

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from: /
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THE ONTARIO FARMER,

A MONTHLY JOURNAL OF

Agriculture, Horticulture, Country Life, Emigration, and the Mechanic Arts.

VOL. III.

HAMILTON, MAY, 1871.

No. 5.

The Farm.

HINTS FOR THE MONTH.

The chief operations this month are finishing the sowing of spring crops and planting hoed crops. Flax should be sown as early this month as the weather will permit. Grass and clover seeds may still be sown on grain fields and bear spots in meadows. Rolling and top-dressing are to be recommended wherever practicable. They will greatly promote growth. Oats do best sown in April, but for seedling down to grass they may be put in early this month, and if not likely to mature, may be cut in a green state and cured like hay. Thus treated, they make excellent fodder. Oats and vegetables mixed make good green feed during the Summer, and cure well for Winter use. Indian corn sown thick broad cast makes the best green forage for Summer soiling, but it ought not to be sown until the last of May, or first of June to avoid risk of frost. Every farmer should have a small patch of this excellent green forage plant, and especially should the dairy farmer avail himself of its help in keeping up a supply of milk when the pastures fail through Summer heat and drought. We also recommend our readers to plant a piece of ground in the usual way for a crop of ears. This cereal is much neglected in Canada, but may be grown to great advantage, especially in certain localities.

When corn is planted in hills, it is well to plant a few pumpkin seeds here and there, that a double harvest may be obtained. Carrots and mangolds should be sown early this month if they are not already in the ground. Both are very valuable winter food for stock. Potatoes ought to be all planted by the end of May. As a general rule, the earlier they are in the better, provided risk from frost is avoided. Occasionally late planted potatoes yield the best owing to the early spring turning out dry, and it is well to have both an early and late-planted patch. To raise potatoes profitably, hand-hoeing should be avoided as much as possible. Plough out drills about three feet apart, and drop the pieces about a foot and a half apart in the rows. Cover with the plough, or with a cultivator having the middle tooth out. In about a fortnight, or just before the

potatoes come up, a careful harrowing lengthwise may be given, which will be as good as one hand-hoeing. Ground should now be in course of preparation for turnips and buckwheat, though these are not to be sown for some time to come. Beans should be planted this month. The white bush variety is the best for family use. Dairy operations will begin to require a large amount of attention this month. A clean cool, well-ventilated milk room should if possible be provided. In the orchard, grafting should be attended to early this month. It is a simple operation which any handy man can easily learn to manage. Do not wait until you can afford to employ a professional nurseryman. Try your hand on a few trees, and resolve to quit growing natural fruits, some of which is sour enough to give even pigs the colic. This will be a busy month in the kitchen and flower garden. Seeds of all kinds must now be sown, as the state of the soil and weather permit. Fruit-trees, shrubs, shade-trees, &c., may still be planted out with success. May is the best time for lifting evergreens. With care they may be successfully planted from the woods and swamps but they are more sure to grow and will come on much more quickly, if transplanted from the nursery. Our native balsams, cedars, and spruces, if well grown are very beautiful, and make very effectual wind-screens. Active operations will begin this month in the apiary. Weak stocks may require a little feeding still, but it will not be long before fruit-tree blossoms, early spring flowers, white clover, &c., will furnish abundance of food. Toward the end of the month there may be a disposition to swarm in case of strong stocks, but generally speaking there is no danger of this occurring until June. Our advice to all bee-keepers is 'get moveable frame hives and practice artificial swarming. Then your bees will never betake themselves to the woods.'

A TALK WITH A FARMER.

A few days since I met with a Garafaxa man; he was a Scotchman, and of course more advanced in agriculture than the generality of Canadians. He had just been paying for his land; and as I knew the progress of the man, I rather wondered at it.

'How do you manage to get so much money together these hard times?' I said.

The answer was—'My cattle turned out well.'

'How many did you fatten?'

The reply was—'Six good ones.'

'What had you for them?'

'Oh, just turnips and grain.'

'How many acres of turnips?'

'Seven, and all were good.'

'But seven acres were a great many to house?'

'Ah, but I pitted most of them, and only took in my root-house full at a time.'

'What is the root-house made of?'

'Mine is made of logs, but most of my neighbors have stone root-houses.'

'How many cattle do you generally reckon an acre of turnips will fatten?'

'Just about one, besides keeping all the rest of my stock, and I have a good many; but I do not feed all turnips, that would be too cold for them. I give, besides, peas and oats. I feed all the peas and oats I grow to the cattle, and also all the hay, and that gives me good manure; but with all, it does not give me enough?'

'Do you grow wheat?'

'Yes, but not much; a little fall wheat and a little spring, but no more than I can help, as it does not pay.'

'Do you grow barley?'

'No; peas and oats pay better, as I feed all to the cattle, and get the manure; if I grew barley, I should be forced to sell it off the place, and then the farm would suffer.'

'Seven acres is a good deal for a man to do. How do you manage about hoeing and manuring?'

'Well I manure the fall previous, and plough it in; when it is well rotten in the ground next year when I sow my turnips; and besides that, the ground is so moist that I never have any trouble in getting them up. If I manure in the spring, I should be obliged to manure in the drill, and then the ground is too light and spongy, and dries up, and the young plant either misses, or when it does come up, withers away; whereas, when the manure has been in the ground all the winter, the whole of the soil feels it, and the plants grow right away. I sow the turnips in drills, of course. I sow with the hand barrow, with two rollers—one before the seed and one after it—so that the ground is always firm and well pressed down; I make the rows from thirty inches to three feet apart, and I calculate to leave the turnips at eighteen inches apart in the drills. I hoe them with the horse hoe between the rows, and then single them with the hand hoe. If the season is dry, the horse hoe kills everything that is not in the row with two hoeings; but if it is wet, we have to go over it several times, as it is required. Our horse-hoe widens as necessary, and the knives overlap, so that it makes clean work; and as we can do with a horse from two to three acres a day, we don't spare the hoeing when wanted.'

'What about hand hoeing?'

'We go over the rows twice; once to cut out generally, and second time to single the plants. We always calculate to cut close round, so as to make the plants fall down. In the wild country we always made every turnip plant fall over, one way or the other, and thought they came on all the better.'

'How do you harvest them?'

'We go along the rows with the hoe, and nick off

all the green, then turn them out with the plough, and so get them out of the ground.'

'When you pit them in the field, how much earth do you put on them?'

'Not more than four inches in the solid, and we never make the heaps large; we are always afraid of heating and rotting.'

'Well, but the turnips must freeze in the winter.'

'They don't freeze much, and if they do, they are better to freeze than to heat. If they are cold for the cattle, the grain warms them.'

'How do you manage the turnips in the root-house?'

'We pile them so that there is a good draught all round and through them, and we take care to make the oor of rails and poles, so as to have a good ventilation. Then we keep the house well aired and open, except in the very hardest weather, when we close it. We are always careful to keep the turnips as clear from dirt as we can, so that they never choke and heat in the heap in the house.'

'Do you raise the cattle, or buy them?'

'We raise all we can, and buy the rest.'

'What do you consider a purchased beast ought to produce before you sell him?'

'Well, whatever you give for him, we take care that he doubles it at least before we sell him; if he won't do that the profit is not worth having.'

'Do you find that your farm gets enough manure?'

'Not so much as I could wish, but we are very careful to get all we can. We always have enough for a good crop of roots, and something over.'

'Except, then, what wheat you raise for your own use, and a little to sell, everything the farm makes is consumed on it?'

'Yes; if it was not for that the land would be getting poorer; as it is, the whole place is getting better every year.'

'How came you to pay so much attention to turnips?'

'Oh, we were just driven to it. The wheat failed, so that we were getting worse every year, instead of better. Now we are doing well.'

'Did you ever grow mangels or beets?'

'Yes and they did well; but I gave them up, as they required more hard work than turnips, as we have to single them all by hand, and the turnips do so well that I do not care to be looking for anything else.'

'How do you like the broadcast turnips?'

'They do better than any other in new ground, when sown thinly; but we do not get on at all with broadcast in old land.'

'I suppose you, as an old countryman, were surprised when you came here to see our light steel, hoes and forks, &c., of the American pattern?'

'Yes indeed, I was, and well pleased too. When I went to the old country, two years ago, I found them all still working with the old heavy hoes and forks, made of iron, and each a load of itself for a man, and I could hardly get them to believe that we in the new world were better off for tools than they were in the old.'

'Well, but they are better off than they used to be in that respect.'

'No—not a bit. I found the same tools I left there twenty years before, and no improvement. We are greatly ahead of the old country in Canada, with our farm implements and tools.'

Now, if any one wants a better essay than this on turnip growing and successful Canadian farming,

they must be hard to please. This is real practical knowledge, and practical knowledge crowned with success.—*VECTIS*, in *Globe*.

THE CABBAGE AS A FIELD CROP.

Among the profitable crops to be grown on the farm, cabbages hold an important place.

They are not so extensively cultivated as they deserve to be. We have reference now to their cultivation beyond a place in the vegetable garden where, of course, they are esteemed as indispensable for family use. About 10,900 plants can be grown on an acre. Throwing out the 900 plants as producing imperfect heads, we have 10,000 heads, which, at the low estimate of three cents per head, amount to \$300. But if taken from the field, and sold at the price there still remains the loose leaves and stalks, which afford a considerable quantity of nutritious food to milk cows, at a time when grass begins to fail, promoting and keeping up a flow of milk in the fall which is not easily obtained from any other food.

Last season we commenced feeding the loose heads and leaves left from a patch of cabbage, and found the increase of milk nearly, if not quiet, paid for the cost of cultivation.

A part was fed from the field and the balance was stored in the barn so as not to be effected by frost. We believe the crop can be grown profitably for stock feeding. Where the soiling system has been adopted.

The elder Mr. Quincey, of Massachusetts, in a letter written to us several years ago, places cabbages as among the most important plants for soiling purposes. They come in play at a time when the nutritive value of grasses has been injured by frosts, and when the food of stock is being changed from succulent grasses to dry fodder, and hence they are of important service for the dairy. Some regard cabbages as a profitable crop to raise for feeding stock in spring, or during the latter part of winter. Properly stored the heads may be kept without loss or decay. As a market crop, cabbages have long been regarded as among the most profitable vegetables that can be grown. Sales are readily made in the fall throughout all our cities and villages, and at remunerative rates. In the spring, perfect heads of good sorts command very high prices, and, in view of this fact, it is rather singular that so few, besides market gardeners, go into their cultivation for supplying the spring markets. They can be grown on almost any soil that is adapted to corn, if an abundance of well rotted manure is applied to the land. That from the hog-pens produces the best results. Cabbages are not likely to do so well on ground that has been successively cropped by them for three or four years, but succeed best on fresh lands. For a very early crop the plants will be well on their way at this time in hot beds, but for a general crop, the seed can be sown now. And we have introduced the subject with the hope of inducing a more general cultivation of cabbage as a field crop.

There are a great number of varieties of cabbages many of which are inferior. The Winningstadt we place among the first for excellence. It is a choice variety for the table, taking all its good qualities into account, is scarcely excelled. The

Wakefield, the Ox-heart, the Drumheads, the Red-Dutch, and Sugar-loaf are popular varieties, all of which make good returns.

Some of the varieties of the Savoy are very desirable for cooking. The leaves are very much wrinkled and the variety is very much esteemed for its flavour and richness. Mr. Gregory of Marblehead, advertises a new early variety called the Cannon Ball. We have never seen the variety grown, and therefore cannot speak as to quality or as to its reliability in heading. It is said to be very hard-headed and heavy for its size, being round like a cannon-ball, and excelling in hardness every known variety.

In sowing seed for plants it is always well to sow plentifully in order to secure enough plants to meet every emergency. The seed costs but little, and surplus plants can usually be disposed of, or at least will often accommodate neighbors or friends, who have been, unfortunate with their plants, or who have neglected to arrange for a supply.

We have known, some seasons, a great call for plants, and great difficulty in obtaining them. Sometimes insects prove destructive to the plants while in the beds, before they are ready to transplant. An occasional application of ashes or soot sifted over the beds will serve as a protection.

The cabbage is a very nutritious vegetable. According to Johnston, the dried leaf contains from thirty to thirty-five per cent. of gluten, and is in this respect, therefore, more nutritious than any other vegetable food which is consumed to a large extent by man and animals. We do not know what amount of green food could be grown from an acre of cabbage by selecting the large varieties; but it is larger than one, at first thought, would imagine. Supposing however, that an average of five pounds per-head be obtained the 10,000 heads would turn off 50,000 pounds of twenty-five tons, an amount which it would seem might induce their more extended cultivation as a field crop.—*Utica Herald*.

LAYING DOWN LAND IN GRASS.

It is essential to the success of grass crops whether grown in rotation, or kept at permanent pasture, that the land, previous to sowing the seeds, has been well manured. In ordinary rotations we have a manured root crop, followed by a crop of grain,—oats, wheat, or barley, along with which the grass seeds are sown. In that case they come the first crop after the manured crop, and if the roots, have been grown on a fair supply of farm-yard dung, supplemented by artificial manure of a moderately permanent character, the grass seeds are, under ordinary circumstances, likely to succeed. If the preceding root crop, or a portion of it, has been consumed by sheep folded on the ground, there is a greater likelihood—amounting indeed to a certainty—that the grass will be productive and profitable.

When however, two crops of grain are grown after the manured root crop, and the grass seeds are sown with the second grain crop, then the chance of success in the case of the grass becomes lessened; and the only way in which the diminution of fertility can be met, is by suitable top-dressings applied to the young grass plants. It follows,

as a matter of course, that every remove from the manured root crop renders the success of the grasses more and more doubtful, and it may happen that even top-dressings will not serve to counteract the deficiency. This will be found to arise, to a considerable extent, from the fact that the manures applied as top-dressings are wasted in stimulating the growth of weeds, or natural grasses of comparatively little value, which are indigenous to the soil, and which thrive to the detriment of the more valuable grasses.

The next condition therefore to be observed in laying down land in grass is, that it shall be as free from weeds as it is possible to make it. This ought to be effected in the previous preparation and cultivation of the land; no after treatment will be sufficient. There are many who seem to imagine that if their fields are covered with something which gives them a green appearance, they have got pasture, but whether it is of a suitable nature for the support of cattle or sheep, is another question.

As an illustration of this we give the following list of plants, which are actually worthless weeds found in a square yard of grass land :

Plants.	Plants.
Narrow-leaved Plantain.....7	Self-heal.....4
Creepling Crofoot.....3	Small Birdweed.....1
Hardhead.....2	Foot's Parsley.....1
Dandelion.....3	Mouse Ear.....2
Autumnal Hawkbit.....1	Field Madder.....6
Ground Ivy.....6	Common Cuckoo.....2
Creepling Bent.....4	

There were thus thirteen different kind of weeds, numbering altogether forty-six plants, in the square yard, leaving very little room for the clovers, rye grass and other valuable grasses, which in fact, had died out owing to the encroachment of worthless intruders.—*Irish Farmers Gazette.*

COUCH GRASS.

A recent number of the *London Agricultural Gazette* begins its leading article by asking the question "What is the plant which most occupies the attention and engages the interest of the British farmer?" Strange to say, this is the reply to the question: "It is *Couch Grass*." This question and answer not only indicate that British farmers are excessively troubled by this pest of the soil, but it is one of many proofs of that anxiety and diligence in regard to the extirpation of weeds, which many slovenly Canadian farmers would do well to take both as a rebuke and a lesson.

Couch grass is already very troublesome in many parts of this country, and the greatest pains ought to be taken in order to annihilate it. Yes, annihilate is the word; nothing short of utter extinction will do, and that is no easy task. The *Genee Farmer* referring to this nuisance, speaks of a noted farmer who had considerable experience with couch grass, and who was asked by a neighbour the best way to destroy it. With a merry twinkle of the eye, he replied, "Fork it up carefully, so as not to leave

a particle of root in the ground. Then put it on the top of a stump, where the sun can scorch it. Then take a stone and hammer it out flat.—If the wind does not blow it off the stump, I think it will die in the course of the summer or winter following." In this jocose method, the wonderful tenacity of life which characterizes this species of grass, was well brought out. It can only be got rid of by a war to the knife of downright extermination.

BONES.

There is a wealth of manure of the best quality in bones, and they should by all means be preserved and turned to good account. Even the small quantity comparatively, which is thrown away as the waste of the family kitchen, is by no means to be despised. There are various methods by which they may be prepared for application to the soil. Most bones may be broken up by a heavy iron hammer or mallet, but for immediate effect it is desirable to reduce them to a state of greater fineness, in fact, to bonedust. They may be burned, and then readily reduced to an impalpable powder. Pile up with wood, they burn easily, and it is said a wheelbarrow load of wood will burn a tun of raw bones, leaving a mixed white and coaly mass, which is very easily broken up. Bones may be prepared for use by fermentation. There are various ways of doing this. The bones, either whole or broken into large pieces, which is the better mode, may be thrown into a box, barrel, or hogshead, and let down into the ground in a moist place, where the drainage of the cow-yard, the urine from a privy, soapsuds, dishwater, or any water containing organic matter, liable to become putrescent, may keep them constantly moist. Any other refuse animal matter may be thrown into the same receptacle. In default of a suitable vessel, a hole in the ground will answer the purpose. Let it be two or three times as wide as it is deep, and if the bottom be of clay, it will be all the better. A coating of fresh stable manure to the depth of eight or ten inches, will hasten the process. Some coal dust, or charcoal finely broken, put under the manure will absorb the escaping ammonia and prevent an offensive smell. In from four to six weeks, the hard bones will have become so soft, that a spade may be forced through them easily. They should now be mixed with loam, decomposed muck, or well-rotted manure, and applied to the land. Another process is to pack away the bones in a hogshead or box, and mix good unleached wood ashes with them (about a bushel of ashes to a barrel of bones will do) pouring water or soapsuds over them: After five or six weeks, the water may be allowed to evaporate and

a decomposed soupy mass will remain which may be dried, pounded up and applied to the soil. Or the bones may be collected in a pot, tight box, or barrel, and covered with lye. This will reduce them to a soft pulpy mass. Here you have precious stuff, dilute it and you will have the very best liquid manure. Or if preferred, it may be mixed as above directed, with loam or muck, and applied in that form. Every farmer and gardener, should rigidly economize the bones. Let none be lost. It is better to plough or dig them under, than do nothing with them. But by the above methods, all of which are simple and practicable, this valuable manure, so much of which is now wasted, may be turned into speedy and profitable use.

