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THE CANADA FARMER

VOL. II. No. 11. | TORONTO, UPPER CANADA, JUNE 1, 1865. | POSTAGE FREE.

The Field.

Work for the Month of June.

It has been well observed, that "in no month of the year, are the prose and poetry of farm life more mingled, than in the present." The bright sunshine, the blooming flowers, the verdant fields and forests, the chirping insects, the singing birds, and the "little busy bees," combine to form a scene in which activity and beauty are harmoniously blended. It is nature teaching man to labour cheerfully,—to let work and gladness go hand in hand. All can appreciate the poetry of pleasant fields and pretty flowers, but it is rather prosaic to plant potatoes and hoe corn. Now begins the fight with weeds, and a stern fight it often is. Nevertheless it is a battle in which there must be no cowardly shirking, and in prosecuting which, the farmer needs many of the qualities of the true soldier. Corn, whether for green fodder, or a crop of ears, may still be planted. Indeed, it is hardly advisable in this climate to put corn into the ground before the beginning of June. Our farmers should grow more of this valuable cereal. Millet may also be sown early this month, and is useful both for green forage and for curing the same as hay. It is not even now too late to get a fair crop of mangolds, and carrots, if these have not yet been sown. Better put them in late than be scant of roots for winter feeding. The middle of this month is the time for getting in turnip seed, and we earnestly counsel all our readers by all means to grow a patch of these valuable esculents. No farming is worthy the name which does not include in its regular course,—turnip growing. Choose the best bit of ground at command, and if you can get it, sow Coe's Superphosphate, at the rate of about 200 pounds to the acre, before drilling in your turnip seed. It will hasten the growth of the young plants, and increase the crop amazingly. Manure-making is always seasonable, and should not be lost sight of, anytime in the year. Husband cattle droppings, poultry dung, privy ordure, kitchen refuse, weeds from the garden, and compost all with swamp muck, or ordinary soil. Let no fertilizing material go to waste. Barns and sheds will soon be needed for storing away hay and grain. Let them be in good order before the hurry of haying and harvesting comes on. Look after the tools that will then be needed. The mowing and reaping machine should be carefully overhauled and scythes, cradles, rakes &c., provided and put in working order. This ought to be a busy month in the dairy. June butter is generally considered the best produced during the year. Let it be carefully made, and it will command the highest price going. Or if it be preferred to keep it until winter, which may be done very well with care, it will fetch a much better price then without doubt. The strictest cleanliness needs to be observed in all dairy operations. Richer pastures do not grow than are to be found in Canada, and by skilful manufacture, our butter and cheese may challenge the world. Sheep washing and shearing will demand attention early this month. Some farmers do this job too soon. It should be left until we have settled warm weather. The loss of their winter over-coats all of a sudden, must be a severe shock to these most useful, but too often ill-cared for animals. Even in thoroughly warm weather, they should receive extra housing on chill nights and during cold storms just after shearing. By the end of this month, it will be time to cut the first crop of clover for seed. Sometimes animals become bloated from eating greedily of fresh clover. The *Annual Register of Rural Affairs* prescribes a dose of pulverized charcoal as "the best remedy" in such cases. Quantity to be given, about a tea-cup full to an average sized cow, and in proportion to other creatures, according to their age and weight. It should be mixed with water, and poured down the throat from a junk bottle. Orchards should have the soil cultivated and mellowed, and a liberal supply of well-rotted manure should be harrowed in so that the roots may get a supply of nutriment during the fruiting season. A mulching of straw or old litter is very useful in dry hot weather. Plenty of good fruit is not to be raised without some trouble, any more than other crops. Look out for and exterminate the borer before he gets far into the wood. Destroy tent and other caterpillars, if it be not already done. Watch for the curculio, that pest of the plum orchard. Two ways of getting rid of it are recommended by experienced fruit growers. The first is to gather up the young fruit that falls, and either burn it or feed it to the pigs, that the larvæ may be killed. Pigs and poultry allowed to run among the plum trees will do this work effectually. The second plan is to jar the plum trees, and so shake off the perfected insects. White sheets should be spread for them to fall on, that they may be readily seen, and destroyed. This is a busy month in the garden—weeding, thinning, hoeing, transplanting, watering, and sowing late seeds, will give the gardener enough to do. Cabbages, cauliflowers, early celery, and tomatoes, must be transplanted this month. Cucumber and melon plants will need watching, and defending from the ravages of the striped bug. Sowing seeds at intervals of a few days is recommended, that they may have a succession of tender leaves to feed upon, and so a supply of the older plants may get out of harm's way. It is in the early stage of the plant that the bug feeds on it. Scattering ashes, plaster, and lime, also destruction by hand, are practised to get rid of these marauders. Cooping a hen with a brood of young chicks near the vines is a good plan. The chicks will devour the bugs, and do the plants no harm. Lettuce, beans, peas, and radishes, may be sown at intervals, to keep up a supply as wanted. Gooseberry and currant trees must be watched, and on any sign of the worm or slug appearing, fresh lime should be sifted among the branches. The heads of fruit trees may be shaped, and a too rampart growth prevented by judicious pinching of the young shoots. This is an important month with bees, as it is the time for new swarms to issue from the hives. Every bee-keeper should supply himself with a good modern text book on api-culture. He will find many suggestions in such a work, of especial value about swarming time.

Phosphorus Set Free by Tillage.

The effects produced by the thorough tillage of the soil, whether chemically or physically, are most interesting and important, and should be carefully studied by every farmer desirous of increasing his profits and improving his art. Cultivation opens up the soil to the beneficent influences of air, warmth, and moisture, by which, injurious compounds are not only rendered harmless to vegetation, but, in many cases, even to yield valuable nourishment to plants.

