good state of cultivation. It is useless—a mere waste of time—to plant a tender tree in hard clay, or sod unlabored. The tiny rootlets require to have the soil from which they are to take the food in fitting order. In taking up the young trees from the native bed choose those that are least in the shade, as they are hardiest. Take them up with the roots as little injured as possible. If any root be injured or broken, cut off the injured part. Do not let the roots be exposed to the air and sun; keep them covered till planted. When planting, and when they are planted, tread the earth firmly about them.

And now a word as to the time of planting. It is a current opinion that the planting should be late in the season—advancing into June. It is generally held that the first week in June or the few previous days are the fittest for the planting. We have planted evergreens at different times, and, though we have had some failures, generally with success. Those we planted in the last days

of May, in early June, in August, September and October have grown well. Still we could not neglect the rule given by experienced gardeners and nurserymen. They say *the best time to plant evergreens is when the buds begin to burst*. The sap, so abundant then in all parts of the tree, being checked by the removal from its nursery, descends into the roots, giving them additional vigor, and causing them to take hold and recommence growing at once.

**A Great Dairy Enterprise.**

There are a few gentlemen of large and expensive ideas at the present time that are agitating the practicability of establishing a cheese and butter factory in this city on a most gigantic scale. The plans are to make arrangements with the six railroads lines that centre in this place to bring the milk on from all stations along the different lines, and make butter and cheese on the most approved and scientific principles. Arrangements are made in the States for regular milk trains, that bring the milk every morning the distance of eighty miles to New York. Large factories can employ the best of skilled labor, and have every appliance, and every facility of shipment and markets; thus they can make better terms in every way. We hope the gentlemen may succeed in the undertaking, and believe the plan to be a good one and one that would tend to enrich the farmers and advance the value of farms more than any enterprise ever yet put into operation in this locality, if properly carried out. We hope our dairy correspondents will each give us their views, namely, Messrs. Arnold, Willard and Sebury, on this question. There will, no doubt, be great objections raised by many that are interested in the factories now in operation, as such a plan would interfere with their present business; the extra handling of the milk would also be an objection. If energy is thrown into the plan, we cannot see why this should not act as well as the plan of sending the milk off the farms to be manufactured; it took many years to convince the farmers, but time convinced them. It may take time to bring the plan into operation. Perhaps the number of factories now started will prevent the plan from being carried out.

**Competitors in the Wheat Market.**

The *Mark Lane Express*, in its review of the grain trade, in reference to the large shipment of wheat from Calcutta and its good quality, says:—"Now that such facilities are offered for the transit of wheat from the East, the low class of grain from America and Russia is almost entirely neglected, and the influence thus brought to bear on the course of the prices is a matter for careful consideration. As some quantity of Calcutta wheat has recently been taken for the continent, it is plain that millers there begin to appreciate the article, and an extension of the English trade in this direction may possibly be looked for." The "signs of the times" plainly indicate less demand in the markets of Britain for the breadstuffs of the Western Continent. The vast fertile lands of Asia and her cheap labor can supply wheat at a price that would give the American producer no profit when selling at competition prices. The English farmers have greatly reduced the area of wheat culture. The competition of sellers in the British markets from all parts of the globe has lowered the price of home-grown wheat, while wages have been high. At the same time the demand for meat has been increasing and the price advancing steadily, and in consequence the course has been, less wheat and more meat and cheese. The same course is the most prudent for Canadian farmers—it is what we have been advis-

ing our agricultural friends to pursue. The price of breadstuffs will, judging from present prospects, be little higher than it is at present. The latest reports speak rather favorably of the growing crops in England, but let them turn out as they may, the immense resources of India now added to the countries of Europe and America that till the soil for the markets of Great Britain will keep down prices. Good beef and mutton will continue to bring good prices, and in these we will be able to meet any competitors by following the most improved systems of agriculture.

**Emigration.**

Emigration from Great Britain no longer commands the same degree of interest from all classes that it did a few years ago, though it is still a matter of the greatest importance to the country. In countries such as Canada, where such a vast extent of territory awaits the enterprising colonist, the emigrant is ever welcome, and is sure to add to the wealth of the country; but he must be of the right sort, not of that class who are found loitering around village shops and street corners. We want men accustomed to work—willing to earn their living by the sweat of their brow, men able to handle the axe and the cradle in the new settlements. But many have been sent here as farm laborers whose only claim to the classification was their own pretensions.

The Select Committee on Immigration and Colonization have published their report containing a synopsis of the evidence taken by them. From this it is seen that the immigration to the Dominion has greatly fallen off. The reports from emigrants already here were very discouraging, and many who would have emigrated acted on the advice of friends here—"Let those who can make a living at home stay there." Bringing suitable emigrants to the country is but the first step towards its colonization. Steady employment for all hands would soon settle our waste places. The total number of settlers last year was 27,882, and the total cost of immigration \$296,692.91, making the cost of immigrants to the Dominion \$10.83 per head. It is stated that the emigrants have been of a satisfactory class, and that the agricultural laborers have readily obtained employment. We cannot ascertain what proportions are really agricultural laborers, but it is to be hoped that they were the majority, as, despite the depression in general business, farming may be said, on the whole, to have been fairly remunerative.

**Orchard and Garden—No. 4.**

HINTS FOR JUNE,—BY H. ORTI.

The season is now past for planting deciduous trees and shrubs generally, and we must be content with our labor on that score till fall. Evergreens may yet, however, be safely transplanted from the nurseries or the woods, only a little extra care being required in digging and packing. See that the roots do not dry, as the sap being of a resinous nature, rapidly hardens on exposure to the air, which no attention afterwards will make the plant recover.

Strawberries may yet safely be planted. If the leaves are long, remove some of the tops; dip the roots in thick mud before planting. To strengthen the growth of young plants newly set out, it is a good plan to pick out the flowering stalks to prevent fruiting, thus laying up larger stores for next year. In picking strawberries for market, be sure to pick off half an inch of the stem with the berry; this keeps the fruit firm and helps to preserve it considerably. Reject all bird-eaten or too ripe fruit, and when the measures are full, the addition

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of a few green leaves around the edges makes a pleasing contrast with the fruit, sure to attract the eyes of intending purchasers sooner than fruit carelessly arranged.

All freshly planted trees will require mulching if the season is very dry; a pail of water occasionally will prove beneficial. Do not use any liquid manure, but plain water, as the roots are not in a condition to want any strong food.

This will be just the time to get after the lice, as the newly hatched insects are now moving about the trunk and branches. Lime wash will prove as useful an agent for destroying them as anything else. Have an eye after the currant worms, as they make their appearance very early on the young growth. Dust hellebore liberally when the dew is on; this will necessitate a little early rising, but this is healthy for you, though not for the currant worm. Hellebore either in a dry or liquid state is an indispensable article with the careful fruit grower, as it is sufficiently poisonous for the majority of insects which infest the garden, and is not dangerous to handle.

The curculio, that great enemy to plum culture, commences its operations when the fruit begins to set. There are a great number of ingenious devices to catch the "little codger," but we think the following simple method of dealing with it the best: Make the ground under your trees very clean and smooth, spreading on it a large sheet prepared for the purpose. Then give a sudden jar to the tree, which will bring down the stung fruit and some of the "animals." These should be immediately destroyed. This does not take long, and if followed up, will ensure a good crop of this beautiful fruit.

The early part of this month will be found quite soon enough for the planting out of a great many flowers, such as geraniums, verbenas, heliotropes, lantanas, annuals, dahlias, &c.

Summer Pruning may be done from the middle of the month till the 1st of September. We consider it the best time for the thinning out of trees. Cuts now made do not bleed, and soon callous over. Make your preparations to commence budding early in July, when we hope to illustrate and fully describe this method of propagating trees. By this means parties who have small lots and no room for a great variety of kinds, can bud several on one tree, and thus enjoy by this art what their limited grounds will not allow.

Land plaster has a beneficial effect on young trees, applied on the foliage in the same manner as on the meadow.

Keep the hoes going. Weeds will grow and get the start of you if you are not watchful.

"A stitch in time saves nine."

#### Hints to Dairymen—No. 5.

Written for the Farmer's Advocate, by J. Seabury.

Colonel Waring, in his remarks on corn fodder, "Ogden Farm Papers," says:—"Sowed corn-fodder is trash, no matter what the variety, nor what the quality or richness of the soil." This, no doubt, will astonish at least some of the readers of the FARMER'S ADVOCATE, but when we come to consider the matter carefully we will find that the Colonel is right in his assertion. Every dairyman knows that wood-land pasture is very little use, and that the cows will not touch it when they can get good pasture in the open field; every one has also noticed that grass growing under shade trees if not trodden down is allowed to grow rank, while all in the vicinity is eaten off close. No doubt dairymen have also noticed when feeding their sowed corn that where it has grown very rank the cows did not care as much for it as where it grew much thinner and not so rank. The reason

of this is from the simple fact that the latter has had more sunlight and air, two very essential things in the growth and development of the nutritive properties of plants, and most certainly necessary to the full development of the saccharine properties in the corn. This alone would be a very strong argument in favor of sowing in drills, to say nothing of the saving of labor in cutting up, besides it can be well worked with the cultivator and hoed if necessary. It is a well-known fact that grass is the most natural food for the cow and in substituting something else we must aim to give her the most nutritive food and that which can be readily converted by her into milk. There is no crop that a dairyman can raise to better advantage than a good piece of corn sown thickly in drills on a good rich piece of land. Every dairyman should sow from one to five acres. The easiest and best way to put it in is to take a plow (after the land has been well prepared with the cultivator and harrow) and make a mark, say two or three inches deep and the distance apart that you want your drills; into this sow the seed thickly with the hand and harrow down lengthwise of the drills. As high as 30 to 40 thousand pounds of grain and 10 to 12 of dried has been grown per acre. It can be sown any time from the 20th of May (or earlier according to locality) up to the first of July. Many dairymen sow at different times, so as to come in when wanted. Don't fail to sow a piece, even if small, and you will be surprised at the result. The Colonel concludes his remarks on corn by saying:—"Give it plenty of sun and it will give back plenty of nourishment."

Keep a close watch on your meadows, picking up all sticks and stones, and rolling down smoothly for the mower. If they are clover or part clover they should have a top-dressing of plaster or some other artificial manure. This, if it should prove a dry summer, will repay the farmer 100 per cent. on his investment, besides being a great assistance to the aftergrowth, either for feeding or mowing. If there is any prospect of a light crop prepare to meet the deficiency by sowing some green crop. If you have not a suitable piece of land, mow a piece of your lightest meadow and turn over well and sow to corn, oats and peas, or some other crop. Many dairymen sow spring wheat, which is said to be excellent, but there is nothing equal to the western corn for a good large yield of feed. If many dairymen would take this precaution it would save them many dollars which they have to pay out for hay or other feed in the spring. There is a great diversity of opinion as to the proper time for cutting hay, but in my opinion the best time is when the plant is in full bloom. The most competent jury a dairyman can submit this question to is his own stock, and I feel certain they will return a unanimous verdict in favor of the early cut hay. As I remarked before, the most natural food for the cow is grass, and the dairyman to be successful with his stock must endeavor to have his winter feed as near that as possible. A great many run away with the idea that because the cattle eat the well cured early cut hay more readily, and will eat more of it, that there is a waste about it and that it does not go so far. They should bear in mind that cattle or cows fed with it require little other feed, and, also, let them note the difference in the condition of cows that are fed on early cut hay and those which are fed on hay that the seed has fallen from. What herb doctor would think of letting his herbs remain until dead ripe before cutting them? He gathers them while in blossom, from the simple fact that they are much stronger than when allowed to get ripe. The same will apply to the early cut hay, the nutritive properties are in a soluble and digestible condition, whereas, if allowed to stand and

ripen a portion of this becomes converted into woody fibre and thus lost.

As a general thing, pastures are allowed to take care of themselves, whereas they should have a certain amount of attention. The weeds and foul grasses should be kept down, and if there is any portion of the field that has grown rank it should be mown off. There is a great diversity of opinion about pastures; some writers are of the opinion that to make a good pasture it should not be broken up at all; others, that it should be renewed every few years by breaking up and reseeding. My opinion is that it altogether depends on the kind of soil and the locality. The dairyman must study the nature of his soil and under what treatment it will yield him the largest returns, not only in pasture, but all kinds of crops. He should be continually watching the growth and yield of his crops and dairy, and study in what way he can increase that growth and yield. The larger his crops and the better the yield of his dairy are, just in that proportion does he lessen the cost of production, and just in that proportion is he realizing higher prices for his goods. If dairymen would only make this point a study and use their pencil and memorandum book in making a few calculations by the rule of proportion it would be the means of creating an interest in their work. Farmers and dairymen as a class are stubborn to learn. This is a progressive age and those who allow themselves to fall in the rear must be content to occupy second-rate positions and to be satisfied with small pecuniary rewards. Notwithstanding all the improvements in nearly every department of farming, little has been effected by way of inducing farmers and dairymen to perform their business operations in a more systematic manner by keeping a regular record and account of their farm operations and business generally. I don't suppose there is more than one in fifty who keep regular accounts, or have any idea what their expenses are, or what their various crops cost them to grow, either separate or otherwise. They have not the remotest idea what crop pays them best. They do not know whether it will pay them best to raise wheat at 90c. per bushel or peas and barley at 60c. They have no idea what a bushel of wheat or a pound of beef cost them, it is all guess work. Now, in my opinion, it is just as necessary and just as easy for the farmer or dairyman to know what his products cost him and whether he is making or losing in certain crops as it is for the merchant to know what his profits were for the past year, and which line of goods paid him and which did not. If they would go into this thing carefully, no matter how rude the first attempt might be, they would be surprised at the results, and it would furnish food for thought and set him thinking. For instance, a farmer may be raising some crop which costs him 10c. per bushel more than he is realizing for it, but as he keeps no account he does not know it; again he may be raising some other crop which is paying him 10c. or 15c. per bushel over cost and yet he is ignorant of the fact and goes on raising that which is costing him more than it nets him. Every one should carry a pocket diary and make a note of what he is doing each day, state of the weather, money received, money paid out, sales of produce of any kind, stock, &c., and all purchases, bargains made, engagements of hired men, &c. From this pocket diary he should copy into a good large book all the items in full, with full notes and remarks on any subject. This book alone, if carefully kept, he will find of very great use, and very interesting after a few years. And what farmer or dairyman is there that cannot keep such a book? From this book he can carry out a simple set of books if he wishes, posting all the necessary items into a ledger.

To committeemen and salesmen of factories I would say, keep yourselves well advised as to the markets and what is doing, and be prepared to act when a buyer comes along. It is very annoying to come to a factory, examine the cheese, like them in every way, but on asking the price to be told that the committee will have to be called together before they can sell. If the patrons of a cheese factory must have a committee let that committee name one of their number as salesman, with full power to sell, but with the understanding that he consults the others. I would further add, sell your goods when they are fit to move, let the price be what it may, and you will find that you will do as well on the whole, if not better, than those who hold for better prices, for very often instead of better there is worse. Then, again, your goods are gone, you are relieved of any further trouble, you have your money and save all risks and shrinkage.

#### A Present to Every Subscriber.

We have imported some choice sugar-cane seed, which is claimed to be a valuable food for stock, an ornamental plant, and a fine shade. It will do to plant until the 10th of this month. It grows something like corn, but much taller. It can be sown broadcast, in rows or in hills. It must be cultivated when young.

To any or every one of our subscribers who wish to try it, we will mail a small packet, on receipt of your application, and one postage stamp for postage and packing.

We feel satisfied you would be pleased to see it growing. You might plant it either on the farm or in the garden, or any place where it would get plenty of sun. It would look well near the lawn, or to cover some rough, unsightly places. It must be cut before it becomes woody, if you wish to try it for food for stock. It may become of value as a soiling crop, and as such several of our exchanges speak of it in the most commendatory manner.

#### Patent Rights.

The latest invention we have seen in the way of patents and patent vendors was a real live Yankee woman, who was on the market square in this city with a patent churn. It might serve some of our bachelors right if they were caught, but to those that have purchased the fanning-mill right or any other patent have most probably had experience enough. Our advice to our farmers is, never purchase patent rights, although a fortune be made to loom in view. The price which is asked is \$400 or \$500 per county. Remember there are over three thousand patents out on churns.

#### Notes on the Garden and Farm.

**ROTATION OF CROPS.**—As desirable as rotation in office may be, in cannot be more so than a judicious rotation of crops on the farm. No matter how fertile the soil, it is conceded that constant cropping with one, two, or three kinds of grain, will wear out the land. All good farmers concede that a proper rotation of crops, including the grasses, should be followed. Chemists inform us that the nutriment of food-producing plants is taken in part from the soil in solution through the roots, and partly from the air through the leaves, and therefore that suitable food must be provided, or a manifest deterioration will result. The good farmer, while he aims to produce the largest crops at the least expense, will also be careful to keep up the fertility of the soil by a judicious rotation of crops, supplemented by the application of manures to the land.

**THE VEGETABLE MARROW AS A WINTER VEGETABLE.**—Why do we only grow this really serviceable vegetable for summer consumption, and not seek to produce a crop for winter use? Is there a prejudice against it when in a ripe form, or does this negligence arise from that indifference for new things that is so much the characteristic of the English people? It took a long series of years to teach our ancestors the great value of the potato as an article for winter consumption, and now we realize its value in the greatest degree. It cannot, however, be denied that we have in the potato an exceedingly uncertain crop—one on which no positive reliance can be placed—as a full and complete crop is now the exception, and possibly a very sparse crop may some day become the rule. The severe check that the potato has received during the last two years is, I fear, beginning to shake the confidence the growers had reposed in it; and should it at any time prove to be a general failure, it would not be merely a severe loss to the potato-growing community, but a heavy national misfortune also. To advise the cultivation of the marrow for the production of a winter crop is thing new; but the advice is just as strongly needed now as it has ever been in days past; and although it would be absurd to set up the marrow as having pretensions to fill the place now occupied by the potato, yet it may well become a valuable adjunct to our somewhat sparse winter vegetable supply, as it is ridiculously easy of cultivation, easy to store, and are easy to cook.—*The Gardener's Magazine.*

**DEEP OR SHALLOW WHEAT CULTURE.**—Mr. Mechi has been in the habit of cultivating wheat after the mangel, kohlrabi, cabbage and turnips. For the preliminary crop he subsoils deeply and manures heavily, but for the subsequent wheat crop he breaks the ground only with a single plowing with one pair of horses. He finds that deep culture just before wheat sowing enlarges the straw product at the expense of the grain. The heavy foliation of the plant is often very deceptive in regard to its yield, while light-looking fields generally produce largely in quantity and of very superior quality. He quotes Liebig in support of his views as follows: "But in proportion as the conditions for the formation of the straw become favorable, so did the quality of the seed deteriorate as the quality diminished." He cites the practice of some successful farmers, who, on finding their crops too rank, trod them with men and horses. Salt stiffens the straw and checks a rank vegetation, but it should be used in moderation. He always scattered it in connection with guano. *Dep. of Agr. Report.*

One word of caution as to relying solely upon gypsum as a fertilizer. Excellent as it is, land must have something else, or it will finally run down. Plants require at least a dozen elements in order to live and thrive, whereas gypsum furnishes only three, sulphur, oxygen and lime. When plaster first came into fashion in this country such were its magical effects that many farmers thought they could sell all their hay and still keep up their farms by purchasing yearly a ton or two of plaster. They found themselves deceived. The phosphorus, potash, soda, etc., were in a few years exhausted, and a prejudice arose against plaster, which it did not deserve. It was accused of being merely a stimulant to land, enriching the father and impoverishing the son. Rightly used, it is one of the cheapest commercial fertilizers used, and will enrich both father and son. If hard-wood ashes can be bought for twenty cents per bushel, they deserve to be ranked No. 1, as they contain all the inorganic elements of plant life, but even in this case we would like to mix some plaster with the ashes.

**WHAT MAY BE DONE BY PLANTING.**—We notice that the timber on a part of the Cawdor Estate, in Scotland, has been sold for more than £16,000 sterling. It occupied only some 300 acres of hilly ground, which has no value for agricultural purposes. It was planted 56 years ago, and has in that time become worth more than £50 per acre, besides the money which has been realized from time to time by the sale of the wood cut for clearings. Are there not a great many places in Canada where plantations of suitable trees would create, with little subsequent trouble, a large sum of money for children, as certainly as assurance. We are inclined to think that many landholders might usefully and profitably plant portions of their property, and though they rarely enjoy the benefit themselves, except in the way of an increase in the value of the investment, they would have the satisfaction by this means of making an excellent provision for their families.

**GREAT LOSS OF CATTLE.**—Mr. Andes Smith, Dereham, near Ingersoll, has sustained a very severe loss in his herd of cattle by the death of fourteen head. Several veterinary surgeons have been called in to examine into the cause and nature of the disease, but as yet have great difficulty in agreeing upon it. The disease commences by swelling in the upper part of the legs and descends to the lower parts, when they break out in sores. The tails of the animals also drop off within about seven inches of the stump. The malady broke out about six weeks ago, since which time fourteen head of valuable cows have died and four are now sick. Singular to state, although the cows have been all more or less affected, a bull which has had the same treatment and shelter, has shown no signs of disease, and none of the herds of neighboring farmers have been affected.

The District of Tevitsdale, Scotland, has been suffering from an extraordinary scourge of mice, supposed to be the consequence of an indiscriminate slaughter of hawks and other birds of prey having disturbed the balance of nature, and allowing the mice to multiply without restraint. The Scotch, naturally a shrewd people, have concluded that the hawks, being comparative few, consume less of the products of the earth than the innumerable hosts of mice, and have reversed their course of action. The Duke of Buccleugh's head game-keeper has accordingly got orders that hawks and other birds for the future be preserved, that they as was their habit, aid in the destruction of the vermin of the farm.

Advices from Australia to the 26th of February state that £20,000 have been subscribed by stockholders towards £25,000, the estimated cost of shipping to England 200 tons of fresh meat under the freezing process of Mr. Thomas Mort, who during the past ten years had invested a considerable amount of capital in testing and maturing his plans and erecting very substantial factories, both in the Blue Mountains and at Sydney. The Government statistics show there were in Australia, and Tasmania on December 31st, 1867, 38,866,093 sheep and 3,574,133 cattle; at the close of 1875, the number of sheep had increased to 50,566,928, and of cattle to 5,643,091.