HOW TO APPLY MANURE.

Observation and experience should determine the mind of the farmer in regard to the best plan of applying manure, whether to plough it under deep, or leave it on the surface. The advocate of surface manuring speak against manure being turned under too deep, while the advocates of deep manuring charge surface manuring with fertilizing the atmosphere. But there is a medium course, and each theory is supported by plausible arguments. However, there are true philosophical principles against burying manure too deeply in the earth the loss of the saline matter of the manure, by solution and infiltration will be great in porous soil, and the evaporation, to which so much loss is attributed by those holding opinions averse to surface manuring, would be only a small drop in the bucket, compared to the loss by solution. In porous soils, it is well known that manure will penetrate to a great depth, and much animal matter may descend beyond the reach of surface-growing plants. Humus is formed by the decay of decomposition of vegetable matter, which, in the philosophy of nature, is manipulated on the surface; hence, the rule in the application of manure should be taken from the indications of nature and science. The decay and consumption of one crop for the nourishment of another, the droppings of animals, and defoliation of trees and plants are all left on the surface. This seems to contradict the idea of loss by evaporation. It will, therefore be best to adopt the plan of deep cultivation, but keep the manure and vegetable matter as near the surface as possible. There is always some loss by evaporation, but much less by infiltration. It should be a leading idea with farmers to be close observers of such natural operations, in the growth of spontaneous and cultivated vegetation, and accommodate their practice so as to imitate nature as nearly as possible.—“*Articola*” in *Journal of the Farm*.

FREQUENT HOEINGS.

The *Mine Farmer* concludes an article on hoeing with the following suggestive paragraphs:—“Frequent hoeings, even during the driest seasons, contribute to the benefit of the crop. By the loosening of the soil, the air, and especially night air,

charged with moisture, even in times of severe drouth, obtains ready access to the roots of plants, and becomes condensed in the soil. Very often during a hard Summer drouth, we have seen corn leaves and other vegetation roll up during the day time, but come out again at night in consequence of the falling of the dew, or the prevalence of moist air. Where the ground is not stirred, it becomes crusted over, “baked,” as it is called, and hence the moisture from below does not find its way up to ground is frequently hoed, the reverse is the case; hence, the benefit of repeated hoeing during the Summer months. Upon this point, one of our late English journals mentioned the fact during the extremely dry season of 1826, a gentleman was in the habit of hoeing, with his own hand, three drills of turnips, daily. The result was that the three drills thus hoed were a good crop, while the yield upon the remainder of the field, hoed less frequently, come almost to nothing.”

THE EXCELLENCE OF ORCHARD GRASS.

We have lately come upon several statements touching the value of orchard grass, and records of profitable experience with the same, all of which seem worthy of repetition, and ought to carry weight with the readers of these columns.

Simon Brown, of the *New England Farmer*, a well-known agricultural authority, says cows are very fond of this variety; as a pasture grass it affords an early bite; as a crop for hay, sowed with red clover, it is of high order; sheep seek it in preference to other forage; it exhausts the soil, less than rye-grass or timothy; it will endure considerable shade, and because its fibrous roots extend to long distances and run deep, it has special power in resisting the effects of drouth. For these reasons Mr. Brown thinks we do not cultivate orchard grass (sometimes called rough cock's-foot) to half the extent which would prove profitable.

Another writer in the same paper bears similar strong testimony, and says orchard grass does not incline to head out the first year, but grows leaves that make the softest and best of hay for milk cows and for young stock. He directs that the first crop be cut as soon as it begins to lie down or look gray. At the second mowing the clover will have made stems, and perhaps blossoms, and thereby add much weight and virtue to the hay.

The late Judge Buel used to say he preferred orchard grass to almost any other; and here we have that veteran, A. B. Alan (with whose testimony we close the case), writing as follows to a friend:—“Orchard grass is the earliest and latest of all grasses we grow, and a great yielder in good land. I have seen two tons per acre, year after year, among apple trees, which grow so large and close together as to completely shade the ground. What other grass will do this? I have written an article on this subject on an average, perhaps, of every three years, for the past twenty years, and yet how little good it seems to do; farmers continue to inquire after it, as if a word had never been said.”

ALSIKE CLOVER.

The following is an extract from a farm journal:

"23rd May, 1868.—Made the weekly inspection of the farm. Went first to the Colt Ground, where the span of colts, now three years old, are growing into the future team. This place consists of four acres, fenced in with Black Ash pole or log fence, so high that they cannot jump over, and so strong that they cannot break through. This is the true way to prevent colts being breachy. The pasture is very rich, and is more than will be necessary to support the colts during the season.

"I noticed the Alsike clover particularly, which is now about five inches high. It possesses one unusual peculiarity, viz., that of doing best in the holes covered or nearly covered with water during the winter and spring. No doubt this is a valuable property as compared with red clover, which will not stand such hardship. Another thing to recommend its use is, that before timothy or red clover is ripe enough to cut for hay, the top flowers of the alsike are ripe, and shed their seed, which seem to catch at once and grow, as I find vast numbers of young plants only two inches high, the result of last year's haying. Our colt pasture is an uneven piece of land, and the roots and stumps not out sufficiently to enable us to level it yet."

"This property of withstanding water in the winter and spring renders it a very useful plant for undrained farms, and reminds us of the native place of the Alsike clover, which was first discovered in the ditches of the fortification of "Alsike" in Sweden.

FARM GLEANINGS.

California is expected to produce a very heavy wheat crop this year, the breadth of land sown being fully twenty-five per cent. more than last year.

A plantation of oaks comprising five acres, started thirty years ago, on the farm of Ben Perly Poore, at West Newbury, Mass., has made a fine growth. Some of the trees are now over forty feet high.

Orchard grass is receiving much attention among farmers in the Atlantic States. It is the earliest and latest of all grasses, and if properly managed with other grasses, is excellent both for pasture and hay.

The New England Farmer thinks that if farmers will make accurate comparisons between the profits of getting twenty tons of hay from twenty acres, and the same amount of the same variety of hay from ten acres, they will be much more likely to drain some of their lands than they will without such comparison.

The wheat prospect in Central Illinois is represented as very encouraging. The growing wheat stands thick upon the ground, and the recent rains and warm sunshine have given it a luxurious appearance. Growers predict the earliest harvest known since Illinois was settled.

Joseph Harris says a field he top-drained last winter, kept green during the whole summer, while other grass land was completely burned up. It produces more grass, at the time most needed, than double the number of acres of any of his other pastures.

A correspondent of the Germantown Telegraph says that his own experience and observation and that of his neighbors, show that small potatoes if planted may, for the first year produce nearly as good a crop as larger seeds; but if this plan is pur-

sued for more than one year, deterioration and a small crop of potatoes will be the result.

It is generally supposed that the ashes of pine wood is not so rich in alkalis as that of hard wood. In his "Muck Manual," Dr. Dana says that, "in equal weights, pine ash affords four times more alkali than the ash of hard wood." At the same time a bushel of hard wood ashes yield more alkali than a bushel of pine wood ashes; the ash of the pine being much the lightest. According to analysis, only about 13½ parts in a hundred of hard wood ashes are "soluble," while of the yellow pine fifty parts are soluble.

The Live Stock.

For the Ontario Farmer.
SHORTHORNS.

BY MR. W. GOMERSALL, OTTERBURN, YORKSHIRE, ENGLAND.

In resuming the subject of Shorthorns in the "Ontario Farmer," it may be well to advert to the fact that Cattle of all descriptions, have commanded high prices in England during the past year. Shorthorns have also, both pure-bred and otherwise, participated in the general improvement and in numerous instances exceptionally high prices have been made. As the remarks in this article have reference mainly to the ordinary class of pure shorthorns, it may be pretty safely assumed that any material advance in the general stock of the regular markets has a decided influence on the better classes above that standard, and as a natural consequence one of the best inducements is held out to breeders to improve their stock and steadily try to bring them as near to the standard of perfection as it is possible to attain to under the general adverse circumstances of those below the position of the opulent breeder.

So far as the breeding and rearing of Cattle is concerned, it may also be safely assumed that the best pay most; and yet how constantly we see even very extensive breeders make no effort whatever to raise the standard of their stock; but go on year after year, forgetting the annual story, told by the *accidentally* best heifer or cow, when she goes to market, and replenishes the pocket of her careless owner with an extra five or ten pounds. That animal cost as little in keeping, or may be a trifle less, than any of her companions. Perhaps she might have a stain or two of *pure* blood in the veins; and if so, her superiority is at once accounted for. Now this little episode brings the subject to that point which may fairly be said to be of the greatest importance in the rearing of Cattle;—the superior power in the digestive organs, possessed by the *Shorthorn* over the common and ordinary breeds.

It has become an established fact that the Pure-bred Shorthorn can make superior progress both in growth and condition, to common bred animals, and they shall both have the same pasture, or the same stall feeding. This superiority becomes, even strikingly apparent, with a cross or two, of the pure shorthorn. It shows itself in many ways. The bright eye, the docile temperament, the rich hair, and the mellow touch;—and even when turned out in the treacherous sunshine of a March day, how vigorously they go to work on the rough herbage left from the summer grazing. Leaving out of the question the “loose boxes all the year round,” as incompatible with the position of those who expect to live by farming; it is better for the health and constitution of their stock, to have a few hours out on grass when the weather permits, and when they return to their yards, stalls, or boxes they enjoy them better;—confinement is more easy after such exercise.

It ought to be a point in every breeder's arrangements to reserve some *old meat* on a favourably situated pasture for this especial purpose; favourably situated as regards shelter from the keen winds of the early spring months; not merely with the view of saving in-door keep, but also to combine with that economy, the benefit of change and exercise, so necessary to the vigorous growth and the future welfare of young Shorthorns.

Indeed young stock requires the best care the premises will afford, bestowing upon them. Symmetry and style are sacrificed by the starving process so much in practice; and are as certainly secured by liberal and generous treatment. It may not be possible for all farmers to afford extra keep to all their stock; but the next thing to do is to give all the extra keep they can to their calves and carry them well over their first year. Once well started they seldom if ever “look behind them again;” but onward they go with profit and pleasure for their kind owner each succeeding year. Then again how much less liable such well started animals are to all the ills that cattle are heir to. Could any better inducement be held out than this? In favour of the liberal treatment of the young; Nay, indeed all ages, may fairly be included in this particular, for it is one of those circumstances which would gain from any insurance company, some such name as “*private insurance against risk.*”

Now if a small “*Linseed Cake Bill*” will effect such an insurance;—and it may be very confidently stated that it will;—then the Cake can be proved “a double debt to pay;” growth, condition, style, symmetry, constitution, early maturity, and above all health; these and some other concomitant advantages are certain to flow from the use of a little extra food; food that is richer in those particular

elements required in the more rapid development of the bone and muscle of growing stock.

It is not the object of this article to teach the chemistry of this important subject; but it may not be out of place to say, there is a point in keep, where growth and improvement would inevitably stop; turn that course well and safely, and our machines (our cattle are nothing less) will carry us on our journey with light hearts and happy minds.

What can a few dollars spent in extra keep do? They can go three times round the Calf, whilst they only go once the Cow!

In other words three Calves can be permanently improved in symmetry and constitution whilst one Cow would be improved in condition by the same amount of extra keep. Symmetry can never be added to the full grown animal; it must be secured in youth.

DIVIDING SWARMS.

No certain rule can be given as to the right time for dividing colonies, as seasons are so different and localities so unlike with respect to the putting out of blossoms. As a rule, I find that when fruit blossoms early, and good weather prevails during its blossoming, it is safe to expect early swarms. No new colonies can safely be made before drones appear as on them depends the impregnation of the young queen.

It is always best to choose a time when the nights are warm, or the young brood may suffer after so much surplus population is taken from the hive.

Those who have used moveable frame hives for any length of time will have become familiar with various ways in which colonies may be divided; such need no aid in the matter but a word or two of caution may be “in order.” Never expect to benefit a colony that is not doing well by making two of it; unless a hive is very strong in numbers and in all ways prospering, do not divide it. Generally such colonies may best be made vigorous by taking away their queen and replacing her by a young one.

Never divide when honey is not very abundant. In making the division, whatever way you practise, be sure to have the main part of the worker force of the colony with the queen, leaving the hatching brood with few old bees in the old hive. To do this easiest, it is well to have the queen in a new hive on the old stand, while the old one is removed some distance away.

It always pays to rear queen cells eight or ten days in advance of swarming time, so as to give the part of the colony left queenless a queen cell nearly mature, thus saving them much time.

If the greatest yield of surplus honey is the object, it may best be secured by making no more than one new colony from each one in a season; where little fall pasturage is found, it is generally best to be contented with securing one new colony from two old ones, thus:

Take three frames of comb, containing brood and stores, from a good colony, replacing them by empty frames; put them in an empty hive and set it where the one from which the frames were taken

stood; then move another strong colony a rod away, and put the one from which you took the frames where that one stood. In the new hive you have brood and stores and a good colony of bees; one of these hives will contain a queen, it matters not which, for both are alike well provided with materials for producing another. The hive that you move a rod away will lose nearly as many bees as if it swarmed, but it keeps its queen and all of its brood, and will soon be strong again, much more so than if it had lost its queen as in natural swarming.

There are many whose bees are still in box hives who wish to transfer them with the least possible loss to moveable comb hives. Such will find swarming season the best time to do it. The matter is very simple. In the middle of a warm, pleasant day smoke the hive that you wish, to drive, in order to alarm the bees and induce them to fill their honey sacs; wait five or ten minutes, and then take the hive and carry it few yards away; turn it over and put on top of it a box or cap as near the same size as possible. With sticks now drum smartly on the lone hive, making a continued jar, and the bees will mount rapidly into the upper box, and soon be found hanging to it like a swarm. Take it off, then, carefully, and set in the shade. Carry the hive from which you drove the bees, to a location two or three yards behind where it stood before; it will keep bees enough to rear a queen and do well. Put your new moveable comb hive on the old stand, spread a sheet before it, and then empty the bees from the box upon the sheet, and they will run up into the hive, and go to work there like a swarm. It is well, if you have any good pieces of comb, to fasten them in the frames, as it gives the bees what all like—"a start in life." If you wish to transfer combs and a queen from the old hive it can best be done just three weeks after the swarm is thus taken from it. At that time there will be little or no brood in the combs, and they can be easily handled; they will have a young queen, but she will not have deposited many eggs. Full directions transferring combs are given in any standard work or bee-keeping. The operation is very simple.—*Mrs. E. S. Tupper.*

BETTER AND CHEAPER MEATS.

I do not want to see meat any cheaper; but I do want, both for our own interest, and those of the consumer, to furnish meat of the best quality. Cheap as our mutton often is, it is the dearest meat in the market. Thousands and tens of thousands of sheep are sold that do not dress over thirty-five pounds. From fifty to sixty per cent, of the meat consists of water. How much of the remainder consists of good digestible meat, and how much of bones, skin, and tough indigestible muscle, has not yet been determined. But it is a pretty large proportion. We may argue people to eat less pork and more mutton, that it will do no good unless we provide mutton that approximates more closely to pork in actual nutriment.

We ought to be able to produce a pound of mutton that shall contain as much available nitrogen and carbon as a pound of pork, and at less cost. This should be the aim of our breeders and feeders. When this is the case, we shall be a mutton-eating

instead of a pork-eating people. Our mutton must contain less water, and more (invisible) fat. It must be grown more rapidly, and fatted while the sheep or lamb is grown. I believe that the time will come when we shall have sheep that can make as much fat and flesh out of a given amount of real food as a pig. At present, our best mutton breeds, such as the Cots olds, Leicesters and Southdowns, will not approximate to a pig in this respect—and the fact is not creditable to our intelligence and skill as breeders. Let us turn our attention to this subject.—*Jos. Harris, in Agriculturist.*

BOTS IN HORSES.

A correspondent of the *American Stock Journal* gives the following remedy for bots: "Fill an ordinary junk bottle half full of molasses; then fill with sweet milk; shake well, and drench; follow the above in about an hour with a bottle of strong sage tea, made of our ordinary garden sage; next day give that horse a feed of rough rice, and the dead bots will come out with the rice. My theory is, that the milk and molasses being sweeter than blood, the bots turn loose to eat it. The sage tea will kill them, and it is the only thing I ever heard of that will do it without injury to the horse. The rice will cut out the dead bots better than salts; in fact, if you will give horses a feed of rough rice every two weeks, I do not think there is the least danger from bots; at least such is my experience. As a proof of what I have written, get two sage leaves, dip them in hot water, lay one down, and put a lively bot on it; then cover him with the other, and he will die instantly. Sage tea I have also found very beneficial in colic; and is perfectly harmless, if it does no good."

BLACK TEETH IN HOGS.

Black teeth in hogs' jaws seems to be diseased or partially rotten and to act in some way or other, just as injuriously upon the hog's appetite and health, as the tooth ache does the human body. Whether the black teeth in a hog's jaw, ache, and render him feverish and fretful, and disposed to lose his appetite and his flesh, and get poor and stay poor, I am not prepared to say, but as tooth-ache has a strong tendency to produce this result in man, it is fair to presume that such teeth in hogs will ache and produce the same effect in the case of hogs and other domestic animals that they do in man. We would advise you to remove them. This is the best and perhaps the only cure for the black tooth disease in hogs. And it surely is not any more "cruel" to have such teeth extracted from, or knocked out of a hog's jaw, than it is to our own, or our children's rotten and aching teeth pulled out of our or their heads by a regular dentist, or by any other person who can do it for us.