"The chemical analysis of a great variety of vegetables has revealed to us the fact that the ash of plants (their residuum on being burnt) known to be useless as food, almost invariably contains but a small proportion of phosphoric acid, whilst the ash of wheat, oats, and the like, invariably attains a much larger proportion; and we are further taught, by chemical analysis, that the most nutritious parts of those plants invariably yield the greatest proportion of phosphoric acid,—thus the ashes of the seed of wheat, oats, and rye, contain nearly half their weight of phosphoric acid."

It is not a little singular that phosphorus, all important in the economy of nature though it be, is a comparatively scarce element. Although we *now* know that it is contained in every fertile soil, there was a time, and that not long since, when its presence was unnoticed in the statements of the analyses of soils; and, as it could not be traced from the soil to the animal, there were not wanting physiologists to maintain that phosphorus found in animals was elaborated under the influence of the life-power. The recent advances which have been made in the processes of analysis, have enabled chemists to detect phosphorus in almost every variety of rock and soil; and there is now no difficulty in tracing the phosphorus of animal substances through the vegetable to the mineral kingdom.

It appears to be a wise arrangement that phosphorus should exist in such small quantities in the earth, and that even the greater portion of this small supply should be locked up in the rocky portion of the soil. But, were it otherwise,—were phosphorus and the other constituents of the soil, which are used as food by plants, supplied in an available form in unlimited quantity, the husbandman could not earn his bread by the sweat of his brow, in obedience to the fiat of the First Great Cause. The tilling of the soil, is, therefore, but the setting free, or rendering available for the purpose of vegetable nutrition, a portion of the phosphorus which it contains. There are, no

doubt, other ends served by the process, but this is the chief one. The principal cause of the infertility of the soil is the want of a due proportion of available phosphoric acid. The manures which have been proved to possess the most ameliorative effect on exhausted or naturally inferior soils, are those which contain a large proportion of phosphoric acid. In view of these facts, phosphorus is seen to be of the deepest interest to man, whether he live by cultivating the soil or the mind.

Guano, and the other numerous varieties of artificial fertilizers, which are now employed as auxiliaries to farm yard manure, are valued in proportion to their per centage of ammonia and phosphoric acid, but it should be borne in mind that the quantity of ammonia contained in the soil and atmosphere is practically almost unlimited, whilst the proportion of phosphorus, contained even in the best soils, is very small, and is, after the most laborious treatment, rendered useful. Every addition of ammonia to the soil, aids in the solution of the mineral matter, and enables the plant to draw, as it were, in advance, upon the resources of the land. Thus, whilst the compounds of phosphorus enrich the soil and directly contribute to the wants of vegetable life ammonia chiefly acts as a solvent of the saline and other mineral constituents; in fact, whilst in the majority of cases, the continued application of Peruvian Guano, sulphate of ammonia, and other ammoniacal manure, is but a constant aid to the crops to exhaust the soil, a liberal application of phosphoric compounds makes a positive addition to the soil's fertility.

The Turnip and its Cultivation.

"Country Gentleman" Prize Essay

BY J. C. SNELL, EDMONTON, C. W.

I am going to give you my experience in turnip culture during the last ten years, on my father's farm. I shall not attempt to give positive proof that it is a profitable or paying crop, but I cannot understand how any one that keeps good stock, and pays attention to pushing forward young animals, can well do without them. It is true that if all the labor that must be expended in its cultivation be taken into account, it is one of the most expensive crops we raise, if not the *most expensive*, but it leaves the land in first rate condition for growing future crops of any kind. For it must be well manured to produce a good crop of turnips, and it must be so well cultivated that all grasses and weeds are effectually killed. We can do more injury to Canada thistles by cultivating turnips than by any other course. We get a larger amount of good, succulent feed for stock from the same quantity of land than we can of any other crop. We make an immense pile of excellent manure to keep up the farm, and our stock is healthier and better for a liberal supply of roots. Besides all this there is more real pleasure in working among and watching the growth and progress of a field of turnips than can be derived from any other crop; it is really fascinating, and we consider it by no means an uncertain crop; in ten years we have never failed to get an average crop. This year, 1861, in spite of the most severe drouth that the "oldest inhabitant" has ever experienced, we have cultivated twenty-six acres, and never had a better crop. I am quite certain that they will average 900 bushels per acre. This is considered a good crop, but as high as 1,000 bushels have been grown in Canada. In this, as in the cultivation of any crop, a great deal has to be learned by observation and experience—sometimes dear bought experience.

A good crop of turnips may be obtained without the use of artificial or expensive manures, by using only good barnyard manure; by this I do not mean the kind of manure generally used by our farmers, such as rotten straw and the droppings of animals that have been fed on straw, but manure made from animals that have been well fed. I think the best time to apply the manure is in the fall, spread and ploughed under. In this way it keeps the soil open and loose during the winter, and becomes thoroughly mixed with it. But if it is not convenient to apply it in the fall, manure that has been composted during the winter, and is well rotted, can be applied in the same way in the spring. But perhaps a better way to get immediate benefit from the manure is to open out drills and spread the manure in the drills, then close them and sow upon the top. This mode requires more labour, but will perhaps pay for it in the crop, as the manure is directly under the plants, and must have a good effect. If the land has been ploughed in the fall, as it certainly should be, it need not be moved again till most of the spring work is through, about the last of May, when it should be ploughed, harrowed and rolled, then let lie for a week or two, so that any seeds of noxious weeds that may be present will have time to sprout; the land should then be thoroughly worked with the plough, harrow, cultivator and roller, till it is fine and loose; a fine seed bed is of the greatest importance. If the land is of a character that will bake, it should never be worked while wet.