**SOIL PROTECTION.**—John Beard, of Alameda Co., Cal., is one of our best farmers. Finding he could spare a portion of his land, he leased part of it to a neighbor, who planted it in corn, beans and potatoes; the lease being up, Mr. Beard plowed the land as usual, and sowed it all in wheat. That planted with corn produced very little wheat, but where beans had been planted it did a little better, while that part which had been planted in potatoes produced a splendid crop of wheat. He cannot explain it, but gives the information for the benefit of farmers, who can experiment for themselves.—*Ec.*

The *California Live Stock Journal* says of rust: Rust is likely to attack wheat fields in seasons when there is much moisture, producing a rank, tender growth of straw. Morning fogs, which wet the growing grain and then clear up suddenly, exposing the still wet fields to a hot sun, also showers and sunshine immediately following, are favorable to the germination and growth of the fungus rust. As a preventative, a bushel of salt to the acre, sown upon the growing grain, is good. As a general thing, when the rust once shows itself, it is safer to cut the wheat for hay before it is entirely ruined.

Gypsum is often used extravagantly. It does not follow that if 100 pounds of gypsum to the acre will increase the crop of clover by a ton that 1,000 pounds will add ten tons to the yield. The rule of three does not work in the plaster business. Homeopathic doses of plaster is the rule. Possibly 300 pounds to the acre may be allowed when plaster is cheap, but if it costs half a cent or more a pound, we would call it wasteful to use over 200 pounds per acre, and we have seen great effects from 100 pounds. The latter amount will furnish forty-six pounds of sulphuric acid, and few crops will carry off this much acid from an acre.

Complaints are general of the Exhibition Railroad rates. There is great dissatisfaction with the smallness of the regular rates. "A reduction of 50 per cent. is usually deducted to conventions, country fairs and similar gatherings of the people, but now, when it is especially desirable that as large a number of the people as possible attend the National Exhibition, a miserable reduction of twenty-five per cent only is made on the roads."

## Agriculture.

## Culture and Quality of Root Crops.

Jonathan Periam, of Chicago, in the London (Eng.) *Agr. Gazette*, says:

In your issue of Nov. 27th, I notice an enquiry relating to difference in quality of mangels: 1st, Whether the evils of over-manuring would not be met by thinning out less widely the roots, and thereby gaining a greater number per acre. 2nd, Are the small mangels as nutritious as the medium-sized? The answer to both questions may be in the affirmative, so far as feeding to stock is concerned, and with the addendum to the second enquiry, that, as a rule, and a pretty constant one, large roots are not nearly so nutritious, weight for weight, as smaller ones, for the reason that the cells are larger, and contain proportionately, weight for weight, more water than smaller ones.

During my connection—as superintendent—with the Chatsworth (Illinois) Company, for the manufacture of beet-sugar, I found no special difference in feeding stock, between that portion of the sugar-beet grown above ground and that portion below; but for sugar the difference was very marked, that portion above ground containing the nitrates notably in excess, thus reducing the sugar product if mashed with the lower. Hence the absolute necessity of hilling the crop as it progresses, and in some seasons more than in others.

So we found that high manuring was fatal to the crop as to its saccharine qualities. In testing by the polariscope, I always found the large roots deficient in saccharine as compared with the smaller roots, say those of from 1 to 2 pounds weight; but in a crop of large roots the yield of saccharine would of course predominate, since the yield would be largely in excess over the smaller. We did not seek to exceed 12 tons of 2,000 pounds each per acre.

In relation to external marks for determining nutritious quality, these, of course, are determinable and in a measure constant, both in the leaf and shape of the bulb; but my experience would indicate more from family characteristics than anything else. As a rule—and this is known to all practical cultivators—recently manured land tends to cause all root crops to grow forked, knobby, uneven, and with many side roots. Such specimens are usually deficient in nutriment, and generally from their own size and sponginess.

## Growing Oats.

In a recent number of the *Ohio Farmer*, E. says among the objections which some farmers make to this crop are the following:

1. It is an uncertain crop.
2. It is not a good crop with which to seed down the land.
3. It is not profitable.
4. It exhausts the land.

To these objections allow me briefly to reply.

1. I do not consider this objection well founded. In my experience I have had as good success with oats as with almost any crop which I ever tried to cultivate. If the land is at all suitable, is well fitted to receive the seed, and the sowing is done early, a good crop is almost sure to be obtained. Most of the failures which I ever have known with this crop resulted from putting it on wet, undrained land, or else from late sowing. Too much water will ruin oats, and late sowing will be fatal to success in their cultivation.

2. While this is not the best crop with which to lay down land to grass, yet if the soil is finely pulverized and a liberal quantity of grass seed is used, there will seldom be any difficulty in getting a good catch. I very often seed with oats and almost always obtain good results.

3. This objection, it seems to me, must be made by men who do not have a good market, or else do not understand the culture of the crop. Where there is a fair market the crop can be made to pay well.

4. This is the chief objection that many farmers have to growing oats. But the impression that so widely prevails that this crop is very exhausting to the soil is without any reasonable basis. It is true that after a crop of oats is taken off, the land is not usually in as good condition as it is after the removal of a crop of corn. But in most cases this is due to the fact that the oats were grown without any fertilizer whatever, while the corn was well

manured. As a natural consequence of such a course, the oats must leave the land poorer than the corn, but it is the fault of the method of culture, and not of the oats. According to analyses of the various kinds of grain, and which can be relied upon as substantially correct, a good crop of oats is much less exhausting to the land than equally good crops of either wheat, corn or rye. Of the three great elements of plant food which are furnished by the soil, ammonia, potash and phosphoric acid, oats require less ammonia than wheat and but little more than corn or rye, while of potash and phosphoric acid, oats require much less than either of the other crops named.

I believe the oat crop is worthy of a great deal more attention than it has received in the past, and I am confident that with good culture it can be made very profitable.

## Poisons in Agriculture.

Dr. R. C. Kedzie, Professor of Chemistry in the Michigan Agricultural College, has furnished a valuable paper to the transactions of the Board of Health of that State, on the Use of Poisons in Agriculture, and more particularly on the effect of Paris green. He states that there are three forms in which arsenic is used, namely, white arsenic, arsenate of soda and Paris green. The first has been used to destroy weeds in garden walks, but Dr. K. regards this practice as dangerous, as there is nothing in its appearance to distinguish it from some other substances used as articles of food, and its use is liable to fatal mistakes. Arsenate of soda is still worse, as its appearance and flavor is not unlike common salt, and an unsuspecting housewife might use it for flavoring dishes, and destroy a whole family if it were brought into the house. Paris green is very widely used for destroying the Colorado potato beetle and the cotton worm. Its brilliant color is likely to prevent accidents from mistaking it for something else. Dr. Kedzie estimates that more than a hundred tons were used in one year in the State of Michigan. This extensive use brings up the questions, Will it poison the plants, and render crops unsafe as food? Will it poison the soil, and injure succeeding crops? Will it become washed into drains and poison springs and wells? What becomes of it in the soil?

To answer the first question,—cabbage plants were watered with a saturated solution of arsenic, and were killed in a week, but the leaves did not contain a trace of the poison, except by a discoloration of the stem near the roots. When the solution was weaker, so as not to injure the plant, the slightest trace could not be discovered anywhere. The experiments were repeated on barley and on turnips. Again, they were tried on peas, all with the same results. Dr. Kedzie says, "Four years ago I made a careful investigation to determine whether the potato tuber absorbed arsenic when Paris green was applied to the plants to destroy the potato beetle. I took potatoes raised in the ordinary course, and repeatedly dusted, and others to which all the Paris green had been applied that could be used without killing the plant; but in no instance could I find a trace of arsenic in the tubers. Other chemists have made similar investigations with the same results."

To determine the very important question, whether the poison applied one year to potatoes, would affect the quality of wheat the year after, four square rods of wheat were measured off in March, and two ounces of Paris green were applied in water, or at the rate of five pounds per acre—much more than is used for potatoes. The surface of the ground was rendered sensibly green by the application. The wheat was not injured in growth. The grain, when ripe, was submitted to three of the most rigid tests, but the slightest trace of arsenic could not be discovered. Dr. K. was satisfied that it contained none at all. The poison exerts more influence the first year, and therefore it is very safe to conclude that wheat is not injured in any degree as human food when growing the year after the potatoes.

In another case, cabbages were grown in the college garden after potatoes which had been dressed with Paris green. Six ounces of the cabbage head, submitted to the closest examination, failed to indicate any trace.

In answer to the question, What becomes of the Paris green? Dr. K. remarks, that it is insoluble in pure water; and it may be taken up to an extent of one part in 100,000 of rain water which contains traces of ammonia. Water charged with carbonic acid will take up one part in 10,000. The water in the soil containing some carbonic acid will therefore dissolve a portion of it.

Where then is the remedy? A perfect antidote or safeguard is at hand. Hydrated oxide of iron is the well-known and standard antidote for Paris green, as it forms an insoluble salt with arsenious acid, or only soluble in strong mineral acids. Fertile soils contain always a far greater amount of this antidote than is required to neutralize all the arsenic ever applied to it, for one per cent. of the hydrated oxide would be no less than a hundred tons per acre, with a depth of one foot of soil. Dr. Kedzie proved the correctness of his reasoning on this point by actual and repeated experiments. Hence the fear of this poison injuring water is entirely groundless.

Several cases are mentioned where the careless use of Paris green, in applying it to potatoes, resulted in poisoning. More than one thousand reports were received from clerks in all parts of the State, only five of which report poisoning to the workmen. In one case, by careless handling, the Paris green was allowed to come in contact with a sore in the hand. "It swelled enormously, but was subdued by vinegar and salt." In another case the dust was inhaled, resulting in much pain in the head and a copious discharge from the nose for two weeks. The operator states that he had been subjected to catarrh since childhood, but when the effects of the Paris green had left him he had not suffered from it since. It proved a powerful medicine. In another case the poison was permitted to enter a hole in the boot leg, causing some inflammation. Another man narrowly escaped with his life, from inhaling the dust, which he had absurdly endeavored to exclude with a veil over his face. He was sick two weeks. Another had his eyes badly inflamed for a long time by the dust entering them, and some children were injured by playing among the dusted potatoes. It seems remarkable that so few cases should occur in more than a thousand reports, when it is remembered how careless many are in the application of the poison. It is much safer, however, to apply the Paris green in water—a moderate spoonful to two or three gallons—care being especially required only at mixing.—*Country Gentleman*.

## How to Kill the Canada Thistle.

By a Correspondent of the Michigan Farmer.

For twenty years I worked among the English thistle, but you say they have not the Canada thistle in England; that is true, the Canada thistle grows a little more bushy and also more prickly, but I believe one is just as easy to kill as the other.

About fifteen years ago I bought my clover seed from York State, and I suppose I bought a few Canada thistle seeds also. Two or three years afterwards I had a few spots, about two rods across, of as nice Canada thistles as ever you saw. My Yankee friends told me I would never kill them but I was not much alarmed. I plowed my field a good depth and worked my fallow good; twice during the summer I took my grub hoe and grubbed deep every thistle I could find. I looked them over again late in the spring, and that was the last of the Canada thistles on my place.

If I had a farm covered with Canada thistles, I should plant as much as I could with corn, two years in succession, or fallow after corn; I should thoroughly work my corn; occasionally a thistle would dodge the cultivator, which would be grubbed out, a foot deep, with a good, long-shanked grub hoe. Do this for two years and the Canada thistle will be dead.

To work the fallows I should plow deep and harrow, then would have a shovel plow-share made three feet wide, with a loop through the middle just right to slip over the point of any common plow share.

With such a plow one can plow five acres per day; don't need to be plowed more than four inches deep, and just as often as a thistle can be found appearing in sight I should run my plow through the fallow.

Of course this cannot be done where there are stumps or rocks, but thoroughly cultivate land in this way two years in succession and the Canada thistle cannot stand it.

JOHN SKINNER.

American seedling potatoes continue popular in England, on account of their immense productiveness, but are pronounced very inferior in quality to the standard English kinds.

### Plaster as a Fertilizer.

As many of our readers have sent us inquiries as to the value of land plaster as a fertilizer, we give the following abstracts from good authorities on the subject:—

For more than a hundred years has gypsum, or plaster, been used as a fertilizer. Benjamin Franklin, it is said, introduced its use in this country. He sowed plaster on grass on a hillside in the form of large letters, "B. Franklin." After a few weeks' time the grass upon which it was sown had so outgrown the rest that the letters could be read a long distance off.

Mr. Chesebro, Rensselaer county, New York, says:—"From a piece of land which yielded me the first year of tillage, without any enrichment, but twenty-six loads of hay, I was enabled in five years' tillage, with no other fertilizer than plaster and clover, to take off three hundred loads of hay from the same ground." Geo. Geddes, a noted farmer of Onondaga, N. Y., says he has some fields that have been cropped more than fifty years with no other manure than clover and plaster. He says a crop of corn raised on a clover lay needs but little hoeing if the cultivator is used.

"Liebig (the great chemist) found by experiment that four pounds of plaster produced one hundred pounds of clover."

The *Prairie Farmer* of March 20, 1872, in an editorial article, says: "The most astonishing results have been noticed in the effects of plaster on clover. The yield in many cases has been doubled." "Clover will remain much longer in soils that have been treated with plaster. Now when we consider that clover is one of our most valuable forage plants, as well as the crop that is chiefly used for turning under, especially as a means for preparing soils for a crop of wheat, it is plain that we can not attach too high an importance to this mineral fertilizer."

Mr. Flint says:—"In one instance within my knowledge a large pasture which had become worn received a top-dressing of plaster, and so far as could be ascertained the increase of grass over the adjoining pasture was about seventy-five per cent."

At a late meeting of the New York Farmers' Club, Mr. Curtis said:—"On dry loam or gravelly soil, sown on clover, plaster often doubles its crop. In Glenville, New York, lands rejected fifty years ago as worthless now are, by using clover and plaster, worth \$100 and \$150 per acre."

A Prize Essay on the "cultivation of the potato," written, by D. A. Compton, of Hawley, Penn., says:—"After all, plaster is the main dependence of the potato grower, a help on which he may rely with the utmost confidence. Astonishing results are obtained from its use when applied in a proper manner; the writer has seen a field all of the same soil, all prepared alike and all planted with the same variety at the same time, on one-half of which, that had no plaster, the yield was but sixty bushels per acre and many rotten; the other part, to which plaster was applied, yielded three hundred and sixty bushels per acre and not an unsound one among them."

To obtain the best results, the vines of potatoes should be dusted with plaster as soon as they are fairly through the soil, again immediately after the last plowing and hoeing, and at intervals through the whole growing season. The first application should be light, the second heavier, and then after that it should be bountifully applied—say two hundred pounds per acre at one sowing. Messrs. Dewey and Stewart, of Owosso, Mich., practical farmers and millers, who cultivate a large farm, besides attending to their milling, assure us that they never raise wheat without top-dressing with plaster. They say they know by many years' experience that with it they can raise larger crops and better wheat than without it; they even claim that they can tell by the grain whether plaster was used in the raising or not, and that they pay higher prices for that raised with plaster, because it is better.

A correspondent says:—"The past season I used plaster alone on one piece of corn, skipping two rows, which I harvested separate. Result: about 100 pounds of corn by using plaster to 73 pounds when not used."

#### BEST WAY OF SOWING.

At the meeting of the New York Farmers' Club referred to, W. Curtis said:—"It is better to sow it on the crops and let the rain following wash it down to the roots."

W. Early, of Charlottesville, Va., says: By observation it is concluded that plaster acts as a condenser of ammonia, which is found everywhere in the atmosphere and in all soils to a limited extent; that it holds this powerful manure in its grasp, fixes it and gives it out to the growth of plants as they require it, instead of allowing it to pass away unfixed and unadapted to plant growth.

It will thus be seen that the weight of authority, scientific as well as practical, accepts the theory of Liebig; that plaster assists the growth of vegetation chiefly by its capacity of arresting and fixing the ammonia in the atmosphere, and giving it up to vegetable growth. Now, if this is correct, and, as Johnson says in his agricultural chemistry, "the influence of ammonia on vegetation is conceded to be of a very powerful kind, assuming to promote the rapidity and luxuriance of vegetable life," it necessarily follows that plaster must aid the growth of every kind of crop and all kinds of vegetation. It is also apparent that, as a general rule, the best mode of application is to apply it directly to the leaves and stems of the plant.

The above mentioned work also says:—"That vegetation absorbs in its growth less than one-eighth part of its own weight from the substances of the soil, the remaining portion being compounded of water or gases of the atmosphere which are absorbed by the leaves as well as by the roots. Therefore if one crop out of five of clover is turned under you will give to the soil more than you have taken from it. No farmer can afford to do without plaster."

#### DIRECTIONS.

Sow about one hundred pounds to the acre; the best time is after rain or when the plant is damp with dew—when the plant first starts is a very good time to sow. Some prefer to sow when the plant is some six inches high; some sow at both times. Sow on new seeding as soon as the seed sprouts or is in sight. If used after mowing it is a great protection to the root in grass or clover.

#### Facts About Root Crops.

It has been well established by chemical experiment, and is thoroughly understood by all farmers who have intelligently and observantly cultivated root crops, that they derive a large proportion of their sustenance from the atmosphere. Their broad, succulent leaves absorb the fertilizing gases that are afloat in the air, and this peculiarity is one important element of their value as a part of a rotation. But Dr. Voelcker shows very conclusively that they also draw largely on certain universal constituents in the soil, especially lime, potash and phosphoric acid. A ton of turnips consumes about 22 pounds of mineral substances, and a ton of mangolds upwards of 31 pounds. Small as these quantities seem, they are larger than those required to mature a crop of wheat or barley. It follows, therefore, that roots are exhaustive crops unless consumed on the ground or returned to the soil in the form of manure. Experience has taught all who have had much to do with the cultivation of root crops the necessity of high manuring. It is wise to grow them, notwithstanding the large draft they make on the mineral elements of the soil, because of the clean culture they demand, and the splendid condition into which they bring the land for a succeeding crop of grain, also because of the juicy food they provide for stock at a time of year when there is nothing else but dry forage to give them. But they must be liberally manured, and either consumed on the land which produces them, or given back to it in the shape of stable dung. Dr. Voelcker makes an important suggestion as to the best fertilizer for root crops, which we commend to the attention of all who desire to secure the largest returns with the least expenditure of manure. It is that as good a yield may be had with half the usual amount of barnyard dung by the use of from three to four hundred weight of superphosphate or dissolved bones, drilled in with the seed. To get a sufficiency of manure is the great difficulty with most farmers. Often it cannot be had for love or money. If half the quantity ordinarily applied will suffice with the use of superphosphate or bones, which can readily be bought, the grand obstacle to high farming is materially lessened.

Dr. Voelcker gives the table showing the proportion of dry or solid matter contained in the various roots, from which it appears that it is greatest in parsnips, viz., 18 per cent., and least in

white turnips, viz., 8½ per cent. They range in the following order: 1, parsnips; 2, sugar beets; 3, carrots; 4, mangolds; 5, Swedes; 6, turnips. Their feeding values rank similarly. Sugar beets contain the most saccharine matter, and unripe turnips and mangolds the least. Besides the deficiency of sugar in unripe turnips and mangolds, they contain certain acids, the chief of which is oxalic acid, a powerful vegetable poison. This acid exists even more largely in turnip and mangold leaves than in the immature bulbs, which thus explains the scouring effect they have when fed in considerable quantities to stock. It may be questioned whether it is not better policy to cast them direct to the compost heap, instead of using them for food at all.

The doctor shows very clearly that overgrown roots are less nutritious than those of fair medium size. This is an important fact in connection with our agricultural shows, and we hope cultivators and judges will "make a note of it." The practice of giving prizes for big roots Dr. Voelcker pronounces as childish. "Such roots," he says, "may delight or astonish women or children; but what is the use of such productions? and why should prizes be awarded to monster roots, which usually contain from 93 to 94 per cent. of water?" It is a common remark about these mammoth roots that they are "watery," and science confirms the current impression. All roots exhibited at fairs, whether grown in the garden or field, should be cut when judged, and their excellence decided by their fineness of grain and solidity of texture.

Besides the superphosphate and bones recommended above, Dr. Voelcker suggests the employment of 1½ cwt. of nitrate of soda, and 2 cwt. of common salt. These he would sow broadcast, while the other fertilizers are to be drilled in with the seed.

Dr. Voelcker advises a wider cultivation of the sugar-beet for feeding purposes. It ranks next to the parsnip in nutritious properties, is easily grown, and yields a large return to the acre.

The results of this investigation, as above summarized, present nothing calculated to discourage root culture, but rather the reverse. These crops play an important part in successful and profitable agricultural, and it is not too much to affirm that the highest style of farming cannot be obtained without them.

#### Argument for Grass Culture.

A contributor to the *Boston Cultivator* says:

Taking all things into consideration, as regards alternate husbandry compared with the grazing districts, the one is remote from cities, and has a system of rotation of crops which requires more labor to keep up the fertility of the soil, to supply the demands of the people; the other near to the city to supply the cities with milk, and by top-dressing those meadows they do not require that capital, skill and enterprise that they do in the tillage districts. In speaking of the average rise per acre of the two modes of husbandry, the grazing districts always have done, and always will command a greater rent; one reason the meadows are never broken up, and by top-dressing can be made to produce large crops of hay. In mixed husbandry and by a rotation of crops, more study and skill are required to be successful; more practical knowledge in farming, and after all his hopes, perhaps will be disappointed; his crops may prove a failure.

I will furthermore inform you the system of mixed husbandry in England is very differently conducted to what it is here; all farmers that rent a farm under those large proprietors, are under a specified agreement to keep their farms and buildings in a good state of cultivation and repair, they having those farms on a lease for a number of years, and under this system English agriculture is not only profitable but progressive. Whatever ideas may be formed in regard to alternate husbandry as an amelioration of neglected estates, as a general rule the farmers make farming pay a greater percentage than they do here, because there meadows are more lasting and productive, there pastures are permanent and nutritious, there tillage is cultivated under a system that cannot be reduced to a state of poverty, and the farms are generally let to farmers that understand their business, for a poor farmer those landlords do not want.