BERKSHIRE HOGS.

The following is Youatt's description of the original English Berkshire hogs:

The Berkshire pigs belongs to a large class, and are distinguished by their color, which is sandy or

whitish brown, spotted regularly with dark brown or black spots, and by their having no bristles. The hair is long, thin, somewhat curly, and looks rough; the ears are fringed with long hair round the outer edge, which gives them a ragged or feathery appearance; the body is thick, compact, and well-formed; the legs short, the sides broad, the head well set on, the snout short, the jaw thick, the ears erect, the skin exceedingly thin in texture, the flesh firm and well-flavored. The bacon made from these hogs is very superior. This breed of pigs has been generally considered to be one of the best in England, on account of its smallness of bone early maturity, aptitude to fatten on little food, hardihood, and the female being such good breeders. Although termed the Berkshire breed, these pigs have been reared in various parts of England. Hogs of the pure original breed have been known to attain to an immense size, and weigh as much as 800 to 950 pounds. They are not however, generally of an enormous size, being much smaller than several of the older breeds. Their ordinary weight averages from 250 to 300 pounds, and some will, at two years old, weigh over 400 pounds.

CAUSES OF ABORTION IN COWS.

I would like to get some opinion from your many intelligent readers in reference to the cause of abortion in cows. I had one that dropped her calf about two weeks before her time, and I can give no cause whatever. Her feed had been corn-stalks once a day, with about one quart of corn meal mixed with about the same amount of wheat bran once a day, and run to a straw stack.—SUBSCRIBER.

Bedford, Mich.

This subject has frequently been alluded to in our columns, and the opinions and views of prominent dairymen both in this country and Europe given. The investigations have been useful in determining certain facts attending this disease. They have been given heretofore in our columns, and it would be impossible to condense them into the space of a single article of ordinary length for our paper. The main points in these researches and new facts, also, which may be elected, will appear as we can find room for them.

A correspondent of the *Utica Herald* says, in a recent article upon this subject:—"In tracing the history of the abortion of cows in Herkimer county, to its first appearance in dairy stock, it will be upon a close investigation to have been accompanied by the following surroundings, and peculiarly significant circumstances, which can be easily verified by those who may choose to do so, and also see what have been the various effects in the disease upon different cows among the same stock of cattle, as well as the mode of its communications when once its appearances had presented themselves to the owners of dairies.

"The stock first to abort were the following:—Those that had added the effects of a constant breeding in and in, for a series of generations, to which also was added the high feeding and close stabling of dairies, and the breeding from young stock, and that these abortions of cows can readily be pointed out in certain parts of townships connected with the development of the disease in its origin and progress to other sections of the country, and was

transmitted by the communication with aborted cows or bulls that had been kept with cows thus diseased.

"That the disease of abortion affects some cows but slightly, while to others it is more serious in its consequences, so much so that cases of an exceptional nature have indicated very generally such a diseased state of the system that even the water in the joints of the animal was found to be quite yellow when slaughtered, and that in efforts made to fatten such stock, so serious were the effects of the disease upon the constitution of the cows that no amount of feeding could be made to improve their condition, either in the flow of the milk or in the increase of flesh upon the system."

THE DIARRHOEA IN YOUNG ANIMALS.

The diarrhoea or dysentery (*Dysentery neonatorum*) of sucklings is a disease which befalls the young animal's, colts, calves, and also pigs and lambs, at any age, from the very day that they are born until they have been weaned and accustomed to solid food; and generally it is acute and dangerous in a high degree, as long as the sucklings are very young, say less than two weeks old. In some districts this dysentery seems to be quite frequent, proves to be very fatal, and causes a great many losses. It is, however, one of those diseases of which we know the cause, and therefore, as we are almost always able to remove the same, the preventative generally is within our power.

The *Symptoms* are so well known, that a description of them are superfluous.

The *Cause*.—The immediate cause is too much acid in the stomach and intestines, which, instead of supporting the digestion, prevents it, decomposes the food milk, etc., and irritates the mucous coat of the digestive canal frequently to such a degree as to cause inflammation. Now, the question is—How does that acid come there? Let us see. Very many, but principally our dairymen, know that milk shut up for an unusual long time in the bag of a cow (and also of any other milking animal), when at the same time the animal heat and respectively the physiological exchange of organic material, is increased (either by uncommon muscular exercise, by high feeding, or by fever of excitement), it becomes changed, sour, and even conglobated in a similar way, and perhaps more and sooner, than it does when kept in a vessel exposed to a temperature of between 120 and 150 degrees Fahrenheit, after it has been milked out. Still change or acidification is yet a somewhat different one, where the milk under such circumstances is confined in the bag of the animal, and is secreted and kept under the influence of the increased physiological, or, in some instances even, pathological, exchange of material—organic waste and repair—which not only favours fermentation or makes the milk more apt to ferment, but also increases the amount of some of its constituent parts; that is, of casein and milk-sugar.

In an animal which is fed with heavy food, especially large quantities of grain, and such food in general as contains a great deal of nitrogenous substances, or in an animal which has severe muscular exercise, or is feverish or excited, the milk always is richer in casein and milk-sugar. Therefore as milk-sugar is changed by fermentation into

lactic acid such milk has to be considered as the source of the abnormal acidity of the gastric juice in the stomach of the sucklings, and consequently as the cause of dysentery.

As soon, however, as we know the cause of a disease, and if at the same time we are able to avoid those conditions which constitute the same, the prevention is quite easy.

First, we have to feed no more grain, or such food in general, which is very nourishing or rich in nitrogenous substances, to our brood animals, than can be easily digested and assimilated, and agrees with their condition. Secondly, we must never give our brood animals any too severe or too long continued muscular exercise. Thirdly, we have to give the young ones a frequent opportunity - during the first month at least every two or three hours - to suck their dams, in order to prevent too great an accumulation of milk in the bag of the latter. When this cannot be done, or where the dam produces more milk than the young is able to consume, we have to milk out a sufficient quantity before the latter is permitted to suck. Last, but not least, we have to prevent as much as possible our brood animals from becoming unnecessarily excited and irritated, or exposed to such noxious influences, which might cause fever and disease; and we must never allow the young to suck its dam when she is suffering from fever or disease nor must we feed it with the milk from a feverish or diseased animal. If we comply with the above, we scarcely shall have cause to complain about diarrhoea in our colts, calves, and lambs.

Treatment.—The object of a rational treatment must be, first, to remove the immediate cause, the morbid acidity of the gastric juice, and secondly, to mitigate the pain and the morbid irritation in the mucous membrane of the digestive canal.

The following compound answers the above demands; at least, it has been found to be very useful and reliable, where the disease had not already advanced so far as to make a recovery impossible:—Five grains of powdered opium, two drams of powdered rhubarb (best quality), two scruples of carbonate of magnesia, and two drams of powdered marsh-mallow root, made with a little water into ten small round pills, five of which to be given in the morning and five in the evening. The above is intended for a colt, ten to fourteen days old. For a younger one, the doses, of course, would be a little less, and for an older one a little larger. For a calf of about the same age the prescription would be as follows:—Five grains of powdered opium two drams of powdered rhubarb, two scruples of carbonate of magnesia, mixed with and suspended in five or six ounces of chamomile tea, to given as a drench half of it in the morning and half in the evening. To lambs and other young animals the same medicine may be given in proportionate doses. — *Western Rural.*

FEEDING SHEEP.

As to my reasons for keeping sheep in so small lots:—In the first place, in small lots each sheep will get his proper share of grain, etc., and in the second place, you can keep them more quite. All the room they should have, in my opinion, is so that they can lie down comfortably and not crowd each other. One quart of corn per head a day is

heavy feed, I admit, but if they are large, strong wethers, that will weigh 100 or 110 pounds on an average in the Fall, they will eat it if the weather is steady cold. But if it is hot and cold every few days, they will not eat quite so much. My theory of feeding sheep is this, that after you get them well on to their feed, and up to what we term full feed, the more you can get them to eat, the faster they will lay on fat. My experience is that if you want to fatten sheep fast, give them all they can eat and digest and keep them quiet, and they will not disappoint you. I claim that you can crowd a sheep as well as you can a hog, if you know how to do it. We calculate to make sheep gain from twenty up to twenty-five pounds per head, live weight, in about 100 or 110 days from the time we put them in the yard.—*P. L. Potter, in Country Gentleman.*

WHAT MIGHT BE DONE.—What is generally known as the North-western States have never had to exceed one sheep to each twenty acres of their territory, though the capacity to maintain twenty times that number without seriously conflicting with or supplanting any other industry, except, perhaps, lighting and fighting prairie fires. These Autumnal pyrotechnics, is estimated yearly "scatter to the winds" an amount of grass equal to the production of over two hundred million pounds of mutton, and as many pounds of wool. And all this while our farmers are shipping cheap corn, and cheaper wheat, to both old and New England, to pay for a large portion of the clothing to shelter themselves and their families.

A PROLIFIC FLOCK.—A correspondent of the *Country Gentleman*, writing from Chattanooga, Tenn., writes:

I have seventy-two breeding ewes, a cross from the "Improved Kentucky," impregnated last Fall by a Cotswold buck. Thus far, fifty of the ewes have brought me eighty-six lambs seventy-two of which are living and doing well. Thirteen came dead, and one was killed by falling from a straw pile while playing. With the exception of about one week in January, when the grass was covered with sleet, they have had no feed, keeping fat on the meadow, timothy and clover, which has afforded fine grazing all Winter.

DRYING WOOL.—M. P. Haverz, Professor Industrial Chemistry at Verviers, says, in *Revue Hebdomadaire de Chimie*, of July, 1870, that the complete drying of wool for manufacture is difficult, useless and injurious to the fiber; difficult, because wool and woolen fabrics attract and retain readily up to 10 per cent. of moisture, which should be left in it; useless, because the wool cannot be carded unless moistened and oiled; and injurious, because too strongly dried wool, as well as woolled fabrics, though in a less degree, becomes rough and looses plumpness.

A BIT OF EXPERIENCE.—A correspondent of the *Ohio Farmer*, who has been a wool grower since 1860, says he finds nothing that pays better, since raising grain has got to be so uncertain. His opinion is that sheep that will average four to five pounds per head annually, are a paying investment at present prices, and wool at fifty cents per pound. There is another advantage, the money comes all in a lump which is better than to get it in dribbles.

LIVE STOCK GLEANINGS.

The whole yearly income from the neat stock of the United States is estimated at no less than \$600,000, including beef, dairy, and labor of working oxen.

To cure a dog of sheep killing, let him see the sheep he has killed; in his presence take off the pelt, fasten it tightly around him, and make him wear it from one to three days. We think you will never be troubled by his meddling with sheep again.

An exchange says: Horseradish is an excellent condiment to mix with the food of cows to give them an appetite, and make them sleek and thrifty. It should be fed frequently to all animals that are not well, and it will be of great service to working oxen troubled with heat. If given to cows in doses of a pint a day, mixed with potatoes or bran, it will prevent or relieve cows of the disease called cake in the bag. Few animals will refuse to eat it, and some will eat it greedily, as much as half a peck at a time.

Many farmers, for an extra dollar or two, sell their best calves to the butcher, and raise such as are not so valuable, and think they gain by the practice; but the few dollars they think they make, would in many cases amount at the milking age of the stock, if the best had been kept, to more than thirty dollars, instead of a dollar or two.

The oldest horse in the State of Ohio owned by a farmer of Fremont, died during February. The animal, "O'd Ned" was about thirty-six years of age, and last summer seemed good for several years more of life. The winter, however, proved too severe for him; for, towards the end of January, he appeared unwell, and after lingering for a few days, he died without a struggle.—*Am. Ex.*

HOW TO FIT A COLLAR TO A HORSE.—The plan adopted in the West, which we are assured by men who have been long in the collar business, does not injure the collar in the least, is to dip it in water until the leather is thoroughly wet, then put it on the horse, securing the hames firm, keeping it there until it becomes dry. It is all the better if heavy loads are to be drawn, as that causes the collar to be more evenly fitted to the neck and shoulder. If possible, the collar should be kept on from four to five hours, when it will be perfectly dry, and retain the same shape ever afterward; and as it is exactly fitted to the form of the neck, will not produce chafes nor sores on the horse's neck.—*Harness and Carriage Journal.*

DRESSED BLACK HOGS.—A correspondent of the *Michigan Farmer* says: The principal objection to the Essex and Berkshire breed of hogs I find to be their colour. Now, as Youatt justly observes, this is not even "skin deep." The colouring matter will be found to be secreted between the true skin and the epidermis, or outer skin. If care is taken in scalding black hogs, they can be dressed as white as any white hogs. It is a well known principle that all black substances absorb heat. Hence, in dressing black hogs, the water should not be so hot as in scalding white ones. If this simple rule is observed, there will be no difficulty in dressing black hogs. Instead of this colour being an objection, I regard it as an advantage, for the skin of a black hog will always be found to be smooth and glossy, free from cutaneous eruptions, and always clean.

The Garden.

THE ADVANTAGES OF HORTICULTURE.

Some three years ago the Rev. Dr. Os-good, in addressing a public meeting on this subject, in substance, observed, that horticulture is one of the best pursuits to follow for mental culture, inasmuch as gardening is at once a school, a workshop, and a parlour.

As a *school*, it begins with the earth, or mineral kingdom, and rises through the vegetable and animal world. Even a small clod of earth is a fit subject for study, exemplifying the truth that "wisdom is oftentimes nearer when we stoop than when we soar." Through all the gardens of vegetable life, from the minutest plant to the tallest oak, there is a world of study and of wisdom. Botany is an interesting study, pursued through the laws of vegetable growth, particularly when illustrated by the familiar plants around us. The gardener, while laboring to obtain the greatest yield, should combine the beautiful with the useful, instead of striving to separate them. We may hold up an apple as a thing of use, and point to a flower as a beautiful object; yet these, if not brother and sister, are, at least, first cousins. Besides a school of learning, the garden should be a school-house of Divine faith.

As a *work-shop*, the garden is one of the very best places to develop bone and muscle. Let a lady take a hoe or rake, and in a few hours every muscle will find its exercise. The garden is a pleasant place in which to see our wives, our sisters, and daughters engaged—the best of all gymnasiums. Flora and Pomona were called by the ancients feminine divinities. Why may we not class gardening among the fine arts? The gardener is a painter of no mean order, using the colors which nature furnishes; and it is for him to apply them with fitness. Our education would be much more perfect were we to unite the study of gardening with that of books; and how

very little, too, it takes to surround one's place with flowers compared to the sums paid in needless luxuries.

The garden is a *parlour* with pleasing associations. We want something when we come together to unite us socially and bring us into affinity, which the garden is eminently calculated to do. Are not the strawberry and grape ministers of civilization, if not of evangelization? In enjoying the lovely tints of a flower we exhaust nothing, and rob no one; while, at the same time, we are brought out of our own selfishness.

Elihu Burrit discourses on the same theme as follows: "the garden is a bound volume of agricultural life, written in poetry. In it the farmer and his family set the great industries of the plow, spade and hoe in rhyme. Every flower or fruit-bearing tree is a green syllable after the graceful type and curse of Eden. Every bed of flowers is an acrostic to nature, written in the illustrated capitals of her own alphabet.— Every bed of beets, celery or savory roots or bulbs, is a page of blank verse, full of *belles lettres* of agriculture. The farmer may be seen in his garden. It contains the synopsis of his character in letters that may be read across the road. The barometer by his door will indicate certain facts about the weather; but the garden, lying on the sunny side of the house, marks with greater precision, the degree of mind and heart culture which he has reached. It will embody and reflect his tastes, the bent and bias of his perceptions of grace and beauty. In it he holds up the mirror of his inner life to all who pass; and with an observant eye they may see all the features of his intellectual being in it. In that choice rood of earth he records his progress in mental cultivation and professional experience. In it he marks by some intelligent sign, his scientific and successful ceremonies in the cornfield. In it you may see the germs of his reading, and you can almost tell the number and nature of his books. In it he will reproduce the seed-

thought he has culled from the printed pages of his library. In it he will post an answer to the question whether he has any reading at all. Many a nominal farmer's house has been passed by the book agent without a call, because he saw a blunt, gruff negative to the question in the garden or yard."

THE HEMLOCK.

It is often objected when tree and ornamental planting are urged, that these objects though beautiful and desirable are costly, and that the money needed for them is not at hand. But many forget that for some of the choicest ornaments of the lawn or shrubbery, no outlay is required. In many localities, there are to be found in a wild state, shrubs and trees fitted to grace the garden of a Prince. Among these may be named the hemlock, decidedly the handsomest of the Evergreen Family. Its graceful appearance, the delicate green of its foliage, its varied colours when the young shoots push forth, and its hardness, commend it to the attention of all who have a home to beautify. It looks well singly or in groups, and as it bears both shade and pruning well, it is an excellent tree for screens and hedges. It grows rather slowly when first transplanted, but once established it flourishes luxuriantly. Removed from a mucky swamp to upland, it requires only ordinary care to make it bear the change remarkably well. Though it does best in moist land, it soon accommodates itself to ordinary soil. We would say to our readers try the hemlock.

PERENNIALS.

This class of plants do not require the expense of purchasing, or the trouble of planting year by year, and there ought to be a good proportion of them in every flower garden. The *Gardener's Monthly* gives the following lists of six kinds, flowering during the summer months, to which many others

may be added, — and among them the Phloxes and Sweet Williams ought by all means to have a place.