The best way to prepare the land for sowing is to mark it out in drills from 26 to 30 inches apart. I think the latter distance preferable, and for this purpose a double mould-board plough is a great advantage. A roller should be passed over the drills, lengthwise before sowing; this flattens the drills and makes them more solid, to prevent the seed being deposited too deep. You may get quite as good a crop by sowing and cultivating on the level, but they are much easier to work in raised drills, and the horse-hoe can be used sooner without injury to the plants. The drill we have used for sowing is one of the kind used in Yorkshire England, a cumberous machine, drawn by two horses (sows three drills at a time), and has an arrangement for sowing dry manure with the seed, which can be used or not at pleasure. We have sowed a mixture of coal dust, ashes, bone-dust and dry swamp muck with very satisfactory results. It is certainly a good principle to sow manure with the seed, but it is rather troublesome. We have never tried superphosphate, but have no doubt it is a good thing.

For covering the seed I think a brush is the best thing; it may be made of green branches or boughs drawn through a light frame of poles; a roller packs the ground, and when a shower of rain comes it is apt to form a crust on the surface, which prevents the plants from coming up. I think it better to sow after a shower if possible, while the ground is damp and the crust does not form on the surface as it would if they were sown before a shower, besides the ground is better for being a little solid, as the seed does not need to be so deep. The best time to sow is about the 20th of June; any time between the 15th and 25th will do very well, but if the weather, or other things, are unfavourable to sowing at that time, I would not be in a hurry. I have seen a good crop of turnips that were sown on the 12th of July. We usually sow about 2 pounds of seed per acre; some persons sow 2½ or 3 pounds. Of course a much less quantity would be sufficient if it all grew, but it may not all germinate, or the fly may come in for a share, and it is well to have enough, as the additional expense is only trifling, besides you have a better choice of plants in the operation of hoeing and thinning.

As soon as the plants are large enough, they must be thinned by striking the hoe across the drill, cutting out the width of the hoe, and leaving only one plant in a place. After a little practice it will never be necessary to use the hand in separating the plants, and a good hand can hoe three-quarters of an acre a day. The hoes should be from 7 to 9 inches wide and straight in the head, so as to be used in pushing from you as well as pulling towards you.

Persons acquainted with turnip culture are very apt to fall into the error of leaving the plants too thick, but experience teaches us that under no circumstances should they be less than 9 inches apart, and I think that 12 inches is decidedly preferable. It will be seen in harvesting that where they are thin they are much larger, and there is less expense in harvesting large turnips than small ones. In the operation of thinning there is room for the exercise of some good judgment; care should be taken to select the largest and healthiest looking plants, and in order to do this it is better to cut out several small ones even if it makes a much wider blank than usual. The soil should be well moved around every plant so that it will fall over; they will bear a good deal of rough usage, and be better for it. The crop will pay for being twice hand hoed. The horse-hoe should be freely used from the time the plants are large enough for hoeing till they are too large to admit of its passing between the drills. I am so well satisfied of the benefit of horse-hoeing that I believe it would pay to run that implement through them once a week.

The quickest and easiest mode of harvesting that I know of is to cut the tops off with hoes; the hoes should be ground pretty sharp; then plough them out, taking the mould board off an iron plough for the purpose, the ploughshare cuts off most of the roots, and pushes the turnips out of the ground.

For storing, nothing is better than a cellar. A cellar under a driving house or barn, with trap doors in the floor, is very convenient, and here we use an arrangement to prevent the earth from going into the cellar with the turnips. It is a sort of grate or riddle made of two pieces of scantling or plank ten feet long and two feet wide, with bars of iron put in crosswise about 2 inches apart, and two legs bolted on to one end to elevate it to a slanting position. The turnips are thrown on to this and roll into the cellar, while the earth falls through upon the floor. It is very important to keep the earth from going into the cellar, as it prevents the circulation of air among them, and causes them to heat and rot. Whenever the weather is mild all the doors and windows should be left open, as there is more danger from heating than from freezing where they are stored in such large masses. If they should heat, it can be detected by the smell, and in that case they must be picked over, and the injured ones removed. If the floors of cellars and root houses could be constructed of scantling or narrow planks placed a couple of inches apart, so that a current of air could pass under and up through them, it would be a great improvement.

Where sufficient room in cellars cannot be provided, they may be kept tolerably safe in pits. Dig a trench 4 feet wide, and 8 or 10 inches deep; fill in and shape up to a point; cover with straw 8 inches deep, and then about seven inches of earth, leaving the top open 6 inches wide, and cover with wide boards, to throw off the rain. They should be taken out of the pits early in spring, and put in the barn.

For young animals turnips must be sliced, but cattle and sheep from two years old upwards will eat them very well without being cut, and are not any more liable to get choked. Young sheep, or sheep that are being fattened, may with safety be fed all the turnips they can eat, but it is not good to give a very large supply to breeding ewes. Cows will eat a bushel and a half a day, but a man must have plenty to feed at that rate. Hogs will winter very well on turnips.

The above remarks apply only to *Swedish* turnips.

Progress of Flax Cultivation.

THE subjoined report of the progress and increasing popularity of flax, as an object of culture among our farmers, has been received by the Board of Agriculture of Upper Canada, from that energetic promoter of flax cultivation, Mr. J. A. Donaldson, and has been handed to us for publication, by the Secretary of the Board.

