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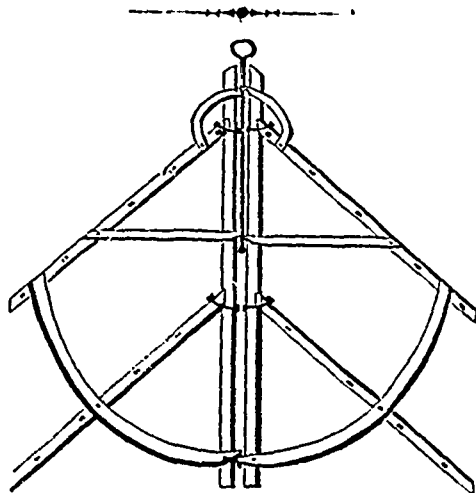
The field.

War against Weeds.

We have a decided impression that weed-growing is one of the heaviest of the many taxes upon agricultural industry. One might almost imagine that they were among the most profitable things that can be grown, from the apparent care to retain them in the land, and to grow them, which is taken by many who aspire to be called farmers. Slovenly cultivation is the source of an incalculable amount of loss, for what will support a thrifty weed will support a valuable and useful plant. When one considers the immense crop of weeds annually raised, what a pity it seems that the productive energies of soil and air wasted on them were not turned to better purpose. Many farmers have battled against the weeds infesting their land until they have lost heart; and perhaps all the time they have been endeavouring to rid themselves of these vegetable pests, every field has been surrounded by a seed-bed, and the margin of land along the fence has been the constant source whence a reinforcement has come. Thistles and other weeds have light downy seeds which the wind readily wafts about. Birds and other creatures spread them in their ordure and otherwise. You will sometimes see a field preparing for fall wheat bordered round with a magnificent growth of thistles, all in seed and ready to take advantage of the loosened earth to establish themselves. Our crooked fences furnish too much chance for this nuisance to perpetuate itself. Time spent in mowing down all weeds on the margin of fields before they go to seed would be time well employed. Could we adopt a system of farming that would enable us to dispense with all but boundary fences, it would facilitate the extermination of weeds very much. One argument in favour of soiling cattle is that it renders clean cultivation more practicable. But even as things are, much may be done by waging incessant war against weeds. Thoroughly rotting manure, repeated ploughings and harrowings, frequent use of the cultivator and hoe among crops that can be filled by these implements, "autumn cleaning,"—as late fall ploughing is very fitly styled in the old country,—these are among the tactics by means of which this war is to be carried on. And if it be real war, war in earnest, it will assuredly be crowned with victory.

Prairies in Winter.

We have more than once had occasion to remark that there are disadvantages and inconveniences about the prairie country; that western paradise, as many regard it. Among these must be ranked its bleak, desolate appearance in winter, and its exposure to high winds which sweep across those vast expanses with great force. On this subject the *Prairie Farmer* says:—"If any man can look abroad over the vast expanse of western prairies at this season of the year, and not be impressed from their dreary monotony, with the importance of planting belts and groves of evergreen and deciduous trees, hedges and wayside shrubs, then must that man indeed be dead to those emotions that surroundings beget in the minds of most mortals. The prairies are right royal in their magnificence when covered with the green mantle of spring, when the zephyr winds of summer wave their glorious covering of vegetable growth, or when decked with the varied hues of autumn. But now when frosts and storms and sunless days have changed their grandeur into the dullness and dreariness of a desert, men are led, or should be led, to look about for means to diversify and beautify the landscape."



Another Good Harrow.

To the Editor of THE CANADA FARMER:  
 Sir,—In No. 19 of THE FARMER (Oct. 15th), you gave an extract from the *American Agriculturist* containing a plan and description of a harrow made by Mr. W. D. Morton, of Lapeer County, Michigan. I send you a plan of a harrow which I made and have used for these seven years past. I do not claim for this harrow all that Mr. Morton claims for his—that it will give perfect satisfaction on both rough and smooth land; but I do say, that for new, stumpy land, it is almost complete, and has given perfect satisfaction to all who have tried it.

For old, smooth, level land, I have seen nothing yet to equal the double square wooden harrow. This harrow, Mr. Morton's harrow, and all the iron harrows I have ever seen tried, are all too dead when in motion; they lack that peculiar quiver or shake, or hursal, as they call it in Scotland, which the double wooden harrow always has, when the ground is in proper tilth, and which rejoices the heart of the experienced farmer to see, for then he knows that he is not only preparing a good seed-bed, but he is also sure that his harrow is working as it ought to do. I will leave to more scientific men to define more exactly whence this shake or quiver arises; my own opinion is, that to secure it there must be a certain amount of wood in the harrow, and it must not be concentrated too much, or too heavily loaded with iron.

I have harrowed a whole day with this harrow, on new land, and never put a hand to it to lift it, driving it through between stumps two feet apart. I doubt Mr. Morton's draught bar would be badly in the way in such a narrow passage. And, furthermore, the slats in the Morton harrow would fare badly among snags and underbrush stumps. The advantage of this harrow, in this respect, can be seen at a glance. The fastenings are all on the top; it is therefore not so liable to catch, and if caught, it can stand a good jerk.

I claim for this harrow, that it is simpler than Mr. Morton's, that it can be made cheaper, is stronger, and will therefore last longer. It is spreading fast over these United Counties of Huron and Bruce. Like Mr. Morton, I am so convinced of its being a complete harrow for stumpy land, that I offer it freely, through you, to all who need a good, strong, useful article—a harrow that will double over a cradle knoll, adapt itself to a hollow, and will not stick at a stump.

The circular-hinge bands should be iron, 3 inches wide and  $\frac{3}{4}$  thick. The centre and shoulder draught bands, 2 or 2 $\frac{1}{2}$  wide,  $\frac{3}{4}$  thick. The draught rod, one inch in diameter—the front end formed into a ring to hitch to, and a 2-inch nut on the other end, behind the centre draught band. The harrow should be made of 3x4 3-inch scantling and bolted between each tooth, with screw bolts, not rivets; for when any of the wood gives way, unscrew the bolts and they will do again. This is another advantage which this harrow possesses—if properly made at first, any farmer, almost, with very few tools, can mend it, or make it over again, as long as the iron work lasts, without calling on the blacksmith.

The wood work is worth about \$2; and a good blacksmith ought to make wages at \$8 for the iron work.

Should this article on harrows suit you, and you give it a place in your valuable columns, I may at some future period give your readers my experience and opinions of the ploughs at present in use in this part of Canada.

I.  
 Hay, County of Huron, Nov. 11th, 1864.

## The Chess and Wheat Conversion.

To the Editor of THE CANADA FARMER :

SIR, Notwithstanding your article on the alleged change of wheat into chess, in No. 20 of THE CANADA FARMER, there are, it seems, people still left who imagine that their crude experiments prove the impossible transmutation. I wish to show that no such careless experiments as those of Mr. J. Hunter Sears deserve the slightest attention, for none of the elements of deception are precluded in such ill-conducted efforts. He does not seem to be aware of the wonderful amount of seeds contained in the soil, whose vitality is only dormant, waiting for their development, favourable circumstances. Yet any Canadian, of even ordinary observation, ought to be well acquainted with the fact, that as soon as he has cleared off the original forest a new variety of vegetation appears on the soil. Raspberries spring up where trees had grown, and species of forest trees differing widely from the former occupants, always are the first to grow on the cleared land; yet I suppose that Mr. Sears will not assert that maples are converted into raspberries. In Scotland, when the heather is cleared off the land, Dutch clover covers the soil, yet, I presume, it is not converted heather. Sowing wheat in a rod or two of cleared forest, and finding, a year after it has ripened, chess growing on the spot, is exactly analogous to the instances I have related; for what has really happened in this case, that the disturbance of the soil has brought other seeds into a condition favourable for their growth, and I am confident that if the ground had been examined by a competent botanist, chess would not have been the only plant different from the neighbouring vegetation that would have been found developed. To show the wonderful abundance of lying seeds in the earth waiting for favourable circumstances to enable them to grow, I will instance an experiment of Darwin's, who took six and three-quarter ounces of soil from six inches beneath the surface, and placed it in his study beneath a bell glass, and gathered no less than 557 plants from that soil, occupying no greater space than a breakfast cup. Here we have an extraordinary number of plants springing into life the very moment circumstances favour their growth, but which had remained in the ground dormant for an unknown period, and very likely would have remained for many years, perhaps ages, if they had not been brought into light, air and heat. Every farmer knows, or ought to know, that he cannot keep his land, however clean he may think he has made it, free from weeds, without the constant use of the plough, scuffle and harrow, for the deeper ploughing and the more he stirs the soil, the greater the number of seeds he brings into those conditions favourable to growth.

Chess, then, may lie in the ground, and only be developed by the proceedings necessary for planting the wheat, and we ought, in all fairness, to conclude this to be the case, unless accidents are provided against in our experiments more carefully than they were in Mr. Sears' industrious, yet worthless efforts. Birds, even, might have brought the chess seeds to that very spot, for we know that birds would select that easily-moved ground to work and associate in rather than the hard, never disturbed forest, and we know that in the crops of birds seeds undergo no change for many hours, indeed not at all in the crops, or until they pass into the gizzard. Suppose an accident, no improbable supposition, happened to a bird scratching in that soil ground, by a hawk or rat seizing it and devouring it on the spot, what is to prevent the seeds in its crop growing in ground so favourably prepared for them? Why not chess seed in its crop. Before the transmutation of wheat into chess, of a plant that is of one species, suddenly and violently changed into another species, can be admitted, it is incumbent on all experimenters to show that they have excluded most carefully all sources of error. No man, of even very moderate knowledge, would place the slightest faith in Mr. Sears' experience, not from any doubt of his honour or veracity, but from the manifest imperfection of his mode of handling the subject. Let him take wheat and sow it in ground which has been subjected to a temperature say of 300 Fahr., and then placed in a box covered with glass, and then let it grow for as many years as he pleases, and note its changes, if any; but the moment he perceives any other plant growing with his wheat, let him carefully examine how that plant or its seed might have effected an entrance into his box, when he has proved entrance impossible, it will be time enough to consider how the transmutation has been effected.

CAUTION.

P. S.—My friend A. sowed a field with timothy, and was disgusted the year after to find it converted into pigeon grass, and the more he cut the timothy the more the pigeon grass took its place. I think this is as much an instance of conversion as Mr. Sears', though all my friend's neighbours thought the pigeon grass came from seeds lying dormant in the ground until ploughing brought them up for growth.