“While caring for the annuals and grasses, we hope the hardy herbaceous plants will not be forgotten. We give a list of six good ones, for flowering near each of the months annexed. April—*Iberis sempervirens*, Double Daisy, *Phlox subulata*, *Dicentra spectabilis*, Snowdrop, the Forget-me-not or *Myosotis palustris*. May—*Polemonium reptans*, *Omphalodes verna*, *Funkia Geranium sanguinem*, *Fraxinellas*, *Aquilegia canadensis*. June—*Achillea tomentosa*, *Dodecathron Meadia*, *Funkia cerulea*, Lis of sorts, *Lychnis fulgens*, *Pentstemon roser*. July—*Zanchneria Californica*, *Wahlenbergia grandiflora*, *Spiraea japonica*, *Potentilla atrosanguinea*, *Lychnis Chalcedoufca*, *Campanula persicifolia alba*. August—*Achillea Ptarmica*, *Clematis revoluta*, *Chelone barbata*, *Delphinium formosum*, *Lythrum salicaria*, *Liatris spicata*. September—*Sedum popuifolium*, Double Dwarf Sunflower, *Anemone japonica*, the Lilies, *Dracocephalum Virginicum*, Asters. There are besides a great many other beautiful species, and which others might think even more beautiful than those we have named but these will at any rate form the nucleus of a good collection.”

THE EUROPEAN LARCH.

This is well known as a beautiful ornamental tree, and as such is to be found in most gardens that have any shrubbery about them. From its quick growth, the *Country Gentleman* recommends its culture for timber, and estimates that in twelve years the larch crop on an acre of ground would be worth twelve hundred dollars, thus giving a yield of one hundred dollars per annum to the acre. Our cotemporary also advises the use of this tree as a screen, since though it is deciduous, it affords a much better protection than other trees which drop their leaves, on account of the profusion of small shoots which break the force of cold winds. The larch is easily grown from seed, which should be sown half an inch deep in beds of fine, rich mould, and shaded from the sun the first season.

HOW TO PREVENT MILDEW ON GOOSEBERRIES.

I observe from time to time, in the reports of the Fruit Growers' Association of Ontario, that the English Gooseberry is much afflicted with mildew. About thirty years ago I got some plants of the English gooseberry, and when the time for fruit came round they yielded nothing but poor, dirty looking, worthless stuff, year after year, on account of this same mildew. At the time I could not understand what was the matter — not even knowing what mildew was. After several years of trial I pulled up the bushes. About eight or nine years ago I procured some bushes of the English variety, of two different sorts—one red, the other green; but, as on the previous occasion, these were affected with mildew. By this time I had heard of many preventives, such as sulphur, tan bark, boards, &c. I tried all these, but with very little success. Being very fond of gooseberries, I determined not to give up, and remembering that one of my bushes, of the first lot, had by oversight been spared, it being in a corner of the garden where there was a grass plot, and not being attended to, the wild grass grew as high as the bush; still there was a little fruit, small in size, but perfectly free from mildew from year to year. It then occurred to me that if sound fruit grew among a tangled mass of wild grass, it might have the same effect to spread grass on the ground, under and around the bushes. For the last six years, as soon as the grass will cut say nine inches or a foot long, I have spread a quantity of new cut grass under my bushes, and let it remain all summer. That, combined with very high cultivation and close pruning, has been a complete preventative of mildew for the last six years. Whether this simple and inexpensive remedy will hold good on all kinds of soil, I am not prepared to say. One thing I can say, as all my neighbours can testify: I have had splendid crops of large sized sound berries, some of them nearly as large as small plums. My soil is a sandy loam, with gravel sub-soil.—*Cor. Globe.*

STAWBERRIES ON THE FARM

'Strawberries? Why I can't grow 'em. No use trying.'

'Have you ever tried, John?'

'Well, yes. Give 'em a heap af attention—but it's no go.'

'Where is your bed? I would like to see it; perhaps I can tell you the trouble?'

'Wall, it looks kinder bad just now. Ye see, we've had a heap o' work to do, and I reckon Sally and the old 'oman hain't done anything to it.'

'Do you leave it for your women folks to attend to.'

'Yes, kinder so. Ye see that's small business for us men folks, what's got the farm to tend to.'

'Do you love the fruit?'

'Wal, I declare if that hain't a queer question to ask a human bein'—love 'em? why that hain't no name for it. I calkerlate my appetite is prodigious for 'em. Why I fancy I can take care of a small size platter full as quick as any man in these parts. Neighbor Jones says I alers manage to find room for 'em when I call round to his house.'

'Is this your bed?'

'Yes, just as I expected it; the old 'oman hain't touched it looks rather bad.'

'Yes, it seems to be a good place for snakes and birds' nests. Did you suppose, neighbour, you could grow strawberries with such care as they have had? Why, this ground is as hard as a brick, while sods and weeds seem to monopolize the room. Suppose you let your corn grow without cultivation, or hoeing, or your potatoes; or sow your wheat in grass sod, how much will you get? Or just let your boys lay around the bar-room of our village and hear all the low, obscene, vulgar language used there. Throw out of your house the Bible and all good reading, and give them the yellow-covered literature of the day, and see how they will grow up.'

'Wall, yes, it might go kinder tough and cross-grained like, but I've alers found the biggest strawberries in the wildest grass in my meadows, and why shouldn't I here?'

'Just because your tallest grass grows on the best and most loamy land in your meadow, and of course the strawberries that grow there would be better than on the hard, poor, baked land that grows nothing but sorrel and a little white clover.

Did you ever take into consideration neighbour, the advantages that would accrue to you by having plenty of small fruit.'

'Wall, no; I never could see quite as much profit in 'em as framin—raisin' pork and corn.'

'Don't you desire to make your boys love home and the farm, rather than to leave it for the city, one of these days?'

'Wall, kinder, yes.'

'Then, make your home and farm attractive, by planting plenty of fruits. Raise a good supply for the table, so that your wife and daughter can give you plenty of such in pure cream and sugar. I tell you what it is, home will seem more cheerful to you and the boys, when you go into the house and see a fine dish of strawberries or raspberries in sugar and cream, to tickle you palate; or a good large short-cake, steaming on the table, with the little red or black rubies within; and for all you may not love flowers, just give up to your boys or the women folks' whims, as you call them, and plant out a few such. Cover your verandah with the sweet-scented honeysuckle and the deliciously fragrant rose. Oh, as you set to the table, with your family around you, with your luscious fruits and the fragrance of the flowers filling the room, life will have a higher, a more holy aspect, and really your family will seem nearer and dearer to you—the world will become more beautiful.'

'Why, neighbor, you'd make quite a preacher, seems like.'

'Yes, if loving flowers and fruits, and sounding their praises and their benefits into the ears of my neighbours, constitute such, I might. It makes a home cheerless to me to see no fruit, no flowers around, when the Great Giver has so liberally placed them within our reach. It disgusts me to see the sloveliness around many farmers' houses, and the coldness and cheerlessness. No luxuries, no beauties. I don't wonder the sons find the cities and towns more inviting, and the daughters give their best smiles to the town and city fops. When will farmers see the necessity of making their homes more attractive, and supplying their tables with more fruit—planting a tree here and a shrub there, and in the place of broken down stoops and paintless houses, make them smile, as it were, with twining vines, green blinds, and a good, liberal coat of paint? But neighbor, a word about this strawberry bed. Clean it out,

give it a good coat of manure, fork up the soil; along the fence, yonder, set out a row of raspberries & blackberries; through the centre of your garden set posts and nail on slats, to which train a few grape vines, or run them up the side of your barn, or into one of those trees. Set out a few currants, and then give them good care. Suppose it does take a few hours, occasionally, remember how well they feed you—giving you better health, a clearer mind, and a higher appreciation in life. We are not to live here always, and of what benefit will be our accumulated property to us after we are gone. Then, care for such, and enjoy life better—leaving to your sons a better inheritance than great fields—a contented mind and such an attachment for the avocation of their father, that the allurements and vices of the city life cannot weaken or destroy.

'Wall, neighbor, I reckon there's more truth than poetry in what yer say, and I believe I'll try and fit up the old place a little.'—*Small Fruit Recorder*.

PLANTING EVERGREENS EARLY.

Robert Douglass, the well known arboriculturist of Waukegan, Ill., in a private note to us says: "People have got a notion that the Larch, being a *Conifer*, must therefore be planted late, when it should be planted at the earliest possible moment. And this recommending late planting for evergreens is all wrong, in my opinion.—We invariably get the best growth on ours when we plant them early, and we have tried both early and late planting pretty thoroughly."

The above is in perfect record with our own experience; and we always transplant evergreen trees as early in spring as the weather will permit. We said many years ago, that the far too general practice of transplanting evergreens late in spring came into vogue through the discovery that they could be safely moved later in the season than deciduous trees, and not because it was a better time. Procrastination is the bane of horticulture, and if a certain kind of work can be put off a week or a month, there are always those who will seek a good excuse for the act. Having tried both early and late planting of evergreens quite extensively, and during a goodly number of years, we are decidedly in favor of the earliest possible moment after the

ground is in suitable condition to work in spring.—*Rural New Yorker*.

HOW I RAISE MELONS.

As many people think they cannot raise melons, and as I have seen numerous articles written on the subject, I concluded to give my experience, which may benefit some one, as I have always found it successful. Many gardeners think it is necessary to dig a hole about two feet deep and three feet in diameter and fill it nearly full with manure, then place a few inches of dirt on the top and plant the seed. This I claim, is all nonsense. I simply give the ground a good coat of fine manure, thoroughly dig or plow the ground, then level with a rake or otherwise. I then make a marker, by taking any piece of wood that will not bend, eight feet long, fasten two pegs to this, seven feet apart, nail a handle in the center, bracing it both ways. I then draw a tight line for the first mark, drawing the marker the first time through with one peg against the line; the next time through, but one peg run in the last mark; then you get all straight. Mark across these in the same manner, then place or each corner or hill two shovelfulls of well rotted manure; take a digging fork and mix with the soil thoroughly to the depth of the fork tines. After this take a rake and rake the soil on the top of this to the depth of three inches, which makes the hill a little higher than the surface of the ground.

The seed should not be planted until the ground gets thoroughly warm—say the last of May or first of June in this section. Too early planting is one cause of failure. Then I stick nine seeds in each hill. As soon as they come up, sprinkle a little plaster on the plants while the dew is on, to keep the bugs off; do this as often as the plaster gets off, until the plants get to be of good size; then thin out to four plants in a hill. When these begin to run nicely, pinch off the tip end of the runners, which will cause them to throw outside runners; pinch these in the same manner; keep the ground well cultivated and free from weeds till the vines take possession.

Mine, treated in this manner, cover the ground completely, and we had last year from a small patch, water-melons by the hundred, while others lost all their plants by the dry weather, because they had a manure pile underneath the plants.

I raise Mountain Sweets altogether, which I think is the sweetest melon grown; but it does not grow so large as this. I hope that those who have not raised them heretofore, will try and raise some this year, according to directions above, and enjoy eating them for a month or two in the fall, as we do; they will do you good.
CHAS. I. JONES, *Fairfield Co., Con.*

GARDEN GLEANINGS.

THE Wisconsin marshes are full of cranberries this spring, and the berries look nice and fresh, but will not keep a long time in warm weather. The Indians are bringing them to market quite abundantly at \$2 per bushel.

THE *Pleasant Valley Fruit and Vine Reporter* says that grape growers in the State of New York generally concede that the vine is not injured by the loss of sap termed bleeding. There may be some difference in this respect between varieties; those which are strong growers may not feel the loss of sap like those of feebler growth.

THE Chinese keep grapes perfectly fresh and sound for a long time by the following plan:—They cut a circular hole in a ripe pumpkin, large enough to admit the hand. The contents are then taken out and the hollow is filled with bunches of ripe grapes. The piece which was cut out is replaced, and the pumpkin is kept in some cool dry place.

THE editor of the *Gardeners' Monthly* says that there are three distinct kinds of flowers on the grape vine. First, purely staminate, in which there are no traces of ovaries; secondly, small ovaries, with defective stamens, which never produce seeds, though often swelling enough to make small grapes with no seeds; thirdly, hermaphrodite, which we believe alone produces fruit,

THE editor of the *Gardeners' Monthly* says that the Honey Locust is an admirable hedge plant for cold climates, and is far better than any other plant where the soil is poor and thin. There is one great ad-

vantage which it possesses over other plants. The Osage Orange, for instance, has thorns on its young growth, and that is the end of them—but thorns come out of the old wood of the locust and continue to come out year after year,—branching and growing simply as thorns, and nothing will dare go through a hedge of this plant, even although there should be a tolerably large gap invitingly open.

FOR me floriculture has done so much—quickening good desires and rebuking evil—that I have ever faith in those with whom its power prevails. But let us never forget that humility on the score of our multitudinous weeds is more becoming than pride in our little dish of sour wizened fruit; that “we are the sons of woman, Master Page,” and that the old serpent hides still among our flowers.—*Rev. S. Reynolds Hole.*

GRAFTING WAX.—There are many different ways of making grafting wax as there are nurserymen. One of the oldest and most popular recipes is the following: One pound of tallow; three pounds beeswax; four pounds rosin. Put into a kettle and melt slowly until all the ingredients are combined. If to be used in the open air in cool weather, add a quarter to one-half pound more tallow. Some persons leave out the beeswax altogether; but we prefer to have it, and always use it.—*Rural New Yorker.*

PROFITABLE DAIRY.—The *Advocate* speaks of a farmer near Portland, Oregon, who last year netted from nine cows the sum of \$944—the expense of the cows being about \$300. He sold 2,442 pounds of butter at 44 cents, while the milk, calves, and pork from sour milk, made up the remainder.

EUMELAN GRAPE.—The Eumelan is an excellent grape, so far as quality of fruit is concerned, but whether it will prove to be more valuable than other sorts cannot be known until it has had a more thorough test than has yet been given it.—*Rural New Yorker.*

Editorial.

A FRIENDLY AND SUGGESTIVE LETTER.

We make no apology for inserting in full the following communication, though it is somewhat lengthy, and contains here and there highly complimentary allusions to the ONTARIO FARMER. It is from an intelligent and experienced farmer, whose judgment we value and whose zeal in promoting the circulation of our own and kindred journals ought to rebuke and "provoke," very many. We bespeak an attentive perusal for our friend's letter.

To the Editor of the ONTARIO FARMER.

DEAR SIR:—Enclosed you will find names and money from subscribers to your paper, and I sincerely regret that I have not more to send you; but you would scarcely believe the extraordinary excuses which some individuals manufacture when asked to subscribe to the "ONTARIO FARMER," and it really makes one wonder at their shrewdness in this particular, with a view of avoiding the outlay of a dollar. Equally surprising is the supineness of others in aiding the circulation of so useful and desirable a Journal, furnishing us as it does with the scientific and practical progress being made at home and abroad regarding productions of the soil, effected in a measure by the steam plough and cultivator, together with other important improvements in farm and labour saving implements which is so desirable and of such utility to the farmer. Also the many new fertilizers which are working wonders in old country agricultural. Then, again, there are reports from time to time of the proceedings of the dairy conventions, also of fruit culture, and Bee management, reports of sale of the different thorough bred herds, and of sheep sales in the old country and in this, and a long and accurate account of the Provincial Exhibition, with premiums awarded, of itself worth more than double the year's subscription, more especially so to those who are unavoidably deprived of the pleasure of being present, at such a gathering.

Then again we are furnished with particulars of what is going on regarding emigration; an all absorbing subject with the farmer, as well as with all classes of society; also with valuable extracts on a variety of subjects from numberless agricultural and other papers of interest and importance to other classes of the community as well as to the farmer. We have also, most valuable information from the experienced, energetic and skilful veterinary surgeon, Mr. Andrew Smith, which to many of us is or may be, worth ten times the amount of subscription. Besides which we have the practical and useful hints and desirable information regarding the farm and other matters given us in every volume, when and how suitable operations should be carried out upon the farm by our talented and respectable Editor, and though last not least do we welcome the interesting and graphic letters of our worthy and much respected Professor of agr-

culture, whose zeal and energy for the advancement of his art, is equaled only by his honesty and uprightness of character. Information therefore from such a source of the distant counties and of the peoples progress cannot be otherwise than useful, especially so when in all his peregrinations, his great aim is in obtaining reliable and truthful information confirmed and supported as far as possible, by ocular demonstrations; and here, before I give you my reason for enumerating, as I have done, the different subjects alluded to, I must refer to the very pleasing and interesting, and I may add, without fear of contradiction, edifying story, "Farming for Boys," which was given in each number of your last years volume. It is not to be so alone that such a story is interesting for as much as may be learnt from it by them, much, and I say it unreservedly may a so be learnt by men of years and experience, and in this remark I was earnestly supported the other day by a respectable and intelligent near neighbour of at least thirty years practical experience in farming matters. Why, sir, that part of your paper alone, is to many boys, worth three times the amount of subscription. In truth it is impossible to imagine the good and profitable account it may be turned to hereafter by an industrious lad of an intelligent and reflective mind. My grand children who were ready to devour the book immediately it entered the house, so interested were they in the tale, and I doubt not but it is equally so with others. Now then as I have promised to give you a reason for the several allusions to different subjects so far throughout my letter, I will proceed at once with the explanation, although my letter is even now much longer than I intended it. I must then say that I have been induced to allude to the many interesting subjects contained in your Journal in consequence of the extraordinary excuses of non-subscribers. One is that there was nothing so very particularly interesting in the paper. Another that you had promised so many portraits of animals, which he had never seen, and when I asked him if he had not read your reason for their non-appearance, his answer was that "he had not seen it." I have explained to him that as the proprietors of the different animals they wished to have represented were unwilling to bear their proper share of the expense, the project had to be abandoned and that the same was the case also with the *Cand. Fame* and other journals. I asked him who he thought was the most benefited by the representation of them in agricultural journals, the breeders of such animals, or the Editors of papers? He replied: "the former most certainly?" Why then I asked him should they grudge their share of the expense necessary to have their herds and flocks advertised to the world in the publication alluded to? He did not know, was the answer. Then to be sure you threw out certain "hints," about farm matters occasionally, I replied, do you consider "hints," of no value, when from hints alone hundreds, aye, thousands in this world have become both happy and wealthy? I could have added, that if he had some good neighbour who would have given him some useful hints about the management of his stock and farm at an early stage, he might have been the better of it. Then in replying to my question if the article of "Farming for Boys," was not very interesting as well as instructive? His answer was, "I dont know what you are alluding to," the truth was at once very

plain to me that he had not only *not read that, but other articles*. I questioned him upon, consequently he being quite ignorant of the contents of the several numbers, might be considered *a ve y efficient and highly qualified person* to pass sentence upon your labours, Mr Editor, upon the merits of the ONTARIO FARMER. There were three or four other events in this young farmers practice, which, had I wished to be vengeful, I could have recalled to his mind in the shape of severe losses emanating entirely from sheer ignorance in his profession, which might probably have been avoided, had he subscribed earlier in life to an agricultural paper; all I can now further say is, that when we next meet and discuss the value and utility of an agricultural publication (the ONTARIO FARMER, in particular) he may have dived a little deeper into the arts and mysteries of his profession. In the mean time, I wish him, in an industrious point of view, every prosperity he deserves.