The potato bug has made its appearance on Long Island, and is playing havoc with the early crops.

**The Formation and Improvement of Pasture Land.**

A survey of recent agricultural literature and of recent agricultural statistics, plainly shows that increased attention is being paid to the production of good permanent pasture. Wheat sells at a low price, and is always a precarious crop. Beef and mutton, on the other hand, continue to be in great demand. Foreign countries, where the climate is more congenial for the production of cereal crops than our own, successfully compete with us in the markets. Bread is cheap, but beef and mutton are comparatively dear. Such at least is the verdict of consumers in our large towns. Farmers may have grain hanging heavily on their hands, but they find no difficulty in disposing of a fat ox or sheep. The price of meat has been steadily increasing, whilst the price of flour has been almost stationary for many years—always, however, sufficiently low to make the growing of wheat unremunerative, except when a more than average crop is obtained. Such being the case, it is but natural that wheat growing is getting gradually supplanted by meat growing; for fatted kine are found more profitable than ears of corn.

The fact that much of our arable land is being converted into permanent pasture would, one would think, prove that farmers find that an extension of the area under grass is desirable. The cultivation of arable land is expensive—requiring a considerable amount of manual labor and the use of modern improved implements and machinery. The latter are, however, expensive to buy and to keep in repair; manual labour is also scarce and not worth the money asked for it in time of strikes at least. If we do return to a primitive kind of farming, it is because we find pastures pay better than fallows and cereal crops. Grazing flocks require but little labor to manage, and at present prices of meat they pay tolerably well for their keep. But though it be confessed that a return to pasture is opposed to the ideal standard of agriculture believed in by political economists and others, farmers who farm for profit cannot afford to play at a losing game for the sake of philosophic theorists.

A return to pasture some fifty years ago would mean an abandonment of our fields to their original state of comparative unproductiveness. Since, however, the introduction of artificial manures and the use of other fertilizers is better understood and more commonly applied to grass land, the formation of permanent pastures does not necessarily include a return to the primitive form of agriculture. The quality of our pastures can be improved by free use of manures, and be made to carry an extra quantity of stock. Whatever turn agriculture may take in the future, the present stage in its history must be productive of permanent good. Grass land was being neglected. All the manure made on the farm or purchased from the manufacturers was generally applied to crops of roots or of grain. The pastures were allowed to take care of themselves. Now, however, farmers are beginning to understand that in no way can manure be applied with more direct certainty of obtaining good results than by its application to grass land. Corn may be unduly forced. During a wet season a heavy manuring of the soil may result in a great deal of straw and but a small yield of good sound grain. Roots, also, may run to leaf at the expense of bulb. And even should the bulbs grow to a large size, they lack in quality from being forced by heavy dressings of manure. But inasmuch as abundance of blade, not of seed,

is the prime object in the cultivation of grass land, any manure applied and which takes effect can only take effect in an increase of bulk in the direction most desirable to the farmer. The manuring of grass land has not been as popular as manuring land for corn because, although as we have pointed out, manure applied to pastures is more certain in its results than when applied to roots or corn, still the benefits derived from improving pastures are not quite so apparent to the farmer as the increase in bulk of his turnips or wheat. Cattle are turned into the pastures and shifted about from one field to another as a fresh bite is obtained, and there is thus a difficulty in assessing the true results. The farmer, of course, knows the land is improved, but he does not exactly know by how much. The increase, except in the case of hay, cannot be measured or weighed as his corn is after harvest. The improvement, however, is none the less real and must inevitably tell in the long run on his ledger accounts. It is satisfactory to know, therefore, that the proper management of grass land is at present engaging the general attention of agriculturists throughout the country.—*The Farmer* (England).

**Good Seed.**

In a recent communication to a London agricultural journal, Mr. J. J. Mechi says:—"How important is parental influence, and how unreasonable is the practice (still pursued by some) to sow in-

**English Wheat.**

Foremost as wheat is among the cereals of the temperate zone, it is not selected for uniformity of composition; few grains, indeed, vary more according to season, soil and situation. English wheats, however, come nearest to an average standard of best bread-making qualities; and if we do not turn out the highest-price flour, it is entirely owing to the want of skill or judgment on the part of the miller. The wheat-corn of southern climates, and during excessively warm periods of growth, preponderate in gluten and hardness of grain over those of colder countries and cold, wet seasons. Hence the hard wheats of Venezuela, Africa and Taganrog. Payen, who chiefly illustrates from these, declares that they yield over 20 per cent. of nitrogenous substance when chemically dry; but this is an impossible ordinary condition, and leaves the real amount very uncertain. Whatever may be the maximum percentage of flesh-forming compounds in wheat from the sunnier clime, anything exceeding 13 per cent. must be taken from the entire grain. But when the kernel of hard corn shows as much as this it is altogether unfit for bread-making, unless a large quantity of poorer or softer wheat flour be mixed with it. We find the hard Italian wheat only suitable for making macaroni, vermicelli, and similar pastes; nevertheless, good, hard Russian corn, coarsely ground and dried, makes the best substitute for oatmeal in porridge, when that is found too heating to the blood of young children, as experienced

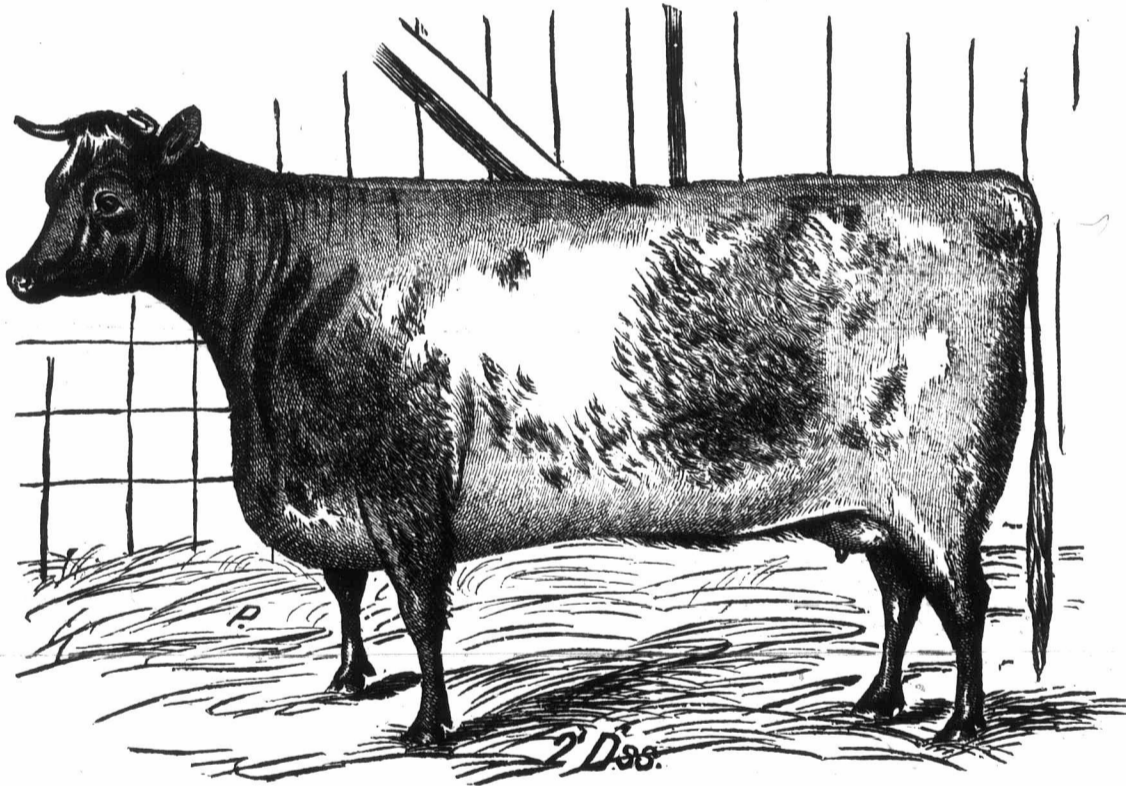
Scotch physicians tell us is sometimes the case.—*The Sanitary Record.*

**Choked Cattle.**

The following recipe should be printed at least once every year, as it is a sure remedy:—Take of fine-cut chewing tobacco enough to make a ball as large as a hen's egg, dampen it with molasses so it adheres closely; elevate the animal's head, pull out the tongue and crowd the ball as far down the throat as possible. In fifteen minutes it will cause sickness and vomiting, relaxing the muscles so that the potato or whatever may be choking it will be thrown up.

**Canadian Stock Sales.**

The great Canadian stock sales take place this month. Capt. Chambers, of Spring Vale, East



AIRDRIE DUCHESS 2ND—PROPERTY OF THE HON. M. H. COCHRANE, COMPTON, P. Q.

inferior or unsaleable seed as a matter of economy. Admirable as our dressing machines now separate inferior seeds, still the more powerful blower which follows, soon exhibits a selection of light or comparatively imperfect kernels or seeds. A good ordinary sample of dressed corn passed through a powerful blower comes out in very improved condition. I invariably blow all my seed corn, and by doing this with fen oats, often extract one-fourth as unfit for sowing. The same remark applies in degree to grass and other seeds. In the case of peas and beans, a riddle or screen gets rid of the 'springlings.' How forcibly and clearly does Liebig, in his 'Natural Laws of Husbandry,' enforce the necessity for care in selection of seed: 'The development of a plant depends upon its first radication, and the choice of proper seeds is, therefore, of the highest importance for the future plant. Poor and sickly seeds will produce stunted plants, which, again, will yield seeds bearing, in a great measure, the same character. The horticulturist knows the natural relation which the condition of the seed bears to the production of a plant which is to possess all or only some properties of the species; like the cattle breeder, who, with a view to propagation and increase of stock, selects only the healthiest and best formed animals for his purpose.'

Oxford, well sell, on Tuesday, the 13th of June, 20 head of Shorthorns, together with Cotswold sheep, Berkshire pigs and carriage horses.

The Hon. M. H. Cochrane, Simon Beattie, and John Hope, will sell in Toronto, on Wednesday, the 14th, 50 head of Shorthorns.

The accompanying engraving represents one of the choicest animals to be disposed of. We give her pedigree herewith:

AIRDRIE DUCHESS 2nd.

Road; calved December 7, 1871.

SIRE FOURTEENTH DUKE OF THE DALE (28460).  
 dam Tenth Duchess of Airdrie by Royal Oxford (18774).  
 gr d Seventh Duchess of Airdrie by Clifton Duke (23580).  
 gr d 2nd Duchess of Airdrie by 2nd Duke of Athol (11376).  
 gr d Duchess of Athol by 2nd Duke of Oxford (3046).  
 gr d Duchess 54th by Second Cleveland Lad (3408).  
 gr d Duchess 49th by Short Tail (382).  
 gr d Duchess 30th by Second Hubback (1428).  
 gr d Duchess 20th by Second Earl (1511).  
 gr d Duchess 8th by Marske (418).  
 gr d Duchess 2nd by Ketton 1st (709).  
 gr d Duchess 1st by Comet (155).  
 gr d by Favourite (252).  
 gr d by Daisy Bull (189).  
 gr d by Favourite (252).  
 gr d by Hubback (319).  
 gr d by J. Brown's Red Bull (97).

There are many other animals in Mr. Cochrane's catalogue with pedigrees quite as good and per-



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ls in Mr. Cochrane's as good and per-

haps as valuable beasts, as the above really first-class cow.

The Hon. G. Brown will sell 50 head of short-horns in Toronto, on Thursday, 15th.

Messrs. Jno. Snell & Sons and W. T. Benson will sell 40 head of shorthorns in Toronto, on Friday, June 16th.

There will no doubt be an attendance from all parts of America, and perhaps foreign countries, of gentlemen interesting in stock breeding. The week will probably be memorable as the greatest for shorthorn sales that we have ever had in Canada.

Messrs. Long and Thompson will sell at St. Mary's, on Saturday, June 17, 34 shorthorn cows, and one Gwynne bull.

**Canada as a Dairy Country.**

The dairy interests of Canada are destined to supersede all others as the mainstay and support of our country. The great timber interest is limited, the fishing interest is now divided, other countries can compete with us in manufac- tures and in all other productions, but in but- ter and cheese we can compete with the world. We have the largest tracts of available land for dairy purposes. Our climate and soil are both suitable. It is only a matter of time, and Canada must have a world-renowned name for her dairy products; in fact, as we now stand, we can compare most favorably with any country. In no part of the world has there been such information gathered or spread as at our conventions. Our appliances are unsur- passed—the old system has been found much more remunerative. Large factors have suc- ceeded better than small ones, still many pre- fer working on their own capital. Machinery of every kind is produced to facilitate opera- tions. Perhaps one of the greatest aids is steam- power. The time is near when most good farmers will have their steam engine for cook- ing the feed for their stock. For the dairy interest it is particularly essential. We now give you the representation of one of the cheapest and best boilers for a small farm and dairy. Those boilers occupy but little space, are strong and efficient. The heating surface is very great, as the heat has to pass between the numerous tubes; thus it requires but little fuel. The steam can be conducted in tubes to any place where it may be required, either for cooking food or driving machinery. The cost is only \$130. We are indebted to E. Leonard & Sons, of this city, for the ac- companying engraving. Larger establishments require larger boilers and engines attached. As steam power has facilitated all other kinds of mechanical productions, it must facilitate the farmer in his labors and increase his profits. So important a branch is the dairy interest that we employ the best Canadian and American talent to furnish matter of interest and importance to our readers.

**Water Supply.**

Pure water and plenty of it is perhaps the first requisite to perfect health. On the contrary, impure water conveys disease to the very citadel of life, and is one of the most fruit- ful sources of blood poisoning—diarrhoea, dyspepsia, dysentery, malarious and typhoid fevers. Pure water is much more scarce in the country than in town, in fact, it cannot be had at any price in many places. And yet there need be no scarcity in any part of England. The question is merely one of sinking or storing. There is abundance of water alike above and under the earth. The average rainfall of England is 32 inches a year; each inch is equal to 23,000 gallons, or to about a weight of 100 tons per acre. Even our driest counties have 20 inches of rainfall, in addition to dews, or over 2,000 tons per acre. It is calculated that we use less than a seventieth part of the rainfall, or, in other words, that the twenty-five million inhabitants of England and Wales use for all their machinery, cooking, wash- ing—throwing all the beasts in to drink with us—only three hundred and sixty-five thousand mil- lion gallons of water a year; whereas the supply by rain alone is twenty-seven million millions of gallons, or one hundred and eighteen thousand four hundred millions of tons. And then we draw from wells, streams, rivers, reservoirs also. No doubt a good deal of this is rainfall at second-hand; and the water may be best at times at second-hand. Some authorities affirm that the best drinking

water is that drawn from wells not exceeding 30 feet in depth. The great danger of wells arises from the filtration of the filth of cesspools into them. This often occurs when it is least expected. At a farmhouse near Bedford a water-closet was put up, and the excreta conveyed into a large pond or moat over 100 feet from the well. An outbreak of illness occurred, when it was discovered that the well had been poisoned by human excreta. Reservoirs for the storage of rain-water, are, how- ever, frequently the only resource, and could often be formed at trifling expense. Again, the storage of water in tanks from the roofs of houses is a simple matter, and a tank ten feet deep and six feet over can be made in stiff soil by simply plaster- ing the sides and bottom with three coats of Port- land cement, for an outside cost of £2. Of course in light soils concretes or bricks would be useful. such a tank would be found sufficient for ten cot- tages. It would hold 1,000 gallons for every foot in depth, and the roof of an ordinary cottage, covering only 2½ poles of ground, would furnish 7,000 gallons per annum where the rainfall was only 20 inches, and more in proportion. A farm-

manure to make it safe to put under corn in the hill. I tried this experiment once, and but once; the result will explain why. I took about ten bushels of muck to two bushels of clear hen ma- nure, in April, put together in a compost heap, added two bushels of ashes and a little unslaked lime, shovelled it over several times, so as to get it well mixed, and put about half a pint to each hill and covered it over with dirt, before dropping the corn. The corn came up well, but in less than a week after I found that my manure was killing the tap roots as fast as they reached the manure, and the result was that not one stalk in fifty lived to produce corn, and I lost my corn crop. It being so late that I could not plant to any other crop, I sowed the field between the rows to English tur- nips, the ground having been, previous to planting corn, liberally treated to manure, broadcast, and well plowed under. I got a large crop of turnips, there not being corn enough to shade them.

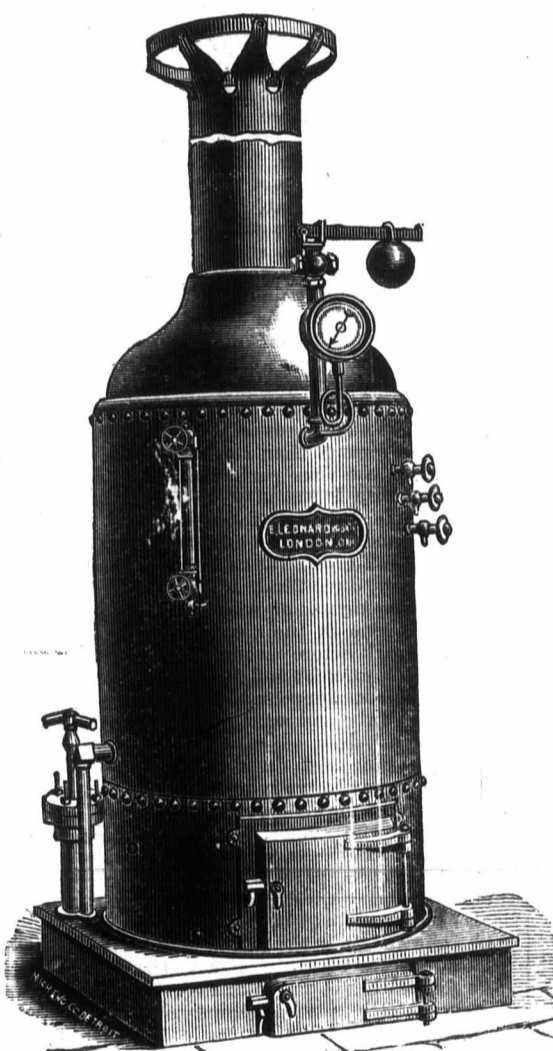
The best use to which I can put a small quan- tity of hen manure is to take a barrel, put in say one bushel, set it in the garden, fill it nearly full of rain water, stir it up well, and when your vege- tables are well up, water them once or twice a week with this solution, taking care not to pour the liquid on the plants, except on squashes or cucumbers. You may use it so without fear of injury, as it will have a good tendency in keeping off the striped bugs, though not an infallible remedy. (Plaster of Paris or flour sifted on when the dew is on, being the best remedy for these pests, to be repeated as often as it is washed off by rain.) When the liquor is exhausted in the barrel, add a little more hen manure, and fill up with water again, using the liquor till the vegetables get so well started as not to require any more of that kind of stimulant. This use of hen manure I find pays well, with my experience with it. If I had more than I could use in the way last mentioned, I should put it on the compost heap with other manure, and spread it broad- cast on the land and plow it under.

**Decrease of Population in Farming Counties—Farmers' Prospects.**

The State Census in New York shows that there has been a decrease of population in ten of its agricultural counties in the last five years, amounting to 6,177. All the counties having a large city, except Jefferson, show a decided increase, which reveals the fact that the tendency of our population is more and more towards cities. All the increase of the State in the last five years, which amounts to 322,000, has been in cities and villages. This tendency has been marked in New England for the last fifty years, and is destined to go on in the future. Nothing can be more cer- tain than that in the older States the con- sumers of agricultural products are rapidly increasing, or barely holds its own. It fol- lows from this that farm products must increase in value. The demand for them grows faster than the supply. Within fifty years the price of many of these products has doubled, and some of them quadrupled. Veal and mutton were thought to be well sold at 4 and 5 cents a pound, cheese at 6 cents, eggs at 10, butter at 12½, poultry at 10, and beef and pork at 5 or 6 cents. Animal products are, without doubt, destined to advance in price still further.

If prices go up as consumers multiply, farming must pay better in the future than it has in the past. The young men who, during the centennial year, will make up their minds as to their business in life, should take these facts into consideration. There is to be a harder struggle for bread, and the com- forts of life, in the large cities, where consumers are so rapidly multiplying. Labor will not be so well rewarded there. All farm products will be in greater demand, and will bear higher prices, while the cost of production will not be materially in- creased. The comforts of life have greatly im- proved in our farming districts, and in most of them in the older States, the style of living is much above that of laboring people in cities. To those who stick by the farm, and cultivate the pa- ternal acres, the future promises an abundant re- ward.—*American Agriculturist.*

☞The report from the Niagara District is that fruit trees of all kinds give promise of a good crop. Peach trees look quite healthy, having suffered very little during the winter.



BOILER FOR FARMERS AND DAIRYMEN.

house and out-buildings covering but ten poles would furnish 28,000 gallons a year. Of course in constructing storage-tanks and reservoirs great care should be taken to exclude impure filtrations, and the troughs and roofs would also occasionally have to be looked over and kept clean. It would also be desirable to pass the water through a filter- bed of stones and charcoal.—*London Gardener's Chronicle.*

**Liquid Manure.**

It is generally known that it is only when dis- solved manure is available as plant food. Until dissolved it lies inert in the soil to which it has been applied; but then the salts, in which its fer- tilizing power consists, being set free, are available for plant food, and—in the liquid state—are ab- sorbed by the rootlets of the growing plants. Hence the immediate benefit derived by young plants from the application of liquid manure. A mode of applying it, though on a small scale, is given by a correspondent of the *New England Farmer*, as follows:

I saw, in a late number of your paper, an in- quiry of how much soil to put with a bushel of hen

## Garden, Orchard and Forest.

### Caterpillars and Cankerworms.

As the warm weather comes on, the insects will rapidly increase, and if not looked after will do vast injury to fruit trees and to the crop of apples, pears, currants and other fruits. They must be headed off so far as lays in our power. As for caterpillars, they not only injure the trees, but constitute one of the greatest eyesores on the farm. A tree all covered with the nests of the web caterpillar is highly suggestive of shiftlessness. Fortunately they may be easily seen, even before the foliage has got to be very thick. It is an easy matter to fix a swab on the end of a pole, dip it in gas tar and go at them. Gas tar kills every one instantly when it touches him. The great point is to touch him. Whale oil soap is good also, and so is a thin lime wash, and a simple bush is not a bad thing to have, with a scientific twist it will destroy the nest and the inmates are left for a time homeless, to say the least.