## Summer Fallowing and Thistle Killing.

To the Editor of THE CANADA FARMER :

SIR.—I observed in your paper of the 15th November, some remarks about Canada thistles. I have been trying experiments on them for several years, to try and destroy them, as they are the most troublesome weed we have to contend with. Your correspondent says that mowing them will destroy them. I should like to know if there is any particular time when it ought to be done. I have been mowing them several years without success; I have a piece of meadow that I have mowed for four years, and the thistles are now on the increase. There is one plan I have been trying with good success, only it costs a good deal of labour. It is ploughing. Four years ago I summer fallowed about four acres; I ploughed it eight times over during the summer, never allowing the thistles to come more than an inch or two above the ground till I ploughed it again, and I have not seen one thistle on that piece of ground since, excepting where they branch out from the fence. The year following I summer fallowed a field; I ploughed it six times over, and a few odd ones came up the year after. Last summer I summer fallowed nine acres; we ploughed it three times, and cultivated it several times with a wide pointed cultivator. The last ploughing was done about the last of September. I have walked over it since, and have not seen one thistle make its appearance. The ordinary way of summer fallowing does the thistles but very little harm; I mean three or four times ploughing. In regard to the seed it never troubles me much. I believe there is not more than one thistle out of twenty that grows from the seed. I have had patches of thistles in my fields for a number of years; I observe they have spread out from the root, and perhaps moved about a little with the plough and harrows. If they spread from the seed as much as some people suppose they do, in a year or two they would be all over the field, as they have been allowed to ripen and have been harvested with the grain. I have examined the thistle and seldom could find any good seed in them that looked like growing.

J. R.

## The Breeder and Grazier.

### Food for Cattle.

One hundred pounds of good hay affords as much nourishment to cattle which feed upon it as, 43 lbs. of wheat, 44 dried peas, 46 beans, 49 rye, 51 barley, 56 corn, 59 oats, 64 buckwheat, 64 linseed oil cake, 68 acorns, 96 red clover hay, 105 wheat bran, 109 rye bran, 153 pea straw, 153 pea chaff, 167 wheat or oat chaff, 170 rye or barley chaff, 175 raw potatoes, 197 boiled potatoes, 220 oat straw, 262 ruta baga, 275 green corn, 280 carrots, 339 mangold wurzel, 346 field beets, 355 rye straw, 504 turnips.

Food for Cows.—German chemists have found the relative value of food for cows giving milk to be as follows:—One hundred pounds of good hay contains as much nourishment as 26 lbs. of peas, 25 beans, 50 oats, 60 oil cake, 80 clover hay, 80 vetches, 200 potatoes, 250 pea straw, 300 barley straw, 300 oat straw, 500 Siberian cabbage, 400 rye straw, 400 wheat straw, 400 beet-root with leaves.

The English give their cows weighing a thousand pounds, eight pounds of good hay, thrice a day in winter. A cow which was given 27 lbs. of hay daily, yielded in four days one quart of more milk than when she consumed only 21 lbs. of hay; that is, the extra 24 lbs. of hay in four days, gave one quart of milk extra. While horses require eight per cent. of their weight good English hay a day, milch cows require only two and three-quarters per cent. A milch cow will not eat more than 25 or 30 lbs. of hay a day, and if more milk is desired, it must be obtained by giving her richer food, that containing more oil, albumen, &c. *Hall's Journal of Health.*

## What is the Cheapest Way of Feeding Pork?

To the Editor of THE CANADA FARMER :

SIR.—This is a question often asked, and which, if answered satisfactorily, would be readily adopted by many whose experience goes to prove that pork-feeding is anything but a profitable speculation in Canada. Although our farmers very seldom keep an account of the expense of raising pigs for the market, it is nevertheless a settled conviction, that it is one of their most unprofitable operations; and yet to abandon it altogether would never do, as in that case there would not be a market for the coarse grains which it is indispensible to raise on a farm to secure a rotation of crops. Nor would it do to give up eating pork. Admitting, then, that as a necessity farmers must feed pork, the point to be arrived at is, the best and most profitable way this can be attained. Most farmers begin the winter with a brood or more of spring pigs, and a sow or two for breeding. These all are usually brought through with as little food as will keep them tolerably quiet. The breeding sows are a little better looked after in the spring, but the others, as soon as the snow is off, are given to understand that they are to shift for themselves; and because they manage to rub along with grass and roots until harvest, it is supposed all is well. They are then turned into the stubble fields, and when time can be had to thresh peas, they are perhaps put up to fatten, or allowed to run around, but well fed. But with this new mode of treatment, they begin to grow, and before his pigs get really fat, the farmer finds his peas are about done, and he must kill. When he weighs his hogs and reckons how much he could have made of his grain at the market price, he finds that there is a decided loss, and he says "it don't pay."

Now, can there be no improvement of the general method pursued in Canada of raising pork? I think there can, and I propose to give a few thoughts as they have occurred to me from observation and reflection. I would suggest curtailing the period of keeping pigs, as well as the number kept. If they are to be kept through a winter, let the sow have her brood somewhere about the first of June. When the young pigs are weaned, let them be well and regularly fed. They may run on grass, but should not be allowed to depend upon it for a subsistence. They should be regularly fed through the winter, and next season should be put up early to fatten, and be ready for the market when pork usually brings the best price. Now all this can be accomplished by a little attention and forethought. If a farmer raises only what peas he feeds to his hogs, let him go one year without feeding hogs at all. Let him keep his peas over and feed his young pigs; thus having once started, he can easily follow on. I have found it profitable to feed early spring pigs and kill them in the fall. For several years I have killed spring pigs 7 or 8 months old averaging over 200 lbs. About the middle of last April, I bought two small pigs 4 or 5 weeks old for \$1 each. They got the refuse from the kitchen, and milk, &c.—occasionally some peas. Towards autumn they got more peas, and when confined for fattening, I boiled the peas. I killed them on the 18th November, and they weighed respectively 278 and 282, making a total of 560 lbs. This at \$6 per 100 lbs, which I could have obtained at the time, would realize \$33 60. I kept no account of the grain I gave them, but I estimated it at 20 bushels of peas, which, at 60 cents per bushel, was worth \$12. They would eat neither corn nor potatoes; their food was exclusively peas and milk. I consider there was a fair margin for profit, and am positive that others pursuing a similar course would find it equally remunerative. I have never before had my pigs above 246 lbs., and I account for the extra weight this year by my own supervision, and boiling their food. Not being acquainted with the different breeds, I can not say to which they belonged. I believe they were but a common sort. I have had them before that were styled excellent breed, with an extra price. A farmer should, of course, keep the best, as they will pay the best. If it be a fact that pigs require so much feed to make them a certain weight, it remains to be ascertained whether it is most profitable to give them that amount of feed in 8 or 18 months. I think it decidedly most profitable to the feeder to adopt the shorter period. Had I kept mine a fortnight more, they would have made 300 lbs. a piece. When killed they were about 247 days old, so that they were some 30 lbs. over one pound per day.

Rocklands, December, 1864.

J. E.

## The Dairy.

### Keeping a Cow in Town.

How to keep a cow economically, is a problem that many a family in the suburbs of all cities would be glad to solve. It must be done in connection with a garden. It is idle to think of pasturage—that is a waste of manure, and for the garden that is worth a considerable portion of the cash necessary to pay out for forage. If you have half an acre of ground, you can keep a cow and grow all the vegetables you need by purchasing two tons of hay, or its equivalent, in a year. Indeed, we are not sure but you may get through with one, which is only half the allowance of the winter months. But you may gain the other by growing Indian corn as a second crop after all early vegetables, and with that you may have rye growing at the same time, which will give feed early in the spring, which may be cut in time to plant several other crops. Four square rods of corn, planted in close drills, just as early as possible, upon well manured ground, will give green food by the time the rye is gone. The stubble turned under gives a fair coat of manure. The corn will also be followed by another crop, not of corn, but some kind of vegetable for use or sale. For instance, cucumbers for pickles, and with these, sown about the 10th of August, a crop of white turnips, and with the turnips rye, for soiling and manure.

If you intend to make the garden in great part support a cow, keep no pig. Teach the cow to eat all the slops and garbage of the kitchen. Don't waste a leaf of cabbage, beets, carrots, parsnips, celery, nor any other green thing. Every pea and bean pod, and vine, and every potatoe or turnip paring, and every green corn husk or cob, and even green potato tops, will be eaten with avidity by the cow in the stable. And in the stable you must keep her all the time. You need not fear any unhealthiness if you keep it cleanly. Let the floor be earth, and use fresh earth every day for bedding, and every day you will gain a pile of rich manure. With careful economy you will be surprised to see what a cow will learn to eat, and how cheaply you can keep a cow and a garden.—*N. Y. Tribune.*

### How to Keep Butter.

**MESSES. EDITORS.**—In answer to an inquiry in your paper, for a brine to keep butter, I would reply, I have for years used a recipe given in Mrs. Cornelius's Young Housekeeper's Friend, which by the bye is a real friend.

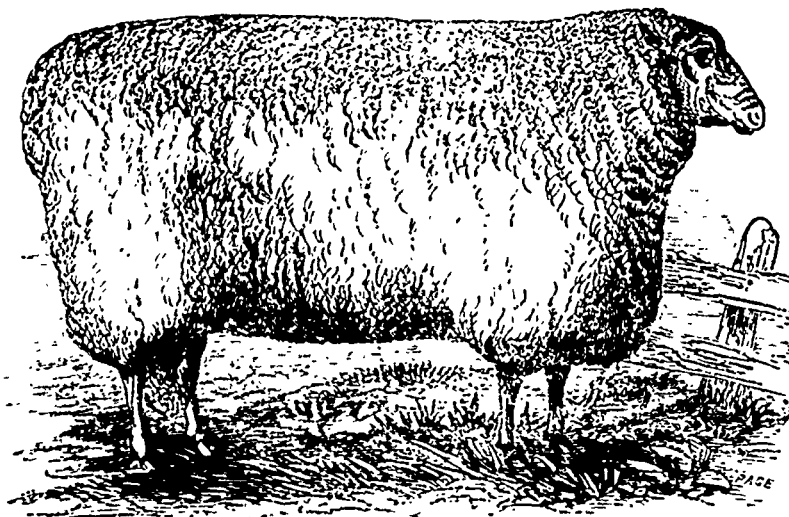
After taking out as much butter as will last for a week or fortnight if the weather is cold, I take two quarts of water, one of clean fine salt, one pound of white sugar, and a tea-spoonful of saltpetre, when dissolved, lay a piece of white linen over the butter (covering it closely around the edges), and pour on a part of this brine. Head up the firkin, and if it leaks set it in a wash-tub and put in some more, driving down the hoops; every time butter is taken out close the firkin in this way. If the salt does not all dissolve in the brine, add a little more water. One recipe will do for one hundred pounds of butter. With this recipe I have kept butter into July, in Brooklyn.—*E. J. E., in New York Observer.*

**ZINC MILK PANS.** Experiments in England have recently been made regarding the effects of zinc upon milk, and it was found that milk kept in zinc vessels will continue sweet four or five hours longer, than it will in vessels of any other material.