Then an answer from another party was that, "he really could not afford, to continue the Paper, as he was determined on economy." Economy, indeed! Save the mark! for I never in my life time heard such a graceless and unmeaning expression issue from any lips, being fully aware that *his economy* would be, *non est*, the very first day he was in town, and that his "*siller*" would leave his pocket in the same reckless and unprofitable manner as of yore. I thought perhaps he might think that there was nothing in the periodical, but no, that was not it, "the FARMER was all very well, there was a good deal of very interesting matter in it, but I must and shall practice economy." I told him I should wish others heartily rejoice if he truly and honestly carried that resolve out, and I wished sincerely that I could but see it even in the distance! "Well then, a third one had just been buying a farm for his son, and for a while it made him very poor, a very flimsy excuse I told him. However, as his son was about to be married, and I knew him to be very industrious and deserving, I thought I would not press the matter, but wishing his son every happiness, and hoping they would both become subscribers another year, we parted. A fourth application was to a young industrious farmer, who had by his energy, industry and economy, laid up in a few years almost enough to purchase a small farm, and had been in treat, for one a few days only before. Though without family, but with an industrious and frugal wife, he could not, it appeared, afford to subscribe to the "ONTARIO FARMER" nor to any other Agricultural or Horticultural paper.

Other excuses, with a little variation, of the same nature, I could give you, *ad libitum*, but I think you have had, *quantum suff*. I hope I may yet, time permitting, be more successful with other neighbours, for I am indeed anxious that the circulation of the ONTARIO FARMER, and all other Agricultural papers should yearly increase, and I sincerely hope that some of your present subscribers will use their influence with their neighbours to this end."

"OUR CANADIAN GRAPES."

An article with the above heading appeared in the Horticultural Department of the *Weekly Globe* of May 5th from which we clip the following paragraph for the

purpose of making a couple of comments thereon:—

"Some weeks since an article on Canadian Vines appeared in the *C n d' E r me* and was copied as a matter of interest to English grape culturists into several of the leading English agricultural and horticultural newspapers. The culture of our Canadian grapes has hence excited considerable attention, and, as a result, an English gentleman who has at present upwards of forty different varieties of vine from all parts of the world, has applied to the writer of the article in question to send him all our hardy hybrid sorts. This has been done and a recent mail transmitted to England the following kind, carefully packed in air tight cans, the roots well grouted with clay, and every precaution taken to ensure their arriving at home in first rate condition. The sorts sent are:—Saleim, Iona, Adirondac Diana, Hamburg Hartford, Prolific, Hattie (a new white,) Ontario (very large but sour,) Agawaum, (hybrid, very fine,) Water Frost Wild Grape, Sand Frost Wild Grape, Delaware, Manitoba (a new variety,) Royal Muscadine, Wild Vine, and a cross section of the Great Water Frost Grape Vine."

Our first comment is one of satisfaction that it is beginning to be known in England that Canada is indeed a grape growing country and that British horticulturists are likely to make the acquaintance of some of the really fine varieties we can raise here in the open air.

Our second comment is one of dissatisfaction. With the exception of the wild vine, there is but one really Canadian grape in the list we have quoted, and that is mentioned along with the not very complimentary characterization, very large, but sour. The horticultural authorities connected with the *Globe* surely know that there are several purely Canadian grapes of no mean excellence which could have been easily furnished to the order of the English gentlemen in question, and which we do not hesitate to say *ought* to have been furnished by any one claiming to be acquainted with the grapes of Canada. The originator of Ontario, Mr. Reid, of Port Dalhousie, has other grapes not so large but of better quality than the mammoth. Laura Beverly, a grape produced by one of the Niagara District vineyardists, is very highly spoken of by Mr. Beadle, horticultural editor of the *Globe*. We have not yet fruited it, but on the recommendation just referred to, it has found a place in our garden. Worst of all, Mr. Arnold's hybrids are completely

ignored in the consignment and list above referred to. This is really too bad. We will engage that on application Mr. Arnold would have supplied specimens well packed for such a purpose, and been only too happy to find an English gentlemen sufficiently interested to give his grapes a trial. As the only reparation that now can be made for a sin of omission so injurious and unfair to our country and its enterprising grape culturists, the *Globe* should give the name and address of the English gentlemen in question, so that those who are more familiar with the grapes of Canada, more impartial, or more energetic in dealing with such a matter, may supply the great and glaring deficiencies we have indicated.

MR. FLEMING'S NURSERY.

When in Toronto recently, we took a very pleasant ramble through the grounds and green-houses where Mr. James Fleming and his long-established business continue to flourish, spite of the ravages of time and the encroachments of the city. It is a sudden and striking transition from the busy, bustling thoroughfare that Yonge Street has now become, into the quiet walks and blooming conservatories of Flora, that still maintain themselves so near to the marts of mammon. Mr. Fleming's nursery is one of the landmarks of Toronto, and may the time be far distant yet when it shall be swept away. Its proprietor seems to have no idea of yielding to the temptation to cut up his domain into city lots, for he is making improvements which if they do not imply permanence do certainly imply indefinite postponement of the evil day when flower-beds shall be superseded by "door-yards," and structures of glass by edifices of stone and brick. One of these improvements is a nice show-house for the exhibition of specimen plants and choice blooms. This building ranks No. 1 in the village of glass-houses clustered upon this charming spot. Its erection alters the enumeration given in Mr. Beadle's account of this nursery, which we copied into our columns

rather more than a year ago. Following the example set us in that article, we propose briefly to mention the contents of the several buildings in regular numerical order, as they presented themselves to our view on the occasion of our recent visit of inspection.

No. 2 is a propagating-house containing a large variety of roses, verbenas, dahlias, heliotropes, petunias, colenses, geraniums, foliage plants, &c., all looking exceedingly thrifty. Very noticeable among these young things, were a quantity of the new tri-colored geraniums, and a fine lot of ferns.

No. 3 is chiefly devoted to exotic plants in full size, and in many cases in full bloom. Here too may be seen a splendid variety of colenses in all the glory of their many-tinted leaves.

No. 4 is a pelargonium-house. Here those lovely Zonale geraniums, Mrs. Pollock, Sun-set, Golden Pheasant, Lady Callum, &c., display their soft bewitching hues, while double geraniums and fancy pelargoniums in great variety please the eye and tempt the purse.

No. 5 is a camellia and azalea house. At the time of our visit these rich flowers were in full bloom and presented a very showy and magnificent appearance. Here too are a multitude of young oleanders, and myrtles, also a few roses, oranges, &c.,

No. 6 is a winter-flowering house, but full now of young stock for spring orders:—fuschias, geraniums, hanging-baskets, sweet-scented verbenas, callas, cactuses, aloes. While inspecting this house, we learnt what we did not know before, that large specimens of the aloe with its peculiar and beautiful leafage, so ornamental for door-steps and lawns, can be had on hire for the season from this and other nurseries, thus enabling those who have no conservatories, to get the benefit during the summer of some of their most attractive products.

No. 6 is a rose-house, and on the day of our visit looked charming, as a palace of the queen of flowers might well do with so many fine varieties in full bloom, Lamar,

que, that beautiful hot-house climber had a profusion of snow-white buds and flowers enough to make a score of weddings gay. The moss roses were a very attractive class, and one fine specimen which towered far above all the rest, like Saul of old among his compeers, had on it some thirty buds just ready to open. That fine tea rose, Marechal Niel would seem to be outdone by a new competitor for public favor, Nephotos, which was in full bloom and yields enormous flowers. Gloire de Dijon, Sir Joseph Paxton, Louis Philippe, and other fine roses, looked very beautiful.

No. 8 is a large vinery, 83 feet long, 18 feet wide, forced since March 1st, and showing April 15th abundance of fruit buds. Here are the Black Hamburg, White Frontenau, Chasselas, Zinfindal, Muscat of Alexandria, Victoria Hamburg, Sweetwater, and other varieties fit for a cold grapery, or for partial forcing with heat. This house besides its chief use is very serviceable for growing tomato and other young plants. That lightly-praised new tomato, the Trophy, was enjoying the warmth of this building and thriving well under its influence.

No. 9 is a bedding-plant house, 50 feet long and 10 feet wide, built on Peter Henderson's cheap plan with six feet sash a-top and solid sides. It is chiefly devoted to fuschias, stocks, scarlet geraniums, petunias, salvias, and ageratums. A new dwarf ageratum, Imperial Dwarf, introduced last year, is one of the many attractions of this building.

No. 10 is a verlena house containing some 5000, pots. This is the first batch of the season. Another will succeed it making from 8,000 to 10,000 as the year's yield. Here are nearly 100 varieties of this deservedly popular bedding-out plant. Thirty new varieties invite patronage this year while between 60, and 70 old favorites are in course of cultivation.

Around this little glass village of ten structures there stretch, long expanses of hot-beds containing tomato, cabbage and cauliflower plants, Japan lilies, chrysanthemums, ivies, carnations, picotees, pansies, penstemons, &c.

In the open ground are tulips, crown imperials, hollyhocks, grape vines, hyacinths in full bloom, *Dielytra Spectabilis*, peonies, English gooseberries, rhubarb, asparagus, and in fact a large and varied assortment of things both useful and ornamental, for the supply of the many gardens that are coming into existence all over the country, making the wilderness to blossom as the rose, supplying the wants and gratifying the tastes of their proprietors and visitors.

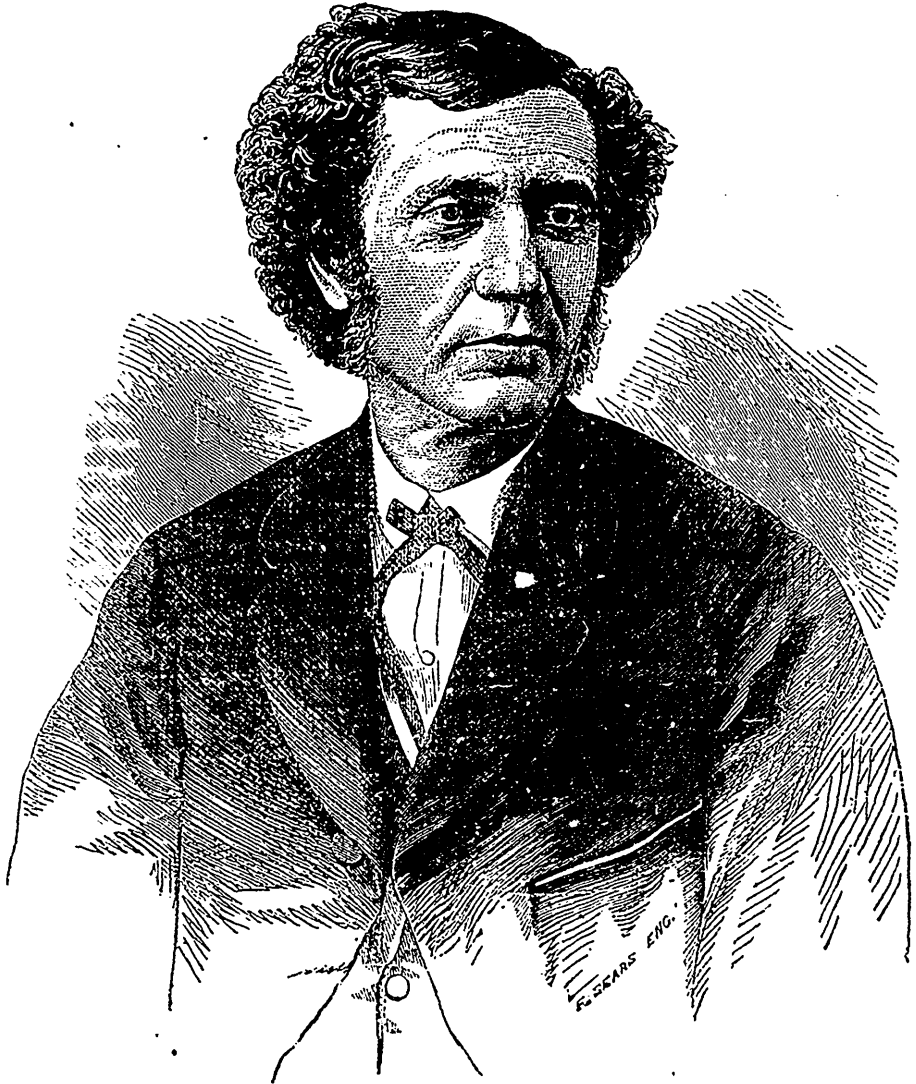
AVERSENESS TO LEARNING A TRADE.

There is the soundest of common sense in the following paragraph from the *Manufacturer and Builder*:—Why is it their is such a repugnance on the part of parents to putting their sons to a trade? A skilful mechanic is an independent man. Go where he will, his craft will bring him support. He need ask favours of none. He has literally his fortune in his own hands. Yet foolish parents—ambitious that their sons should “rise in the world,” as they say—are more willing that they should study for a profession, with chances even of a moderate success heavily against them, or run the risk of spending their manhood in the ignoble task of retalling dry goods, or of toiling laboriously at the accountant's desk, then learn a trade which would bring them manly strength, health and independence. In point of fact, the method they choose is the least likely to achieve the advancement aimed at; for the supply of candidates for positions as “errand boys,” dry goods clerks, and kindred occupations, is notoriously overstocked; while on the other hand, the demand for really skilled mechanics of every description, is as notoriously beyond supply. The crying need of the country to-day is for skilled labor; and the father who neglects, to provide his son with a useful trade, and to see that he is thoroughly master of it, does him a grievous wrong, and runs the risk of helping by so much to increase the stock of idle and independent, if not vicious, members of society. It is stated in report of the Prison Association, lately issued, that of 14,500 prisoners confined in the penitentiaries of thirty States in 1863, seventy-seven per cent, or over 10,000 of the number had never learned a trade. The fact conveys a lesson of profound interest to those who have in charge the training of boys, and girls too, for the active duties of life.

JAMES VICK.

We have the pleasure in presenting our readers with an engraving of Mr. James Vick, the celebrated Rochester seedsmen and florist, now pretty generally known throughout the United States as "the

fault to find with its reflections of his countenance. Mr. Vick is no ordinary man. He has risen from nothing to be the proprietor of one of the largest seed and flower businesses in the world. No man living has done more, if so much, to create a taste



Flower King." It is considered to be an excellent likeness. Mr. Vick complains of it that it makes him rather old and scarcely as good looking as he considers himself to be, but unfortunately, when he peeps at the looking-glass he has the same

for flowers among the masses, and to gratify the taste when created. He is passionately fond of the floral duties it is his vocation to scatter far and wide. His annual catalogue is a marvel of editorial talent, artistic genius, and typographical skill. It

is a powerful educator of the people, going forth as it does to the number of some hundreds of thousands. Mr. Vick deserves honour not only as a self-made and most successful man of business, but as a public benefactor. If he who makes two blades of grass grow where only one grew before, deserves that character, surely he who multiplies and improves the flowers is worthy of it too.

THE AMERICAN HORTICULTURAL ANNUAL.

"Better late than never" is the welcome we and many more have during the last few days extended to this valuable serial, which has been delayed in appearance in consequence mainly of its Editor having been ill. It is of such permanent value, that some delay was much better than that it should have lacked from any cause, through preparation. We are not sure but that it has gained something by delay.

The main contents are a Calendar of garden operations for every month in the year; Orange Culture in Florida; Raising Nursery Trees from seed; Dwarf Conifers; Notes on the New Apples of 1870; Pears in 1870; Peaches in 1870; Cherries in 1870; Notes on Native Grapes in 1870; Notes on Small Fruits in 1870 Blackberries; Raspberries; Currants; Gooseberries; Strawberries; New Roses tested in 1870; New Bulbs tested in 1870; Notice of New and Interesting Bedding and other Plants tested during 1870; Notes on new and noteworthy vegetables in 1870; Horticultural Implements, and Garden Appliances in 1870; Obituary notice of Horticulturists; List of Nurserymen, Florists, Seed-men, and dealers in Horticultural Stock. The articles are all written by first class authorities, and the book is a cheap and valuable fifty cents worth of useful and interesting matter. Published by Orange Judd & Co., 245 Broadway, New York.

Agricultural Intelligence.

AGRICULTURAL AND ARTS ASSOCIATION.

MEETING OF THE COUNCIL.

A meeting of the Council of the Agricultural and Arts Association was held Wednesday May 4, at the Board-room of the Agricultural Hall. Mr. Stephen White was in the chair; and there were also present the Hon. D. Christie; Messrs. White, Farley,

Wilson, McDonald, Shapley, Murton, Choate, Young, Buckland, Gibbon, Graham; and the Revs. Dr. Burnett and Bethune.

The minutes of the last meeting were read and confirmed.

BEET-ROOT SUGAR.

The Secretary read an analysis made by Professor Croft under the auspices of the Agricultural and Arts Association, of the following varieties of sugar beets, grown last year from imported seed, carefully selected, and furnished by Mr. St. George Harvey, of this city.