To the President of the BOARD OF AGRICULTURE:

SIR, As I have been engaged by the Board to give instructions in the cultivation of the flax plant, I deem it my duty to furnish you with a brief statement of the progress that is being made, and have now the honour to state that since the first of January, I have been unceasing in my endeavours to bring this important subject prominently before the agriculturists of Western Canada. In doing so, I have attended several meetings in different sections of the country, and found on all occasions a strong desire, on the part of the farmers, to give this new crop a fair trial this season.

In the county of Peel, three meetings were held during the month of April, one at Streetsville, one at Brampton, and a third at Meadowvale. On all three occasions the Messrs. Gooderham & Worts attended, offering the most liberal inducements to the farmers to commence its cultivation in that section of country. They not only offered to provide them with seed for sowing, and wait for pay for it till after harvest, but stated "they would be prepared to buy the crop in the autumn, offering the handsome sum of $15 per ton for all they could procure, and this price for the straw with the seed on, making it conditional at the same time that the farmers could have this price after the flax had been cut either with the cradle or reaping machine, or $14 per ton if pulled by hand in the usual way." This ought to be a great inducement, when we are aware that an average crop of flax, in ordinary seasons, will produce in this state, from 2½ to 3 tons per acre, allowing the farmer to realize from $35 to $40 per acre for the crop. Many parties accepted this liberal offer, and put their names down for seed enough to sow from five to ten acres each. Mr. William Gooderham, of Meadowvale, assured the parties at the meeting, that he would sow at least thirty acres himself, as an example to others.

Mr. William Perine, of Conestoga, Co. of Waterloo, attended these meetings also, and stated that from 11 years' experience in the county of Waterloo, he had

every reason to believe flax could be made one of the best paying crops in Canada. He also corroborated the statements made by me, from time to time, and concluded his remarks by saying he and his brother intended putting in 4,000 acres this season.

In the county of Simcoe, I also visited several other places, showing the samples from the manufactory of Messrs. Perine, Bro. & Co., Doon Mills. At the village of Churchill, near Lefroy Station, a meeting was held, where there were nearly a hundred farmers present. After hearing explanations, a subscription was raised to the amount of $175 for the purpose of assisting any party who would erect a scutch mill, and several parties pledged themselves to put in from three to five acres each.

At Woodstock, I also attended two large meetings, and found in this section of country, a great deal had already been done. A Mr. Brown has had two scutching mills at work during the last two years, and has there given out seed enough to sow from 800 to 1,000 acres. He also stated at the meeting that he could get any quantity sown, as the farmers had felt the benefit they received from this crop. The Hon. Mr. Alexander, Doctor Cottle, and several members of the Agricultural Society attended on both occasions, and perhaps no part of Canada is likely to go more extensively into the growth of this new crop than the farmers in the county of Oxford. An oil mill is in full operation here and doing a large business.

On Saturday week I attended a large meeting in the Town Hall at Brantford. The mayor filled the chair, and a number of the most enterprising farmers in the neighbourhood were present. Two parties, present at the meeting, stated they intended putting up mills this summer and were then prepared to offer seed to the farmers who were inclined to commence operations. Mr. Finlayson, one of the parties, stated he was not only prepared to offer seed on the same terms as others, and wait for pay till after harvest, but he would advance money then, on account of the crop, and would pay as liberal prices as any other party in the country. Mr. Lyons, from the town of Simcoe, county of Norfolk, who intends putting up a mill, made similar offers. A lively discussion took place here among the farmers themselves. Several stated they fully intended to make a beginning this season, while others said they had already grown it. One party stated he had several acres, both last year and year previous, off which he had over 17 bushels of seed per acre.

A strong feeling was exhibited in favour of the project on all sides, and no doubt a large quantity will be sown. I have also answered numerous letters of enquiry, and on all occasions have found the farmers ready to make the trial, wherever a mill may be started.

JOHN A. DONALDSON,
Gen. Emig. Agent.

Toronto, 8th May, 1865.

Spring Seeding and Drainage.

To the Editor of THE CANADA FARMER:

SIR,—It being a general remark that wheat is looking very well, I have just been taking a stroll over a few farms in this neighbourhood, to cheer my eyes with a sight of returning prosperity to the farmers. But hope rather gave way to sadness as I proceeded. Many fields that look well in the distance, on nearer inspection, prove very spotted. Furrows stand full of water, often reaching some feet on the adjoining ridges, and everywhere large patches where the plant is not quite dead, but struggling for existence in a soil waterlogged, cold and heavy, like a bed of putty. Some progress has been made with spring seeding; but farmers whom I have met, state that more than half is yet to sow, that the weather has been so unfavorable, that when the land is ready for working another rain comes, and causes another week's delay. One farmer, who has ten acres of barley to sow, commenced with the cultivator on Friday, 28th April, when it was just dry enough for working, and got one half of it in fine order, intending to sow it next day; but a heavy rain fell that night, and next morning it was under water. On Friday, the 5th May, the other five acres were dry enough, but the five that had been cultivated, having the furrows all closed, could not be touched; so he cultivated the other five, and got them in good condition, intending, as before, to sow next day; but on Saturday it again rained heavily, and now the whole ten acres are farther back, and in worse condition, than they were a fortnight ago. He is not alone in this experience. Many are in the same predicament, and will be sowing till near the end of May. The result is likely to be the same as last year: before the plant is large enough to shade the land, the hot June sun will scorch the one, and bake the other, and the crop prove a failure. Had these ten acres been *underdrained* they would have been dry on the *Wednesdays* instead of the *Fridays*, and been sown and harrowed in good order.