It is rather late to attack the cankerworm with any prospect of success. The time to take her was when she was trying to ascend the tree. If she has got up, the only way is to grin and bear it till next fall.

Soft soap is good to apply to the trunks of apple trees. It helps destroy the eggs of the borer. But after the fellow has made its hole, it is necessary to hunt him up and give him a sharp punch with a wire or some other sharp and flexible instrument. Towards the end of this month, the curculio will begin to show his work on the plum trees. One way to head him off for the future is to collect all the young fruit as it falls and burn it, or otherwise get it out of the way. This destroys the larvæ. Another way is to turn in the pigs or the hens and let them take care of the little Turk. Jarring the trees will knock down a great many, and if they fall on a sheet they can easily be consigned to the flames.

On the whole, it is best to adopt the plan of actually killing most kinds of insects. The are not easily scared, and death is good enough for them.—*M. Ploughman.*

### Correct Planting of Ornamental Trees.

There are two classes of men who fail to properly understand the true meaning of this term. The one crowds his trees and shrubs to make an immediate effect, with an idea that in the future as they become too thick a portion can be removed; the other sets his trees as if patterning after a "city of magnificent distances," in mortal fear that some time to come, "far on in summers that we shall not see," they may by some possibility touch. There is, however, a happy medium between these extremes, in which the trees and shrubs may be made to produce an immediate effect, and yet not crowd sufficiently to look out of place.

The most beautiful examples of true landscape art will embrace groups and masses so intertwined that we lose sight of the crowded appearance of the foliage, in admiring the commingling of colors and forms. In fact, a properly constructed mass is one of the difficult tasks for a landscape artist to arrange; he may not carelessly choose his trees, nor should he set them regardless of the effect that their peculiarities in the future will produce. On the other hand, he who unthinkingly sets the trees regardless of the future, looking only at the present, makes even a worse mistake, if that be possible. In the future, when the trees are grown, after the fearful crowding they have received, it is worse than useless to thin out judiciously, and indeed; during the planter's life, this is but rarely done. The attachment that has grown with and for his trees, generally proves a barrier that it seems impossible to break down. And so they live on, year by year increasing in size, as they assuredly decrease in beauty, until they are past help.

All this truthful illustration of two classes of planters, who follow out each season the extremes of a system that has for its basis the ultimate beauty of model lawn. It is a difficult task to find a newly-planted place to-day where the owner has so evidently said to himself, this maple will extend over an area of thirty feet, or this spruce will require at least a circle of forty feet diameter, that this red bud will only need twenty feet, and so on? Such cases are far from rare; yet the

other extreme, of sufficient trees for a larger lawn crowded into a little yard, is of still more frequent occurrence; and it behooves every faithful writer who loves trees, truly to guard the inexperienced against just such mistakes.—*N. Y. Tribune.*

### The Imported Currant Borer.

*From an Essay on the subject by A. J. Cook, Lansing, Mich.*

This beautiful wasp-like moth belongs to the same genus as the peach borer. The moths of this family may be readily told by their trim form, quick movements, diurnal habits, flying in the hot sunshine, and especially by the brush-like character of the tip of the body. This last character will serve to distinguish them from the wasps—an important fact, as even entomologists of considerable experience are liable to be deceived, so striking is the resemblance. The larvæ of the family, so far as I know, are without exception borers. They are white with a brownish head, and generally pupate in a cocoon made of their own chips or dust.

This Egerian, as will be noticed by the name, is imported, and as is generally true, is all the worse from that fact. As a rule the imported species are the most destructive.

#### DESCRIPTION AND NATURAL HISTORY.

The moth is a little less than one-half inch long, and expands three-fourths of an inch. The color is deep blue, with three yellow bands across the abdomen, a yellow collar, and a yellow mixed with blue marking the legs. These yellow bands, so like the same in many of our wasps, render this species all the more liable to be mistaken, especially as they mingle with the wasps, making a gay company in the bright sunshine. Yet the tufted extremity, in lieu of a pointed one tipped with a dreaded spear, will quickly undeceive us.

These moths appear in June and July. I found several specimens yesterday, June 22nd, 1875. They deposit their eggs near a bud, at which work they seem very busily engaged during the heat of the day. These eggs soon hatch, and the tiny caterpillar at once bores to the centre of the stem. What more strange than this minute larva, almost microscopic, can thus perforate the hard, woody stem? These larvæ may be found in the stem from June to July the following year. I have taken the moth from the bushes with my net, and the nearly full-grown larvæ from the hollow stem the same day, June 22nd, 1875.

A curious example of wise foresight is afforded by these larvæ in their eating through the hard wood and bark before assuming the pupa state, as without such forecast and action the hollow stem would be a fatal dungeon to the moth, whose slender sucking tube and wanting jaws would render her escape hopeless.

In May, June and July the insect becomes a pupa, the pupa always lying very near the outside opening, in a poor apology of a cocoon, if any, made of its own leavings. That able entomologist, Rev. C. J. S. Bethune, of Ontario, speaks of the chrysalid sleeping peacefully in this cavity while the bleak wintry winds howl among the branches. Such a remark would be true only of the larva.

In June and July the moths again appear. These insects seem to attack the red currant more generally, yet the black variety, and even the gooseberry, is not exempt from its blasting work. Not only do the broken stems, so weakened as to be unable to stand upright, but also the sickly appearance of the foliage tell of this insect's presence and work. Bending the stocks will also generally give the needed information, as the affected ones bend more readily. The hollows in stocks cut across will inform us of their privious or present work.

It has been suggested that we catch the moths. I think this is not a practical remedy. The moths are so small, so quick, so wasp-like, that I should despair of this ever becoming generally practiced. I would suggest letting the bushes sprout up pretty freely, and then each spring practice heavy pruning, taking pains to cut and burn the feeble and limber stocks. This should be done about May 20; if later, some of the earlier moths might escape, if earlier, the pruner could not discriminate so wisely between healthy and diseased stems.

Foreign fruits in England cannot compete with the native grown. Grapes, pines, bananas—none are so good as the English raise in their forcing houses. The American Newton Pippin apple is, however, the most popular in the English markets of all apples. English pears are said to be superior to any. Glott Moreceau and Winter Nelis, are the favorites at Christmas time.

### The English Cabbage Butterfly.

*By W. Saunders, London, in the Report of the Entomological Society.*

This destructive pest is rapidly spreading westward. During the past season it has appeared for the first time in London and the neighborhood, and will probably reach the western limits of the Province before the end of the summer of 1876.

It was brought to Quebec from Europe most probably in the egg state on cabbage leaves, about the year 1857 or 1858, its event being chronicled by an entomologist in Quebec, in 1859, when the first specimens were captured.

The eggs of this insect are laid on the under side of cabbage leaves, singly or in clusters of two or three, where they are attached by some adhesive substance. They are so very small that they easily escape observation; in shape they resemble a sugar loaf, and under a sufficient magnifying power their surface appears beautifully ribbed and sculptured. When newly deposited the eggs are white, but they soon acquire a yellow tinge, and in about a week they hatch, the enclosed worm escaping by gnawing a hole through the egg shell, after which it devours the remainder of the egg shell, and then sets to work with an insatiable appetite on the cabbage leaves.

There are at least two, perhaps three broods during the year, and the ratio of increase of the insect is enormous.

The caterpillar is dreaded by cooks in every country where it prevails; it is not content with riddling the outside leaves, but prefers to secrete itself in the heart, so that every cabbage has to be torn apart and carefully examined before being cooked; and even after it has been dished up, one needs a watchful eye to avoid an undesirable admixture of animal with vegetable food.

#### REMEDIES.

One method suggested is to search for the eggs at the proper season and destroy them; another, to employ children with nets to catch the butterflies, and as these latter are rather slow and heavy flyers, this is not a difficult task; while a third method recommended is to lay boards between the rows of cabbages, supporting them two or three inches above the ground, with the view of luring the worms to select such places in which to pass the chrysalis stage of their existence, and so secure their destruction. Objections can be readily found to all these methods, but they are the best which man's experience has yet enabled him to devise.

### Mulching in the Fruit, Flower and Kitchen Garden.

Mulching (*i. e.*, covering the surface of the ground between growing crops with some loose material to prevent evaporation) will effectually save much labor in watering, and to a very considerable extent make up for poverty in the soil. Materials for mulching are generally plentiful in most gardens; decayed hot-bed manure is one of the best, and when this cannot be had short grass is generally plentiful. Most fruit and vegetable crops are benefited by mulching, but some more so than others. The raspberry, for instance, which delights in a somewhat moist soil, and is a shallow rooter, should always be mulched in dry situations. Our soil is dry and thin, and not well adapted to the raspberry; but by mulching thickly, we always secure great crops of fine fruit. In fact, the weight of the fruit is nearly doubled in consequence. Celery, too, is mulched thickly with short grass as soon as planted, and it seldom requires more than one or two good waterings. Let the weather be ever so dry, the surface under the grass is always moist. The mildew which affects the pea in dry summers is greatly checked, or altogether prevented, by good mulchings along the rows, and extending outwards from the sides about 18 inches. Brussels sprouts, broccoli, cauliflower, etc., which often hang fire after planting in a dry June, make marvellous progress with their roots under a good layer of short grass. Potatoes, though they too are benefited by the same means in dry seasons, are better without it, as a rule, in case of wet setting in autumn, and thereby aggravating the disease; but this is the only exception. The health of gooseberry and currant bushes is greatly promoted by mulching, and indeed all kinds of fruit trees, especially stone-fruits; and newly-planted trees of all descriptions are often saved from perishing by a good top-dressing of rotten litter, and such like, during summer and winter.

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In the flower garden mulching is not admissible, but we generally practice it with Calceolarias, and the disease is unknown with us, though we have to contend with a dry, cakey soil. The iresine, too, should be mulched; it is a moisture loving plant, and will thrive if mulched where it will sometimes not do any good otherwise. In vine and peach borders, whether inside or outside, mulching is almost indispensable. In some places where they are raked painfully smooth and neat, sometimes they get so rent with the drought during summer that a man has to go over them every week to fill up the cracks. Good grapes are seldom to be found under such circumstances. A mulching 4 or 5 inches thick, of rotten litter and leaves, is best for vines, and a border so dressed need never offend any eye not painfully sensitive on the score of neatness. Large plants in pots, such as figs, pot vines, pines, orchard-house trees, &c., should also be mulched when practicable, as roots are often near the surface, and are apt to suffer from irregular attention in watering. Apart from the advantages of mulching in a labor saving respect, and as a conservator of moisture, it keeps the soil about the roots at an equable temperature, by preventing radiation in cold weather, and the bare soil from the roasting effects of the sun in warm weather—a condition of things very unfavorable to vegetable life generally.—*Gardener.*

#### Rapid Growth of Timber Trees in Massachusetts.

Mr. J. W. Manning says, in *Boston Cultivator*:—I will here record my own experience: In 1858, 3-foot trees of Norway spruce and Scotch larch were planted. In nine years the spruce reached fifteen feet in height and spread twelve feet broad, and was then successfully transplanted. The larch, in 1873, had reached thirty feet, and had a spread of branches full twenty feet, and a circumference of four feet at the base. One larch had attained 40 feet from 5 feet in 17 years, and this on the dry, sandy loam that was distinguished for barrenness twenty years ago, so that only a medium crop of rye could be grown once in five years. I have grown rock maple trees from the seed on the same sort of land, in six years, to fifteen feet high and 2½ inches in diameter. The white maple excels many others in rapid growth. From six-foot trees, three years from seed, planted in the fall of 1864, they now stand thirty-five feet, and are from seven to fifteen inches in diameter at base. All these are on naturally poor soil, that has been kept free of weeds and grass. I planted elms in 1856 that were easily carried on my shoulder, and now they stand thirty to forty feet high, with a girth at base of six feet. Rock maples planted in 1855 stand now thirty feet high and fifteen inches in diameter. The bass and white ash I then planted have done as well in the race of life. So, with such living examples to behold, and as good or better examples in all towns, an enthusiasm could be generated that would shortly line all our streets and country roads with comforting shade. I know of a farm in Lisbon, N. H., Leonard Bowels's, on which were planted, thirty years ago, rock maples on the roadside as far as his land extended, and the result is, that hill on which these trees stand is memorable in the life of the planter. Those trees are distinctly visible from the top of Mount Washington, which is more than twenty miles to the east. It is very strange that more land owners do not appreciate such examples often seen in communities, and plant miles of trees, leaving a growing monument, instead, as is frequently the case, leaving a more desolate aspect to the land than they found.

#### Flower Pots.

We learn from the *Hamburg Gartenzeitung* that the fabrication of flower-pots from a mixture of cow-dung and earth is now extensively practiced in North Germany. As many as 16,000 were used last year in one establishment. For forcing they are highly recommended, though they will not bear plunging in a hot bed; and they are admirably adapted for nursery work, for plants raised in pots and afterwards turned out, in this case pot and all. Even standing dry the roots of plants will penetrate the sides of the pot and extract some nourishment from them. They are made by machinery, and one man can make from 700 to 900, or even 1,000, in ten working hours. There are machines for three sizes—2 inches by 2 (price 8s.), 2½ inches broad by 2½ high (price 10s.) Since the first introduction of these pots by Mr. MacIvor some years ago, we have heard little of their use in this country.—*Gardener's Chronicle.*

#### The Destruction of Humming-Birds.

Extract from a letter written by a lady in Jamaica to *Land and Water*:—

"We have two magnificent ceifas, or silk-cotton trees, not far from the house, on which there must be many millions of dark crimson and maize-colored blossoms, with a perfume very much like that of the Turk's cap lily—rather too powerful for a bouquet; but when mingled with the perfumes of other trees by the breeze, it is truly delicious. Among the blossoms the humming-birds are darting in and out like sparks of emerald and crimson fire, but unfortunately their number is being rapidly reduced by the woman-kind of England, who will decorate their silly heads with the lovely little bodies, which ought never to be seen except on the wing. Unfortunately, too (such is the course of fashion), the negro women here are adopting the same mode, and I fear there is not much doubt that the humming bird will soon be exterminated. It is, indeed, a shame to destroy these little beauties in the ruthless manner they are being destroyed at the present time."

NOTE.—For England read North America—Canada included—and for humming-birds read blue birds, and apply the moral.

#### Twig Blight.

The twig blight on the apple tree has been noticed by the writer for many years in central and northern Illinois, and in Wisconsin. It is always here connected with a vigorous growth. Usually very little blight is seen except on the current year's growth, sometimes taking a few inches of the growth of the previous year—rarely taking a whole limb, unless it be a newly set graft.

In some cases more than half of the grafts are entirely killed by the twig blight in mid summer, during the first year. Its appearance is much like the pear blight, and equally difficult to account for. There is no evidence that the injury is done by insects.

The injury by "Spores" is about the most plausible and popular way of accounting for the damage.

We have never known it to kill an entire tree like the pear blight. The limbs sprout and grow vigorously the next season.

Last summer, while travelling in Michigan, I noticed that where the soil was rich there blight was prevalent—but where the soil was light and sandy there was not much blight. It does not recur with equal severity every season, but several summers may be passed with little or no blight.—*E. G. Mygatt, in Small Fruit Recorder.*

#### Smoke for Curculio.

At the January session of the Iowa Horticultural Society, Mr. Kauffman, of Des Moines, stated that he and other cultivators had been very successful in fighting the plum curculio, gouger, etc., by burning coal tar under the trees. The tar is procured from the gas works, and a pint is poured into a long-handled frying-pan. It is then set on fire and carried about among the trees, so as to give them all a thorough smoking. The smoke is very dense and blackens both fruit and limbs, lasting for several days if there is no rain to wash it off. As this has actually been tried and been successful, it is worth trying generally, the remedy being cheap, easily applied, with very little trouble. Mr. Kauffman declares that the pests would never touch the smoked fruit at all. This is, indeed, "important if true."

A NEW CRAB APPLE.—Nowadays, when our nurserymen are hunting up all imaginable varieties of the crab apple for the purpose of planting in sections where the ordinary varieties will not succeed, a new form, embracing some marked peculiarity of promised excellence, will doubtless prove acceptable. The Messrs. Paul, of England, have now in their possession a cross (so it is alleged) between the Red Astrachan and ordinary Siberian crab. This new variety has the early maturing property of the former parent as well as its brilliant red color, and yet it is undoubtedly a large Siberian crab. The tree is of vigorous habit with handsome foliage, and makes an ornamental specimen. It has been named the "Imperial Crab." Doubtless our growers will soon have it for sale on this side of the Atlantic.

#### Season to Cut Timber.

If oak, hickory or chestnut timber be felled in August, in the second running of the sap, and barked, quite a large tree will season perfectly, and even the twigs will remain sound for years; whereas that cut in winter and remaining till next fall (as thick as your wrist), will be completely sap-rotten, and will be almost unfit for any purpose. The body of the oak split into rails will not last more than ten or twelve years. Chestnut will last longer, but no comparison to that cut in August. Hickory cut in the eighth month is not subject to be worm-eaten, and will last a long time for fencing. When I began farming in 1802, it was the practice to cut timber for post fencing in the winter. Winter oak posts and black oak rails, cut at that time, I found did not last more than ten or twelve years. In 1808 I began cutting fence timber in the eighth month. Many of the oak rails cut that year are yet sound, as well as most of those formed of chestnut. If the bark be not taken off this month, however, it will peel off itself the second or third year and leave sap perfectly sound. The tops of the trees are also more valuable for fuel than when cut in the winter or spring. I advise young farmers to try the experiment for themselves, and if post fences do not last twice as long, I forfeit all my experience as worthless.

#### Turpentine and Kerosene for Cut Worms and Crows.

A correspondent of the *Tribune* says:—"Spirits of turpentine poured on seed corn before planting, and thoroughly mixed by stirring, so that all the seed shall be impregnated with it, is a specific for the terrible ravages of the cut worms. I have never known it to fail in one instance. My own practice has been to put one quart of turpentine to a bushel of corn, or in that proportion which is sufficient, and I have always thought corn came up two or three days quicker when thus treated. Besides, the scent of turpentine, which can be detected several weeks after planting, aids much in keeping crows at a distance."

Another writer recommends kerosene for the same purpose. These may be good remedies, but we would not use them on an extended scale until we determined by experiment whether there is any danger of injuring the vitality of the seed.

#### Treatment of Small Fruits.

The *Gardener's Chronicle* says:—"Where water can be commanded, there is nothing so profitable as to well soak the soil about small fruits, just about the time they have set their fruit. Much of the value of this operation, however, will depend on the nature of the soil. The advantages are least in a tenacious and greatest in porous soil. It is said that an animal derives most benefit from food when it is hungry before it begins; it is certainly so with plants. Water applied to soil already wet is an injury, and water never has so telling an advantage on vegetation as when every leaf is about to be withered up for want of it. A plant that never seems to want water is in a very doubtful condition in regard to its health."

WIRE WORMS.—A correspondent of the *Prairie Farmer* communicates the following:—"Last spring I planted a field of corn, which was the second crop after breaking an old meadow. The wire worms attacked the corn before it came up and made clean work of it, in places, all over the field; some places for nearly an acre the corn was entirely destroyed by them, while in others, in the same field, the corn came up and looked well. We went to work with our hoes and replanted the vacant places. The ground being warm and in fine condition, I supposed the corn would be up in a very few days, but to my sad disappointment there was not one hill in fifty that came at all. When I examined for the cause, I found from four to six wire worms in each hill, which had entirely destroyed the germ and heart of the grain before the plant got through the ground. I thought I would not give it up yet, though it was getting late in the season, so I procured some early corn called the "Kankakee yellow," and put it to soak in copperas water in the evening, and let it soak till morning. I then poured the water off and went to replanting the same ground again. Nearly every hill came up in a few days, grew finely, and made good, sound corn. I am fully convinced that seed corn soaked as above directed, will prevent wire worms and other insects troubling it. The only difficulty is it may be some trouble to plant with a corn planter while damp."

## Correspondence.

**PROTECTION OR FREE TRADE.**—I like your paper well, and think it equal to any published in the Province on agriculture, and is now worth reading as one of our best agricultural papers, so much for small beginnings with John Bull energy.

The *Genesee Farmer*, when edited by Joseph Harris was a favorite with me, and I admired his "Walks and Talks," and especially some of his essays. The view of Free Trade vs. Protection has not been enough discussed in your paper yet. I would be much pleased to see a few well-written articles on that interesting and, to the farmers of Canada, important subject in your paper.

John Granger's views in the April number may be well enough for a country that raises large quantities of wheat for exportation, but not for this section of Canada, where we cannot raise such crops of cereals as you in the West can. We find it more profitable to raise mutton, beef, pork, vegetables, apples, butter and cheese, and we like to go to the small towns where manufactures are carried on with vigor, and supply the consumers with such produce as we could not ship to Europe, and such as would not impoverish and exhaust the soil as continued crops of wheat would. While the country is full of manufactures, carried on with vigor and profit, the prices of provisions will not be ruinous to farmers around those manufactures, and I have yet to be convinced that any class of men in Canada would realize the benefit of protection more than the farmer would.

The farmers of Canada do understand that the manufacturers are aiming to make money by having protection, and the more money they make the more they expend. Their mechanics are well paid and therefore able to live on the produce a farmer has to sell. And no persevering manufacturer is a miser; the very first item in his business is to pay cash—for buildings, for raw material and for machinery. What a great benefit your manufacturing towns in the West are seems to be not fully appreciated as yet by many. What has the Cosset manufacturers done for Brockville and vicinity? An immense benefit. The market for perishable farm produce is better than ever before known since these enterprising and worthy men built their large manufactory. Real estate has gone up, rents have advanced and a good demand for farmer's produce is found every day in the market.