**FEEDING COWS FOR MILK.**—Having tried some of the different species of grass and clover for the purpose of producing most milk— it being weighed regularly each day— I find that clover (Northern red) makes very much more in quantity, and of better quality too. Changing back to timothy and other grasses, it is certain cows decrease in the number of pounds. They were fed regularly upon each kind of grass about three hours each day. Green corn fodder of the southern kinds, saved for the purpose of feeding, does not produce so much milk as either of the other kinds of feed mentioned. Now, as milk is becoming so valuable for cheese and butter, farmers will aim to produce the best breeds of cows which give the largest number of pounds of milk, and the best quality too. What kinds of roots and grasses, green or dried, will make most milk, will be questions more thoroughly discussed among farmers, as the value of cheese is greater through the cheese-factory system. If milk is to be adulterated for gain of any kind, let it be through the feed, which seems the only honest way.—*Cor. Boston Cultivator.*

## Sheep Husbandry.

FIRST PRIZE LEICESTER RAM, AT THE PROVINCIAL EXHIBITION, HAMILTON, 1861.



The Property of Messrs. J. & J. WHITTE of Trafalgar.

It is a curious fact that the origin and early history of many of our existing breeds of domestic animals are more or less involved in obscurity. This, however, is not the case with the new and improved Leicesters, which are so named after the county in which they had their origin. About the year 1755, Robert Bakewell, of Dishley, in the County of Leicester, commenced with much judgment and earnestness the improvement of his own extensive flock, which consisted of what has been since termed the old Leicesters, the ordinary breed of that large and excellent grazing district, situated in the centre of England. These sheep had coarse, long wool; they were large, ungainly, and coarse-boned animals, fattened and reached maturity slowly, being seldom fit for the butcher till they attained three years old, weighing from 20 lbs. to 30 lbs. a quarter, according to the manner of feeding and other conditions, and the fleece may be said to have averaged, among the more carefully-tended flocks, about ten or twelve pounds weight. The old breed of Leicesters possessed many good properties and feeding qualities before Bakewell's time; but by his care and judicious selection of breeding animals, it was almost re-modelled. "The principle," it has been well observed, "that the virtues of parents are communicated to their young, was not newly discovered; but it was reserved for Bakewell to apply it in the case of the animals used for human food in a new manner, and to produce more remarkable results than had before been arrived at. He perfectly understood the relation which exists between the external form of an animal and its aptitude to become fat in a short time. He saw that this relation did not depend upon mere size, nor, in the case of sheep, on the power of the individual to yield a large quantity of wool. He therefore departed from the practice of all former breeders of long-woolled sheep, who had regarded size and abundant growth of wool as primary properties in the parents. Holding bulk of body and the produce of the fleece to be secondary properties, Bakewell directed special attention to the external form, which indicates the property of yielding the largest quantity of muscle and fat, with the least bone, and what is usually termed offal. He aimed, too, it is said, at producing the fat on the most valuable parts; but this is merely a subsidiary property, dependent on general harmony of conformation. Progressively perfecting his animals by skilful selection, he necessarily continued to breed from his own stock, and did not scruple to connect together animals the nearest allied in blood to one another. This system, continually pursued, not only gave a permanency to the characters imprinted on

his sheep, constituting a breed, in the proper sense of the term, but tended to produce that delicacy of form, which experience shows to be connected with the power of secreting fat and arriving at early maturity."

The system, as it is termed, of "in-and-in" breeding, when long and undeviatingly pursued, naturally tends to produce creatures of an artificial condition, more delicate in temperament as well as in form, less prolific of lambs, and less capable of supplying milk to their offspring. Bakewell could not have been unacquainted with these results, but in the progressive formation of his breed he appears to have regarded all other conditions as secondary to that of securing the largest amount of fat and muscle in the least time and with the smallest quantity of food. However well this system succeeded in the hands of so great a master, who exercised the greatest caution and soundest judgment in making proper selections from his flock, his followers found it necessary to get occasionally a change of blood from other flocks of the true Leicester type, thus sustaining strength of constitution, and, as a consequence, the healthy action of the various secretions and functions of the animal. However high-bred a stock may be, individual animals will now and then throw out inferior points, which no care can prevent, and which can only be remedied by a careful selection of tups from improved flocks of other breeders.

The old Leicesters had a long, thin staple of wool, easily wetted, so that rain or snow had ready access to the skin, producing an injurious effect on the comfort and health of the animal. Their heads and ears were bare, and often their legs and bellies, so that, when taken newly lambed, they demanded the greatest care and attention to preserve them alive in bad weather. In these respects especially they required to be improved. Some of the descendants of the old race still retain, more or less, of these defective peculiarities, being quite bare and blue about the head and ears. At one period they were called "blue caps." Mr. Bakewell, by his judicious management, in a great measure corrected these deficiencies in the breed of Leicesters, and otherwise so much changed them, that they became quite a different race of sheep, and were afterwards designated the "New Leicesters," or the "Dishley breed," from the name of the parish in which their improvement was effected.

The new Leicesters possess many good points. Their heads are rather prominent, nostrils wide and expanded; eyes full and quick; ears thin and pricked, with bright, white, close covered heads, and pleasant features. As regards the head, it is

generally a true index to the valuable qualities of any breed of sheep. Show a thorough judge the head of a sheep, keeping its carcass out of view, and he can tell what kind of animal it is. Mr. Bakewell's improved sheep obtained so much celebrity, that breeders availed themselves of every opportunity of procuring his stock; and as they had no other way of doing so but by hiring tups for the season, or by sending their ewes to Dishley to be served, he frequently obtained from one hundred to four hundred guineas for the use of a ram for a single season. From eighty to one hundred guineas was considered by him a very small sum. He had one favourite tup, and he took in ewes to be served by it at ten guineas each; this animal it is said served one hundred and twenty ewes in one season! These facts indicate the value of his sheep at that early time, and how they were prized by other breeders. Bakewell never sold either tups or ewes as breeders. The tups when old and unfit for use, were disposed of to butchers; but he invariably went himself and saw them slaughtered. With respect to his ewes, to prevent any breeders getting the use of them, he flooded a piece of low, marshy land in autumn, on which they were placed, in order to contract the disease called the rot, which, of course, rendered them useless as breeders. They were generally sold at low prices to butchers; while he probably would have realised fifty guineas for each as breeding stock. Tup breeding was, in fact, a monopoly in Bakewell's hands, and also for some years in those of his successors, and exorbitant prices were accordingly obtained. But this, like other monopolies, was of limited duration; the breed rapidly extended, and in the course of a few years prices came down, and good specimens of both sexes, of the improved blood, could be readily obtained both in England and Scotland, at moderate prices.

It is stated and, we believe, on good authority, that the people of the British Isles have evinced a diminished taste for extra fat mutton, and consequently Leicester sheep have, in some districts at least, experienced a decline. Fat Leicesters and other large breeds do not find so ready a sale as formerly, except at reduced rates. Hence resort has been had to crosses, with a view of obtaining animals of moderate size and meat of a superior quality. For this purpose, also, a greater demand has been experienced of late years for the different races of Downs and mountain sheep, as first qualities of mutton in the British markets are duly appreciated and command high prices.

It has been well observed: "though graziers are justified in attending to the production of that article which best suits the market, there is no reason for alarm lest the Leicester either deteriorate or become extinct as a breed. For crossing, it stands unrivalled, and the demand for rams for this purpose alone is already almost incredible, and yearly increasing." But however much Leicester sheep are valued and prized for their exquisite points, symmetry, great aptitude to fatten, and mellow handling, their early maturity and heavy weights; and although they undoubtedly produce more mutton and wool for the food they consume, than any other breed, still their money value, in markets where butcher's meat is high, is invariably lower than the smaller breeds. Another peculiarity is, that however fat they may become, they seldom prove full of tallow, and it is now generally admitted that the longer they are fed, in the same ratio the produce of tallow diminishes. Although not so coarse grained as many of the other large breeds of England, Leicester sheep are often not so well proportioned, having too much fat and too little lean, and this often not well mixed. For breeding tups for crossing purposes, the Leicester stands unrivalled everywhere; and if kept for feeding purposes, they should be sold young, to make them at all profitable. Some fifty years ago, attempts were made in the north of England to improve the Leicester by crossing with the Teeswaters; the

object being to increase their size, and the experiments are said to have been in that respect successful; but their feeding properties were spoiled, and the cross was found to be almost unsaleable. They were slow feeders, and consumed more food than the pure Leicesters. The breeders were not long in discovering the unprofitable character of the stock, and it cost them a great deal of trouble and expense to renew and renovate their stocks; and traces of the alloy were too obvious for a great number of years. "This," observes a modern practical writer, "is another proof of failure in attempting to improve Leicesters with other breeds; and it must be admitted that Leicester sheep can improve all other breeds, but none can improve them." Many will certainly question the exact correctness of the above conclusion, while most will admit that it contains much truth. It is thought by some that the new Leicesters have been somewhat improved by a dip of Cotswold blood; invigorating their constitution, and more fully developing several of their more valuable points; while it is generally admitted that the latter by a Leicester cross evince a greater aptitude to fatten and early maturity. In the new Oxfordshire breed, which in some localities have already attained to considerable distinction, we have a very striking demonstration of what can be obtained from a skilful admixture of Leicester and Cotswold blood.