No. 1. White Silesian, green top; average weight 4 lb; water, 92.63; cellulose or woody fibre, 1.2255; soluble saline matter, 93.8; insoluble earthy matter 0.745; sugar, including albuminous matter and pectine 5.14.

No. 2. White Silesian, red top; average weight 4lb; water, 33.25; cellulose or woody fibre, 2.4870; soluble saline matter, 1.634; insoluble earthy matter, 1.088; sugar, including albuminous matter and pectine, 7.54.

No. 3. Knowles' improved; average weight 2lb. 15oz; water, 89.92; cellulose of woody fibre, 2.73; soluble saline matter, 1.077; insoluble earthy matter, 1.12; sugar, including albuminous matter, 6.16.

No. 4. Vilmorine's imperial; average weight 1.11; water, 86.05; cellulose or woody fibre 3.394; soluble saline matter, 1.19; insoluble earthy matter 1.41, sugar, including albuminous matter and pectine, 9.22.

No. 5. Maderburg; weight 2lb. 1oz; water, 91.09; cellulose or woody fibre, 2.824; soluble saline matter, 7.99; insoluble earthy matter, 1.16; sugar including albuminous matter, 4.17.

Mr. S. G. Harvey, representative of the Canadian Beet-root sugar Company, explained to the Council that a number of experiments were being made in the raising of superior beets for the manufacture of sugar. Until the experiments had been made, and the result ascertained, the Company was not in a position to state definitely where the works would be located; but there were no fewer than thirty-six counties had made application for sugar beet seed, and seventy-six parcels of it had been distributed gratis for experimental purposes. Mr. Harvey also stated that an application had been made to the Dominion Government for a charter, but the Company was not particularly anxious to press for it, as Sir F. Hincks could not guarantee the Company against a heavy excise duty. There was a hope, however, of a favourable view of the matter being taken by the Government. The speaker stated that two extensive beet-root sugar factories in England have offered to subscribe for £10,000 sterling of stock (Cheers) The Board of Agriculture, he had no doubt, could do much in promoting the manufacture of beet-root sugar in Canada.

ACCOUNTS.

A few accounts were presented, and Mr. Young suggested that they should be sent to a committee composed of the Hon. D. Christie, Rev. Dr. Burnett and Mr. Choate.

On the motion of Mr. Graham, Mr. Young's name was added to the Committee.

The motion as amended was passed unanimously.

ADMISSION OF CANADIAN ANIMALS INTO THE STATES.

The Hon. Mr. Christie read the following from a letter which he had received from Mr. Conger of Michigan:—

"It having passed the United States Congress that the words "beyond the seas," refer to stock imported from Canada, the following instructions were issued from the Treasury Department; To admit to free duty animals from beyond the seas, when imported for breeding purposes, the owners thereof will be required to produce to the Collector of Customs at the port of importation a certificate from the United States Commissioner at the port of shipment, showing that the animals are, to the best of his knowledge and belief, intended for such purposes; and a so a statement of the owner, made upon oath, that the said animals were actually purchased abroad, and imported into the States for the *bona fide* purposes of breeding and improving stock."

THE 1871 PRIZE LIST.

The Secretary then read the report of the Prize List Committee. The report showed that a considerable increase had been made in the amounts of the various prizes awarded to the exhibitors of horses, cattle, sheep, and grain. The proposed increase is as follows:—Road and Carriage horses, \$131; agricultural horses, \$132; heavy draft horses, \$83; Durham cattle, \$194; Devon cattle, \$126; Hereford, \$126; Ayrshires, \$126 Galloways, 662 grade cattle, \$51; fat and working cattle, \$60; for sheep—in Cotswolds, \$60; Leicesters, \$6; large pigs, \$20; Suffolks, \$20; Berkshires \$40; Ess x, \$20; any other breeds, \$20; poultry, \$54; implements, \$210; small do, \$53; field grains, \$50; field roots, \$3; horticultural articles, \$200; dairy products, \$18.

The Board recommended the trial of implements early in the ensuing summer.

On the motion for the adoption of there port.

Prof. Buckland suggested the propriety of placing racers upon the same standing in the prize list as other classes of horses.

The Hon. Mr. Christie argued that it was most injudicious to encourage the raising of fast horses in Canada, inasmuch as it fostered a gambling spirit among the young men of the present generation. He deprecated the system now pursued in the States, of having the trotting track at the exhibition held, and hoped that the Council would do all in their power to prevent such a custom creeping into Canada. He suggested that the English system of giving really good prizes for the best horses for general purposes, be adopted.

The report was then adopted *nem con*.

THE KINGSTON BUILDING.

The Secretary reported to the meeting that in reply to a communication with regard to the preparation for the exhibition at Kingston, the Mayor of that city had stated that nothing had been done except the appointment of a committee.

THE TRIAL OF IMPLEMENTS COMMITTEE.

The following gentlemen were appointed upon the committee to make arrangements for a competitive trial of agricultural implements during the ensuing summer:—The Hon. James Sheeh, Hon D Christie Messrs. Graham, Chas. Rykert M. P. P., Stephen White, McDonald, Murton and Wilson.

THE PROVINCIAL EXHIBITION.

A deputation was appointed to confer with the authorities in Kingston respecting the requisite accommodation for holding the next exhibition. *

PRINTING CONTRACTS.

The tender the *Globe* for the printing of the association for the ensuing year was accepted. The council then adjourned until 8 p. m.

EVENING SESSION.

The Council resumed its sittings at 8 p. m.

REPORT OF THE EXECUTIVE COMMITTEE.

The Executive Committee presented their report, which was as follows:—

Entries to be made on or before the twentieth of June, to the Secretary of the Association at Toronto, enclosing a dollar for entry money.

The committee recommended that the Secretary be instructed to advertise at once for offers of funds suitable for the trial of implements of the following sizes, viz:—

Full wheat, 20 acres; grass, 20 acres; for ploughing, (sod) 15 acres; peas, 10 acres; logs for 10 cords of wood, and land suitable for testing cultivators and gang ploughs.

The following prices were recommended to be given at the trial of the implements:—

Mowers—1st prize, \$20; 2nd do, \$15; 3rd do, 12; Reapers—1st prize, \$30; 2nd do, \$20; 3rd do, 15; Thrashing Machines—1st prize, \$50; 2nd do, \$40; 3rd do, \$30

Pea Harvesters—1st prize, \$12; 2nd do, \$9; 3rd do, \$6.

Fanning Mills—1st prize \$8; 2nd do \$6; 3rd do, \$4.

Straw Cutters—1st prize, \$8; 2nd do, \$6; 3rd do, \$4.

Sulky Horse Rake—1st prize, \$12; 2nd do, \$9; 3rd do, \$6.

Ploughs 1st prize, \$25; 2nd do, \$20; 3rd do \$15.

Harrow—1st prize, \$12; 2nd do, \$9; 3rd do, \$6.

Cultivators (double)—1st prize, \$20; 2nd do, \$15; 3rd do, \$10.

Grain Crushers—1st prize, \$12; 2nd do, \$9; 3rd do, \$6

Machines for Sawing Wood—1st prize, \$20; 2nd do, \$16; 3rd do, \$10.

Gang Ploughs—1st prize, \$20; 2nd do, \$15; 3rd do, \$10.

The report was adopted.

Several accounts were presented and recommended to be paid.

Several matters of detail were discussed and the meeting adjourned until the 21st of June, at two o'clock in the afternoon. *Globe*.

THE COLORADO POTATO BEETLE.

To the Farmers, Gardeners, and Inhabitants of the Counties of Lambton Kent and Essex:

Beware! Beware of the Colorado Potato Beetle! Last year the advanced guard of this great western army of destroyers reached your shores, and this year you may expect to have your fields devastated by countless hosts, if you do not ward off the foe. If you make a determined and united effort, you can undoubtedly save your crops of potatoes and prevent the spread of the pest.

As our readers are probably well aware, this destructive insect has been gradually advancing eastward from the Rocky Mountains, at the rate of fifty or sixty miles a year, and, as we predicted some months before, it reached the shores of Ontario last season. Our country happily is protected by a

chain of road lakes, which present an almost insuperable obstacle to the passage of this insect; but we have vulnerable points along the counties above mentioned, where we are only separated from the adjacent State of Michigan by the River St. Clair. The beetle possesses considerable powers of flight, which enable it to make its way over moderate distances, so that the river presents no effectual barrier to its passage, and it has even been found that numbers survive after having been drifted twenty or thirty miles across a lake. From the entrance, then, to the St. Clair on Lake Huron and its outlet on Lake Erie, the passage of this insect must be guarded against, or else the whole country will be devastated in no long space of time, and the community will be exposed to a loss of several millions of dollars' worth of potatoes.

But how, it will be asked, can this pestilent Colorado beetle be kept off? It entered our country in small numbers last year, and will probably come in far greater numbers this year. What can we do to prevent it? The first thing to be done by all who cultivate land in the counties of Lambton, Kent and Essex, is to *burn very few potatoes yet*, only enough to barely supply the wants of one's household. Next, do not plant any at all unless you are determined to fight the insect, without relaxing all through the season. To do this effectually you must not have too large a potato field, and this you must watch carefully, from the time the leaves appear until you gather in your crop. When the insect makes its appearance early in the season, make a few small heaps of potatoes here and here in your field the beetles will be attracted to these for food and you can then easily kill them by going round every morning and crushing under foot all that you can find. This will prevent their laying their eggs and producing a fresh brood. Again, plant your potatoes, if possible, in a field surrounded by timber; or, if that is impracticable, surround it with a wide border of Indian corn. If all these means prove insufficient, then you will have to resort to the use of "Paris Green" which, being a preparation of arsenic, is a deadly poison. Be very careful then how you use it; never leave it for a moment within the reach of children or careless grown people. Mix it with eight or ten times as much flour, ashes, plaster, or slacked lime, and dust it over the affected plants through a coarse muslin bag or sieve attached to the end of a stick. Keep to the windward of it when at work, and apply it when the dew is on the foliage.

We trust that every one in those counties will adopt these precautions, and so that all in the neighbouring counties will be on the watch as well. There is no saying how far east the beetle may get this year—one specimen was found at Stratford last summer—so let all be on the look out. As those on the western frontier who keep off the insect not only benefit themselves, but also the whole population of Canada we would suggest that a reward should be given by the Government of Ontario, or by the various municipalities, or by both, for all fields of potatoes that are kept free from the pest where it actually makes its appearance. Or perhaps a better plan would be for the reward to take the shape of so much a hundred for all authenticated specimens gathered in Canada, in the same manner as a price is set upon the head of the Plum Curculio by the Fruit Growers' Association.

Last year we made an additional suggestion, which we still consider of importance. It is that a

tract of country, some ten miles in width or more, should be marked off along the border line between the foot of Lake Huron and the head of Lake Erie, and that the culture of the potato should be absolutely forbidden throughout the whole tract during the prevalence of the pest in the neighbouring State of Michigan. We commend the suggestion to the Minister of Agriculture and all others interested in the matter.—*Globe*.

THE CROPS IN THE UNITED STATES.

The official report of the United States Department of Agriculture, under date May 1st, gives on the whole a very favorable report of the condition of the crops through the States, as far as it could be ascertained at that early date. The spring has been unusually early, and the growth of grain advanced two to four weeks beyond its accustomed status. There is no State in which winter-killing is not exceptional, and in several it is a most entirely unknown. In Maine there has been considerable loss from winter-killing during the variable weather of February and March. Vermont grains, too, have suffered somewhat from open winter. The reports are favorable from Massachusetts and Connecticut. No wheat is grown in Rhode Island, and indeed very little in New England. The warm autumn gave a strong growth in Western New York, and though the covering of snow was light the plants retained their vigor through the winter, and are in more than medium condition. Eight counties report "very good." Three-fourths of the returns from this State indicate merely an average prospect. Of fifteen counties reported in New Jersey, none present discouraging accounts, but three hint the prospect of an average, two estimate an advantage of ten per cent, three of twenty per cent, and one of twenty-five, while others return the crop "better than for years and looking remarkably well." Forty counties in Pennsylvania send returns, of which only two represent an inferior prospect, and three-fourths report a more than average luxuriance. The wheat crop in Indiana is reported "remarkably fine." "though the fly has destroyed parts of fields. Wheat and rye look well in Delaware. Every return from Maryland is favorable in comparison with last year. The crop is generally more advanced than usual, and in one county the report states that "it never before within the recollection of the oldest inhabitants had so promising a look." Of thirty-six returns in Virginia, three are less favorable than usual, seventeen show great improvement and the remainder report a medium appearance. The reports from the Carolinas are favorable, with the exception of a few counties where wheat was partially winter-killed. In some portions of Alabama wheat is inferior, but in others it looks well. A very small area of wheat or rye is sown in Mississippi or Louisiana, except in the latter for winter pasture. What there is of it presents a uniformly promising appearance. In some counties in Texas, wheat has been greatly injured by drouth; in others the prospect is good. Not a county in Illinois reports a poor appearance of winter wheat or rye, and in most of them the report is that it "never looked better in thirty years." The Cook county correspondent reports no wheat sown in that county, in the following terms: "We had long since ceased to speculate in winter wheat and rye, as it is easily shown that every dollar we ever made in winter grain cost us

16 shillings." Of 52 counties reporting in Indiana, none represent winter wheat in poor condition, and but five indicate a mere "average prospect," while more than a third state that the appearance of such crops was never excelled at the same season. There is some complaint of the ravages of the Hessian fly in two counties in Ohio; in twenty-six counties a condition above an average is reported; in seven the winter grain looks better than for several years, and in fourteen it "never looked better." Very general returns from Michigan represent winter grains in superior condition, eleven only giving an average promise, and none lower than average. In Wisconsin there was some injury in the more northern counties from freezing, six reporting low condition, but the larger number represent the crop as better than usual. But twenty-six counties report winter wheat. Very little winter grain is grown in Minnesota. Five counties report wheat looking well, and two make unfavorable reports. In a large number winter rye is grown, and generally looking well. Less than a tenth of the wheat of Iowa is the winter variety. Only sixteen counties report favorably. In Kansas the returns represent the range of condition of winter wheat from "good" to "the finest ever known" and "an immense yield is expected." Nebraska is a spring wheat region, but the winter variety "looks well, what there is of it." The reports from California are generally unfavorable. Accounts are favorable from Oregon, except in one county. Where winter crops are grown in Nevada and the Territories, they are represented in good condition almost without exception. — *Globe*.

THE TEXAS CATTLE TRADE.

If railroad kings rule in Wall Street, cattle kings rule in portions of Texas. A recent letter from south-western Texas gives very interesting information in regard to this vast trade, the extent of which is known to comparatively few in more densely populated States. It is estimated there are 4,000,000 head of cattle in Texas at present, one-fourth of which are ready for market and have already been started across the country for Kansas and Nebraska, for shipment east and to California. The plains over which these cattle range until they are three or four years of age, contain 142,000,000 acres of rich pasture.

The following are a few of the ranchmen, with their respective herds:—Richard King has a farm on the Santa Catrutes River, of 84, 32 acres, on which he keeps 65,000 cattle, 20,000 horses, 7,000 sheep, and 8,000 goats, and employs 300 Mexicans to attend them. He sells 10,000 calves annually. Mr. O'Connor owns a little pasture field on the San Antonio River, where he grazes 40,000 head of cattle, and sells \$75,000 worth each year. He commenced the business in 1852 with 1,500 head, and his present enormous herd are the result of natural increase. Another man named Robidoux has a ranch of 142,840 acres near the mouth of the Rio Grande. It is surrounded on three sides by water, and to enclose the fourth required thirty-one miles of fence. He has 30,000 head of cattle besides an immense amount of other stock. John Hitson, whose farm lies on the Brazos River, has only 50,000 cattle, and drives to market 10,000 or so annually.

It is a significant fact that it required 111 cars per day during the shipping season last year to remove

the Texas cattle from Abilene, Kansas and that a single bank in Kansas city handled during the short season over \$3,000,000 of cattle money. This trade has increased in extent rapidly from the time the first shipments were made to the east, a few years since, to the present time, and from the high price which beef commands at the present time there is every reason to believe that it will be largely increased in the future. — *Atiwaukee Sentinel*.

NEW IMPORTATIONS.

Mr Long has again returned from England with a fresh importation of valuable stock. Among them he brings a promising, clean limbed, and powerfully built colt, of the agricultural or heavy draught class. He was sired by Oxford from a Yorkshire mare. He stands 16 hands 1 inch, and though not quite two years old weighs 1,650 lbs. He will doubtless prove a useful acquisition. Mr. Long has also brought over six very fine Leicester yearling rams, two of which he has a ready sale—one to Mr. Lawrie, of Sarabara, and the other to Mr. Aldrick, of Thornhill. As will be seen by advertisement, these fine animals are offered for sale.

At the exhibition of stallions, in connection with the Hope Agricultural Society in Port Hope, there were ten entries of general purpose stallions, and two entries of blood stallions. The prize of \$75. for the best blood stallion, was awarded to Mr. James White, of Trafalgar, for "Touchstone." The prize of \$75. for the best general purpose stallion, was awarded to "Performer," owned by Mr. Hall, of Orono.

PEARS NEAR MONTREAL.

In a report made to the Montreal Agricultural and Horticultural Society, by Mr John Archbold, that gentleman states that the following varieties are the twelve best adapted to the climate of the Island of Montreal, viz.: Summer Doyenne, Dearborn's Seedling, Beurre Goubalt, as dwarfs; Bartlett and Bonchretien, either as dwarfs or standards; Flemish Beauty as a standard only; White Doyenne, Glout Morceau, Belle Lucrative, and Kingessing, as dwarfs; Oswego Beurre, as standard; Onondaga, as standard or dwarf; and Vicar of Winkfield, as dwarf. He adds that the Beurre d'Anjou is a very fine pear, but does not seem to be hardy on the quince stock.