The farmers around this section of country have no reason to complain of hard times. I know of very few, if any, failures among them, but I know of many who have been adding to their bank deposit account and their real estate investment for the last ten or twelve years when we had the old Protectionists in power.

I am an Englishman like yourself, and have no desire to see the American manufacturers close up all our machinery by flooding our markets with the goods we could as well manufacture ourselves. My motto would be, for manufactured goods, protection; raw material that Canada needs and cannot produce, free. Yours truly, CANADIENSIS.

[We still invite farmers to send us articles on this very important subject, Protection or Free Trade. Our columns are ever open to farmers to discuss any topic affecting farmer's interests.—Ed.]

FROM OUR CALIFORNIAN CORRESPONDENT, No. 1.—CHINESE IMMIGRATION—THE TRADE DOLLAR—WANT OF EMPLOYMENT—BRITISH COLUMBIA—THE GREAT REPUBLIC.—As many of your readers have friends on this coast, a few remarks from a resident on the Pacific Slope may be interesting. The two questions now agitating the public mind of California are, "The Chinese" and the "Trade Dollar." What the result will be of the present agitation of the first question 'tis hard to predict. A great many are of the opinion that, unless the authorities at Washington suppress the Coolie immigration, this State and City, impelled by the first law of nature—self-preservation—will, even by violence if necessary. They are a terrible evil, no doubt, and a curse to any Christian community. When the Burlingame Treaty was first ratified, this city gave them one of the grandest banquets ever held here; now no condemnation of its author and its objects is too severe; but the people were ignorant of the vile, thieving, treacherous and beastly nature of the Mongolian previous to the treaty. Now, alas! they are painfully aware of it, and recognize the absolute necessity, for the

salvation of the present and future white generations, of the abrogation of the treaty. China only sends the refuse of her country, which Europe would not be permitted to do. The discount on the trade dollars is now 10 per cent; last year it was at a premium. That silver will ever be worth its former value I cannot think, seeing the increasing yield of it in the United States and elsewhere. How much greater the decline may be, it is hard to conjecture, but that it will gradually decline in value is very probable. Its present uncertain value is seriously embarrassing commerce all over the world. There are multitudes of all classes employed here—those that will and those that won't work, but the former largely predominate, and many good workmen in the various branches of industry would only be too glad to work for board and lodging at anything. This has been an unusually severe winter; some 33 inches of rain has fallen to 11 inches last year. The snow fall in the mountains has been very heavy. The farmers are jubilant over their prospects, anticipating a good harvest. The great plains, Joaquin and Sacramento, cannot be depended upon, however, until the wheat is actually garnered, as the hot winds from the north often, in a few hours, burn up the brightest prospects. In fact, wheat growing in the Joaquin is often a failure. I know quite a number bound for the Cessiar mines, in British Columbia, this spring. As I had such a rough experience in 1862, when I went to that ice-bound country, I do not care to "repeat the dose," although it appears much gold was taken out there last year. You appear to be very slow in building your Pacific Railroad, and from what I know of that country, on this side, I think the slower the better, for it is a road that passes through, or has to pass through, a sea of mountains, and, as your Blake justly says, "and that without an acre of ground fitted for cultivation for hundreds of miles, and further, what towns are there on this coast, or likely to be, to act as terminus? There is a very uneasy feeling prevailing the public mind as to where the unwieldy Republic is drifting to. One of the main courses, no doubt, is the total absence of all honesty of public sentiment; and until a higher standard of morals prevail, this Great Republic will be swallowed up in a vortex of corruption and unrighteousness. Will a remedy be found? As it is, the world at large begins to think this should-be-glorious Republic a failure—and I am inclined to think time will only confirm it.

San Francisco, 15th April, 1876.

**SUPERPHOSPHATE.**—In a late No. of the *ADVOCATE* a Dumfries correspondent asks for information about superphosphate: Will it pay to use them, &c. We have tried artificial manures in different ways, and cannot say much in their favor. Our first trial was with three pieces of turnips, a fourth of an acre each. All the land had twenty loads of dung to the acre, and plowed under in the fall. No. 1 piece was drilled up and had a second dressing of dung; the drills were split down and sown with purple top Sweeds. No. 2 was drilled up and 150 pounds of phosphate sown; mixed with the soil on the top of drill; sown with the same kind of seed. No. 3 had 60 bushels of ashes sown broadcast before the drills were drawn, and the same kind of seed sown. No. 1 yielded 360 bushels. No. 2 yielded 210 bushels. No. 3 yielded 220 bushels. Last spring the Brockville Superphosphate Company sent our Agricultural Society six packages of superphosphate of lime to introduce it into our neighborhood. Two packages were handed to me to try it on turnips. It looked like the genuine, and oh! such a smell, or, to get nearer to the truth, I should say stink; it was the nearest approach to skunk. Our turnip field was sown with rye in September, 1874. About four acres had 20 loads of dung to the acre before sowing the rye. We run the ewes and lambs on the rye until the last week in May, then plowed the rye under, worked the land thoroughly, and the remainder of the field was manured in the drill before sowing, except four drills. Two drills had the phosphate sown at the rate of 400 pounds per acre, and the other two drills had a dressing of ashes. We did not measure the turnips, on account of taking some time. (We cut the turnip tops off with a hoe and then pull the turnips with iron harrows.) The land that was manured well in the fall had the best crop. The land that was manured in the drill, and the drills that were dressed with ashes, were about the same; and the drills that were dressed with phosphate were not more than half as good. I would not condemn the use of arti-

cial manures. Probably on a lighter soil (our land is clay loam) the phosphates might do better.

Wilmot, Waterloo Co., May.

W.C.S.

[The results of Mr. S.'s experiments with superphosphates are very different from what we have known, but there is nothing in his disappointment to cause us any surprise. A satisfactory result from any agricultural experiment depends on several circumstances, and, if any of them be adverse, it may injuriously effect the result. We have known instances in which the application of lime failed to produce any perceptible benefit, and yet no teaching in agricultural science has been more generally received or more thoroughly substantiated by the experience of thousands than the value of lime in its chemical action on the soil, and as supplying an element essential to the production of good crops of many farm products. In like manner has salt been found a failure by some. A cause of the comparative inefficiency must be sought in the soil or some circumstance besides the manure. We do not know Mr. S.'s farm, but are inclined to the opinion that it needs draining, as many clay-loam farms do. If this be the case, the failure is easily accounted for. Superphosphate cannot be expected to produce the desired effect if there be stagnant water in the soil. This is the case also with lime. Last season we applied superphosphate on a small scale to potato, cabbage and tomato crops, and with good results. The following article from a correspondent of the *English Agricultural Gazette* shows the estimate formed of this manure by others:—

"Theories and experiments are all good as far as they go, but a few facts outweigh them all. On good loamy soils, well worked and finely pulverized, 10 cwt. of superphosphate is by no means an overdose. Crops of turnips and cole seed are thus produced of extraordinary weight and quality, and what is more, in the succeeding year, the crop following partakes of the dressing, which is readily seen. For potatoes or mangels, it has not been ascertained to what these aids may profitably extend. Very heavy crops of potatoes are now standing, produced from 12 cwt. of superphosphate per acre, without other aid; and the wheat crops after such management are splendid. Seven cwt. per acre, along with farmyard dung for potatoes, is the lightest satisfactory dressing, as is shown from hundreds of instances. For mangels it is almost impossible to decide as to the best quantity to be applied. One fact is well known, the grower uses from 20 to 25 cwt. of superphosphate per acre, together with farmyard manure and salt when the plant is forward. The produce (which are Long Yellows) has exceeded 63 tons of manure (besides their leaves) per acre for the past six years in succession. The field is six acres in extent, and a loam of medium quality. The above must suffice, for many facts could be stated of extra produce from extra dressings. The object in penning this short paper is to show that much greater produce may be profitably realized by the more liberal use of chemical aids.

**CROWN LANDS FOR SETTLEMENT.**—Having received several enquiries relative to Crown Lands, and some to those in the vicinity of Thunder Bay in particular, we applied to the Department of Crown Lands for authentic information on the subject, and are now in receipt of the following reply:

WM. WELD, ESQ., EDITOR FARMER'S ADVOCATE, LONDON.—SIR.—Your letter of the 6th of January last, addressed to the Commissioner of Immigration, has just been forwarded to this Department, and in reply to your enquiry respecting the lands held by the Crown in the vicinity of Thunder Bay, I have to state that the Townships of Oliver and Parpoonge, portions of Blake and Crooks, and four tiers of lots on the Dawson Road, north-west of Oliver, have been opened for location to actual settlers under the Free Grants and Homestead Act of 1868, and are now in the hands of Amos Wright, Esq., Crown Land Agent at Prince Arthur's Landing, for disposal.

The regulations under which these lands are located you will find laid down on the back of a map which is sent to you herewith. The other lands in this district are sold under the Mining Act, at one dollar per acre, cash. Your obed't serv't,

THOS. H. JOHNSON, Ass't Commissioner.

Toronto, 28th April, 1876.

1. In Townships now appropriated, or hereafter to be appropriated, under "The Free Grants and Homestead Act of 1868," where the lands have been subdivided into quarter sections or lots, of

soil (our land better.

W.C.S.

ts with super- what we have disappointment factory result ends on several be adverse, it e have known lime failed to yet no teach- more generally initiated by the blue of lime in d as supplying o of good crops nanner has salt e of the com- t in the soil or ure. We do nclined to the any clay-loam ailure is easily ot be expected re be stagnant also with lime. ate on a small ato crops, and ticle from a cultural Gazette is manure by

good as far as them all. On finely pulver- y no means an e seed are thus and quality, and ar, the crop fol- which is readily has not been y profitably ex- atoes are now of superphos- and the wheat plendid. Seven dung for po- dressing, as ces. For man- e as to the best is well known. of superphos- ard manure and The produce eeded 63 tons of acre for the past d is six acres in lity. The above e stated of extra e object in pen- at much greater ed by the more

NT.—Having re- Crown Lands, of Thunder Bay Department of ation on the sub- following reply:

ER'S ADVOCATE, e 6th of January oner of Immigra- this Department, ecting the lands of Thunder Bay, ips of Oliver and Crooks, and four d, north-west of ocation to actual d Homestead Act of Amos Wright, ce Arthur's Land-

ese lands are lo- the back of a map The other lands in ining Act, at one ed't serv't,

t Commissioner.

which the areas average 160 and 320 acres respectively, the quantity of land to be located as a free grant, to any person, whether the head of a family having children under eighteen years of age, residing with him, or otherwise, shall be 160 acres, and be composed of a quarter section or a half lot as the case may be, and should any quarter section or any half of a lot so divided, contain less than the said quantity of 160 acres, the location shall be limited to such quarter section or half lot, and should they exceed the said quantity of 160 acres, the full quarter section or half lot may be located upon payment by any person who is not the head of a family, having children under eighteen years of age residing with him, for the quantity in excess of 160 acres, at the rate of fifty cents per acre.

2. Any locatee in said Townships shall be allowed to purchase an additional 160 acres, at the rate of fifty cents per acre, cash, at the time of such location, subject to the same reservations and conditions and the performance of the same settlement duties, as are provided in respect of Free Grant locations, by the 9th and 10th sections of the said Act, except that actual residence and building on the land purchased will not be required.

T. B. PARDEE, Commissioner.  
Department of Crown Lands,  
Toronto, August 11th, 1875.

PLASTER OF PARIS.—Please give your opinion on the use of Plaster of Paris; whether beneficial or not, and if beneficial, where does the plant get its benefit—by applying it on the leaves, or on the ground at the roots?  
GEO. M. BREWER.

Jordan, May 13th, 1876.

[We speak from our experience when we answer your query in the affirmative. We have used it, and found it very beneficial to corn, grass and potatoes. It has the property of attracting ammonia from the atmosphere and fixing or retaining it, notwithstanding its volatile nature; and, to use the language of Johnson in his work on Agricultural Chemistry, "the influence of ammonia on vegetation is conceded to be of a very powerful kind, assuming to promote the rapidity and luxuriance of vegetable life." In another column will be seen an article, abridged from our contemporary, the *Ohio Farmer*, on plaster as a fertilizer.—Ed.]

### The Horse.

#### How to Break a Balky Horse.

A correspondent of the *New Orleans Home Journal* has the following on the subject:—

Balky horses may be divided into three classes: 1st. Such as do not like to go from pure laziness, or stop when tired and refuse to go any further. This is a balky horse in a very mild form, and can generally be cured by any good horseman.

2d. Embrace such horses as are really stubborn, and refuse to go from a headstrong disposition to have their own way. This class are generally the most troublesome, but, in fact, are the easiest to break; and when once broken, seldom make any more trouble.

3d. Are timid horses combined with a stubborn disposition, and often refuse to go from fear as well as stubbornness. This is the worst form of the balky horse and the hardest to manage, but can be broken so as to work good, but can never be considered really safe.

One important point should always be remembered in breaking horses; always speak kind and pleasant, though you may use a commanding tone and even harsh means, but never lose your temper.

Now suppose we are to commence to break a balky horse of class second, and that he is sufficiently gentle to know what is wanted of him. Put on your harness and hitch him to anything you desire, either single or double, as you feel disposed, and give him the commanding word to go ahead. If he goes, you have nothing to do or say but let him go on and do your work; but if he refuses to go take him out immediately, take all the harness off except the bridle, and take a small rope the size of the plow line, and tie the one end to the bit on the right hand side, and pull it through the ring of the left under the chop, pull his head around to his left side, and slip the rope under his tail like a crupper and make it fast, keeping his head tolerable close to his side. Now all is ready, so let him go, and take a good long whip and make

him go, talking kindly to him all the time. He will travel like a dog after his tail, for he can travel no other way, but after a while he will fall down, when you will immediately let loose the rope and let him get up; now talk kindly to him and caress him.

Your work is now half done, for you have only to tie the rope to the other side of the bit, and pull his head around the other way, and make it fast like a crupper, the same as before, and start him off again and let him go till he falls down a second time; let him get up immediately and hitch him up, and you will, probably, never have any more trouble with him. I have tried the above many times, and have never known it to fail.

#### A Horse with Ascarides.

I have a good horse for some time much troubled with needle worms. I have given him worm balls and oil and turpentine, but he still continues to pass them, to rub his tail, get out of condition, and stare in the coat. He has a full allowance of corn, hay and potatoes. Can you explain the cause of the worms?—A. B.

Needle or whip worms, also called ascarides, now more specifically termed oxyuris curvata, are common amongst horses, infesting especially the posterior parts of the large intestines. The mode of their inception and growth is not yet fully made out, but the eggs are believed to be swallowed in muddy water, or with rough grass picked often near watering places, or licked from the skins of their fellows. A few days' warmth and moisture suffice to germinate the eggs of these worms, and in a suitable habitat, such as the intestines, the wriggling, irritating parasites, cause the annoyance and loss of condition of which you complain. Aloes and turpentine are the medicines usually given to purge away and destroy these visitors. But located so near the extreme end of the digestive canal, they are more readily, and with less annoyance to the patient, got rid of from behind. Occasional clysters of carbolic soap cause them to relinquish their hold on the intestinal walls, and be swept out. Decoctions of quassia chips and various other bitter substances kill and bring them away. An ounce of quassia used to the quart of water, makes an effectual clyster. Corrosive sublimate and other mercurials are sometimes injected, but, being poisonous, require to be used with caution. Good food, rock salt in the manger, and iron tonics, help to produce a more healthy state of the digestive organs, and thus render them a less favorable abode of worms.—*North British Agriculturist*.

#### How to Cure Scratches in Horses.

First cleanse the heels well from all dirt and other foreign matter, with a strong suds made by means of carbolic soap and warm water. This done, dry the parts well and be careful to remove the soapy matter thoroughly from the sore, in order to prevent the collection of dirt. Then dress the heels with a lotion composed of carbolic acid, one part, cold water, forty parts, three times a day. In one-quarter of an hour after using the lotion rub over the diseased surface with glycerine and keep the parts supple with it. Give him, mixed in his feed of grain, night and morning, one and a half ounces of liquor arsenicalis each time, and continue this treatment for a time after his heels have dried up.—*Turf, Field and Farm*.

#### The Horse's Foot.

Most of the horse shoers of the country prepare the foot, fit the shoe, and secure it to the hoof in the same manner that a wood butcher fits a shoe to an old wood or ox sled. The mechanism of a horse's hoof is one of the most wonderful and ingenious structures that can be found in all the works of the Creator. Beneath and in the rear of every hoof there is a frog, which is a tough and elastic pad for preventing injury to the animal whenever he plants his foot suddenly on any hard substance. Large rolls of cylinders of india-rubber are placed beneath the railway cars to prevent injury to any part of the car or to the cargo with which it is loaded. The frog beneath the foot of a horse is designed to subserv a similar purpose. But the manner in which most horses are shod lifts them as it were on short stilts, so the frog cannot perform its appropriate functions.

If we look carefully at the young horse when he is trotting or running, it will be perceived that every foot is brought down to the ground in such a manner that the frog receives the powerful blow.

By this means all injury to the animal is avoided. Science teaches us to permit the frog to develop and point downward. But most blacksmiths seem to think that the all-wise Creator made a mistake when He formed the hoof of the horse. Hence they fall at the frog with red-hot burning irons, with edge tools and with any other appliance that will enable them to remove this extraneous excrescence. Illustrious ninnies! Why not shave away all the rough, callous, adipose tissues beneath their own heels, and allow the bare bones to rest on an iron plate inside of their own boots and shoes? No frog, no foot; no foot, no horse.—*N. Y. Herald*.

#### Harnessing Colts.

The utmost gentleness should be exercised in harnessing the colt for the first time. Any undue roughness as, for instance, throwing the harness over his back, the tugs and straps slapping against his sides, may forever render him exceedingly shy, restive and, consequently, dangerous to approach. First detach the harness from the pad, closely tying up the tugs. Then take them in both hands and place them gently over the collar, buckling below without jerking at the straps—the too common practice of grooms—after this, with both hands place the pad over the back, buckling just tight enough to prevent the pad from moving out of place. When this is done the tugs may be then drawn through the support straps and tied snugly up to them. The collar must be carefully adjusted to the animal's neck so as to prevent both scalding and chafing.

### The Apiary.

#### Bee Items.

The pure Italian bee is known by its being uniform in color, having three golden bands running around its abdomen; again, it is known by its being gentle and easily handled. A pure Italian colony will suffer its hive to be opened and handled without the use of smoke to subdue them; also, by remaining quietly upon the comb while being handled; moreover, a pure Italian queen will always duplicate herself in her queen progeny. A queen who does not do that is a hybrid, and should not be tolerated a single moment to breed from.—*Rural World*.

A FARMER'S HIVE.—Mr. Clark, who has devoted much time for the past ten years to the honey bee and its ways, says:—The simplest hive is the best, and that the nearest and most satisfactory approach to this is a square box, which a swarm of bees will fill. The hive which Mr. Clark now uses is fourteen inches square by fourteen inches deep inside, provided with an excellent feeding arrangement, ample means for ventilation, and three hollow bars in the centre of the box, through which the bees can pass and repress at pleasure. He winters his bees out of doors, the hives being on a bench six or eight inches from the ground, over which is placed a box four or five inches larger than the hive, and one foot higher; the top space above the hive being crowded full of straw. The top of the outside box is made water tight. In the spring this straw will be found all rotten, but the comb in the hive will be white and clean.—*Maine Farmer*.

EXPERIMENTS WITH HONEY.—A correspondent of the *Scientific American* gives his experiments with bees in 1874: I put up six one-pound cans of beautiful linden honey, being careful to make it one homogeneous mass by stirring. It was thrown from the combs by an extractor, on July 20, and put into cans on Aug. 1. The cans were placed respectively as follows: One in a dark, dry cellar, one each under shades red, yellow, green, and blue glass, and the sixth can under full light. On November 8th the honey in the cellar candied to a white. November 22nd to December 10th, honey under colored shades candied, first in the red next in yellow, green, and blue; while the honey in full light remained transparent until January, when it soon candied after exposure and intense cold weather. From my experience an equal temperature would preserve certain kinds of honey, while other kinds would candy under almost any circumstances. I think that candied honey, instead of being looked upon with disfavor, should be looked upon as evidently pure. I hope however that the above experiments will lead others to follow up the light theory with beneficial results.