The first probable importation of improved English sheep into the United States, was made by the illustrious WASHINGTON, who was always a warm friend and patron of agriculture. "Livingston," writing in 1802, says of the "Arlington long-woolled sheep," that they were derived from the stock of General Washington, being bred by his step-son, Mr. Curtis, from a Persian ram and *Bakeritt* ewes." About 1810, some Leicesters reached the United States, (see *Dandall's Practical Shepherd*, p. 41.) and subsequently they slowly found their way into the British American Provinces. In Canada, Leicester blood can be extensively traced in the ordinary flocks of the farm, while of late years we have some farmers who possess excellent specimens of the pure and improved breed; though it must be acknowledged that a great many of our sheep that go under the name of Leicesters, are more or less mixed with other breeds. They are found well suited to the country, and this and other long-woolled sheep of Canada, are not equalled by any other portion of this great continent. The long-woolled sheep at our Provincial Shows are the admiration of strangers, and will favourably compare with those at similar exhibitions of the mother country.

The engraving at the head of this article, is an excellent portrait of the first-prize aged Leicester ram, at the recent Provincial Exhibition. This fine animal is owned by Messrs. J. & J. White, of Trafalgar.

## Correspondence.

### Wintering Bees.

To the Editor of THE CANADA FARMER:

SIR.—The time has now arrived when every bee-keeper should examine his bees and see that they are in proper condition for wintering. If there are any colonies likely to want for honey during the winter, there should be no time lost in feeding them. There are several ways of feeding. A common box-hive may be turned bottom upwards in some dark room, and a teacupful of bee-feed poured into the combs in the centre of the hive every day, or if the combs are not down to the bottom of the hive, and the room is sufficiently warm, the feed may be put in a shallow dish and placed under the hive, leaving the hive in its natural position. If moveable comb hives are used, cards of comb may be removed from strong colonies and exchanged for cards from weak colonies; or if the hives are properly constructed, a piece of empty comb may be laid upon the comb frames in the opening through the honey-board, after removing the honey-box, and the feed poured upon the empty comb, pouring in all it will hold, and if some should run in among the combs, it will do no harm. I am now successfully feeding a weak colony in this way. Bees may also be fed by pushing sticks of candy in between the cards of comb, but I prefer the former method. The best bee-feed is made of two pounds of good sugar and one of honey, boiled together, and reduced to syrup by adding one quart of water; but if honey cannot be had, three pounds of sugar to three pints of water will do. The better the sugar the better the feed of course. It should always be given to the bees a little warm, it will draw them

to it much quicker, and they will eat much faster than if given to them cold.

Having attended to the weak colonies, strong ones should now be attended to. If some dark room can be spared, away from the fire, or some out-house can be had which is clean, dark, and tight, it would be better to remove them to such a place than to let them remain on the stands. Give them sufficient ventilation at the top of the hive to carry off the vapour arising from the bees. It is highly necessary that this should be attended to, for the vapour is thereby prevented from congealing and running back into the combs and freezing, which would prevent the bees obtaining their honey; and often (especially when the bees are left on their stands,) the vapour congeals, and running down the sides of the hive, freezes around the edges, completely closing up all passage for air. The result is, the bees are smothered, and the beekeeper tells his enquiring neighbour that the storm or snow beat under his hive and smothered his bees: when the truth is, the hives had not sufficient ventilation at the top to carry off the vapour. In a dark room or properly-constructed bee-house, the common box hives may be turned bottom upwards, which will ensure proper ventilation; if the room is not very dark, it might be necessary to fasten a piece of net cloth on the hive to keep the bees from coming out. If wintered on their stands, holes should be made between every card of comb, if possible, in the top of the hive, then cover the hive with a cap or box, raising the hive from the board on which it stands a little,—say one-fourth of an inch; and if your colony is strong it will pass the winter in safety.

If moveable comb hives are used having properly-constructed honey-boards, and are to be wintered on their stands, nothing more is required to give them proper ventilation than to remove the honey-box, leaving the cover or cap on the hive; but if wintered in a dark room, remove the cap also. If bees should come out and die to any great extent, cover the passage through the honey-board with wire cloth, or net cloth, or clean straw would do. If the honey-board has only small holes through it, there will not be sufficient ventilation to carry off the vapour. A little care and attention just now in seeing that the bees are all put into proper "winter quarters" may save many a colony which otherwise would perish.

Brooklin, C. W.

J. H. THOMAS.

### Owls, Fish, Hedges, &c.

To the Editor of THE CANADA FARMER:

SIR.—The interchange of ideas in the shape of questions and answers is likely to be promotive of much good at small personal sacrifice of time and trouble. I will begin with a subject which appeared in one of your recent numbers, and will put in—

A PLEA FOR OWLS.—"Erect in the middle of your field a long pole; set a steel trap upon the top, and the unweary hawk or owl will light directly in the trap." Now, I won't say much for the hawks, but plead to have the owls spared—they destroy thousands of mice every year. These mice do infinite mischief in our winters by girdling, and then killing young trees and hedges. Broderip calls the owl the "eagle of mice," and White, of Selborne, records minutely the vast good done by these birds. Mr. Macbeth, of South Elgin, had recently several hundred pear trees just coming into bearing. To his intense mortification, all these were girdled and destroyed by mice. I say, then, "spare the owls."

PISCICULTURE.—I did not go so far as to say that it was impossible to introduce salmon into Lake Ontario, but I affirm that it would be almost so. Sixty years ago, before steamboats were introduced, salmon did come at certain periods, and were taken by Indians at their village at Port Credit. Scarcely an instance of a salmon being caught in Lake Ontario has occurred for years. Philosophers maintain that fish cannot hear. The question is not a very important one practically. It is certain that they have other senses to compensate for the want of this. A singular circumstance has occurred here. Our delicious and mysterious whitefish used to frequent that part of our Island called Gibraltar Point. Since the arrival of the artillery here they have fired at a mark fixed near this point. Whether it was the dipping of the cannon balls, or the vibration caused by the report of the great guns, the whitefish have deserted that point, and gone 20 miles eastward. I have called them "mysterious," because up to this time no food has been discovered in the stomach of the fish. Some one at Newcastle wrote that they fed upon a little red worm. The red worm is a parasite often found upon the air bladder of this fish.



No one of our native fish deserves more cultivation than this. It comes in delicacy of flavour nearer the English sole than any fish I have tested. Mr. Staunton rather curiously contradicts my statement that Lake Ontario is 1,000 miles from the sea. We are 600 miles from Quebec, and I call the sea "the open-sea" in the Gulf of St. Lawrence. We cannot cultivate salmon here, but we can trout in any numbers in any of our rapid streams—the Speed, the Humber, the Credit, &c., &c.

**HEDGE ROWS.**—Mr. McMullen, of Picton, should go down to Quebec to see splendid hedge rows. It is not true that hedge rows of various kinds won't grow with us. But it is true that the farmers are too indolent to plant them and care for them afterwards. Not long ago there were beautiful hawthorn hedge rows near Weston, and at the Quaker settlement at Newmarket.

**BORAGE AND FENNEL.**—Can any of your readers inform me if we have, on this continent, either of the above herbs? If not, what is the best substitute for eating with mackerel and flavouring cider cup? I am glad to see the consumption of cider greatly increasing among us. It may not be generally known that cider has some peculiar and valuable properties. There are no orchards in Norfolk, England, and the statistics of disease there show more cases of stone and gravel than in any county where orchards are grown and cider consumed. Large quantities of cider from Oswego were used last year in the Lower Province.

Toronto, Dec. 5.

H. P. H.

### Leicester Sheep in Canada.

To the Editor of THE CANADA FARMER:

SIR,—The Leicester sheep are profitable on the borders of Scotland, they are equally so here in Canada, owing to the heavy fleece of wool and large carcass of mutton which they yield. Our country is particularly well adapted for the production of a heavy sheep. Why, then, should our farmers be content with the "hard-feeding," short and light-wooled "rakes" that are so numerous in Canada. Leicesters at one year old might easily shear 7 to 8 lbs. wool, and weigh from 103 lbs. to 120 lbs. without any great effort in feeding, further than attention being paid in the way of shelter, and regularity in feeding turnips and hay. These weights I have no difficulty in producing in my flock. I may add, that I have had some very fair specimens of the native breeds, wintering and sharing the same as my Leicesters, and then the difference of quality was most remarkable—the natives always being the "lean kind."

The proof of Canada being an excellent sheep-producing country is to be found in the weights obtained. A flock of sheep fed on turnips all the winter, well pastured the following summer, and again fed on turnips through October, November, December, until January or February, and weighing 80 to 100 lbs. on an average, when sold for fat on the borders, is considered good management. Now, in Canada sheep can be made these weights the first spring. Old sheep—ewes for instance—gain a heavier weight than what they do in the old country. Light, inferior land will not produce a heavy old sheep; it may feed a fat lamb or hoggett, but it never will carry through the weight to maturity. We have a healthy country for sheep. Our winters require much about the same length of winter feeding. In Scotland, from October to the middle of April, they are fed on turnips—two weeks will make the difference here. Turnips are solid and juicy, and feed more rapidly here. We are not troubled with black hearts in turnip as they are all through the borders.

SUBSCRIBER.

Wroxeter, November 23, 1864.

**EXTRAORDINARY TURNIP CROP.**—"W. M." sends the following item:—"J. Gormley, lot 31, concession 4, Markham, has raised this season from six acres of land, 6840 bushels of turnips, or 1140 bushels per acre, which at the rate of 12½ cts. per bushel, would realize the handsome sum of \$35 dollars."

**FLAX SEED AND OIL CAKE.**—A correspondent, writing from Woodstock, says:—"As an answer to the enquiry made by 'J. B. T.' of London, where to get a machine for grinding flax seed for farm purposes, I believe there is no such thing. In England, oil cake is the form in which flax seed is usually given to cattle. It is also often given to calves, boiled into a sort of jelly and mixed with milk, but the cheapest way of giving linseed is in the form of oil cake. This 'J. B. T.' will be able to procure by the time of your next issue, in this town, where a linseed oil mill is now erected, and is expected to be in operation in a few days, and

where, no doubt, 'J. B. T.' if so inclined, may either exchange his seed for cake or find a market for his seed and purchase the cake. In the *Genesee Farmer* for this month, on page 365, are some extracts from a recent number of the *London Agricultural Gazette* for December, on the great dearth of fodder in England this year, and recommending the use of both oil and oil cake for sustaining the stock during the coming winter. Oil cake can be procured here at a much lower price than that mentioned in the extracts referred to."