In THE CANADA FARMER, of August 1st, you made this remark, "The great lesson of the past season is the *vital importance of thorough drainage*." As far as this locality is concerned, that lesson has not been learned. It has scarcely been begun to be learned. It may be safely asserted there are not twenty-five acres of drained land in the Township of Clinton; and there is not a township in Canada that would be more benefitted by draining. It, in common with the other townships of the County of Lincoln, stands at present rather low in its average productions, but the soil is naturally of the first order, and with thorough drainage, the whole of it, particularly that portion lying between the mountain and the lake shore, would not be surpassed in the wide world. My first impulse, on returning from my walk, was to write to you to complain of the little attention given to the subject of draining in your columns; but on looking back over them, I perceive this would have been unjust, as many articles, both original and selected, have appeared, and so much to the purpose, that instead of attempting to give anything new on the subject, I will content myself with recalling the careful attention of your readers to the articles and communications on the subject, in the numbers here indicated: Vol. I., No. 5, page 67; Vol. I., No. 11, page 162; Vol. I., No. 15, page 226; Vol. I., No. 17, page 259; Vol. II., No. 3, page 34.

In the number last referred to is a letter from a subscriber in Nelson, who makes use of the following emphatic language. "The advantages of underdraining cannot be over-estimated," and "I believe it to be the foundation of all good farming," sentences worthy to be printed in capitals at the top of every page of your journal. I will merely add, as well might farmers expect their cattle to thrive if the action of bowels and kidneys were suspended, and the food, after being retained for a time in the stomach and partially digested, spued out by the mouth, as expect crops to come to full growth, when the rains, their natural food, instead of being digested by percolation and filtration, are spued from the surface in their natural state. Nature has, in some localities, furnished these channels in gravelly subsoils, but where they are awanting, it is the very first function of the farming art to supply them.

But draining is very expensive, many say. Of course it is. So is clearing a farm. So is building a house, or a barn. So is a carriage and a fine pair of horses. So is any improvement. But drainage has this advantage, no other improvement, and no other outlay is so sure of a good return. It would pay to borrow money even at ten per cent. for this purpose, but money should be had at a much lower rate. Were the government to adopt some measures to create a loan fund for this special object, that would not cost over *five per cent.* it would be an immense advantage to the country. The Legislature has chartered banks which furnish ample accommodation for *commercial* purposes, but no provision is made to furnish means for conducting *landed improvements*, although of far more importance. The merchant, who imports dry goods to be worn by farmers' families, can get his paper discounted at a bank, and buy exchange to pay for them; but the farmer, who wants money to pay labourers for draining his land, to create the means to pay for these goods, *can get no discounts*. And yet the final result in the former case is the *rags* of the worn out clothing—in the latter, a great increase in the productions and wealth of our country. If the government cannot see its way to move in this matter, the next best source, that I know of, is the *Canada Landed Credit Company*, who lend money to farmers at one per cent. more than bank rates, and will receive payment of the principal in yearly instalments of two cent. If there are any farmers who are resolved not to go in debt even for this purpose, I would advise them to sell as much of their land as would enable them to drain the remainder; and they will be happier, wealthier, and more independent men.

Mr. Sutton's advertisement of tile making machines is a sign of progress in this work, in the County of Peel, at any rate. I sincerely hope those who have bought machines have had more encouragement than Mr. Little of this village, who some time ago got a machine, chiefly on my recommendation, and now offers to furnish 3-inch tiles, in lots of five thousand, as low as $10 per thousand; and yet, during the past year, he has not sold as many as would drain a single acre.

By way of contributing a little to a work so important, I beg to make the following proposal. If fifty farmers will deposit with you one dollar each, I will add fifty more, to make a premium of one hundred dollars to be awarded at the Provincial Exhibition of 1866 to the farmer who will put in the greatest extent of tile drains during the year, from 1st Sept., 1865, to 1st Sept., 1866. The tile to be not less than three inch bore. The depth of drain not less than three feet, where the digging can be done with plough or spade; nor less than thirty inches in any soil. Competitors to provide, as the work progresses, proof that will be satisfactory to the judges, of compliance with these conditions. To be open for competition to all farmers in Canada West.

I purpose making a similar proposal to this Township (Clinton), to the extent of twenty-five dollars. That is to say, if twenty-five farmers of this township will deposit with the Treasurer of the Township Agricultural Society one dollar each, I will add twenty-five more, to make a premium of fifty dollars, to be awarded at the Township Fair in 1866, subject to the same conditions as named for the Province, open for competition to the Township of Clinton.

J. B. OSBORNE.

Beamsville, 8th May, 1865.

NOTE BY ED. C. F.—We sincerely hope the challenge given by our correspondent will be accepted. Send in your names, gentlemen, for the Drainage Prize Fund of 1866. There will be no objection if more than the amount specified is pledged. Indeed, it would be well to have second and third prizes, as in other classes.

MANURE—THE FARMER'S CAPITAL.—A correspondent of the *Country Gentleman* says:—"I would suggest, what has often been maintained before, that 'manure is the farmer's capital,' and that all of it which is so frequently wasted around the privies, the barnyards, hog-pens, &c., be saved, and judiciously applied to the orchards, gardens, and farms, and a great increase of wealth, health, and happiness, would result therefrom to the people of this country."