### Stock and Dairy.

#### The Effect of Fashion in Stock Matters.

The results of some recent sales of pure-bred stock of different breeds are well worth more than a passing notice. It has never yet occurred that a class of stock, however popular it may have been for a time, included in itself every valuable characteristic. We have never yet had one breed or class of cattle that met every requirement of the farmer, dairyman, grazier or butcher. It is not probable that we shall ever produce or possess such a breed. When any one breed or class of cattle threatens to become so popular as to cause all others to be neglected, and to seriously reduce their marketable value, past experience would lead us to expect that the climax of its popularity has been reached. We learned this lesson a few years ago, when no sheep except Merinos were considered worth keeping, and we may be in danger of receiving another similar lesson before long in regard to Shorthorn stock of the more fashionable sorts. The recent sales of Shorthorns in Kentucky, and of Ayrshires and Devens elsewhere, go to prove this unmistakably. In the Kentucky sales it is noticeable that Shorthorns, of excellent and good pedigree, sold for prices that were equivalent to their value for beef and no more; while a three month's calf of a more favored family, undeveloped and of no certain promise as to the future, brought the remarkable price of \$17,500, and has since been resold for \$22,000. Such an occurrence is strong evidence that, so far as regards these fashionable cattle, we are in the well developed stage of a decided mania. When \$15,000 was offered and refused for a Merino ram, not many years, we were in just such an excited condition, from which we soon emerged to find the price of rams fall to \$50, or in some cases as low as \$10, which was somewhere about their intrinsic value. Not long since those excellent cattle, the Devons and the Ayrshires, for some localities and circumstances unsurpassed by any breed whatever, bore a money value somewhat on a par with their real worth. But the past few months some of these cattle, of faultless character and high breeding, have been either offered without buyers, or have been sold at prices below those which could have been realized for extra good native stock. Of the Herefords, at one time considered to be the peers of Shorthorns for the production of cheap and excellent meat, upon moderately strong pastures, nothing is now heard, and they are almost entirely neglected. The owner of a well known herd of Ayrshire cattle recently sold his stock for a small portion of their value, to make room for a herd of Shorthorns. The excellent herd of Devons owned by Mr. Matton, of Springfield, Mass., was recently withdrawn from public sale on account of the inadequate prices offered. The result may be unfortunate for those persons who, at this late period of the excitement in regard to Shorthorns, go into the speculation of breeding them, with insufficient capital, or without the nerve to bear possible future losses without repining; and it will be equally unfortunate for those who are tempted to neglect the improvement of their stock by means of unfashionable breeds, because of the present neglect with which these breeds are regarded, or because they are dazzled by the more brilliant record of others which are beyond their reach. The Shorthorn may be the most profitable animal to keep on the blue-grass pastures of Kentucky or Ohio, or the rich valleys of the Mohawk or the Genesee, or wherewith to cross the long-legged and long-horned Texan; but it cannot be kept with profit where it is obliged to climb hills to its pasture, nor where the meadows are not always in condition for the scythe; nor can it be profitably fed in stalls upon meal. It has its place, and it will fill that better than any other breed. But so has the Hereford, the placid, gentle feeder which never loses an ounce of flesh through ill-temper or nervousness, and which thrives upon second-rate pastures, and makes a heavy weight of the best beef. So also has the Devon, which, as a working ox, surpasses any other, and which, on hill pastures, will produce most acceptable beef with profit. Neither can the reputation which the Ayrshire has acquired in two centuries as an excellent dairy cow, be suddenly destroyed by the Shorthorn, which for nearly a hundred years has been daily losing its dairy qualities by a course of high feeding and breeding. It is said that the best time for one to acquire a good thing cheaply is when everybody else is anxious to dispose of it, and, if

this be true, it is certainly a good time now to procure excellent pure bred stock of the neglected varieties, while the majority of breeders are pursuing the more promising but more risky business of dealing solely in Shorthorns.

#### Courage of an Importer.

We have the following account of a case of unwavering courage and enterprise, and publish it to show how much of expense and labor sometimes attend the introduction of improved animals from other countries.

Mr. John S. Harris, of California reached Baltimore yesterday by the steamship Sardinian, from Liverpool, with twelve Angora goats, which he brought all the way from Asia Minor, after a most romantic and difficult journey, occupying a year. Angora and Cashmere goats had been considered identical, but a sample of real Cashmere wool, sent to Mr. Harris from Madras, disclosed the fact that it was essentially different from the wool grown on goats called Angoras, which he and others owned in this country. This discovery led the adventurous breeder to go to Asia and learn for himself, as well as to study the habits and mode of raising goats, with a view to making them profitable in the Sierras of California. He started April 16, 1875, from California, via Japan and China, intending to go overland into Thibet, but found that impracticable. He then went to Calcutta, and, going through India, reached the Cashmere district, and saw the animals for which he had made so great a journey. He found the Cashmere goats covered with a rather sparse coat of coarse, long, black hair, under which is a fleece of extremely white, silk-like wool, used in the manufacture of Indian shawls and other goods that are so highly prized for their fineness of texture and capability for receiving and retaining colors. The home of the Cashmere goat is in the Himalaya Mountains, 22,000 feet above the level of the sea, in a region of eternal snows. There are no cashmere goats in America. The traveller found these goats could not be profitably acclimated in California, but he gained the information that mohair wool goats can be successfully raised in a high altitude and low latitude, such as the Sierras of Southern California. Mr. Harris concluded then to go to Angora, but found he could not go overland on account of war, nor via the Persian Gulf on account of the unsettled state of the country. He therefore returned to Calcutta, and went via Ceylon, Indian Ocean, Red Sea and Suez Canal to Port Said, over the Taurus Mountains, in crossing which he was occupied twenty-one days, and suffered intensely from cold, snow, etc., with no other food but native black bread and a kind of molasses. When finally he reached Angora and bought his goats—two rams and ten ewes—he ran short of money, and had to telegraph to California for a credit at Constantinople. He borrowed from a friendly Scotchman, and started for the coast. He had nine mules and three donkeys, on which the precious goats were slung in boxes, while other of the animals were loaded with provender and baggage. He tried to reach Smyrna, but, after floundering in the mountains some days, was obliged to return to Angora. There he found money from his partner, paid his debts and the export duty and "bucksheesh" demanded by the Turks. He went from Constantinople to Liverpool, and thence to Baltimore in safety. Mr. Harris says that, including all his expenses since leaving home, the goats have thus far cost him \$525 apiece in gold, or a total of \$6,300, and he has yet to take them across the continent to California by rail. Mr. Harris is a middle-aged Scotchman, decidedly modest, and does not think he has performed a remarkable journey in the wilds of Central and Western Asia. When he left California he and his partner had 1,700 goats on their ranges at Hollister, Benito county, where he has been seventeen years. He thinks he has found that, by proper breeding, California is especially adapted to producing mohair wools. The goats on the Sardinian are smaller than the ordinary animals, and have long silken fleeces of white wool. Both sexes have flat, corrugated horns about eighteen inches long, that diverge from the front of the head. All are yearlings, and show no ill effects from their travels. Several kids have been born since leaving Angora, one of which, several days old, is alive and well. The goats were visited by thousands of people at Liverpool, where Mr. Harris was a sort of lion. He has with him specimens of Cashmere and other wools, together with their manufactured products, obtained in Asia.

#### How to Make Stock Pay.

One of the most interesting questions to the farmer just now is, how to make the most out of his stock. The common native stock of this country is not sufficiently profitable. It produces too little beef, butter, wool, mutton, pork and lard, and it takes too long to produce what it does, to be profitable in this rapidly moving age. Farmers must float with the stream of improvement or they will find themselves cast high and dry upon the banks. Feed is the farmer's raw material, and his stock the machinery from which he manufactures his wares. No matter how skillfully he feeds it, if his machines are imperfect or slow in action, his wares necessarily cost too much. To improve his machinery, that is, the stock which he feeds, is as needful as to study how to feed. All the investigations and experiments he, and others for him, can make, go for nothing if the animals he feeds cannot digest and assimilate the food in sufficient quantity to turn it into saleable material fast enough. In order that this may be done more rapidly, breeders have for years been improving their stock. Cattle, sheep and pigs of improved breeds come to maturity and reach double their weight at half the age of the unimproved breeds. Unfortunately we are bewildered when we hear and read of the marvellous prices at which some of these animals are sold. Clearly they are out of the farmer's reach. But it is wrong to suppose that he is therefore debarred from improving his stock by the use of improved animals. The past month over 1,000 head of Shorthorn cattle have been sold at various public sales. Many of these have been of the fancy sort, valued at very high prices for their pedigrees. No complaint can be made if a wealthy man chooses to give \$10,000 for one of these animals, any more than if he gave the same amount for a diamond. He injures no one, and does at least some good with his surplus money. But fortunately he has no monopoly of the really good cattle. A good judge of stock would be equally or better satisfied with an animal that at the same sale brings but \$200 or \$300, simply because his family is not so fashionable, or it has not "so sweet a head."—*American Agriculturist*.

#### Milk and Meat.

Dr. Schneider, of Thionville, France, treats an important subject from a new point of view. He demands, why not encourage precocity in animals for milk, as well as for meat? In the latter case the object is to fatten an animal in 36 instead of 60 months, by good feeding. On the contrary, the powers of reproduction, that is, the yielding of milk, are most active or precocious where the dietary is sober, if not miserable. Poor families are most prolific, and weeds most productive. Cundity is the ally of humble rations, and fat the emblem of opulence, is not an attribute of virility. Embonpoint is incompatible with the faculty of generation. If a sterile cow or an ox exact 36 months and good diet to be precociously converted into meat, a heifer could, in that period, have produced upon a regimen, one calf, perhaps two, and from twelve to fourteen months of milk. Production of milk is less costing than that of meat; it can be less expensively disposed of, and if milk has increased in price, so also have butter and cheese. The properties for fattening and milking are but one and the same thing, and pre-exist in the animal, only both aptitudes cannot be developed at the same time. Thus in France, Dutch or Normand cows are kept for the express purpose of yielding milk to the calves of Durham breed.—*Western Farm Journal*.

#### Pneumonia in Pigs.

C. A. W. asks:—Can you give us a remedy for "Thumps" in hogs?  
Answer—Give fifteen drops of extract of gelseminum—mornings, noons, and evenings—until febrile symptoms disappear. Inflammation of the lungs in pigs runs its course rapidly, and may be considered generally fatal, if not taken in hand as soon as the first symptoms appear, such as hard breathing (generally mistaken for so-called thumps), shivering, loss of appetite, cough, etc. Half an ounce of hyposulphite of soda, or two drachms of saltpetre, should be given in a little gruel every morning, and the animals kept warm, dry and comfortable. Indeed, if a little more attention were paid to the cleanliness and comfort of pigs, "thumps," and other diseases among them, would be much less frequent than they are. Place fresh cold water within reach of the pigs, and remove it mornings and evenings.—*National Live Stock Journal*.

**Pay.**

Questions to the most out of this count produces too work and hard, at it does, to age. Farmers vement or they dry upon the aterial, and his manufactures lly he feeds it, w in action, his To improve his he feeds, is as All the investi- cers for him, can he feels can- in sufficient material fast done more ra- en improving gs of improved h double their proved breeds. when we hear at which some they are out of ong to suppose improving his ls. The past orn cattle have Many of these at very high mplaint can be ve \$10,000 for u if he gave the injures no one, surplus money. uly of the really stock would be animal that at 300, simply be- le, or it has not iculturist.

ance, treats an nt of view. He city in animals n the latter case- 36 instead of 60 e contrary, the e yielding of where the die- oor families are uctive. Cundity fat the emblem of virility. Em- faculty of gene- exact 36 months y converted into l, have produced s two, and from . Production of meat; it can be l if milk has in- atter and cheese. milking are but -exist in the ani- be developed at utch or Normand pose of yielding breed.—Western

**Pigs.**

us a remedy for f extract of gelse- evenings—until inflammation of the oitly, and may be taken in hand as pear, such as hard so-called thumps), gh, etc. Half an f two drachms of little gruel every arm, dry and com- ore attention were comfort of pigs, ong them, would are. Place fresh igs, and remove it tional Live Stock

**Selling Milk.**

Few farmers seem to realize the fact that constantly feeding milch cows on a farm will impoverish the soil. Almost any intelligent man will admit at once that if he raises twenty-five bushels of wheat to the acre, he must return some fertilizer to the soil which will replace the elements which the wheat has removed. If we make a chemical examination of the ash of the grain of wheat, we find it to be composed of the following ingredients in the following proportions:

	In 100 parts.
Potash.....	31.1
Soda.....	3.5
Magnesia.....	12
Lime.....	3.1
Phosphoric acid.....	46.2
Sulphuric acid.....	2.4
Silica.....	1.7
	100

Wheat contains about 2.7 per cent. of ash of the above composition. The 25 bushels will yield 1,500 younds, and will contain 31.05 pounds of ash.

According to a recent report of the Connecticut Board of Agriculture, the average amount of milk yielded per cow by a number of dairies was 2,500 quarts. This is equal to 5,315.5 pounds, at 2 1-8 pounds to the quart. Now, good milk yields on an average 65 per cent. of ash; or the 2,500 quarts will give 34.53 pounds of ash, of the following composition:

	In 100 parts.
Potassic chloride.....	14.18
Sodic chloride.....	4.74
Soda.....	6.95
Potash.....	23.46
Phosphoric acid.....	27.40
Lime.....	17.34
Magnesia.....	2.20
Sulphuric acid.....	trace
Silica.....	trace

Thus we see that the ash from the 2,500 quarts of milk is about the same in amount as from the acre of wheat, and that it does not differ greatly in composition.

Nitrogen is another element that the wheat and cow both remove from the land. Wheat contains 12 per cent. of albumenoids, which will yield 2 per cent. of nitrogen. The 25 bushels will therefore remove 30 pounds of nitrogen. Milk contains on an average 4 per cent. of nitrogenized bodies, which will yield 6.14 per cent. of nitrogen; or the 2,500 quarts will give 32.42 pounds of nitrogen. It is not quite so easy to make the comparison of the amount of carbon removed; nor does it make so much difference, as the carbon is derived mainly from the atmosphere, in the one case by the wheat plant directly, in the other by the grass which is eaten by the cow.

From the above it is easy to see why old pastures run down; and the remedy is just the same as should be used if wheat had exhausted the soil—that is, the ground must be manured. And the composition of the ash of the milk shows why potash, salts and superphosphates produce such remarkable effects on old, worn-out pastures. These furnish exactly the elements that have become exhausted. Farmers who buy grain largely for feeding, and apply the manure produced to the land, are thus almost unconsciously returning to the land that which they have removed in the form of milk.—*Journal of Chemistry.*

**Fine Stock a Safe Investment.**

John Scott, in the *Swine and Poultry Journal* for September, impresses a lesson which we have always sought to teach by an illustration which may make it clearer to many than it ever has been before, and especially as he vouches for the occurrence as an actual fact.

My neighbor bought a trio of fine pigs, paying therefor the reasonable sum of \$120. The male was valued at \$60, and the females at \$30 each. This was a wise apportionment of values, as the male would impress his value on all the produce, there are those who think, however, that \$60 is too great a price for one pig. In this case he did not die or prove barren, but he begat his likeness not only on the females of his own blood, but largely on others to which he was bred. In the short space of two years my neighbor had sold, at prices much less than he paid, pure bred pigs to the amount of \$600; had on hand a stock of young

things worth \$300; still had the original stock, and had paid for all his feed and labor by the use of his male on his other stock. To say nothing of his enjoyment in the possession of the best, of the increased respect of his neighbors, of his own culture growing out of the thought he gave to his pursuit, he had a clear return of \$1,000 on an investment of \$120, and all in two short years. Allowing one-half for contingencies, and who has done as well as this with low-priced stock?

If a boar will get one hundred pigs in a year, and each of the pigs are worth \$5 more than are those from a common sire, what is he really worth? If we use him but three years at this rate he will earn us \$600. Is it not plain that such an animal has a real value far beyond the terrible hundred dollars for which he sells? Is it safe, then, to wait for the price to come down before we buy? The expectation or fear that the prices will tumble, is based on the assumption that the world will move backwards. The idea is as vain as it is uncomplimentary, as fallacious as it is undesirable.—*Live Stock Journal.*

**Butter and Cheese vs. Corn.**

One of our eastern exchanges gives the following pertinent advice to western corn growers, and the concluding sentences are certainly very suggestive ones:

With richer grazing lands, the farmer of the west possesses an advantage over the east which more than compensates for the increased cost of transportation of cheese to the seaboard for the export trade. Through the multiplication of these refined and condensed products, the west will, in time, be able to overcome the onerous task of transportation. It bears heavily upon grain, cattle, hogs and sheep. A large percentage of the value of these products is consumed in transportation for all long distances. The true economy, then, would seem to be to turn these substances into less weighty and valuable products, to refine them, using the grosser parts at home, and shipping abroad the more valuable parts. A bushel of corn weighs 56 pounds. Say it is worth 70 cents in New York, or 1 1/2 cents per pound, and that it costs 40 cents to get it here, or about 3/4 of a cent per pound. It thus costs 4-7 of the total value of the corn to market it. On the other hand, if a pound of cheese is worth 15 cents in New York, say it will cost 1 cent for transportation, or 1-15 of its value. In the one case, the farmer must pay 4-7 of the value of his crop to reach a market; in the other, he pays only 1-15 to reach the same market.

**Sheep Pay Best.**

In "Some Sheep Talk," in the *National Live Stock Journal* an experienced stock keeper says:—

I have been feeding some three hundred head of cattle, and I am satisfied that, even with the most favorable conditions for selling when the time comes, I shall make a great deal more money, dollar for dollar, on the money I have invested in sheep, than I shall make on the capital invested in cattle. I have about six hundred sheep, running without any particular attention or care, and have sold one thousand four hundred dollars' worth of wool of this year's clip, and have two hundred and fifty lambs besides. I do not think it possible to have done so well on any equal amount of capital invested in cattle. One great advantage sheep have over other stock is, that they never die of contagious diseases which they contract. They get the scab or foot-rot, or something else, and if unchecked it gets them in bad condition, and would ultimately, perhaps, kill them. But the very worst contagious diseases to which sheep are subject give the owner ample time to treat the affected animals, and the diseases are generally of a character which yield readily to treatment.

PEAS FOR CATTLE.—A. W. Stokes, Hernando, Miss., says:—I have for years kept fatter cows and had more milk and butter, and for less money, than anybody I know of. First, I sow peas broadcast, three pecks to a bushel per acre, in the month of May, harrowing them in after breaking the ground well; then, in September, I pull them up just when a few begin to dry, and make hay out of the vines and peas. I get from 4,000 to 5,000 pounds per acre of hay that is eaten by cattle and horses as eagerly as if it were the best clover. Pulling up is far preferable to mowing, as cattle seem to love the root better than the tops, and it is said to be more nutritious. No manuring is necessary, and one acre in sowed peas is worth six of fodder.

**Preparing Wool for Market.**

Perhaps a few suggestions upon the above subject may be of interest to the readers of the *Farmer*. It is, no doubt, the purpose of all wool growers to put up their wool in that way which will bring them the most money for each fleece. From observation, and some experience in handling, we find there is no uniform method practiced in doing up fleece wool; each grower has his own particular notion—some doing up tightly with a large amount of string, some with only a moderate quantity, and others doing up their fleeces loosely, with only string sufficient to hold the fleece together.

It is a difficult matter for a wool-buyer to determine accurately the value of different lots of wool in the same neighborhood; and still more difficult to buy them of the growers according to their actual value. Generally, each grower—even though his wool is a hard lot, and put up in a slovenly manner—thinks, or pretends to think, that his wool is as good if not better than any in town, and wants the highest market price for it. And he generally gets it; for, if the first buyer that comes round makes any difference in the price and avoids the heavy lots, the next one often buys the heavy wool at full prices.

From an experience of 30 years in selling wool, we find that fleeces done up loosely, and made to appear large, uniformly sell the best. Take three fleeces that are as nearly alike as possible, weighing, say 8 pounds each; the first we will put in a wool-press and tie up tightly; the second, tie up loosely, making it bulky; the third we will split in the middle, tie it loosely, and make what appears to be two fleeces, weighing 4 pounds each. The purchaser, I care not whether he be the common country buyer, the wool-storer or the manufacturer himself, will make three prices for these three fleeces of wool—varying at least five cents per pound between the first and third fleece. If wool-growers can derive any advantage by dividing their large fleeces, is it not their right to avail themselves of that privilege? It may be said that it would be deception, that it would not be honest. In answer we will say it would be wrong to divide fleeces and represent them to be whole; but if we inform the buyer of the fact there can be no wrong attached to the wool-grower.

The fact is, that when a large fleece is pressed into a small compass and tied up tight it appears to be heavier than it should; the wool-buyer is deceived, and the grower does not receive a fair price for such fleeces. We would not be understood to assume that the wool-grower who has heavy fleeces—made up of oil and filth—does not get a fair price for his wool; nor do we recommend splitting such, for we believe this class of wool often sells for more, rather than less than its value; but it is from sheep that have been bred with a view to grow a large amount of cleansed wool, and only a moderate quantity of oil, that we propose to advocate the dividing of fleeces.

To make wool show to the best advantage, it is necessary that the shearer should understand his business—keeping the fleece from being torn or kicked to pieces.—*Wool Grower, in Ohio Farmer.*

**Probable Cause of Hog Cholera.**

As a rule, it is the interest of farmers to raise a breed of pigs that will mature rapidly. Breeds have been hurried up till a pig of eight to ten months old will weigh between two hundred and three hundred pounds. This, of course, has its advantages, but there are many serious evils to counterbalance them, and these are a prime cause of the present trouble.

Hogs now lack bone to a remarkable degree. They are also lacking in hardiness of constitution, which is apt to make them victims to numerous obscure diseases about which little is known, but which are now classed under one common head—that of hog cholera.

One prime cause of these diseases and delicacy of constitution is the extreme early age at which pigs are allowed to couple and breed. If unrestrained they will gratify this instinct at six weeks of age, or even less. Nearly all our choice breeds are the offspring of parents, in almost every case on both sides, less than one year old. They come from pigs, not hogs; and this process has gone on till no more hogs will be left in the West, if this is not already the case.

Hon. D. Christie and Stephen White were lately in Wellington, selecting stock for the Centennial.





Nucle Tom's Department.

We have received various complaints this month from our little nieces and nephews. Some feel annoyed that we have not published their names, who have sent us correct answers to puzzles. Others say their names are not spelt correctly. Others think the puzzles are too difficult, and some complain of the type setters. We beg to apologize for all; but, dear nephews and nieces, we should feel very sorry to have any of you who send us letters and puzzles, which do not appear in our columns, think that we do not care for them. There may be reasons for not using them; some have been in our paper before. We endeavor to select the best. We have been so liberally supplied that we could not publish all. Perhaps many of those whose names have not been in print may have forgotten to send their names with answers, as we frequently receive such letters.

UNCLE TOM.

Who Shall Win the Prize?

Some of our nephews and nieces have asked us to award a prize. We therefore take pleasure in offering a beautiful little chromo to the one who sends us the best original rebus. We also offer our nieces a chromo for the best article, written from practical observation, in regard to house-keeping, not to exceed a half a column. The puzzle must be restricted in length and not theological. You will have to be wide-awake, for there will be plenty of competition. All communications must be in by the fifteenth of June.

At this season the question which interests a boy is not so much whether his life will be crowned with glory and honor as whether his new summer's vest is going to be made out of his father's old trousers.

At a medical examination a young aspirant for a physician's diploma was asked, "When does mortification ensue?" "When you propose and are rejected," was the reply that greeted the questioner.

Puzzles.

62.—NUMERICAL ENIGMA.