**DRAIN TILE MACHINES.**—In answer to our correspondent, D. Norton, we are informed that drain tile machines can be had from W. Lindsey, Newcastle, C. W. These machines are of English invention, with Canadian modifications, and it is believed improved. The dies which form the tile, are lately improved. They are made of a bright composition metal, which makes the tile as smooth as a bottle. The advantage of this metal is, that it is bright and clear. This machine makes tiles of any shape, as round, round with flat bottoms, egg-shaped, and horse-shoe tiles. The round tiles with flat bottoms are most used. Horse-shoe tiles are going out of vogue, and will soon be amongst the things that were. Price of machine, \$130.

### Bound Volumes.

The current volume of "The Canada Farmer" is now ready, consisting of 24 numbers, and comprising 384 pages of reading matter in a bound form. The binding will be charged 30 cents in addition to the subscription price, making \$1 30 in all for the volume. Parties desirous of having their Nos. for the present year bound, will please send them to us, securely packed, with their name and address, together with 30 cents in stamps or otherwise, and we shall return them bound, free by post.

### To the Readers of "The Canada Farmer."

Subscribers to "The Canada Farmer" will please observe that this issue is the last of the year, and that the next paper will not be sent to any one who does not remit for 1865. Our Club terms will be found advertised elsewhere. Persons engaged in getting up Clubs are requested to close up their work at once, so that subscribers may receive their papers without delay.

## The Canada Farmer.

TORONTO, UPPER CANADA, DEC. 13, 1864.

### Horse-flesh as Human Food.

ATTEMPTS are being made in France to introduce horse-flesh as an article of human food. A meeting of Parisian gourmands was held not long since, for the purpose of testing the feasibility of the movement, and reporting on the result. The following paragraph on the subject appeared in *Galvani's Journal*:

"Last week M. Decroix, one of the secretaries of the society for the protection of animals, delivered a lecture at the Garden of Acclimatization of the Bois de Boulogne, on the alimentary use of horse-flesh. After showing, by official data, that the supply of butcher's meat of all kinds, which is so necessary to support the strength of man, and enable him to bear fatigue and avert disease, is not equal to the demand, he showed that if the flesh of disabled horses were introduced into public consumption, it would increase the present supply of meat at least one-twelfth, and that in Paris especially it might daily produce upwards of 2,600 kilogrammes of good meat, even admitting that the flesh of one-third of the horses slaughtered were rejected on account of their diseased state—a proportion which he considered exaggerated. M. Decroix reminded the audience that the illustrious Larrey, in the course of his military career, had three times prescribed the meat of horses for his patients, and that in Egypt especially, he had, by the use of this aliment, stopped a scorbutic affection which had broken out in the army. More recently, he added, in the Crimea, two companies of artillery had, by Dr. Baudin's advice lived entirely upon the flesh of unserviceable horses, and thereby escaped the diseases which had afflicted the rest of the army. He further stated that at Vienna, Berlin, Hamburg, Altona, and other towns, horse-flesh is

not only by the lower orders, but by all classes of society. In order to confirm his theory by experiment, the lecturer concluded his address with ordering in a large tureen of broth made from horse-flesh, and a dish of the latter flavoured with spices, of which the company partook with great relish."

There is nothing in itself repulsive about the use of horse-meat as an article of food. Like the ox and the sheep, the horse is gaminivorous and herbivorous, and a far more cleanly feeder than the pig. Indeed, the flesh of a young horse cannot but be good eating. We have read a story of a strong-minded lady-farmer, who once had a fine young horse that broke his leg in a gate. She instantly had the animal killed, and directed a butcher to dress it and cut it up exactly as he would an ox. She then sent presents of it to her friends, requesting them to cook it the same as "other beef." It is said they one and all pronounced it to be equal to any beef they ever ate. In a surreptitious manner, there can be no doubt that in England, and perhaps other countries, horse-flesh finds its way to the sausage-makers, and is often eaten by human beings.

A writer on this subject in one of the English agricultural papers, suggests a few insurmountable difficulties as he regards them, that stand in the way of the use of horse-meat as an article of diet. The first objection he urges is the friendship subsisting between man and the horse. Englishmen at least, regard the horse as a member of the family, and on this account, that noble animal is "safe from the shambles." Another difficulty is the value of the horse for other purposes, at the age suitable for making use of him for the table. Under ten or twelve years, the horse is too valuable for work to come into the butcher's hands. Another consideration is that old, worn-out, unsound, and perhaps diseased animals, would be unfit for human food. The consumption of such meat would be confined to a class whose stomachs, like that of the ostrich, will digest iron. On these and other grounds, there seems little likelihood of the French movement making much headway.

For ourselves, we see almost resistless force in the first of the above-named considerations. While we believe in making friends and even pets of all the live-stock on a farm, the horse from his intelligence, affectionate disposition, and the kind of service he renders, becomes a kind of companion. To think of turning on an old and faithful servant—nay a trusty friend—who has carried you on his back, or drawn you in a vehicle thousands of miles, and performed all manner of work for you with the utmost cheerfulness; to think of turning on him—taking his life and picking his bones, is very much like a modified kind of cold-blooded murder. The poet Bloomfield's tale of Abner wooing the Widow Jones, for the sake of being able to keep "Bayard" his faithful old plough-horse; and the grateful humanity of the philanthropist Howard, who would never suffer an old horse to be sold off his estate, but when past work, gave him the run of the pasture field and barn-yard till the weary wheels of life stood still: are examples we should propose for imitation far sooner than M. Decroix and his fellow horse-eaters.

### Stock-feeding the Present Winter.

BOTH in England and America farmers will be put upon their mettle to carry their stock well through the winter that is now upon us. In this country, the unusual drouth of last summer told sadly upon the hay crop, and upon the yield of straw. Generally speaking, there is a scarcity of both these articles. The turnip crop turned out better than was expected—in many localities it was quite up to the average;—but it is as yet the minority of our farmers who grow turnips, and therefore but few, comparatively speaking, have this resource. In England, not only did the summer drouth sadly diminish the forage crops, but the turnip crop—the main dependence of British agriculturists for winter feeding—proved al-

most a total failure. In this state of things, the question, What is to be done to winter the stock? has become one of general and absorbing interest. It is much discussed in the agricultural journals by editors and correspondents. It is unanimously settled that live stock must do without litter, except such as can be provided in the shape of sand, burnt clay, fern, leaves, &c. Every wisp of hay and straw must be husbanded for fodder. To eke out the short allowance, the use of lentils, bran, pollards, inferior wheat, &c., is being recommended, in addition to the usual resort to meal, oil-cake, and the like. Sprinkling small quantities of linsed-oil over layers of chaff, flax-seed boiled into a thin, saltish soup, and poured on chopped straw; also, the purchase and bruising of damaged and inferior grains to mix with cut hay and straw, are among the expedients mentioned. On all hands, it is agreed that special attention must be given to warm housing of stock as a prime consideration in economic feeding. Shelter from wet and cold, at all times important, becomes imperative and indispensable when feed is scarce. Let the farmers of Canada give their best attention to this matter, and endeavor so to manage that breeding and growing animals shall not be so stinted of food as to become reduced in condition. These remarks apply to sheep as well as cattle. Care should be taken lest the produce of wool be lessened both in quantity and quality as the result of hard keep.

### Agricultural and Veterinary Instruction.

Our readers will perceive from an advertisement in the present number that familiar courses of instruction in these departments will be resumed in January next. The object of the Board of Agriculture in establishing these courses of lectures, is to afford young men engaged in, or intended for, practical farming, an opportunity of becoming acquainted with the scientific principles of their pursuit. The method of teaching, therefore, has special reference to the wants of young men whose means and opportunities for self-improvement are limited. During a few weeks in the depth of winter, a comparatively leisure time for farmers, a young man may acquire a fund of useful information, and be put in a way of reading and observing by himself. The most effective influence that can be brought to bear on the advancement of our agriculture will be found in the enlightening of the minds of young farmers in particular. Hence all efforts like the present ought to meet with a hearty response. We are glad to know that in the department of scientific agriculture, Professor Buckland is so promptly and ably assisted by several of his colleagues in our Provincial University.

We may further observe, that the Board has arranged an extended course of study for such as wish to prepare themselves for the practice of the veterinary profession, and that Professor Smith has made arrangements accordingly, and will be happy to answer enquiries respecting particulars. After passing a final examination under an appointed Board of Examiners, a diploma will be given, certifying that such students are competent to practice the veterinary art in Canada. Young men from the country can enter the class without being subjected to examination either before or at the close of the course. But we understand that prizes in books will be awarded to such students as present themselves for examination at the termination of the course, according to the degree of proficiency they may have attained.

### Brighton and Cramahé Farmers' Club.

We are glad to learn that on the 25th of October last, a number of the farmers resident in the townships of Brighton and Cramahé organized an association with the above title. G. S. Burrell, was elected President, Isaac Post, Vice-President, and Isaac C. Squier, Secretary. Various matters connected with the commencement of the Club having been disposed of, a second meeting was appointed for Nov. 16th, and the President was requested to deliver an address prior to the discussions. This meeting was held according to appointment, an able

address delivered by Mr. Burrell, and discussions held on various matters of interest to the farming community. Resolutions were passed recommending that agriculture be taught as one of the branches of a common school education, and requesting the County Council to offer prizes to such pupils as may excel in that particular branch of study. The next meeting of the Club will be held on the evening of Dec. 20th, when the subject of "Renovation of Lands" will be the topic under discussion.

This is a movement in the right direction, and one which we trust will be imitated in many localities the present winter. One of the best means for the diffusion of practical and useful agricultural knowledge is the formation and efficient working of these Clubs.

### Juvenile Papers.

**SUNDAY SCHOOL DIAL.**—This is an excellent illustrated monthly paper for children, which has been for some time in existence, and has attained an established character.

A new volume will be commenced in January, 1865. It is devoted to the instruction and the religious education of the young, irrespective of sect or party. Its promoters solicit the kind and earnest efforts of all who take an interest in the welfare of young people to enlarge the subscription list—the commencement of a new volume presenting a most favourable opportunity for so doing. The *Dial* circulates in Sabbath-schools connected with the various churches of the land, from Gaspe to Goderich; and that it is well received, and worthy of an extensive support, is manifest from the numerous commendations of the press.

**TERMS**—(cash strictly in advance).—For a single copy, or any number separately addressed, each, 15 cents per annum; for 11 copies to one address, \$1.50; for 22 copies to one address, \$3; for 33 copies to one address, \$4.50, and so on in like proportion. Postage free. Orders and communications to be addressed, post-paid, to Mr. A. Christie, box 696, Toronto.