THE BEST KIND OF POTATO SETS.—A correspondent of the Albany *Country Gentleman* gives the following result of his experience:—1. From all my examinations I came to the conclusion that the eyes of any single potato have different degrees of strength or germinating power, and that this difference extends to the plant, giving it a greater or less degree of vigour and growth. 2. That the strength of growth is greater in some kinds of potatoes than others. 3. That there is a greater difference in the strength of the eyes of some kinds of potatoes than in others. 4. That this difference is in degree marked by its external or apparent development. 5. It would seem that the best eye of the smaller potato is less vigorous than the best eye of the larger one of the same kind, but that is not yet proved by experiment. The writer also adds that in some kinds the eye is very faintly marked; in the better kinds the eye seems a more important feature, and in the best kinds the eyes are strongly marked, appearing to be only a mass of deep set eyes.

GROWING CLOVER AND CLOVER SEED.—The editor of the *Genesee Farmer* remarks:

I bought six bushels of clover seed to-day and had to pay $17 per bushel for it. But clover, on a grain farm, is indispensable. It is the only really renovating crop we have. JOHN JOHNSTON, now that he has made his land so rich, may think clover does not pay, but on most farms we must grow clover or we shall grow little else. In fact, one of the means Mr. Johnston used to bring up his land was by raising large crops of clover and making it into hay to be fed to sheep in winter. The manure from clover is much more valuable than from timothy. Clover may not pay directly as well as timothy, but when we take into consideration the fact that it impoverishes the soil less than timothy, while it makes better manure, and is, theoretically at least, weight for weight, quite as nutritious, clover must be the main reliance of wheat-growers for keeping up the fertility of the land. I have always recommended the farmers in Western New-York to "grow their own clover seed, and sow it with an unsparing hand." I will for the future endeavor to conform my practice to my preaching. I think it will be some years before I again pay out $102 for six bushels of clover seed. It is an excellent plan to have a piece of young clover near the barn-yard, and give it a heavy dressing of well rotted manure in the fall. This will start it very early in the spring, and give a great crop. It is just the thing to cut green to feed horses at noon in the stable. And if the second crop is allowed to go to seed, a large yield may be expected, even in such a dry season as the last.

Sheep Husbandry.

The Pros and Cons of Sheep Washing.

THERE is much diversity of opinion, at the present time, in regard to the utility of washing sheep, preparatory to shearing them; and, whatever merits either course may possess, it is clear that the respective advocates of washed sheep, or unwashed, have no difficulty in finding arguments to support their case. Without attempting to arrogate to ourselves the functions of arbitrator in the dispute, we propose to put our readers in possession of the *pros* and *cons* adduced by the advocates of each course, in order that they may form their own conclusions, and shape their practice accordingly.

Briefly then, the arguments advanced by the advocates of washing are as follows:—The practice prevents a useless transportation of dirt to market, and improves the saleability of the wool when offered there. It prevents buyers applying an unequal rule of shrinkage, which is generally one-third, to all unwashed wool indiscriminately; and thereby, consequently, increases the profits of the producer proportionably,—an item which, in a large flock, would amount to something considerable. It costs less, per head, clipping, and the sheep can be better shorn; while it prevents waste, thereby rendering more wool marketable.

It cannot be denied that these reasons are rational, and perfectly intelligible, so far as they go, and they certainly deserve the careful consideration of our producers. On the other hand, the alleged disadvantages stand forth in an equal, if not in a more formidable array. Washing, it is objected is injurious to the health of sheep, rendering them liable to contract cold, and thereby fall a prey to other diseases. This may arise either from their being over-heated by travelling some distance to the washing-pool or by a continuance of cold, wet weather for several days after the process,—neither of which circumstances are of unfrequent occurrence. By washing sheep are subjected to unnecessary terror from the unusual handling and immersion, while they naturally dislike wet in every form, whether it is in the shape of wet pastures, leaky sheds, or wet fleeces. It is further submitted, that any conventional rule of shrinkage, when found unfair, should be abandoned at once: and, last, but not least, the process, when district washing pools are resorted to, subjects the animals to the danger of contracting contagious diseases.

Such, in substance, are the *pros* and *cons* of the case, to which we invite the earnest consideration of flock-masters. At the same time, we would remind them that whatever importance they may be disposed to attach to the objections above mentioned, that of the liability to contract hoof-rot and other diseases, by travelling the same road to the common washing place, cannot be gainsayed. We have known in our experience, several instances of hoof rot and scab being introduced among flocks, where the appearance of the maladies could be attributed to no other cause than that of using a public washing pool.

Sheep are peculiarly liable to contract disease, as the bitter experience of many a flock-master will testify. Scab may be contracted by a clean healthy sheep, being in a field, where that loathsome disease has prevailed, for a few minutes; and hoof-rot may result to sound animals, from travelling on the same road over which a lame flock had passed. Too much caution, therefore, cannot be observed, in keeping sheep away from any place to which the shadow of suspicion attaches. In the face of these considerations, it is undoubtedly the sounder policy for staunch perseverers in sheep washing, to use a large tub for the purpose, in a convenient locality, unless they are fortunate enough to have a stream flowing through their grounds. By this course, the liability to contract disease will be obviated; and, at the same time, the valuable manure derived from the wool may be used for irrigating purposes. The value of the potash alone, extracted from it during the process of washing, is proved, by experiments, to be worth about $12 on 300 sheep.