I am composed of 37 letters. My 19, 6, 27 is a girl's name. My 12, 22, 34, 2, 8 is an introducer. My 25, 27, 4, 20, 31, 10, 17 is a lover of his country. My 11, 24, 8, 27, 28, 37 is a boy's name. My 1, 33, 15, 30, 5 is a gay young lady. My 36, 29, 13, 7, 23, 4, 35 is a memorial. My 26, 3, 32, 16 is to approve. My 14, 3, 9, 18, 35, 25 is a prelate. My 2, 8, 21 is before. My 12, 22 is a pronoun. My whole is a true saying. —JAS. H. C.

63.— To just half of care you may add, if you dare, Three-fourths of what Thomas gives Kitty; And then, without doubt, you will quickly find out What may please and yet puzzle the witty.

64.—ENIGMA.

In America, Africa, Asia I'm seen, Though in Europe 'tis true, I never have been. In woods and in forests I never am found, In civilized cities I always abound. In sins and iniquities my home's by right; Though quarrels avoiding, I'm ne'er last in fight. In the abodes of the good I never have dwelled— In derision by all I doubly am held. Im ne'er seen in church, in chapel, in prayer, And am sure to be found in riot or fair. In oblivion and grief I am doomed to remain, And shall ne'er be released from prison or pain. In evil pursuits I take part most profanely, And without me a raid is insane very plainly. H. H.

65.—DECAPITATION.

Whole, I am a part of a stove, curtail and I am the seat of life; curtail again and I signify to listen; now behead and I become a part of the head; restore to my original form and behead and I am a planet. J.M.S.

66.—Entire I am the edge; behead and I am a place of amusement in winter; behead again and I am used in writing; now transpose and I am a relative.

67.—ENIGMA.

I partake alike in your joy and sorrow, And your home would not be home without me. —JAS. R.

68.—Spelled with five letters, I am a girl's name; take one letter away and I am her brother's name; turn me about and I am the Island where they live. V.S.M.

69.—CRYPTOGRAP.

Pi ouy ovel em Sa i elvo uyo On ienkf ucdol utc Uro vleo ni owt. —G.M.R.

70.—PUZZLE.

A marble wall as white as milk; Lined within as soft as silk; Underneath a crystal clear— A golden apple doth appear. There are no doors to open or unfold, Yet the thief breaks through and steals the gold. —S.P.

71.—NUMERICAL ENIGMA.

I am composed of 13 letters. My 1, 12, 13 is what all beasts dread, My 11, 12, 8 is on the side of the head, My 9, 7, 1 is part of the body, My 3, 1, 11, 10 means so be it, My 3, 4, 10, 6 is what we all do, My 5, 2, 13 is a number, My whole is the name of a sea. —A. N.

71.—ILLUSTRATED REBUS.



NAME OF A PLACE IN CANADA.

72.—PUZZLE.

A ship's crew composed of 30 men, half black men and half white men, having run rather short of provisions, agreed that the captain should cast the half of them overboard. He placed them all in a row, then he cast out every ninth man, until he had the half thrown over. He placed them in such a position as to cast overboard every black man and left every white man. How did he place them? SAMUEL S.

73.—HIDDEN COUNTRIES.

Come and see me, as I am very lonely. (Two countries.) That man saw a Leslie publication in England. He has pain in his arm he said. Yes, we deny the assertions made by you. Tell me, can a dandy speak properly? I call it a lyre-bird, certainly. Don't you? On your chin a wasp is sitting. See that Arab. I anticipate some sport. I saw strange sights in Diana's temple. Oh! do see that ape run in the field. I heard him say, "Alas! Kate, you love me not. He is the same Ricardo yet. —J. M. SHURK.

74.—CHARADE.

My first, though not half a rod in size, is three parts of a pole; My second over river, pond and brook in winter hath control. Deprived of my third this world would soon be desolate and undone. My whole both day and night you'll see in the streets, or walk or run. M. DOUGLAS.

Answers to May Puzzles.

- 43.—Thunder Bay. 44.—St. Lawrence. 45.—He had 81 cents when he started. 46.—Elliott, ELK COLON ELLIOTT ALONE STY T 47.—XIII. 48.—A river. 49.—The bridge of his own nose.

50.—Persevere ye perfect men to keep in mind the precepts.

51.—Thomasburg. 52.— Give me the depth of love that springs From friendship in misfortune grown— As ivy to the ruin clings, When every other hope has flown. Give me that fond, confiding love That naught but death itself can blight; A flame that slander cannot move; But burns in darkness doubly bright.

53.—All the difference in the world. 54.—Grammar. 55.—Scholarship. 56.—A drawer. 57.—A River. 58.—When shall we three meet again. 59.—Thine, I, it, its, he, her, her's, his and their. 60.—Pare, pear, heir, air, all, awl, Sam, psalm, him, hymn. Hugh, hew, mien, mean.

ERRATA.

[There were four letters misprinted in No. 61 puzzle. The two Z's should have been R's, and in the fifth line the W and T should have been U and I. Begin at the N in the sixth line and trace up and around, and you will read, "Never put off till to-morrow what you can do to-day." 62.—Dust.

Names of Those Who Have Sent in Correct Answers to Puzzles in May Number.

Sarah Clarke, Marie Clemens, Alex. Cobben, Henry Denyes, Lizzie Wilson, H. D. C. P. Sunby, Wm. Gorsli, J. H. French, Alex. McKinnel, Janet Hartly, Edith V. Ashford, Mary Close, J. E. Lovekin, Jos. Moody, John Cassidy, Arch. and J. Crossier, Mary Douglas, Robt. McNak, Stella Pardon, Minnie Cuthbert, Edwin Clemens, Wm. Bain, Janet Davidson, Chas. King, F. Stewart, Ellen Fraser, James H. Cross, James T. Ross, C. G. Begg, V. M. Collum, Sam'l Thier, Sarah Sharpe, Stenerengal, Jacob Clemens, Charles Wilson, Owen S. Bauman, Harry Howell, J. M. Sherk, J. Lewis Malvern, J. Hamilton, Maggie Taylor, M. A. Hyde, Alice Nicholson, J. R., Grace McNee, E. Elliott, Josie Lawrance, Archie Milton, Frank Lawson, J. A. Lamont, G. M. R., Warren H. Cody, Mrs. R. McC., D. D. L.

HUMOROUS.

Always the Same.

When a woman enters a butcher's shop to select a piece of meat for dinner, she has made up her mind to take mutton roast. Therefore, when the butcher rubs his hands and asks what she will have, she promptly replies: "I'll take some of that mut—" She stops there. Her eye has caught sight of a ham, and she suddenly decides to take ham. "Is that nice ham?" she inquires. "Best ham I ever saw, madam. How much?" "Well, you may give me three p— well, I don't know, either. My husband was saying he'd like some sausage. Have you any real nice sausage?" "Plenty, madam. Now, then, how much sausage will you have?" "It's pork sausage, is it?" "Yes, ma'am." "Well, I suppose a pound would be enough for our small family, but—but—" "Shall I weigh a pound, madam?" "I was just wondering if a veal pot-pie wouldn't suit him better," she answered. "You have veal, I suppose." "Oh, yes, madam, here's a splendid bit of veal, as good a piece as I ever saw." "Yes, that does look like nice veal," [she says, lifting it up. "And you'll take it?" "Let's see," she muses. "Y— no, I guess not. I guess I'd better take pork chops." "Nice chops; how much?" he asks. "One of these slices will weigh a pound, I suppose." "About a pound, madam." "And it was a young hog?" "Quite young, madam." "And you'll cut the rind off?" "Yes, madam." "Well," she says, heaving a deep sigh, "I guess you may give me some beefstake—some that's nice, and be sure to cut all the bone out!" And she's only been half an hour coming to the point.—Detroit Free Press.

"When women make bread," said Quiz, moralizing over an underdone biscuit at the breakfast table—"when women make bread a curious phenomenon always results: you find a little dear bringing forth a little dough."

## Minnie May's Department.

## Set the Table Neatly.

DEAR NIECES,—Not long since, when visiting at a friend's, I noticed such a bustle and confusion while at dinner, simply for the want of proper attention while setting the dinner table.

"Ada, run and bring the carving knife and fork," said the mother, as we began our meal; "and bring me the sugar bowl." "I hav'n't any fork," cried Jim; "guess I'll eat with my fingers." "No, indeed," said mother, "go right away and get yourself a fork." "I do wish we could always have a pitcher of water on the table," said the father. "Mary, get some water for your father, and do try and remember that; I am sure I have told you often enough." The three children were at last in their places again, and quietness was restored. "I do hope we can get on now without having any one to get up again until the meal is over," said the father; "it makes so much confusion and discomfort. Whose business is it to set the table?" "Mary's," said little Ada. "Well, Mary, if you set it for a week without having one missing thing when we sit down, I will get you a new dress." Mary was pleased with the proposal, and exerted herself to the utmost. She increased order and comfort in the family meals, and was rewarded with the new dress.

There is a science about setting tables which is too often neglected in our country homes. The first point is a clean cloth; then let the plates and cups be shining and evenly set, the knives bright, and the salt cellars and sugar bowl clean. A little care and forethought can prevent the disorder which so often spoils half the meal in our country homes. A good dinner will not look the least tempting if it is carelessly put on the table. Some housekeepers seem to have no skill in these departments. Good flour is converted into some indigestible mass, and fresh vegetables, by being all cooked together, lose all their own peculiar excellencies. The whole meal, when the family are called to partake of it, has the appearance of being thrown on the table. How seldom do we see a bouquet of flowers on our dining tables; yet what a charm they throw over our plainest meal! How refining their influence on the hearts of children, and delightful to all flower lovers! Nothing that makes home bright and pleasant is too trifling to receive our earnest study and attention.

MINNIE MAY.

DEAR MINNIE MAY,—May I be allowed to congratulate you upon your well conducted department; the advice which you give to your many nieces is very good. I have followed the proposition you made last month in regard to making a flower garden. I persuaded my brothers to dig the ground; I then laid it out in flower beds, and have planted some rose bushes, ornamental shrubs and bulbs, and intend sowing some flower seeds soon. What is more pleasant than to spend a portion of every passing day in working among plants and watching the growth of shrubs and trees, and to observe the opening of flowers from week to week, as the season advances? Then, how much it adds to the enjoyment to know that your own hands have planted, tilled, pruned and trained them! This is a pleasure that requires neither great riches nor profound knowledge. The wife or daughter who loves home, and would seek ever to make it the happiest place for husband or brother, is willing to forego some gossiping morning calls for the sake of having leisure for the cultivation of plants, shrubs and flowers. The advantages which women personally derive from stirring the soil and sniffing the morning air are freshness and beauty of cheek, brightness of eye, cheerfulness of temper, virgin of mind, and purity of heart. MYRA.

The company of a good humored man is a perpetual feast; he is welcomed everywhere—eyes glisten at his approach, and difficulties vanish in his presence.

"Why is it, my dear sir," said Waffles' landlady to him the other day, "that you newspaper men never get rich?" "I do not know," was his reply, "except it is that dollars and sense do not always travel together."

The superiority of man to nature is continually illustrated in literature and in life. Nature needs an immense quantity of quills to make a goose with; but man can make a goose of himself in five minutes with one quill.

## Recipes.

DEAR MINNIE MAY,—I would like to become one of your worthy nieces. Do you admit any one who subscribes for the paper. If so I should be happy to send you a recipe occasionally which you might find of use. I have taken a great interest in your department for years, and have found many useful hints in regard to housekeeping. I have a recipe to offer for making nectar, which is a very refreshing beverage in the hot summer.

BLANCH PLAXTON.

## TO MAKE NECTAR.

Take two pounds of chopped raisins, four pounds of loaf sugar, two gallons of boiling water. Mix, and, when cold, add two lemons, sliced; braudy or rum, two pints. Soak in a covered vessel for four or five days, occasionally shaking; strain, let stand in a cool place for a week to clear, and then bottle. It will be fit for drink in ten days.

DEAR MINNIE MAY,—I am afraid you will think I have forgotten you, as I have not written for two months. The fact is, I have not been able to, as I have had a severe attack of sickness, which has left me very weak still, though I hope to be quite well soon. I will inclose our recipe for making raspberry vinegar, as that season will again soon be with us. Perhaps some of your readers may find it useful.

## RASPBERRY VINEGAR.

Put two pounds of raspberries into a jar and pour on them a quart of the best white wine vinegar and let all stand twenty-four hours; then add two pounds more of raspberries and let all stand twenty-four hours more; then strain the pure vinegar, and to every pint add one pound of sugar; then boil it up twenty minutes; when cold bottle it for use. It will keep for years. Seal each bottle air tight.

L. SIFTON.

## RHUBARB PRESERVES.

To every six pounds of rhubarb add six pounds of sugar and a quarter of a pound of bruised ginger; the rhubarb to be cut in pieces about two inches long and put into a stone jar, with the sugar in layers, till the sugar is dissolved; take the juice or syrup and boil it with the ginger for half an hour, then add the rhubarb and boil another half hour.

## BLACK CURRANT JELLY.

It is necessary to add a little water to the fruit in order to strain it. After it is boiled so as to heat the fruit through, press it, little by little, until all the juice is extracted. Allow one pound of sugar to every pint of juice; mix the juice and sugar and boil ten minutes, stirring constantly, when it will be ready to put in moulds.

## SALAD DRESSING.

Take one raw egg, beat it well; then add a little salt, a teaspoonful of mustard; mix thoroughly together; then add two or three tablespoonfuls of salad oil. This ought to make a tenacious mass. Dilute it with vinegar till it assumes the consistency of thick cream. This makes a rich salad mixture.

These receipts have been used in our family for a long time. I send them in part payment for the many favors I have received through the column of the FARMER'S ADVOCATE. Jennie's cheese cakes were delicious.

A. E. PRICE.

DEAR MINNIE MAY,—I enclose you the following recipes, which I know to be very useful:

## MOCK CREAM.

Boil one pint and a half of milk, sweeten and flavor to taste, beat three eggs very light, add to them three heaping spoonfuls of flour and a teaspoon of salt, stir this into the boiling milk; spread this, when cold, between two layers of the cake, and you will have a nice cream pie.

## BREAKFAST PUFFS.

One-half pint of milk, one pint of flour, two eggs, a tablespoon of butter or two of cream, and a teaspoon of salt. Bake in hot roll-pans.

## PUDDING SAUCE.

One and a half cups of sugar, one-half cup of butter, one egg beaten to a froth; when the whole has been beaten together very thoroughly, pour in one big spoonful and a half of boiling water and let it boil up at once beating it all the time, then remove from the fire and flavor with nutmeg and half a wine-glass of wine. H. I. WARREN, Pembroke.

DEAR MINNIE MAY,—Please accept the following recipe from your niece and well-wisher:

## JOHNNY-CAKE.

For a good Johnny-cake that has been tried and found successful, take of sour cream four cups, two eggs, one teaspoon of salt, one teaspoon soda, and cornmeal enough to make a thin batter, and bake in a moderate oven. V. F.

DEAR MINNIE MAY,—I send you a recipe for preserving green tomatoes. I have tried it and can highly recommend it to the readers of the ADVOCATE.

## GREEN TOMATO PRESERVES.

Take green tomatoes 7 lbs., peel and slice, then add 3 lbs. of nice bright sugar, a pint of vinegar, and cloves and lemon to suit the taste, boil half an hour, then put into glass or stone jars.

MRS. C. S.

## Miscellaneous.

GOOD BLACK INK.—To one quart of strong decoction of logwood, well strained, add three ounces of blue galls in coarse powder, twelve drams sulphate of iron, one and one-quarter drams acetate of copper, twelve drams of well-ground sugar, one and one-half ounce of gum arabic. Set it over the fire till it begins to boil, then set it away uncorked till it has turned black enough; add a few cloves to keep out the mould. It is a real pleasure to open a letter and find a clear, legible chirography in ink of a decided color.

To ruin oil-cloths, clean them with hot water or soap-suds and leave them half wiped, and they will look very bright while wet and very dingy and dirty when dry, and soon crack and peel off. But if you wish to preserve them, and have them look new and nice, wash them with soft flannel and luke-warm water, and wipe thoroughly dry. If you want them to look extra nice after they are dry, drop a few tablespoonfuls of milk over them and rub them with a small cloth.

It is said that about 15,000 bunches of violets are sold every day in Paris. Their sale amounts to 500,000 francs a year. They are not in so much favor now as they were during the Empire, for the violet is looked upon as an emblem of the Bonapartes. Great numbers of persons live by its sale and its culture in the sandy fields to the south of Paris.

REMEDY FOR BEE STINGS.—Dr. J. C. Emery, of Lansing, Michigan, writes that, as a remedy for the sting of the honey bee, there is nothing which gives quicker relief than the common peach leaf chewed to a pulp and applied to the wound. The good effect is due to the prussic acid contained in the leaf.

If possible, buy an oilcloth which has been made for several years, as the longer it has lain unwashed the better it will wear, the paint being harder. Never scrub. Sweep with a soft hair brush, and wash with a soft cloth dipped in milk and water. Don't use soap. Rub dry with a handful of rags.

The proprietor of a well-known silver establishment in Philadelphia says that housekeepers ruin their silver by washing it in soapsuds, which makes it look like pewter. He recommends a piece of soft leather and writing to be used.

NEURALGIA.—Persons troubled with this distressing complaint will be glad to learn a cure. Two drops of laudanum in a half teaspoonful of warm water and dropped into the ears will give immediate relief.

A wise cook has discovered that, while peeling onions, if she keeps her hands and the onions under water, she escapes the fit of weeping generally incidental to the process.

To preserve beauty, preserve your health and spirits.

Hours of recreation are not lost hours by any means.

To keep out of trouble keep out of debt.

**Poultry Yard.**

**The Best Form.**

To feed bone matter to poultry is, for young chickens, to mix it with their soft food, as meal; for older fowls it serves best in the granulated or coarser shape.

For laying fowls it is an excellent stimulant, and for growing stock it furnishes the materials that go to form strength and stamina in the limbs and muscles.

Ground bone, bone meal and fine granulated bones are all merchantable articles now-a-days, and large quantities of this economical provision for poultry are used by those who understand its value.

**Hens Eating Their Eggs.**

We saw in the *Cottage Gardener*, last year, a figure of a laying-box, with a description of the same; and as, perhaps, many of our readers have hens addicted to the above habit, we thought a copy of the description might be published in the *ADVOCATE* for their benefit. The plan consists simply in an improved nest or laying-box with a false bottom, forming an inclined plane, down which the egg rolls as soon as laid, into a receptacle beneath; and, of course, before the hen can have a chance of pecking it the egg is beyond her reach. Neither hay nor straw must be used in the nests; but if the surfaces of the inclined plane are covered with smooth matting, a piece of old carpet, or sack- ing, every purpose will be answered.

Another advantage of this laying-box is, that where several hens use the same nest, the eggs are not soiled by their dirty feet in wet weather.

**Preserving Eggs.**

The following is taken from the *Ladies' Pocket Magazine*, bearing date 1795, Vol. 1, pp. 11, 12:—"Curious Method of Preserving Eggs.—The following easy and simple process for keeping and preserving eggs of hens, turkeys, geese and ducks was invented by Mr. William Jayne, an ingenious confectioner of Sheffield, in Yorkshire (England), to whom a patent was granted Feb. 8, 1791: Put in a tub or vessel one bushel (Winchester measure) of quick lime, thirty-two oz. of Cream of Tartar. Mix the whole together with as much water as will reduce the composition to such a substance as will cause an egg to swim with its top just above the liquid, then put and keep the eggs therein, which will preserve them perfectly sound for the space of two years at least."

**Better Allow Them to Sit.**

You had better allow hens to sit once a year; but if you desire to "break up" any particular hen that may be broody, avoid the too common practice of abusing the poor creature, as many do, unthinkingly, by souping her in cold water, tying her to a stake by the leg, shutting her up in a darkened box or barrel, etc. Place her in an open slatted box upon the ground, feed her lightly on dry food, have a water-can handy, and, after three days of such management, introduce a young male bird to the cage. You can thus "break her up" in a week.

**Feed Well From the Shell.**

There can be no dispute about the fact that it is wisdom and economy both, in fowl breeding, to "feed well from the shell upwards. If your birds are intended for the market only, they are always in readiness thus for killing; if for breeding, they are thus always in the best condition for the purpose; if for the show pens, there is no fattening or forcing to do at the last hour to render them presentable. So we recommend good care, good feed and good quarters for poultry all the time.

**VERMIN ON FOWLS.**—Sprinkle Scotch sluff on setting hens; it is effectual. Put sassafras poles in the poultry house for fowls to roost on. Vermin do not like sassafras. If the fowls should become infested, get the oil of sassafras, cut it with alcohol, and sprinkle on the poles.

**Stock Notes.**

**SHORTHORN SALES IN ENGLAND.**

Forty cows and heifers, and seven bulls, from the herd of Mr. George Garne, at Churchill Heath, Chipping Norton, were sold. There was a good attendance, and the day was fine, yet the prices realized were not up to general expectation. The summary was: 40 cows and heifers averaged 45l 5s 8d—1,771 7s; 7 bulls, 46l 7s—324l 9s.

The herd of W. H. Brown, comprising 42 cows and heifers, and 10 bulls, was sold at Brookfield, near Stourbridge. The cows and heifers averaged 30l 8s 3d; the bulls, 21l 13s 8d.

At the Smithfield Sale, 32 cows and heifers were sold at an average of 57l 2s 6d, and 8 bulls averaged 30l 3s 9d.

At the Marshall Sale, Mr. Thornton remarked of Queen Mary that she is the best Shorthorn in England, and said he had himself offered Mr. Kennard 1000 guineas for her for exportation to America, but he, like a true Briton, refused, that his own country might have the honor of her.

At the Berkely Castle Sale there was a goodly company present, and of the number were Mr. Croome, of U. S., and Mr. F. W. Stone, of Canada. Eighty-three animals were sold in three hours and a half. The top figure obtained was for Lady Wild Eyes, 555 guineas. The amount realized for the cows and heifers was 4,107 guineas, and for the bulls, 1,833 guineas. Mr. Stone was the purchaser of Lady Adela in calf, for 40 guineas, and of Damsel 2nd for 70 guineas.