**MESSAGE FOR THE YOUNG.**—This is a new "Child's Paper," the January number of which is just out. It is intended for the use of Sabbath-schools, and the young generally. It is got up in good style, with illustrations. The prospectus states that each number will contain several cuts, a piece of music, a large amount of interesting reading matter, with scripture questions, enigmas, &c. A series of Sabbath-school lessons will also be published in it. It is entirely un denominational in character, adapted to the use of Canadian schools, and as there is no postage upon such papers when issued in Canada, its cost will be but trifling. Enquiries and orders to be addressed to "Message Office, Toronto."

At the agricultural competition of Vaucluse, in France, held at Thor, last summer, the prize for ploughing was carried off by a girl of 20 years.

**THE ILLUSTRATED REGISTER OF RURAL AFFAIRS FOR 1865** published by Luther Tucker & Son, of Albany, N. Y. is out. Its table of contents promises a rich and varied store of good things. On receipt of 25 cents at the *Witness* book store, Montreal, it will be sent to any address, post-free.

OUR FRIENDS from the country who may have occasion to try the virtues of vapour and medicated baths, can do so at Dr. Agnew's bathing establishment, corner of Yonge and Adelaide Streets. These baths are highly recommended for skin and other diseases.

**CHICORY.**—This is now one of the American farm products, and is said to be superior to the imported. We have seen a quotation of "Illinois Chicory," at 11c per pound. This is the roots, cut and dried, not roasted for use. The roots grow somewhat like parsnips, and about as great a yield per acre, and by the aid of a kiln, would be dried and prepared for market as easily as peaches.

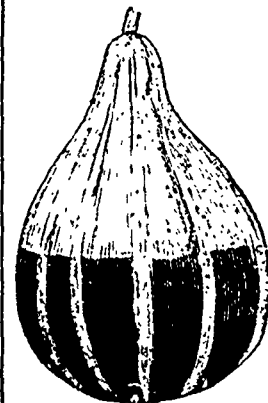


### Green-house Culture of the Mimulus.

The seed should be sown on a moderate heat, and as soon as the plants appear they should be potted singly into thumb pots, filled with light rich soil, and watered freely. As soon as the roots fill the pots, they will need to be shifted to those of a larger size, and on up to the size in which it is intended to have them flower. Now, each pot may be placed in a saucer which should be kept full of water. When the flowers appear they will require to be kept shaded, and liberally supplied with air, in short the treatment is much the same as for herbaceous calceolarias, except that more water must be supplied. If any of the plants yield flowers of such beauty and excellence that it is desired to propagate from them, it can be very easily done by taking cuttings of three joints in length, which can be put into pots filled with light leaf mold and loam, mixed with a little sand. These pots should be plunged in a gentle heat and kept close until the cuttings are rooted, when they may be potted off. By this means a good display of this very showy flower may be had, the whole secret of success being dependent upon keeping the plants from the direct heat of the sun, and giving them an unfailling supply of water at the roots.

### Miniature Striped Gourd.

Among the new and interesting things recently introduced is the *new Miniature Striped Gourd*. The



fruit is about three inches in circumference, and very symmetrical. The upper portion is of a yellow or bright orange, and the lower part of a deep green, the dividing line as nicely drawn as could be done with the pencil. It has also regular stripes of a cream colour as shown in the engraving, running from the apex to the base at equal distances, and about a quarter of an inch in width. This

little gourd makes a very pretty ornament for trellis work, and is deserving of some attention. It will perfect its fruit in any warm situation.

### The Best Soil for Grape Vines.

A WRITER in the *Florist and Pomologist* starts the inquiry whether the geological formation from which we select soil to make our vine borders influences the size and quality of the grapes, altogether irrespective of mechanical arrangement? The question was suggested to that writer by the difference so apparent in his own vine borders, several of which were of soil from the magnesian limestone, and one from the old red sandstone. The difference was not in the growth of the vine, but in the berries and bunches, and which could not be attributed to difference in manures, &c., for they were all manured alike.

The border composed of soil from the old red sandstone was planted with Black Hamburg, Buckland Sweetwater, and Golden Hamburg, and for nine years has produced fruit far superior to the vines of

the same varieties planted in the other borders, although they all received the like treatment in every other respect.

We commend this interesting question to the attention of all grape growers, and shall be happy to receive any observations tending to its solution. It is one of great practical importance not only to those who grow grapes under glass, but to those who plant in the open air for market or wine. If soils formed from rocks of a certain formation prove to yield grapes of superior size in bunch and berry from all other soils, then he who selects that soil for his vineyard, other things being equal, will have the advantage over those who plant on a soil not so well adapted to the production of fine grapes. We are yet to grow our own grapes varieties sufficiently hardy and early are being produced. Already we have the Concord and Delaware, and other sorts are putting in a claim for earliness, as the Isabella and the Adirondac, so that in a short time we shall hope to see our markets well supplied with perfectly ripe grapes of Canadian growth. The best methods of growing the vines are receiving considerable attention, and while there will be some difference of opinion among cultivators, yet the full discussion of the subject will help the thinking planter to adopt the most suitable method. We take pleasure in calling attention to several articles on this subject by an esteemed correspondent; and if any one thinks he has a better plan of pruning and training (and doubtless there are many who think so), we should be happy to place it before our readers. Meanwhile, we will not forget that difference in soil, other than its mere mechanical texture, may have an important influence on the production of fine grapes, and that it may be well when planting vines to have reference to the geological character of the rock from which it is mainly formed, if we would attain the highest degree of excellence in grape growing. This knowledge can be obtained only by actual experiment here, and a comparison of results obtained on soil of different geological character will alone settle the question.

### Preserving Cabbage in Winter.

I HAVE had considerable experience in this matter of keeping cabbages in the best condition possible over winter, as my business of seed raising has rendered this necessary; and the subject would yield quite a chapter; but at present let this suffice. Select a warm location, having a southerly exposure if practicable, under a cliff, where the snow will be likely to bank in winter; the soil should be light in character, and the ground well drained. Dig a trench six or eight inches in depth, and of width sufficient to take three rows of cabbages. Having stripped all but the last layer of leaves surrounding the heads, stand them in the trench in the same position in which they grew, crowding them as closely together as possible; then begin a second trench, or rather continue extending the width of the one already dug, throwing the earth taken from it directly on top of the cabbages already planted, and thus proceed with the whole lot to be buried. Do not fill up the open interval which remains between the bottom of the cabbages and the bottom of the trench; the air is a better non-conductor of heat than the earth, and hence the plants will be better protected with the space open. For this same reason loosely-headed cabbages require less covering than those more completely headed in; the air between the leaves protecting the former. Having completed the planting, tread the earth close against the last row planted, which will tend to keep them upright. Dig a small trench around the bed, for draining purposes, throwing the earth on the edges of the bed, as these are most liable to wash, and hence require extra protection. Have a lot of waste litter or sea-weed at hand, sufficient, if litter, to cover the bed four or five inches in depth, if sea-weed, three inches will be sufficient. After the ground is frozen about through to the cabbages, scatter over the litter or sea-weed as may be. If one has plenty of litter about, a foot of this will be a sufficient protection without the previous covering with soil. The Savoy varieties require less protection than the Drumhead. Six or eight inches of earth will protect as effectually as four feet, as I have proved by experiment.—*J. J. H. Gregory.*

### The Household.



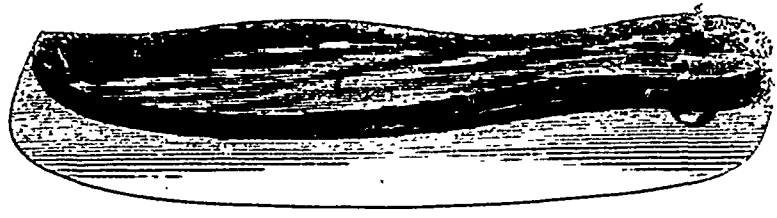
RECREATION is one of the demands of our nature, to which even the industrious farmer ought to pay respect, and every household should have its appointed and approved amusements for the young people. It is said that the statistics of lunatic asylums show a large proportion of inmates as having come from the agricultural class, and the celebrated Dr. Hall, of New York, accounts for it partly from the fact that farmers and their families are so little diverted from the dull routine of every day duty. Their subjects of thought are too few,—life is not sufficiently varied. There is too much monotonous plodding; there is a sameness and a tameness about their mode of living which is unfavourable to mental vigour and integrity. Well-chosen recreation of some sort cannot but be beneficial to all classes of persons, whether they dwell in the country or in the town.

As a healthful, exhilarating, out-door pastime, skating is unrivalled. Its present popularity is a good sign of the times. Like everything else, it is capable of abuse, but indulged within proper bounds, it has very much to commend it. The introduction of artificial skating places, usually called "rinks," has done a great deal to foster a taste for this winter amusement. By their means the dangers of the ice have been reduced to a few bruises or scratches, and anxious parents are enabled to breathe freely when their sons and daughters venture upon the slippery pavement. With a little energy, every town and village in the land might have its rink or rinks. In most rural neighbourhoods, too, provision might be made for enjoying in perfect safety this exciting sport. Many of our farmers have a nice creek or spring flowing past their dwellings, and the young people, with a little direction from an older head, might easily form a family rink. Or a few neighbours, one of whom had such a stream, could unite and get up a skating place which should be common to all. A small rink that would afford immense diversion to the little folks could be made in the door-yard by the help of the well and cistern, if these were capacious and plentifully supplied with water. The boys, and girls even, would work with a will in preparing with spade and bucket such a skating place. Those numerous and melancholy accidents that have re-

sulted from venturing on unsafe ice formed over deep water, should be a warning to everybody. It is much easier to get through ice than to get out again; the edges break away; the feet, as you cling to the ice, rise up underneath; and the risk of slipping in and sinking never to rise again is very great. Swimming is of little avail; you cannot do much at that with skates on; the iron is heavy and weighs the feet down, and what is worse, it cuts the water instead of presenting the resistance of a flat foot against it. A valuable secret for anybody in danger on weak ice is to lie down and crawl away. A man may wriggle like a snake to the shore over ice that would break with the perpendicular weight of a child. Two maxims deserve universal regard. 1. *Keep off doubtful ice.* 2. *Lie down and crawl when there is danger of breaking in.*

In learning to skate, confidence and resolution are the main things. The ice is no place for the nervous, timid, and irresolute. If you think you are going to fall, you will most certainly do so. Resolve to stand and go, and though awkward and scrambling at first, an encouraging degree of improvement will soon reward you. The first attempt of the beginner is to progress on the ice, as on land, by walking. A sort of slide is then attempted. So soon as the learner is a little accustomed to the novel position, the ordinary run, or inside edge forward, as it is called, should be attempted. It is done as follows: Standing with the right heel in the hollow of the left foot, so that the two feet form right angles with each other; the weight of the body is thrown on the right foot, and the inside edge of the left foot is pressed into the ice. A push given by the left foot, which is immediately taken off the ice and brought parallel with the other, sends the skater forward a short distance. Next the left foot should be placed in advance, and a push given by the right foot in a similar manner. Alternating thus from one to the other, the learner will gradually be able to get along, although at first slowly, clumsily, and with hands flying about in an awkward sort of way. By-and-bye however, ease, firmness, command of balance, and considerable speed will be attained. The learner will then be prepared to attempt skating backwards, and various forms of figure and fancy skating. About these, we have not space to say anything just now.