It is not unfrequently the case that wool is washed after being removed from the sheep. This course exposes the producer to many disadvantages when his wool is marketed. The pecuniary loss thus entailed, is very fairly set forth in the letter of "A Toronto Dealer" published in our last issue, which we invite our readers to re-peruse, in connection with this question. In conclusion, we may remark, that in the present unsettled condition of the case, it is highly desirable a common understanding should be arrived at between buyers and producers. Sheep-masters, who prefer, from humane or other considerations, to shear their sheep unwashed, ought not, on that account, to be subjected to an indiscriminate levelling deduction on their wool. Certainly, if it is marketed in a dirty state, and highly charged with yolk, it is only fair that a proportionate reduction should be submitted to.—*clean wool being made the standard*; but it seems to us that, from the varying amount of yolk, or other impurity, induced by different modes of feeding, treatment, &c., any fixed rule of shrinkage, like the present one-third, fails to meet the imperative requirements of the case. No one ever thinks of making a fixed deduction in the case of other farm produce,—on foul seed in wheat, for instance, or useless weeds in hay. The price is invariably contingent on its quality, and the amount of foreign impurity mixed with it,—the best market price and sample being the standard of comparison. We confess ourselves unable to discover any reason why wool should not be subjected to the same conditions. Were this course adopted, we believe that the existing difficulties between buyers and producers would be practically removed. The present arbitrary rule of one-third, however, appears more like an attempt to coerce those growers into the adoption of sheep washing, who believe they are consulting the welfare of their flocks, and consequently their own, by abolishing the practice. We leave our readers to form their own judgments on the case, and in the meantime we will be glad of their opinions respecting it.

Sheep Shearing.

This operation, although too often lightly esteemed and recklessly executed is, in reality, one of the most artistic that the agriculturist has to perform. Few things exhibit the professional taste, skill, and kindly hearted care of a man more favourably than a sheep, whose fleece has been closely, neatly, and uniformly removed, without injury to the skin of the animal. On the other hand, nothing is more discreditable to a sheep owner, than to see a poor unoffending animal, turned off from the shears with some portions of its carcase nearly bare, as if a bungling barber had operated with a bad razor, and other portions covered with wool an inch long, as if an indifferent pruning knife had been employed; the ill used creature bleating piteously with the pain arising from numerous gaping incisions, the result either of culpable ignorance or of brutal carelessness. This picture is by no means too highly coloured. We have often seen animals that might have answered for the original. Shearing is not unfrequently undertaken by persons who have had no previous instruction, and the torture to which the poor sheep are occasionally subjected, by men of coarse minds, can be more easily imagined than described. A terrified sheep is chased round the shearing enclosure, unmercifully seized by the wool, and dragged to the required position, and then, with the four legs bound together, the wool is literally hacked off its back. Now it should never be forgotten that in every operation where sheep are concerned, the behaviour of the operator should be characterized by that quiet gentleness of action, which is the distinguishing feature in the nature and disposition of the animal. Even laughter and loud talking should not be permitted; while, above all things, it is inexcusable—it is positively barbarous!—to seize, or lift sheep by their wool. In some instances, the skin has been absolutely torn from the flesh by this cruel proceeding, and, in all cases, it hurts them exceedingly. This, to a reflecting person, must be self-evident, but if any proof be needed let the sceptic try the experiment for himself, which he may easily do, by being suspended for a brief time by the hair of his head. Sheep should always be caught by throwing the hands about the neck, or by seizing one of the hind legs *above the hock*. In lifting them, place both arms round the body close behind the fore legs; or stand sideways and place the arms before the fore legs and behind the hind legs, respectively. Again, the process of binding their feet together is cruel; and exhibits a helpless, awkward incapacity in the person doing it. It is, as we hope to show in this article, quite an unnecessary preparation for shearing, and tends to lower the status of the workman, and the dignity of the art.

Presuming, then, that the weather is dry and warm, a convenient covered building,—say the barn,—should be prepared for the shearing. It is desirable to divide the space at command, into two unequal portions; the smaller and better lighted being used by the operator; while the larger area will contain the sheep, keeping them cool and under cover. A covering of clean wheat straw should be strewn over the entire floor, to the depth of about three inches, thus rendering it more comfortable for the shearer, when he kneels, as well as for the sheep when lying prostrate. In order to preserve the fleece, in process of removal, from straw, chaff and other impurities, which would otherwise adhere to it, it is desirable to have a piece of canvas, or a horse cloth nailed tight to the floor, over the straw, where the shearer is to operate. As shearing is dirty, and at the same time, back-breaking, heating work, it is advisable that the shearer should be equipped in his oldest clothes, doffing his coat, and if agreeable, his hat; with his shirt sleeves turned up above the elbows. He should take care to be provided with a pair of good, sharp shears having long blades, and a spring not too strong, or they will weary his hand. Shears are sharpened by a rag-stone; and when not in use their points ought to be held together by a ring of leather. In using them, a new beginner should be particularly careful to keep the points clear of the skin, or they will most certainly inflict a cruel gash, or run into it, before he is aware of the injury he is inflicting. The hand, holding them, should be kept low, the broad part of the blades resting on the skin, while the clips should be made short and frequent without bringing the points nearer, where the wool is long, than an inch apart. The form of the animal, it is obvious, prevents the possibility of uniting long clips with good work; and it is certainly preferable to have seemly work, with the fleece uninjured, even though the operation is not quite so rapidly executed. Presuming the shearer to be right handed, the left hand is constantly laid on the skin, close behind the shears usually, to tighten it moderately and thereby prevent laceration.