An agricultural exchange (England), says:—we are informed that Duke of Thorndale (31298), with four females—two of the Acorn tribe and two Barringtons—from Mr. Style's fashionable herd at Beaumont Grange, England, have been bought for exportation to the Bow Park herd, belonging to the Hon. George Brown, of Toronto, Canada. The bull, it is said, cost 1,500 guineas and the five averaged £692 a head.

At the Marshfield Sale of a draft from the R. B. Kennard Herd, 18 females fetched 827l 8s, or a little more than 43 guineas per head. The average price of the bulls was about 35 guineas each. The herd was not sufficiently numerous to draw breeders from a distance. The weather also was unfavorable.

Mr. John H. Holden, Belleville, purchased a lot of stock last week from the herds of Mr. Andrew Allan, Landerston Stock Farm, Montreal, that were fed from her Majesty's Shaw Farm at Windsor; also from the herds of Mr. T. Irving, successor to Sir William and James Logan, Rockfield, Montreal; Mr. N. S. Whitney, the Hill's Farm, Montreal; and very valuable animals from General Curtis, Odgersburg, one of the most noted breeders in the United States. These purchases make a very valuable addition to the stock of Mr. Holden.

F. W. Stone, Guelph, Ont., has made the following recent sales, viz:

**SHORTHORN BULLS.**

To P. De Geer, Queensville, Ont., 2nd Seraph 24805. To J. R. Pettit, Grimsby, Ont., Seraph 24804. To John Coutts, East Wawanosh, Ont., 2nd Earl of Cambridge 17008. To F. Hanton, Puslinch, Ont., King of Athelstane. To T. G. Grieve, Lakefield, Ont., Grand Duke of York 23357.

**HEREFORD BULLS.**

To, J. K. Shaw, Westfield, N. Y., Prince Charming. To C. C. Bridges, Shanty Bay, Ont., Defiance (4507).

**COTSWOLDS.**

To Dr. L. E. Brown, Eminence, Ky., one imported 2 shear ram; one imported ram lamb; two ram lambs and one ewe lamb; also one Southdown ram.

**BERKSHIRES.**

To Jos. Bale, Adams' Mills, Ohio, one boar and one sow. To John Wynard, Arkell, Ont., one sow. To Dr. L. E. Brown, Eminence, Ky., one boar. To J. T. Garrison, Mansfield, Ohio, one boar. To J. M. Jamison, Roxabell, Ross Co., Ohio, one boar and four sows. W. L. Samuels & Sons, Deatsville, Ky., three sows.

**YORKSHIRES.**

To Dr. L. E. Brown, Eminence, Ky., one sow. To J. J. Maxon, Gallipolis, Ohio, one sow.

Mr. Wm. Lang, of Downie, reports as having made the following sales of shorthorn cattle:—A red bull calf, Sir Archie, to Mr. Riddle, of West Nissouri, got by imp. Tambour (4131), dam, Lady Bertha, by Duke of Magdala (1282), 7976; also the bull calf Duke of Avon, to J. & J. G. Jopling, of Downie, got by imp. Tambour (4131), dam, Ginevra 2nd, by the pure Princess Bull Oswald Gray (514). The bull calf Crimson Duke, to the Messrs. Wade, Parkhall, got by imp. Tambour (4131), dam, Crimson Flower 2nd, imp. by Refiner (22662). Also the yearling heifer Lady Beatrice, by imp. Scotsman 2nd, (see No. 3. vol. C. H. B.), Lady Bertha, by Duke Magdala (1282).

The Durham Lawn herd of shorthorns, the property of Col. Holland, of Alexis, Ill., were sold at Dexter Park, Chicago, on the 25th of May. The following stock was purchased by Canadians: Duchess J., calved January, 1875, by 17th Duke of Airdrie, dam, Zoe-Mon 3rd; J. R. Craig, Burnhamthorpe, Canada, \$925. First Rose of Sharon of Durham Lawn, calved August, 1875, by Grand Airdrie, dam, Rose of Sharon of Durham Lawn; John Hope, Markham, Canada, \$3,200. Sanspareil, 12th, calved March, 1873, by Proud Duke, dam, Sanspareil 10th; George Brown, Toronto, Canada, \$1,000.

**DEATH OF TWO VALUABLE COWS.**—A valuable Shorthorn cow of the herd of Col. J. B. Taylor, for which he had a short time before been offered \$4,000, died from fever taken after calving. The calf she has left he values higher than her dam. Mr. R. Gibson, of London Township, well known to the breeders of pure bred stock, has also lost a valuable cow from a similar cause.

Mr. J. & P. Brooks, of Whalen, inform us that they made more profit from 14 sheep than they did from all the rest of their farm, containing 250 acres well cultivated. They have taken 12 first prizes for the best flock of Leicester sheep during the past 10 years. They are preparing for the Centennial.

Mr. Thomas Grey, Sydenham Farm, Oshawa, has sold to Smith & Nichols, of Nevada, two yearling Ayrshire bulls and the yearling heifer, Red Lily; to K. Foley, Darlington, yearling heifer, Rosy; to D. Lick, Harmony, yearling bull, Sims; and to J. H. Holden, Belleville, cows Cora 3rd and Medora.

Messrs. J. Snell & Sons and Mr. W. T. Benson, Edwardsburg, announce a sale of Shorthorn stock, selected from leading herds in England and America, and bred with care, to be held at the Provincial Fair grounds, Toronto, June 11th.

Mr. R. Gibson, London Township, has sold the fine young bull, Baron Percy, of the Uraline family, to Mr. Nicholson, of Sylvan. The Baron is of the same family as Uloras Oxford, formerly sold by Mr. Gibson to Mr. Nicholson.

A large sale of thoroughbred stock took place at Lougue Point, on the farm of Mr. A. Allan. The prices for Alderney cows ranged from \$115 to \$225. Several superior Ayrshires were sold for about the same prices.

Col. Chas. O'Malley, of Wardsville, purchased at the stock sale of Mr. He's herd, at Springfield, Ill., Louan 7th (heifer) of Emgrove, two years old, for \$325; and the bull (2 years old) Col. Reid, for \$300.

Messrs. W. Lang and Hugh Thomson announce a sale of Shorthorns at St. Mary's, Ont., on the 17th of June next. About 35 females of popular families are to be offered for sale.

Capt. Chambers announces a sale to be held at Springvale Farm, E. Oxford, June 13th, of Shorthorn cattle, Cotswold sheep, Berkshire pigs and a pair of matched bay mares.

A joint stock company has been formed for the purpose of importing and breeding stock on the Bow Park Farm, and to make it one of the greatest shorthorn farms in the world.

Messrs. A. & A. Stewart, of Lobo, and Col. J. B. Taylor, of London, have lately purchased 6 and 7 Duchess of the Valley from the herd of the late Mr. Carter, of Connecticut.

Mr. R. S. Robson, of London Township, purchased of Mr. S. M. Rosman, Waynsboro, Va., a fine cow of the Elvina family; also a heifer of the same class.

The Canadian Shorthorn Herd Book for the year 1875 contains the records of 1,854 males and 1,233 females, with their produce.

The Hon. D. Christie is appointed as one of the judges on shorthorns at the Centennial.

Patrons of Husbandry.

Dominion Grange.

The following is the Secretary's quarterly report for the quarter ending March 31st, 1876: Number of Granges—Division, 25; Subordinate, 457. Membership—Male, 10,545; female, 4,481; total, 15,026. Gain by initiation—Male, 1,364; female, 607. Loss from suspension, expulsion, death and non-payment of dues—Male, 65; female, 27. Total loss, 92. With few exceptions, no business reports have been received. The Secretary of Dominion Grange says, since the above report was made up there has been a still further increase of members. May 10th we have 502 Subordinate with 29 Division Granges.

New Granges.

470, Royal Oak, Thos. Gilles, M., Richmond Hill; Henry Newbury, Sec., Richmond Hill—471, Acton West, Wm. Gordon, M., Acton West; R. B. Campbell, Sec., Acton West—472, Lovely, Lachlan Curry, M., Hartley; Thos. Broomfield, Sec.,—473, Glenan East Oxford, B. A. Mollins, M., Burgessville; J. D. Chambers, Sec.; Holbrook—474, Carnegie, Andrew Catto, M., Carnegie; John Hemet, Sec., Carnegie—475, Melrose, David Hill, M., Maxwell; Wm. Hicks, Sec., Maxwell—476, Victoria Corners, James McMurray, M., Victoria Corners; David Irvine, Sec., Victoria Corners—477, Uxbridge, E. H. Hilborn, M., Uxbridge; C. B. Miller, Sec., Uxbridge—478, Saintfield, Richard Penhall, M., Saintfield; Jos. Moffatt, Sec., Saintfield—479, Lake Road, Wm. Wood, M., Forest; David Brand, Sec., Forest—480, Young Canadian, Joseph Irwin, M., Lynden. Joseph Vansickle, Sec., Harrisburg—481, Dumfries, Jno. Anderson, M., Dumfries, N. B.; Henry T. Strange, Sec., Poquicoe, N. B.—482, Fenella, Joseph Jewell, M., Fenella; Robt. Knox, Sec., Fenella—483, Woodville, Ira Argue M., Woodville; Amos Hawkins, Sec., Woodville—484, Myrtle, M. McTaggart, M., Myrtle; D. L. Williams, Sec., Myrtle—485, Newtonville, J. R. Reid, M., Clarke; R. C. Grant, Sec., Clarke—486, Vale, Henry Belford, M., Codrington; Herman Clark, Sec., Codrington—487, Excelsior, R. Walt, M., Colborne; M. Dudley, Sec., Colborne—488, Airlie, Jno. Green, M., Airlie; Michael Irwin, Sec., Airlie—489, Ponsonby, J. Cowie, M., Ponsonby; J. D. Wallace, Sec., Ponsonby—490, Ivy, E. A. Morse, M., Smithville; Isaac A. Merrit, Sec., Smithville—491, Shanty Bay, Alex. Hume, M., Shanty Bay; A. M. McLane, Sec., Shanty Bay—492, Brooklin, Jno. Burns, M., Brooklin; Jas. Burns, Sec., Brooklin—493, Mount Hurst, George Jones, M., Castlederg; Daniel Maty, Sec., Castlederg—494, Wainwright, Alfred B. Shaw, Sec., Wainwright; Gavin E. Robertson, Lily, Alex. Young, M., Wainwright—495, Golden Rule, J. T. Coburn, Sec., West Essa; Robt. Turnbull, M., West Essa; J. T. Coburn, Sec., West Essa—496, Cotswold, Jno. Darroch, M., Cotswold; Edward Darroch, Sec., Cotswold—497, Cobequid, Robt. Putnam, M., Fort Belcher, N. S.; N. M. King, Sec., Central Onslow—498, St. Lawrence, J. Smithson, M., Graystock; M. Graystock, Sec., Graystock—499, Maitland, F. Duncan, M., Porter's Hill; J. Shaw, Sec., Goderich—500, Simmonds, Elijah L. Shaw, M., Middle Simmonds, N. B.; Alfred B. Shaw, Sec., Middle Simmonds—501, Shenango, W. S. Strachan, M., Cumnoek, Que.; Geo. A. Anderson, Sec., Cumnoek, Que.—502, Rockwood, David Shultis, M., Rockwood; John McNabb, Sec., Rockwood—503, Dunganon, H. F. Baker, M., Dunganon; Jacob Crozier, Sec., Dunganon—504, Golden Rule, David Rolson, M., Hamilton; James H. Cook, Sec., Hamilton—505, Blenheim, Lewis Kenney, M., Drumbo; T. Passmore, Sec., Drumbo—506, Royal Oak, Wm. Ford, M., Comber; R. E. Dolson, Sec., Trudell.

DIVISION GRANGE.

Waterloo, No. 29, James Willson, M., Galt; A. J. Goodall, Sec., Galt. The Executive Committee of Dominion Grange will meet in Toronto, June 6th, instead of Napanee, June 13th, as before reported.

White vs. Colored Cheese.

We notice in your late issues considerable discussion on Colored vs. White Cheese, which we think will only have the effect of leading factory-men further astray.

It is well known to any one who has had experience in the British markets, that various shades of color are required, and it is highly important, and should be the endeavor of cheese manufacturers to make cheese suitable for the different markets.

The largest proportion of cheese wanted in England is colored, varying from straw to high salmon color, say a half to one and a half oz. to 1,000 lbs. of milk, but the greater proportion of this should be one oz. to 1,000 lbs., which will meet the requirements, to a large extent, of the most of the cheese consuming districts of England.

There is, however, more white cheese wanted for the Manchester and Birmingham markets, and we certainly think that it would be to the advantage of some of our factory-men if they would give special attention to this, as they would thereby save their annatto bills, and buyers would be able to fill orders which, last season, had to be sent to Montreal and New York.

We would, therefore, strongly recommend the coloring of the largest portion of the cheese to be one oz. to the 1,000 lbs., and a large increase of white cheese, which, we think, will be most adapted to meet the requirements of English importers.—Pearce & Pickering, London, Ont., in Oxford Tribune.

Correspondence.

Correspondents should always send their names and address to this office. Names need not be published if objected to, although some articles would not be published without the name. A letter from Odessa, signed Subscriber, lacks the name.

SEEDING MEADOWS.—As you are desirous of receiving useful information, I will give you my mode of seeding. I plow up deep my old sod, and put on my crop in the spring; when the crop comes off in the fall I then put on the gang plow and plow two or three inches deep. When it is time to fall plow, I then plow deep, turn the old sod up, and let it lie until spring. As soon as ready to work, I put in the crop; barley is preferable. I sow with drill both grain and grass seed very early; when the grain is nicely up, I then put on the roller and roll the same. This for the spring crop. Now for fall seeding. Take good, clean summer fallow; if not clean don't seed when sowing wheat. Sow timothy the same as in spring seeding, but don't mix; sow on the clover in the spring or just about the last snow.

I am farming a 500 acre farm. I keep about 60 cows, and seed from 30 to 60 acres each year. When seeded in this manner, I never failed in getting a good catch. I have seeded in the same field, with the same kind of land plowed in the spring, and lost my seed; I plowed in the following fall and seeded the following spring, and got the seed to take, but not as good as where the old sod was turned up. WM. HARRIS. Mount Elgin P. O., Ont.

[We are in receipt of four contributions on seeding to grass, but cannot more than make place for this one till another issue. We hope Mr. Harris' description of his method will call forth the opinions of others. A communication from an old contributor of Leeds Co., P. Q., will appear next month, when we expect the subject to be fully discussed. We give Mr. H. a prize for his contribution.—Ed.]

TO PREVENT SHEEP BEING KILLED BY DOGS.—Put a bell on one in every twenty. Dogs will not touch them. I have practiced it for nearly thirty years, and never lost a sheep since I put on the bells. I lost scores before.—SUBSCRIBER, Sparta.

Americans Before Canadians.

SIR,—Being in the Ottawa district last month, I noticed a number of boxes of trees imported from the States by the Government for ornamenting the Government grounds. I wish to ask the question "Why the trees were not purchased from Canadian nurserymen?" J. T., WESTMINSTER.

[We hope some of our readers will give us some information on the subject.—Ed.]

Agricultural Exhibitions of 1876.

The Provincial Exhibition has been appointed to take place at Hamilton on the 18th 19th, 20th, 21st and 22nd September.

The Western Fair, London, has been appointed to be held on the 25th, 26th, 27th, 28th and 29th of September.

The Central Exhibition, Guelph, has been appointed to commence on the 2nd of October.

Erratum.

In "June on the Farm," 6,000 bushels of clover seed exported should be 60,000. The amount said to be realized, nearly half a million of dollars, is correct. Despite the greatest care, errors will sometimes occur.

MORE SHORT HORN PURCHASES.—At the sale of the Dodge, of Wankegan, short horn herd at Chicago, the following purchases were made by Canadians: Lady May Third, 1 year old, \$300; Maud Airdrie 1 year old, \$260; Oxford Lass Seventh, 2 years old, \$440. All by Colonel O'Malley. Frantic Twenty-fifth, 3 years old, \$200; Colonel Hope. Oxford Gwynne, 5 years old, \$600; Simeon Beatty, Toronto.

Mr. Kirk, of Westminster, has just received from Scotland and planted over 5,000 evergreens for shelter. Mr. Kirk is determined to test Scottish trees on our Canadian soil, and we hope he will give us his experience in the fall.

Messrs. Morgan, Bowell, Young and Burnett are appointed as delegates to Philadelphia by the Agricultural and Art Association; and each will be paid \$10 per day for fifteen days.

Mr. Joseph Vick, of Rochester, gives the sum of \$40 to the Agricultural and Art Association, as prizes to be awarded for collections of flowers.

Feathers.

The importance of occupying our streams, marshes and watery wastes with waterfowl is fully illustrated by the following facts. We have annually, till within a few years, imported great quantities of feathers, principally from Russia. They were at first of very good quality; but, ultimately, the Russians acquired the habit of mixing sand with them to increase their weight. This adulteration, with the thirty per cent. duty enforced by our Government, made them cost ten cents per pound more than our domestic feathers. This state of affairs soon checked the importation of foreign feathers.

All persons wishing to procure the best combined brick and tile machine, should send for circular to G. S. Tiffany, London, Ont.

Commercial.

London, May 22. The Mark Lane Express, in its review of the British corn trade, says—The present aspect of the country, although not alarming, is not calculated to afford farmers much satisfaction. Light lands have been fairly promising crops, but on heavy soils crops are poor. We incline to the idea that, with the cessation of cold winds and a little warm rain, the crops will fairly recover. The country markets were almost without exception dearer at the close of last week. Trade in London has been marked with considerable firmness and steady demand for continental. Wheat has improved a shilling per quarter. The continuance of the export inquiry, and the steadiness with which cargoes off the coast are taken for continental, show that the request is based upon genuine foundation, and the leading features of trade have been considerably strengthened thereby. In addition to the inquiry for wheat on the spot and cargoes off the coast, the demand for continental has extended to cargoes on the passage from Australia and California.

NOTE.—It is proper to supplement the foregoing with the statement that the direction of the wind altered to the southwest yesterday. The weather has moderated greatly, the thermometer rising to 71 deg., and to-day showers have fallen and the weather is warm.

Intelligence later than the above reports more favorable weather, with brighter prospects for the growing crops. The markets, though somewhat firmer, cannot attain a much higher price; at least this is the impression with English purchasers.

LIVERPOOL MARKET.

Liverpool, Eng., May 23, 12.30 p. m. Receipts of wheat for the past three days were 7,000 quarters, including 5,000 American.

NEW YORK MARKET.

New York, May 25. Flour quiet, scarcely so firm; receipts, 80,000 barrels; sales, 11,000 barrels. Rye Flour, firm and fairly active, at \$4.75 to \$5.20 for superfine.

Wheat is dull and drooping this day; receipts, 139,000 bush.; sales, 46,000 bush., at \$1.09 to \$1.15 for No. 3 Chicago; \$1.15 to \$1.18 for No. 3 Milwaukee; \$1.19 to \$1.21 for No. 2 Chicago; \$1.23 to \$1.25 for No. 2 Milwaukee; \$1.30 to \$1.34 for No. 1 spring; \$1.16 to \$1.35 for winter red western; \$1.22 to \$1.45 for amber do.; \$1.35 to \$1.50 for white western.

Rye steady; receipts, 10,000 bush. Corn quiet; scarcely so firm; receipts, 130,000 bush.; sales, 39,000 bush., at 58c to 62c for new western mixed. Barley, dull and unchanged. Oats are dull to-day; receipts, 135,000 bush.; sales, 23,000 bush., at 34c to 42c for mixed western and state; 41c to 47c for white do. Pork, dull, at \$20.80 to \$20.85. Lard, heavy, at \$12.65. Butter, 20c to 30c for new state and Pa.

NEW YORK CHEESE MARKET.

There has been a better demand from shippers during the past three days, and they are taking considerable quantities of the new stock with 1 1/2c the top figure. This price they pay readily for strictly prime factory, and to home trade 1 1/2c is made in a general way. The receipts of new are not very heavy as yet, and receivers have by dint of hard work managed to keep the market pretty well cleared up. Skins are coming forward with considerable freedom, and range from 5c to 9c, the latter for half skins. There is very little old stock selling, the bulk of the offered stock being of medium and low quality which is not wanted by shippers or buyers.

UTICA CHEESE MARKET.

Utica, N. Y., May 22. A large number of boxes of cheese were offered, of which 1,800 boxes have been sold at 10c to 12 1/2c. A run caused an advance of one cent. The average price is 11c.

INGERSOLL CHEESE MARKET.

The attendance at this market Tuesday was large, but although offerings were liberal there was not much activity displayed. The offerings were 4,500 boxes of April and first half of May cheese.

Sales are reported of 2,000 boxes at 9 1/2c to 9c, as follows: 200 boxes fine, first half May at 9c; 900 boxes whole month of May at 9c; 300 boxes first half of May at 9c; and 600 boxes April and first six days of May at 9c.

LONDON, ONT., MARKET.

London, May 22.—Wheat, Deihl, per cental, \$1 65 to \$1 84; Treadwell, \$1 55 to \$1 72; Red Winter \$1 55 to \$1 60; Spring \$1 55 to \$1 65; Barley \$1 00 to \$1 20; Peas \$1 18 to \$1 20; Oats 65c; Corn \$1 10; Beans 90c to \$1 20; Rye 40c; Buckwheat 80c; Clover Seed \$7 to \$7 50; Butter, Keg 16c; Roll 14c to 20c; Cheese 10c to 11c; Lard 15c to 17c; Eggs 10c to 12c; Hay \$11 to \$12 per ton; Straw \$2 to \$4 per load; Potatoes, per bag 25c to 30c; Onions 40c to 50c per bush.; Cordwood \$4 to \$5 per cord; Lamb, per qr., \$1 to \$1 50; Beef per 100 lbs \$6 to \$7; Dressed Hogs \$7 75 to \$8 25; Milch Cows, \$35 to \$50; Sheep \$4 to \$5 each; Flour per 100 lbs. \$2 75 to \$3 50; Oatmeal \$2 75 to \$3 00; Corn Meal \$1 75 to \$2 00.