Mr. James H. Springle reports the following summer varieties, viz.: Doyenne d'Ete or Summer Doyenne, Osband's Summer, and Tyson, as hardy and coming into bearing early, and recommends that they should be grown on the pear stock. As autumn sorts, he names the St. Shislain, Beurre d'Amas, Belle Lucrative, Flemish Beauty, Louise Bonne de Jersey, White Doyenne, and Oswego Beurre; and says they are hardy, and the fruit of the finest quality. These French sorts seem better adapted to that climate than many of the finer American varieties, such as the Seckel, Kingessing, Sheldon, etc. Of these, he says, the White Doyenne and Louise Bonne de Jersey will do well on quince stocks. For winter sorts, Mr Springle recommends the Lawrence and the Glout Morceau. He adds that he has fruited in his experimental garden, during the

last twenty years, upwards of three hundred varieties of pears on both quince and pear stocks, and his experience has been that, with few exceptions, the quince stock in the climate of Montreal *will not* cause the tree to bear fruit earlier than those grafted on the pear stock; and that it is also a fact that many varieties of pears which do well on the quince stock elsewhere, make in that climate such a strong succulent growth that the wood never ripens, and is mostly killed the following winter. He also states that he could have given a longer list of varieties suitable for the climate, and also a number of seedlings of both apples and pears of great merit, but that he has confined his remarks to the twelve best sorts.

Clinch bugs are already making their appearance in the wheat fields of Illinois.

More timber is being planted in Iowa this spring than during the five previous years.

Orchard grass is receiving much attention among farmers in the Atlantic States. It is the earliest and latest of all the grasses, and if properly managed with other grasses, is excellent both for pasture and hay.

Six thousand dollars will be offered in premiums at the Central Fair to be held in Hamilton next fall. The executive committee had a meeting on Saturday to make up the prize list.

The wheat prospect in Central Illinois is represented as very encouraging. The growing wheat stands thick upon the ground, and the recent rains and warm sunshine have given it a luxurious appearance. Growers predict the earliest harvest known since Illinois was settled.

The West Durham Agricultural Society intend to throw their Fall Exhibition open to the Province. Intending exhibitors are requested to transmit \$1 to the Treasurer, Mr. M. Porter, Bowmanville, before the first of June.

THE MICHIGAN STATE FAIR.—The Executive Committee of the Michigan State Agricultural Society have decided to hold the next State Fair at Kalamazoo. The people of Kalamazoo have undertaken to erect all the necessary buildings without expense to the Society; to give a lease of the National Park grounds, and also to contribute very largely toward defraying the necessary expenses of the exhibition.

At a recent sale of Mr. E. H. Cheney's shorthorns, at Gadesby Hall, Leicester, the total amount realised from forty eight cows and eight bulls was £51,13:8s. The average price of the cows was £96 10s; that of the bulls £62 7s. The highest price given was £500 for the cow Cherry Princess, bought by Lord Dunmore.

EARLY PEAS.

On the 28th of August, 1867, I planted a row of Landreth's Extra Early Peas; they came up, and were growing well, when on the morning of October 8th, while they were full of small pods and blossoms, we had a sharp frost that froze the vines quite stiff, and killed every blossom and pod on them. The vines were left, and continued to grow as well as before, but did not produce another blossom. The practical lesson learned from the above experience was, that while we may get frosts sharp enough to kill blossoms or pods, it would not injure the vines. If we want early peas,

acting on the above experience, we must plant early.

On the 17th of February, 1869, I planted two rows of Landreth's Early Extra Peas; March 17th they appeared above the ground, and, although we had some very rough weather and the vines were frozen stiff several times, they grew well, and on the 30th of April they commenced blossoming; on the 4th of May, they presented a fine display of blossoms; we gathered them on May, 26th. They were a few days earlier than any other peas around here; they produced an abundant crop; soil, good loam, fifteen inches on clay soil.

Carter's First Crop Pea is earlier than Landreth's Extra Early, in this vicinity. On the 1st March, 1869, I planted two rows of Carter's First Crop Pea by the side of two rows of Landreth's Extra Early Peas, they appeared above the ground April 9th. The month of March was unfavorable to vegetation. The Carter's commenced blossoming May 9th, and Landreth's May 13th. I gathered Carter's June 4th, and Landreth's May 13th; each produced an abundant crop.—*Cor. in Rural New Yorker.*

TRANSPLANTING EVERGREENS.

From the 1st to the 20th of May is considered a favorable time to transplant evergreens. It is an essential thing, without which all your labor is lost, that the roots of every kind of evergreen should be protected from the sun and wind, and be kept wet or moist from the time they are taken up until they are set out. This is well settled. All evergreens thrive best on a rich warm soil; but the different kinds of the pines, and the red cedar, do better in high, sandy soil, being more easily affected by dry weather than the spruces, hemlocks, white cedar, or firs. Hemlock is a beautiful tree, and will retain its vigor and color in any shaded nook; if the soil be a little moist, all the better.

My plan is to dig a hole three feet in diameter, and one and a half feet deep; put in four inches of well-rotted manure, and fill up to within eight inches with the sods and surface soil. Trim off by clean cutting all roots that have been broken or bruised; and after thoroughly wetting the roots, place the tree in the centre of the hole, and carefully place the roots as evenly spread over the surface of the earth as possible. Cover the roots with earth using the hand to place it in contact with all the roots. Keep the tree upright, and fill in, pressing the earth firmly upon the roots, and about the stem of the tree. It is well to guard against a dry season by mulching with tan bark, chip or barn-yard manure, to the depth of three or four inches. Success is very certain with the above conditions.—*Cor. Western Rural.*

STEAM AND PROGRESS IN AGRICULTURE.

In agriculture, as elsewhere, the steam engine is gradually but certainly effecting a mighty revolution. The grand leading features of the country—the collection and store of our ample rain supply, the arrangement of a good system of irrigation and of drainage, the general utilization of sewage, the defecation, banking, and stocking, of our rivers, and the systematic provision of artificial methods for

drying the in-gatherings of a wet August and September—have been little more than indicated, and chiefly in our columns. But the spreading use of steam plows, the application of ingenious modes of economizing labor, the increased cleansing of land, the removal of weeds, even to the loss of the picturesque beauty of the scarlet chequering of our cornfield by the poppy; the economy of time, and less than of cost, in plowing, in sowing, in reaping, in stacking, and in threshing; the extension of new and lucrative crops, as that of beet which in France produced a return of £9,000,000 sterling in the year 1869; the economy of seed, and the selection of the better qualities of grain for reproduction—all these improvements are silently making way. A sum fully equal to the national expenditure might, within a few years, be freely added to the annual income of those who live on and by land, by the free employment of available means.—*BUILDER.*

A LARGE DAIRY.

It is said that the second largest dairy in America (the first being that of Chas. Weeb Howard, of California,) is located about four miles from St. Louis. There are 800 cows in the stable. They are attended by Swiss milkers. The chief food used is ground corn, mixed with malt and oil-meal, cooked by steam. The average amount of material consumed per day, is about 4.0 bushels of malt, 6,000 pounds cut hay, fifty bushels of corn meal, fifteen sacks of bran and oil-meal; cut hay and bran mixed together are also furnished. The summer pasturage of this mammoth dairy embraces an area of over 1,000 acres of fine rolling land, with numerous springs of cold water. The average daily yield of milk at the present time is 800 gallons, with eighty gallons of cream.—*Ex.*

FARMING IN NORWAY.—A correspondent of the *Cornry Gentleman*, in an article on farming in Norway, says:—"The amount of work necessary to raise and secure their scanty crops is vastly greater than anything we are acquainted with. The fields are small and irregular in shape, so that labour is wasted in tilling them. There is so little warmth in the sunshine that they cannot make hay on the ground, and the green grass has to be hung up on racks to dry before it can be put away, and the grain is all tied up in bundles when first cut, and then strong stakes are set in the ground, and the bundles in pairs are hung on either side of these poles, pair after pair being put on until the pile is as high as a man can reach. In these grotesque looking stacks the grain is allowed to stand until it is dry, when the men and women carry it on their backs to the barns."

THE FOOT AND MOUTH DISEASE.—"It seems," says the *Practic Farmer*, "that this disease is far from being extinct in the Eastern States. In fact, there appears to be as much cause for alarm now as at any previous time. The Cattle Commissioners of the State of Rhode Is and have adopted resolutions prohibiting the bringing of cattle into that State from the cattle yards at Albany, N.Y., on account of the liability of their being contaminated with the disease. It is expected that Massachusetts and Connecticut will adopt a similar measure. At

present A bany seems to be the great distributing point of the malady. The Canadians do not yet admit that they have it in their herds, but there is no doubt that it prevails in parts of New York, Massachusetts, Connecticut and Rhode Island."

CATTLE DYING IN CALIFORNIA.—The *Sacramento Union* says: The numerous droughts affect the stock cattle more injuriously than any other interest. The loss of a crop of wheat in one year does not affect that of the next, but the cow not only gives no increase in the year of drought, but often dies, and cannot be replaced until after a lapse of three years. It was reported in 1856 that 70,000 cows had died in Los Angeles County alone that year; and in 1863 and 1864 the loss in that State was estimated from 20,000 to 300,000. In Santa Barbara Co. the number assessed in 1863 was 97,000, and in 1865, 12,000, indicating a loss of 85,000. In many ranches of the southern coast 75 per cent died. The surveyor-general reported 436,000 in 1866, after having found 648,000 in the beginning of 1863.

MACCARONI WHEAT.—The *Central Californian*, of March 8th, says.—"S. Baker, who lives about four miles above Hollister, brought to our office, the other day, a sample of wheat he called macaroni wheat. The grains were about three times the size of those of the common wheat. In France this kind of wheat is ground into flour; here in California, and other parts of the United States, it is used for macaroni soup. Mr. B. informs us that he has about thirty acres of this grain sown on his place, and that its yield is much greater than that of common wheat. A Mr. Nash, a year or two ago sowed fifty pounds of this grain somewhere in Santa Clara Valley, and it yielded him fifty sacks. If the thirty acres which Mr. Baker has in does well, it is his intention to sow more next year. There is a mill in San Francisco preparing it for use."

Our Country.

LECTURE BY VEN. ARCHDEACON McLEAN.

INTERESTING ACCOUNT OF MANITOBA AND THE NORTH-WEST.

Notwithstanding the rain and general unpleasantness of the weather, a large audience assembled in the Mechanics' Hall, in this city to hear the lecture of the Ven. Archdeacon McLean.

The chair was taken by His Worship the Mayor, and on the platform were the following gentlemen, viz., Adam Brown, Esq., Col. McGivern, James Turner, Esq., and John Stuart, Esq.

The chairman in a short address, in which he pointed out the interest Manitoba had for us in consequence of recent events there, introduced the lecturer to the audience.

The Rev. gentleman on rising was received with cordial applause by the audience. He began by expressing his pleasure at seeing so many present on a night so unpropitious, but it showed him there was no possibility of drowning Manitoba out (applause). He was glad to say that he had been in the most cordial manner received in Canada, whenever the object of his mission became known. Ottawa had handsomely contributed \$1,000, and he had not a doubt that Hamilton and other cities would do equally well. When he arrived in this city

he went first to one of the editors of the city press, and the first thing he did was to go over with him and introduce him to others (laughter). The lecturer here spoke glowingly of the Dominion of Canada, which he likened to the Eldystone light-house, each stone dove-tailed into the other until all became like a solid rock (applause). The foundation rock was England, and the stones were the Provinces, the cement which bound them together was the love of British principles and loyalty to the British throne. (Cheers.) He hoped the day would yet come when all Great Britain would be confederated provinces, each group with a scion of the Royal House reigning as King, and and Her Majesty over all as Empress. (Applause.) Why could not we have such an Empire as well as Germany? She had acquired her unity through seas of blood while we might achieve ours through the operation of peaceful principles.

Coming to Manitoba, he might say that it had been a noisy little province, (laughter), but he believed the noise was all over now and an area of prosperity had set in. With a good healthy English speaking emigration that prosperity was placed beyond a peradventure. The first question that met him at this point was, how to get to Manitoba. The lecturer here read the Government regulations for taking emigrants via way of Collingwood to Fort William, and thence to Fort Garry. He thought these arrangements were admirable, and they involved but little cost. The Government in this matter had acted with great forethought. Another route from here was over the Great Western Railway and the Detroit and Milwaukee road, and thence by St. Paul, Pembina and St. Cloud. By this route, in summer, if all the arrangements were completed, which he had reason to believe were by this time, the emigrant could go by railway to the Red River and thence by steamboat for the remainder of the way at a cost of not more than \$50 first class and \$40 second class. In comparing the Northwest with other parts of the Dominion, the first striking advantage of the former was the prairie land. To clear a wooded farm cost about \$2200 per acre, and thus the cost of clearing 100 acres was \$22,000, and he thought he was not wrong in saying that without the aid of capital and hired labor it took ten years of the backwoodsman's life for this work. On the other hand the prairie was ready to your hand, and you could reap a plentiful harvest in the second season. The proper time to commence operations was July, then the sod was turned under, and its rich juices fertilized the land, which in the following year would yield abundantly. Then there was the question of roads. In bush land it cost \$500 for every mile of road made, and after that expenditure the road was no better than the prairie road the first day you set foot on it. There had been much exaggeration with regard to matters in Manitoba, but with regard to the fertility of the soil there could be no exaggeration, for there was no more fertile land in all God's creation. All grains ripen there in about 90 days, and wheat yields from 35 to 45 and even 50 bushels to the acre, and with proper rotation of crops and manuring it could be kept up to this standard. Last fall he had paid a visit to a Canadian farmer in Manitoba, and saw as the produce of his farm 1,000 bushels of as fine potatoes as could be grown under the sun, in his garden where sunflowers ten and eleven feet high, besides

vegetables of every kind in luxuriant abundance. The farmer assured him that he had never seen such fertility anywhere else. In regard to the swamps, of which they had probably heard much, it was to be remembered that they were not bogs at all, but had good hard bottoms, and as the river channels were very deep the swamps could easily be drained. There was no dearth of wood along the river banks, and the highest he had paid for it in Winnipeg was \$2.50 per cord. On Lake Winnipeg there was plenty of stone for building purposes, and there were houses in Winnipeg that had been built of native made brick. Winter begins generally about the middle of November or beginning of December. He had done church building in the open air in December last; and the Red River is clear of ice about the third week in April. [The lecturer here expressed to pay a compliment to the Ontario Volunteers, whom he declared to be as well conducted a body of men as he had ever seen.] The sleighing in winter was magnificent, and they had no January thaw. In fact you might back your boots in the beginning of winter and their brightness would neither be dimmed by wet nor dust until the following spring. (Laughter.) The thermometer goes lower there than it does in Ontario, but we have but little wind, and as a consequence the cold is not so much felt. Neither is the atmosphere damp, but is, on the contrary, delightfully clear and dry. In short, to use a homely expression, the cold does not reach one's bones like it does in Canada (laughter). He had lived in Canada eight years, and therefore knew how to compare the two climates. The nights in Manitoba are very clear and brilliant, and he had never seen anything in his life to equal the magnificence of the beautifully tinted Aurora Borea is. He might say, too, that they had an Indian summer every year in Manitoba, and to illustrate the beauty of the sky at this time he related how the Bishop said to him one evening, whilst standing at his door looking up to the heavens, that he had never seen any skies to equal those of Manitoba excepting the skies of Italy (cheers). The climate was dry and salubrious, and he could say, as far as his own experience went, that none could be healthier. He offered his own appearance, after four years and a half of life there, as a living example (cheers and laughter). And now he came to the most important point of his lecture. "Who are most wanted in Manitoba?" and he would answer it carefully, after gaining all the information he could, coupled with his own experience. The farmer and the mechanic were in largest demand. A farmer with a wife and grown up sons and daughters who would work, could in a few years he believed, gain a competence there, and the young farmer determined to work and live a proper life, would be certain to thrive beyond his own expectation. And he would by all means recommend any young man going out there to take with him some large hearted Canadian girl as his wife. (Cheers and laughter.) And in passing he would caution all men, and particularly young men who go to Manitoba, to beware of that curse of many a household and destroyer of peace and happiness—strong drink. (Hear, hear.) Before they started he would like them to go down on their knees and swear never to touch a drop of the cursed liquor. There is room too for a few tailors, he believed in competition, and the only tailor in Winnipeg last summer, he believed, had almost made a fortune.

He himself had paid \$15 for the making of a coat, and therefore he was able to express an opinion on the subject. (Laughter.) There is also abundance of room for shoemakers and plenty of work for tinsmiths. The lecturer then passed to the subject of the land. He believed he would yet live, if God spared his life for the allotted three score years and ten, to see the commerce of Asia passing through the fertile belt, (the valley of the Saskatchewan.) It contained ten millions of acres. Then there is the Swan River District, which Professor Hind, of Toronto, says is the most beautiful country any one could conceive, and which he thinks could not be surpassed in nature. Some American gentlemen, bankers and capitalists, had travelled all through the North-West last year, and they had given it as their opinion that if Uncle Sam could get hold of it, it would be the making of him. (Cheers.) But they would take care not to let him. (cheers.) He trusted that the wholesale men of Hamilton would not lose sight of the Saskatchewan and Assiniboine valleys. Already they were sending large quantities of goods to the North-west, and he hoped they would reap a rich harvest, for a more liberal and kind-hearted lot of gentleman he had never had the pleasure of being acquainted with (cheers). He trusted that a thoroughly British population would people the North-west, and that right speedily, too. Thousands of British subjects were every year moving into the United States and settling there, because they could get land there that would give them a crop the first year without the labor of felling trees. We wanted all the bone and muscle for ourselves, instead of furnishing it to Uncle Sam, and he saw no reason why we should not get it, when we could offer a superior soil to the farmer (cheers).