Skates are now made in a great variety of patterns. Of course, taste will have much to do in the selection of a pair. It is well, however, to avoid fluted skates, i.e., those which have a groove running along the bottom. They give a better hold of the ice at first, and are therefore preferred by learners, but they are apt to become blunt at the edges, and to cut up the ice into little shavings, which collect in the groove and trip up the skater. Square heels are also regarded as objectionable, from their cutting up the ice, and being unsuitable for some kinds of figure skating. Ornamental projections at the toe are also undesirable. We give below an engraving of the best and most serviceable style of skate now in use. It is copied from the illustrated catalogue of Joseph Robinson & Co., of the Sheffield House in this city. They keep a large and varied assortment of skates, but especially recommend the one we have had engraved. The most skilful skaters of both sexes give it the preference over all other patterns.



SCARCITY OF POULTRY.—The *Prairie Farmer* complains that poultry are scarce and high-priced in the Chicago market, and thinks there is a real scarcity of poultry throughout the West. This state of things is attributed by our contemporary, partly to the extreme cold weather last winter, which destroyed many turkeys and fowls that were not well cared for; and partly to the high price eggs have borne for some time past, in consequence of which they have



Markets.

Toronto Markets.

"CANADA FARMER" Office, Dec. 9, 1864.

Flour—Little change; superfine in good demand at \$3 00 to \$4 per bushel for No. 1; extra, \$4 20 to \$4 25; superior extra, \$4 50 to \$4 60; fancy, \$1 10. Fall Wheat scarce, with a good demand, selling at 85c to 93c per bushel. Spring Wheat dull at 80c to 84c per bushel. Barley weak at 55c to 65c per bushel. Oats at 35c to 40c per bushel. Rye 60c per bushel. Peas in better demand at 60c to 65c per bushel. Hay—Market well supplied at \$13 to \$17 per ton. Straw \$13 to \$15 per ton. Provisions—Butter—Fresh, wholesale, per lb. 15c to 20c; retail, per lb. 20c to 25c, in tubs, wholesale, per lb. 16c to 18c. Eggs—Wholesale, per dozen, 15c to 20c; retail, per dozen, 19c to 22c. Lard—Wholesale, per lb. 10 1/2c; retail, per lb. 12 1/2c. Fat Bacon—Wholesale, per lb. 8 1/2c; retail, per lb. 11c. Cheese—Wholesale, per lb. 10c to 11c; retail, per lb. 13c to 15c. Lard—Wholesale, 11c per lb.; retail, 13c to 15c. Beef in small supply at \$2 60 to \$3 per 100 lbs.; second quality plenty, at \$3 50 to \$4 00; 6c to 8c per lb., retail, first class in demand for home consumption and export, at \$1 50 to \$3 per cwt., wholesale; 8c to 10c per lb., retail. Calves \$3 50 to \$5. Sheep, by the car load, \$3 50 to \$4. Lamb, by the car load, \$4 very good bring \$2 75. Pork \$5 to \$5 50 per 100 lbs. Venison, good back, \$5 to \$6. Hides (green) per 100 lbs., \$3 25, dry hides, 6c to 8c per lb. Tallow 55c per lb. Wool active at 25c to 30c. Calfskins (green) 10c to 12c per lb.; dry, 16c to 18c. Sheepskins (green) 10c to \$1 each; dry, 16c to 18c. Lambskins 60c to \$1 each. Coal, Lehigh \$1 50, Scranton \$3, Bituminous \$3. Wood \$4 50 to \$5 per cord. Salt \$1 80 to \$2 per bushel. Water Lime \$1 to \$1 50 per bushel. Potatoes in better supply at 30c to 50c per bushel retail. Apples, \$1 to \$2 50 per bushel. Ducks, 50c each. Chickens, 25c to 35c per pair. Turkeys, 60c to \$1 50 each. Geese, 25c to 45c each.

St. Thomas Markets, Dec. 6.—Wheat, per bushel, 55c to 57c; Spring Wheat, per bushel, 75c to 77c; Fall Wheat Flour, per 100 lbs., \$2 25 to \$2 37; Meal, Wheat Flour, \$2 to \$2 25; Spring Wheat Flour, \$1 87 to \$2; Indian Corn, per bushel, 50c to 55c; Rye, per bushel, 60c to 65c; Oats, per bushel, 32c to 35c; Barley, per bushel, 55c to 60c; Peas, per bushel, 55c to 65c; Indian Meal, \$1 75; Calves, \$2; Potatoes, per bushel, 25c; Beef, per 100 lbs., \$1 60 to \$3; Mutton, per 100 lbs., \$3 to \$4; Veal, per calf, \$2 to \$4; Sheep, \$2 to \$3; Pork, \$4 to \$5 25; Wool, per lb., 35c to 40c; Clover Seed, per bushel, \$3; Timothy Seed, \$3; Flax Seed, \$1 25; Hay, per ton, \$12 to \$14.—Home Journal.

London Markets, Dec. 8.—The weather to day is severe enough to satisfy any desire for "real winter;" still few farmers seem disposed to enjoy it by attending market; very little produce offered for sale, and prices quiet at last quotations. Fall Wheat, 84c to 90c; Spring do., 80c to 81c; Peas, in keen demand at 60c to 62c; Barley, quiet at 55c to 60c; Oats, scarce at 35c; Corn, wanted for grinding at 50c to 55c; Hay, in fair supply at \$15 to \$16 per ton; Dressed Hogs—with the return of weather fit for shipping, prices move towards old rates; good heavy Hogs sold today at \$5 50 per 100 lbs.; small Pork, \$4 00; medium, \$5 to \$5 25.

Galt Markets, Dec. 9.—Flour, \$2 to \$2 25; Fall Wheat, 55c to 60c; Spring Wheat, 75c to 78c; Rye, 60c; Oats, 35c to 38c; Barley, 50c to 60c; Peas, 55 to 58c; Eggs, per doz., 12 1/2c to 15c; Butter, per lb. at market, 15c to 17c; Potatoes, 25c to 30c; Apples, 25c to 30c; Hay, per ton, \$10 to \$12; Straw, \$4 50 to \$5; Flax Seed, \$1 to \$1 25; Wool, per lb., 45c to 50c; Sheep Skins, 80c to 90c; Lamb Skins, 50c; Hides, per 100 lbs., \$3; Pork, per 100 lbs., \$4 50 to \$4 75; Beef, per 100 lbs., \$3 50 to \$4 50.—Reporter.

Quehph Markets, Dec. 6.—GRAIN—Fall Wheat, per bushel, 50c to 57c; Spring Wheat, 75c to 80c; Oats, 55c; Peas, 50c to 55c; Barley, 55c to 65c; Hay, per ton, \$13 to \$15; Straw, per load, \$3 to \$4; Pork, per 100 lbs., \$4 50 to \$5 50; Butter, per lb., 16c; Hides, per 100 lbs., \$3; Beef, \$2 50 to \$4.—Advertiser.

Hamilton Markets, Dec. 6.—Flour, superfine No. 2, \$3 25 to \$3 50; superfine No. 1, \$3 75 to \$4; fancy \$4 to \$4 25; extra superfine, \$4 25 to \$4 50; superior extra, wholesale \$4 50 to \$4 75; do. retail, per 100 lbs., \$2 50 to \$2 75. Wheat, fall, per bushel, 80c to 87 1/2c; spring do., 75c to 85c. Barley, per bushel, 55c to 58c. Peas 55c to 58c. Oats 35c to 38c. Potatoes, per bushel, 35c to 45c. Apples, per bushel, 40c to 50c. Beef, per 100 lbs., \$2 25 to \$3 50. Butter, per lb., 15c to 20c; do. in tubs 14c to 16c. Pork, \$4 50 to \$5. Oatmeal, per barrel, \$4 75 to \$5 25. Hay, 50c. Indian Corn, per bushel, 60c to 65c. Hay, per ton, \$10 to \$14. Straw, per load, \$3 to \$4 75. Cheese, per lb., 9c to 10 1/2c. Tallow, per lb., 5 1/2c to 7 1/2c. Green Hides, \$3 50 to \$3 75. Do. Calfskins, 7c to 8c. Sheepskins, each 75c to \$1.—Spectator.

Montreal Markets, Dec. 6.—ASHES—per 100 lbs.—No. 1, \$5 20 to \$5 25; No. 2, \$5 20; Dressed Hogs, per 100 lbs.—rates for best lots at present on market are \$5 10 to \$5 50 in bankable funds; Butter—some shipments by next steamer from Portland to Liverpool; market in general very quiet.—Witness.

Buffalo Markets, Dec. 6.—Flour quiet but firm; Canada Spring at \$10 25. Wheat quiet but firm; No. 1 Milwaukee Club at \$2, Canada white at \$2 37; No. 2 Chicago and Milwaukee Club held at \$1 95 to \$1 97; amber wintered \$2 20 to \$2 25. Corn dull and neglected; old and new at \$1 40. Oatmeal; western hogged at \$1 1/2c. Barley a shade easier; Canada, \$1 80 to \$1 85; western held at \$1 70 to \$1 75. Rye dull; held at \$1 65. SEEDS—small sales of timothy at \$5 50 for Illinois, and \$4 75 for Wisconsin; Canada at \$4; Clover scarce and firm at \$14 50; Flax Seed dull at \$3. Dressed Hogs dull at 11c to 13c as to condition. Petroleum active and firm at 85c to 85c for prime oil; Naptha 50c to 55c.

Albany Markets, Dec. 5.—Beets—extra, \$5 50 to \$9 15; first quality, \$6 75 to \$7 75; second quality, \$5 25 to \$6; third quality, \$4 to \$4 75; inferior, \$3 to \$3 50. Sheep—only a moderate supply. Hogs—buyers still complaining of a comparative scarcity of primo fat heavy hogs. Most of the sales were at 11c to 11 1/2c

for light to fair Western and State, 12 1/2 for good, and 12 1/4 for extra do. FLOUR AND MEAL—Throughout the week there has been a fair and lively demand for all grades of flour, for the supply of the East, the river towns and the home trade, at pretty steady, but rather higher prices than were obtained last week. The supply continues moderate from the West, and this, together with the receipt from local mills, has been about equal to the demand. The stock here is light for the season, but well assorted. GRAIN.—Wheat is not plenty, and with a fair milling demand the market rules steady; White Canada, \$2 55 to \$2 65. Rye has met with a fair demand, Western \$1 75 to \$1 80; and Stato \$1 50, closing at the inside figure. Corn in limited supply, with only a moderate enquiry for the East, Western mixed at \$1 94 to \$1 95; a sale of Round Yellow was made during the week at \$2. Barley in good request, and for primo better prices are obtained, Canada East \$1 75 to \$1 82, and a West \$2 to \$2 10. Oats in moderate request at 93c for Canada East, and \$1 to \$1 02 for Stato and Western. Hops—The market is inactive and quite dull, Old is held at 15c to 20c, and New 45c to 50c.—Journal.

New York Cattle Market, Dec. 6.—Beef Cattle, first quality, \$17 30 to \$19; fair to good quality, \$11 to \$16 50; common quality, \$9 50 to \$10 50; inferior quality, \$7 to \$9 40. Cows and Calves, first quality, \$20 to \$25; ordinary, \$15 to \$25; common, \$15 to \$17; inferior, \$10 to \$12 1/2. Fat Calves, first quality, 12 1/2 to 14c per lb.; ordinary, 10c to 12 1/2c; common 7 1/2c to 10c; inferior, 9c to 9 1/2c. Sheep and Lambs, extra, \$7 to \$7 50 per head; prime, \$8 50 to \$9; ordinary, \$5 to \$6; common quality, \$4 50 to \$5; inferior, \$4 to \$4 25. Swine, heavy corn fed, 12c to 12 1/2c per lb.; light and medium, 11 1/2c to 12c; still fed, 10 1/2c to 11c. There was no marked change in the market this week as compared with last week. The supply was small, but the city has been flooded with poultry, and added to this, the weather has been very unfavourable. The demand for beef cattle has therefore been light, and prices barely supported. We retain our last week's quotations, though there were some few sales at 7 1/2c. The market on the whole may be called quiet and steady. The demand for milk cows has been very moderate, but we observe no change in prices. Veals have been in moderate demand at our quotations. Sheep and lambs have been rather more active and prices a shade higher, though quotations are without decided change. Hogs have been in moderate demand, and prices are scarcely so firm.

New York Markets, Dec. 9.—FLOUR—Receipts 21,754 barrels; market firmer and quiet. Sales 9,000 barrels at \$9 50 to \$9 95 for superfine state; \$10 20 to \$10 30 for extra state; \$10 35 to \$10 40 for choice do.; \$9 85 to \$10 for superfine western; \$10 20 to \$10 75 for common to medium extra western; \$11 20 to \$11 40 for common to good shipping brands extra round-hoop Ohio. Canadian flour firmer; sales 400 barrels at \$10 25 to \$10 50 for common; \$10 60 to \$12 25 for good to choice extra. Rye flour quiet at \$3 50 to \$9 50. WHEAT—Receipts 2,020 bushels; market 1c to 2c better; sales 15,000 bushels amber Milwaukee, 1c quiet. Barley dull. CORN—Receipts 2,260 bushels; market heavy; mixed western nominal at \$1 90 to \$1 93. Sales 6,000 bushels new yellow Jersey at \$1 65 to \$1 70. Oats 1c to 2c better; \$1 07 1/2 to \$1 08 for western. Pork quiet and firm; sales 1,600 barrels at \$35 to \$38 for two-year old mess; \$33 to \$33 25 for one year old do.; \$34 to \$35 50 for primo. Beef steady.

Advertisements. COE'S SUPER-PHOSPHATE OF LIME AS A MANURE FOR INDIAN CORN.

Letter from Mr. H. CUTTING, of the firm of CUTTING & FOX, Merchants, Coaticook, O. E. :

MR. ANDREW COE, MONTREAL: DEAR SIR,—I used some of the SUPER-PHOSPHATE our firm bought of you last spring, upon part of a field of Corn. The field had been top dressed with farm-yard manure, ploughed in, and, at the time of planting, the 17th of May, good hog manure was applied in the hill, at the rate of 20 loads per acre, with the exception of four rows. Upon these four rows I applied Phosphate only, using a tablespoonful to the hill at the time of planting. Their appearance through the season was better than that of the rest of the field, and the Corn was ripe TEN DAYS EARLIER, and the ears were longer and better filled. At the harvesting, on the 15th of September, they yielded 6 1/2 bushels of ears. I selected four other rows of equal length from the best of the field,—they yielded 4 1/2 bushels of ear. By comparing the cost and results, it is evidently good economy to use the Phosphate. 4 rows, 15 lbs. Phosphate, cost \$9 50, yield 6 1/2 bushels ears. Equal per acre to 300 lbs. Phosphate, cost \$9 60, yield 6 1/2 bushels Shelled Corn. 4 rows, 1 load hog manure, cost \$1 50, yield 1 1/2 bushel ears. Equal per acre to 20 loads hog manure, cost \$30 00, yield 4 1/2 bushels Shelled Corn. I shall use it more extensively hereafter, as will also the Farmers generally in this vicinity. I am yours respectfully, H. CUTTING. Coaticook, C. E., Dec. 15, 1864.

AID FOR FARMERS. \$25,000 to Loan! Terms most Favourable. LOANS upon Real Estate can be had through me, payable by instalments spread over from ONE to TEN YEARS, at reasonable rate of interest, with privilege of paying back a part, or the whole, before maturity, deducting interest for unexpired time. Crown Patents taken out when required. Letters of enquiry must be pre paid. GEO. F. BURROWS, Dundas, C. W. December 15, 1864. 21-21\*

AGRICULTURAL AND VETERINARY INSTRUCTION. THE ANNUAL COURSE OF FAMILIAR LECTURES in the above departments will be resumed JANUARY 13th, 1865, and continue six weeks. The Veterinary department will, as heretofore, be under the management of Professor SMITH, and Professor HUCKLAND will be assisted in the Science of Agriculture by the Professors of Chemistry, Geology, Natural History, and Meteorology, in University College. Fee for the Veterinary Course, \$5; the others, free. For particulars, apply to Professor HUCKLAND, University College. H. C. THOMSON, Secy. Dir. of Agriculture. Board of Agriculture, Toronto, Dec. 15, 1864. 21-31

GRAPE VINES: CHOICE VARIETIES, by Mail, at 25 cents each. Hartford White and Concord are first class Grapes, and ripen with us in open air, in August and early in September, and sell readily at 20 to 25 cents per lb., wholesale. They are very hardy vines, and require no shelter, and with good care will bear 20 lbs., the second year after planting. Persons enclosing \$1 in registered letter to my address, before the Vines are all ordered, will receive by mail, post-paid, in the Spring of 1865, two vines of each variety, and larger quantities, if required. Write plain your name and Post Office. Direct. W. W. KITCHEN, Grape Grower and Wine Maker, Grimsby, C. W. Grape Wine (5 Gallons and over), at \$2 per Gallon. 22-1f

FIRE INSURANCE ON FARM PROPERTY AND ISOLATED DWELLINGS. The London and Lancashire Fire Insurance Company. CAPITAL—ONE MILLION STERLING. THIS Company insures against Fire, Farm Property and Detached Dwellings for a period of years, on terms unusually favourable to the insured. Farmers and others will find our rates equitable, our settlements for loss or damage prompt and liberal, and our system more adapted to their wants than that of Mutual Companies. They have the security of a large deposit (over \$50,000) in the hands of the Finance Minister, besides the income and large capital of the Company. No assessments, and no uncertainty as to when or how losses will be paid. CANADA HEAD OFFICE, MONTREAL—with Agencies throughout the Province. DIRECTORS—Chairman, William Workman, Esq., President of the City Bank; John Leppath, Esq., Vice-President Bank of Montreal; B. H. LeBlond, Esq., Cashier La Banque du Peuple; Alexander M. Delsie, Esq. GENERAL AGENTS—SMITHSON & BETHUNE. County Agents wanted in both Upper and Lower Canada. THOMAS CLARKSON, Agent for Toronto. 29-61

LANDS FOR SALE. TWENTY THOUSAND ACRES OF LAND, both wild and improved, and at all prices, for sale in various townships throughout Upper Canada, cheap and on easy terms. For lists and particulars, apply to the proprietor, T. D. LEDYARD, Barrister, &c., South-west cor. of King and Yonge-sts., Toronto. Toronto, March 15, 1864. 6-1f

THE CANADA FARMER is printed and published on the 1st and 15th of each month, by GEORGE BROWN, Proprietor, at his Office, No. 26 and 28 King Street East, Toronto, U. C. where all communications for the paper must be addressed. Subscription Price \$1 per annum, (POSTAGE FREE) payable in advance. Subscribers may either begin with No. 1, receiving the back Nos., or with No. 23, being the first No. for 1865. No subscriptions received for less than a year, and all commence with the first number for the current year. CLUBS will be furnished at the following rates:— TEN COPIES for..... NINE DOLLARS. TWENTY COPIES for..... SIXTEEN DOLLARS. FORTY COPIES for..... THIRTY DOLLARS. ONE HUNDRED COPIES for..... SEVENTY DOLLARS. To Agricultural Societies ordering more than 125 copies, the FARMER will be sent at SIXTY CENTS. THE CANADA FARMER presents a first-class medium for Agricultural advertisements. Terms of advertising, 20 cents per line of space occupied—one inch space being equal to 12 lines. No advertisement charged less than \$2, being ten lines of space. Communications on Agricultural subjects are invited, addressed to "The Editor of the Canada Farmer," and all orders for the paper are to be sent to GEORGE BROWN, Proprietor and Publisher