The speaker next referred to the coal beds of the Saskatchewan, describing their extent and richness in glowing terms. These coal beds appeared to him to be reproaching the nation for neglecting them so long. They were peeping out of the earth in astonishment at the carelessness of the people in not opening them up. He had a theory of his own concerning the history of these coal beds, which he briefly sketched; and he felt that the day would come when they would be furnishing heat and comfort to tens of thousands of people inhabiting the vast country of the North-west. In concluding his lecture the Ven. Archdeacon briefly explained his object in visiting Ontario—to raise the necessary funds for the endowment of a collegiate institution at the town of Winnipeg, which, while being a credit to the country, would afford to the youth of the new Province the means of obtaining a first-class education. He referred to some of the dangers which had to be guarded against and the difficulties to be overcome in providing educational facilities for a new country like Manitoba. The main objects of the institution for which he was soliciting aid were three in number; 1st. to provide for the proper training of clergymen of the Church of England to minister to the spiritual wants of the inflowing population belonging to that denomination. 2nd. To provide for the training of the Indian youths, who would, in time, go forth as teachers to their own people. There were some four or five of these youths at present in the college, and it was interesting to see the progress they were making. 3rd. To give good, sound education to the young men of the country, without distinc-

tion as to sect, creed or nationality (applause). Until lately the Presbyterians of that section had been availing themselves of the advantages which this college afforded, one of the students being a son of the Rev Mr. Black, senior Presbyterian clergyman in the territory. He paid a high tribute to the worth of this minister, who, in a speech after one of the college examinations, expressed himself as highly pleased with its management, and as glad to find that the sons of Presbyterians were treated in every respect as well as though they belonged to the Church of England. He hoped the audience would contribute as liberally as possible to so worthy an object. The venerable gentleman then took his seat, loudly applauded.

Gentlemen then passed around and took up a collection, which was found to amount to \$56.75.

Resolutions of thanks were then moved to the lecturer and the chairman, after which the audience gave three cheers for the Queen, three for the venerable Archdeacon, and then separated.

Bits and Man factures.

THE WIDTH OF THE RIM OF WHEELS.

A load on wheels with wide rims will run much easier on the soft track, than if the rims were narrow, provided the rims do not sink into the mud or dirt so far that it will close over the felloes. But where the track is not soft wheels with narrow rims are much the best. Wheels with a six or eight inch rim, for going on meadows, where the ground, is rather soft, or on ploughed ground, would enable a team to take a much larger load than if the rims were narrow. But when wheels with such rims come where both narrow and wide rims sink in very much, wheels with narrow rims would be infinitely better. The wider the rims of wheels are, the heavier they must be made, and the wheels should be as light as is consistent with strength and the purpose for which the waggon is to be used.

Some men will say, "Let me have a wheel the felloes of which are two inches wide, and one and a half inches deep, with a tire three-fourths of an inch thick." But this often makes a needlessly heavy wheel, and no stronger than if the felloes were one and three-fourths of an inch wide, and two and one-fourth inches deep, with tire half an inch in thickness, which is thick enough for ordinary purposes. There is no good reason why the wheels of a common waggon should weigh from thirty to forty pounds each more than other wheels of the same strength.

Wheels are often made with a smaller number of spokes than there ought to be, because the hub is sometimes too small to receive more, and sometimes to avoid the labour of making them. There is a regular rule for determining the number of spokes in a waggon wheel, which is regulated by the diameter of a wheel. The greater the diameter of a wheel the larger must be the hub and the number of spokes in it. The spokes, where they enter the felloes should be from seven to ten inches apart—never more than ten inches. The forward wheels of ordinary waggons have twelve spokes; they should never be made with less; and the hind wheels fourteen and sometimes sixteen. Wheels usually have even numbers of spokes, but when the joints of the felloes are on the tenons of the spokes, or when bent felloes are employed, the number of spokes may be odd.

Wheels designed for ox-carts and horse-carts are often made twice, and thrice, as heavy as necessary through ignorance of the strength of materials and the relative proportion which one part should bear to the other—*Manufacturer and Builder.*

GREASING WAGGONS.

The following extract from the *Scientific Press* refers to a matter of so much importance and so much neglected, that we have no hesitation in bringing it before the attention of farmers:—

"Greasing buggies and waggons is of more importance than some people imagine. Many a wheel is ruined by oiling too plentifully. A well made wheel will endure constant wear for ten to twenty years, if care is taken to use the right kind and proper amount of oil; but if this matter is not attended to, the wheel will be used up in five or six years, or may be sooner. Lard should never be used on a waggon, for it will penetrate the hub and work its way out around the tenons of the spokes and spoil the wheel. Castor oil is a good material for use on an iron axle; just oil enough should be applied to a spindle to give it a light coating; this is better than more, for the surplus put on will work out at the ends and be forced by the shoulders and nut into the hub around outside the boxes. To oil an axletree, first wipe the spindles clean with a cloth wet with turpentine, if it won't wipe without it. On a buggy or carriage, wipe and clean off the back and front ends of the hubs, and then apply a very small quantity of castor oil, or some especially prepared lubricator near the shoulders and point."

BUILDING BRICK WALLS.

In olden times hard burnt bricks only were used in building houses. The bricks were first saturated with water before being laid in the wall, and when such walls were torn down, the bricks and mortar had to be separated with a sledge or crowbar. But brick walls built in these days are chiefly made, not of hard bricks, but of stretchers and salmon, or imperfectly burnt bricks, and most commonly brought dry and warm from the kiln, and laid in the wall in that state, with mortar made adhesive by the admixture of loam.

When the bricks are laid in the mortar, as quick as a flash they will absorb the moisture and prevent cohesion, inasmuch that often the bricks can be separated from the mortar as clean as if they had not been laid in it. Bricks of inferior quality will make a tolerably good wall if dampened and laid in good sharp mortar, and whoever wishes to put up a good substantial building, should be careful not to let warm and dusty bricks be built in the walls unless first dampened with water.

HOW TO LOAD A WAGGON.

Some three or four weeks ago the question was asked whether a waggon should be loaded heavier on the hind than on the front wheels. Your reply, though not asserted to be conclusive, implied that the load should be equally distributed. I propose

a scientific elucidation of the subject, which will prove that the load should be heavier on the hind wheels, in the proportion of their diameter to the diameter of the front wheels.

A wheel is a lever, whose long arm, theoretically, is the distance from the ground to the centre of the axle; the short arm is a pivot; but, practically, it is impossible to construct a lever, of such proportions. Hence, in calculating the advantage of the lever, a wheel or a lever, allowance must be made for the size of the axle, and for friction dependent on size, other things being equal. Without going into the too elaborate a discussion, it will be sufficient to say in general terms that the power gained by a waggon wheel is in proportion to its semi-diameter, and hence, that the load on a waggon should be placed proportionally to the diameters of the front and hind wheels.

Suppose the front wheels are four feet, and the hind wheels five feet in diameter then five ninths of the load should rest on the hind wheels and four ninths on the front wheels.—*Cor. Rural New Yorker.*

SUITABLE FLOORS FOR BASEMENTS

One of the greatest faults of the house-building is to be found in want of foresight and care in the preparation for and laying of the floor. Invariably the ground under such floor is so dug out as to leave what is termed an "air space" between it and the joists; and for the circulation of the air, it is likewise necessary to leave holes in the foundation walls for the purpose. Now all this arising of the underside of the floor is procured at the expense of the comfort of the upper surface, and consequently of that of the house itself; for the inch flooring is but slight defence against the cold which must necessarily find its way beneath.

A far better mode of flooring basements, cottages, dairies, etc., is to spread on the ground a bed of air-slacked lime, on which the joists should rest and be sunk, say an inch or two deep, so as to leave no chance for air to enter, and at the same time effectually keep out all vermin, as they will not attempt to burrow in lime. At first sight, this seems to be an expensive mode of securing comfort, but it is quite the contrary. Ten bushels of lime is ample for a square of ten feet (one hundred square feet) and there are very few localities in which lime is not cheap and plenty. Such an under-lying of lime will prove a most desirable preservation of basements of floors, and render a dwelling sanitary warm and sound.—*Technologist.*

FAMILY GLUE.—I make my glue in the following way:—Crack the glue and put it in a bottle; add to it common whiskey; shake up, cork tight, and in three or four days it can be used. It requires no heating; will keep for almost any length of time, and is at all times ready to use except in the coldest weather when it will require warming. It must be kept tight so that the whiskey will not evaporate. The usual corks or stoppers should not be used. It will become clogged. A tin stopper, covering the bottle, but fitting as closely as possible, must be used.—*Georgetown Telegraph.*

Hearth and Home.

FARMERS' BOYS LEAVING HOME.

A great deal is being said and written on this subject, and naturally so, for it may justly be considered a public, nay a national calamity, that so many sons of farmers are dissatisfied with the vocation of their fathers.

But much as this fact is to be deplored, and ardently as we may wish it were otherwise, yet the painful truth fastens itself on our minds, that this condition is likely to obtain, so long as human occupations are as varied and numerous as they now are.

It is well enough to keep saying to the farmer—make your home pleasant—give to it an air of cheerfulness and comfort, that will make it a place attractive to your boys, instead of repulsive. When they leave it for a few hours or days on their return, let a holier baptism of peace fall upon them, within the sacred precincts of home, than they have known during their absence. Make it the bright spot of all the world; the oasis, toward which their errant steps will tend; the magnet that will more strongly attract than all else beside, to draw them from the lure and sin of the great world, into the charmed influences of the paternal roof.

It is an innate desire for *change* that is at the bottom of this evil, and the boys come honestly by it. We are, all of us, ever ready to change our occupation, or our place of abode, for a reasonable probability of gain in so doing. The element of permanence, or fixedness of purpose and pursuit, is not a rational characteristic with us, but the opposite is the truth. We are looking out for a chance to do better, and we emphatically do look out, away from our present life and its environments. There is scarcely a maxim more generally adapted than the one—I have nothing that I will not sell. All we have, we hold by so light a tenure, that any one can take away our possessions, as he may desire them, if he will only pay enough money; and the *rule* is, that this *enough* is about a fair market price, and sometimes less.

Very many of us have become farmers, because we could be nothing else; and though we may have come to accept it at last, as the best life adapted to our needs and capacities, yet this is more a conclusion of the head than of the heart. Many, if not most of us, have secret longings for something different—for another kind of life, than that of the agriculturist; and often the thing we covet, does not assume a definite shape; we scarcely know we do want; yet the secret yearning from the depths of their natures, many will recognize, who read these lines.

In the light of these facts, how can we wonder at our failure to beget sons who will love, with an unwavering and preponderating affection, the things that we have *accepted*—not taken hold of with the warm love of the heart. It is not in the nature of things. While we are changeable, without stability of attachment, we cannot expect our boys to exhibit the virtue of steadfastness. What we are, they will be and this to a more considerable extent than most people allow.

This characteristic being so general, we must expect to see its manifestation in our boys—during

the visionary period of life. By-and-by, their feelings will be brought into subjection, to reason and will; but now young blood will show itself for a while.

And this desire for change is not confined to farmers and their sons. It is to be seen in mechanics and their sons, and, also, more or less among tradesmen. These desire, in most cases, to change to a farm. They look out from their shops, and other places of business, to the green fields and waving woods, and sigh for deliverance from their confinement. They believe farming the most desirable of all vocations.

When a boy, and attending the village school, I well remember how many questions were, from time to time, asked me about my farm life at home, by mechanics' sons, who lived in the village. Their highest ambition was to get rich enough some day, to own a good farm. And, I am glad, as I sit and recall to mind the names of those school-mates, to know, that for a majority of them, their ambition has been gratified. They have become successful farmers, by the practice of economy and unwavering industry.

While something may be done towards holding our boys, by making their homes pleasant. Yet is it not true, that the army of recruits from the country, who annually seek the cities and towns, is largely made up of sons of well-to-do, if not wealthy farmers? Is it a one from the home of the poor or farmer of moderate means, that our young men fly? Indeed it is not. From homes of comparative ease and independence; from comfortable and often luxurious appointments and surroundings, they go forth to seek *something different—change*.

What then shall we do? The answer must be, that the case is a difficult one. But this may be said: When we love our vacation *ourselves*, as it ought to be loved, then may we reasonably look for a similar attachment in our sons. Their first impressions—their first and early love—would be for the business of their fathers, and this attachment would not be likely to change. There are *some* farmers, whose boys desire no change. Let us observe these and learn why.—*North Western Farmer*.

HOW TO GET A PIANO.

This question often asked by many an anxious farmer's wife, after visiting a neighbour who has a piano; and this question at first sight may seem difficult to answer. Before entering on the difficulty of finance, and the means to make or save the necessary amount to buy a piano, let us consider the advantage to be derived from its introduction into every farmer's household. In the first place, there can be no manner of doubt that anything we can do to lighten the cares of our wives and daughters, or enable them to more cheerfully bear with the necessary labour and privation incident to farm life, will be fraught with benefit, and nothing will do this to a greater extent, or in a more pleasing manner, than to have family music and a piano to provide it. There certainly are some grubbing undeveloped sons of humanity who will say; "What do we want a piano for? Our girls are busy enough as it is making bread, milking cows, washing dishes, and the other thousand and one household duties that are always to be done about a farm-house, and have

no time for playing on the piano." Such a man may almost as reasonably say they have no time to sleep. Such an old obstructive need not expect that the females of any household can go on from week to week without some home recreation and amusement. "We," the men on the farm, are actively engaged out of doors, and have some change, excitement and relaxation in going to town or market, or the like; but unless our daughters go with us they have literally none, except going to meeting, which generally only occurs on Sunday. Whereas if they had a piano, when work was over, or sometimes when it could be hurried through by a little extra exertion, what more delightful mode of passing an evening than to have the opportunity of enjoying, and letting others enjoy a little music; and let me tell the above old "obstructive," that his neighbour's sons would be quite as likely to "pull out" and get their day's work over an hour sooner to be able to run over to our intelligent friend's house who advocates buying a piano, and whose daughters can play it. Nothing helps work along more than to feel that some such innocent enjoyment awaits its completion. In truth, the piano is at all times and seasons a welcome addition to any household, and especially to the female portion of it.

Farmers must not think they can keep their girls and boys at home and make them contented and happy, whilst they deny them such innocent amusement.

Let me now proceed to answer the question: How can I get a piano for my daughter; and that too without seriously cramping the head of the family? Let us suppose \$110 a year in addition to the first payment of \$100 has to be found, (the first \$100 having been previously saved by some means as the nest); that will be due in about a year from date of receiving the instrument. Did you ever know a whole family set their determination to work, to do any one thing *with reason*, and not be able to do it? I never did; nor can you cite any instance. Where all are to be so much gratified and amused, and where all determined to help, it is as good as done already. The produce of two extra cows, with calves raised, will nearly pay \$60 of the amount required, and allowing \$8 more, the produce of one sow and sale of her young ones, and twenty extra hens, and sale of their proceeds, will do the rest.

I yesterday was talking to an old woman who three years since planted out fifty back currant trees, to help out housekeeping; and for two years past she has sold \$20 worth of currants each year from a small patch not more than 8 square rods. I saw the bushes myself. Almost every inmate of a farmer's family can have some one or two young animals given, specially devoted to the piano instalment, and only requiring some extra care to be worth some \$20 or \$30 in one or two years. The cost is not felt; and only requires the will and determination to succeed, to enable any one to answer the question under consideration by an immediate order for the instrument.

I would suggest, in conclusion, to any one who has not got the cows just at first, and whilst things are "turning round," persuade your father to buy you two cows on credit. He will have to pay for them if it is true, when the note given for them matures; but then, after the piano is paid for he has the cows, so it is only a question of

about two years' use of the money, or even less, and you have got a piano.—C. In *Weekly Globe*.

Poetry.

THE GARDENER'S SOLILOQUY.

To sow? or not to sow?—that is the question,
Whether 'tis nobler in the mind to suffer
The greatest torment of a gardener's life
In poring early through "fat catalogues,"
Or to take means by popping them, when sent,
Into the waste basket,—to be loathed
No more; and, by doing so, to pay we end
The thirst for new and special novelties
That flesh is heir to. 'Tis a consummation
Devoutly to be wished. To grow? to sow?
To grow? perchance to cram our beds and borders
With useless rubbish—ay! there's the rub!
For to pick out the best of the trade lists,
Full of "ennobled roots," and "improved seeds"
Must give us pause. There's the respect
That raises have for their own progeny;
For who would bear to look o'er all the lists
Now daily sent to gardeners and employers,
"Descriptive guides," "Vade mecums," "Little books."
For teaching when to sow, transplant and reap,
When he himself might the common end
By never reading them? Who would yearn to bear
To sow the good old seeds of former lists?
But that the thoughts of something after seed-time—
That the "ring-leaders," "gems," and "first crop" peas,
New broccolis, kails, French beans, and cauliflowers,
Might not turn out so profitable or early
As the well-tried old sorts, puzzles the will,
And makes us rather grow the seeds we have
Than order others that we know not of.

W. T., in *Gardener's Weekly Magazine*.

THE FARMER FEEDETH ALL.

My lord rides through the palace gate,
My lady sweeps along in state,
The sage thinks long on many a thing,
And the maiden muses on marrying;
The sailor ploughs the fuming sea,
The hunter kills the good red deer,
And the soldier wars without a fear;
But fall to each whate'er befall
The farmer he must feed them all.

Smith hammereth cherry-red the sword,
Priest preacheth true the holy word.
Dame Alice worketh braiding well,
Clerk Richard tales of I've can tell,
The tap wife sells her foaming beer,
Dan Fisher fisheth in the mere
And courtiers' ruffles strut and shine,
While pages bring the Gascon wine
Man buildeth his castles fair and high.

Where'er river runneth by;
Great cities rise in every land,
Great churches show the builder's hand,
Great arches, mountains and towers,
Fair palaces and pleasing bowers;
Great work is done be it here or there,
And well men worketh everywhere.
But work or rest, whate'er befall,
The farmer he must feed them all.