Every preparation being made, and a sufficient number of sheep housed to keep the shearer employed for the day (15 or 20 for a moderate or fair hand respectively, and less, of course, for a beginner), he, or his assistant if he has one, proceeds to catch a sheep in the manner already described, and, picking off any bits of straw, or dirt he may see, places the animal on its hind quarters, on the sheet or cloth in the position indicated by our first illustration. The shearer rests on his right knee, and leans the back of the sheep against his left leg, bent. Taking the shears in his right hand, while using his left to keep up the animal's mouth, he clips the short wool in front of the neck, afterwards passing down the throat and breast to the belly. He next places the

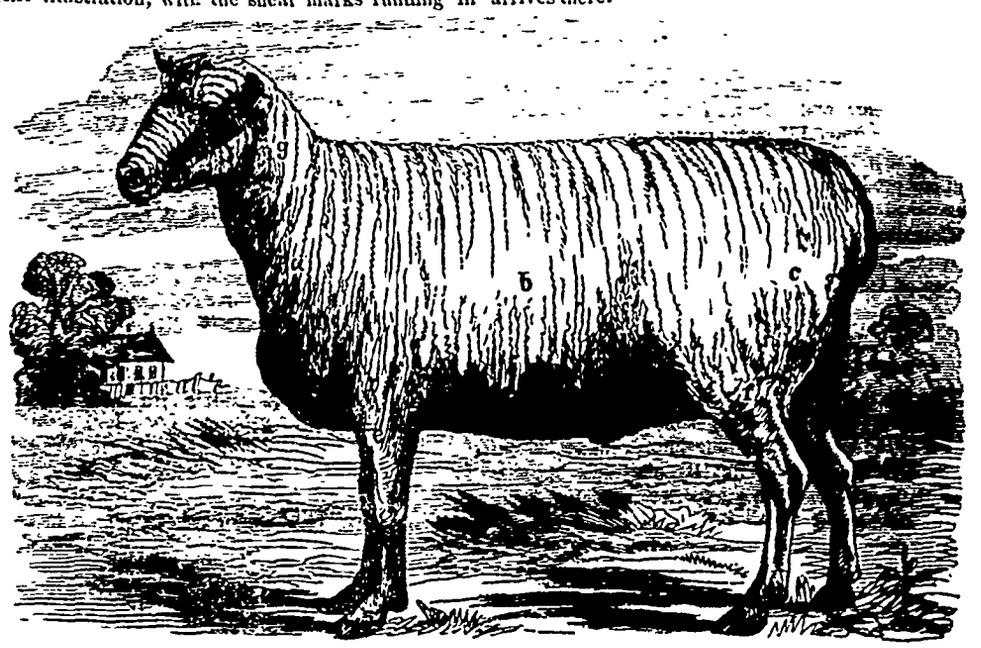
forelegs under his left arm, and shears the belly across from side to side, down to the groins, bares the scrotum, the insides of the thighs, and the sides of the tail, constantly using his left hand to keep the skin stretched, as before directed. As a large portion of the wool clipped in this position is short, it is advisable to use the *points* of the shears, holding them nearly closed, and cutting only with the extreme tips.

The second position, as shown in our next illustration, is gained by relieving the forelegs, and gently turning the sheep on its right side. The shearer now rests on both knees, and supports the animal's right shoulder upon his lap. With his left hand supporting its head, he first removes the wool from behind the crown, then round the back of the neck to the top of the shoulder. He now gently places its head and neck under his left arm and commences to remove the wool from where it was left in the last position, to the middle of the back, all down the left side to the tail, which he entirely bares in this stage. Our illustration exhibits the proper position of the animal, and the hands of the shearer, at the point when he has reached about half way down the back.

The shearer, still continuing on his knees, now turns the sheep on its left side, having previously removed the loose part of the fleece to prevent the animal from lying on it. He now places his right leg over its neck, his right knee and toe resting on the ground on either side, in the position shown in our next illustration. He thus keeps the head down without preventing the respiration of the animal. Beginning at the shoulder, where he left off in the last stage, he proceeds to remove the fleece from the right side of the back bone, shearing towards the belly, across the whole side to the tail, the left hand being at liberty during the whole process to adjust

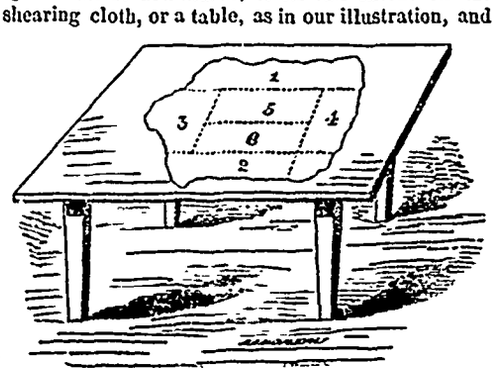
the skin conveniently. The sheep is now freed from the fleece; and, in assisting it to rise, care should be taken that its feet are not entangled, or it will completely disorder the fleece, as it bounces away from the strange ordeal, to which it has been submitted.

The newly-clipped sheep should appear like our next illustration, with the shear marks running in



parallel bands, or flutings, round the body, from the neck and counter *a*, along the ribs *b*, to the rump *c*, and down the hind leg *f*. When the stripes, or flutings, coincide across the back, and care and taste are exercised in rounding the shear marks on the neck at *g*, at the change from the counter to the body above *e*, and in making them run straight down from *c*, to *f*, as far as the wool extends, there are few objects more graceful and comely than a sheep, in good condition, so clipped.

Folding the Wool.—The fleece just removed is spread *inside downwards*, to its full extent on the shearing cloth, or a table, as in our illustration, and



every portion restored to its natural position; while impurities of every kind are carefully removed. The side marked 1 is then folded over 5; and, in like manner, the opposite side 2 is folded over 6. The fleece is now tightly rolled up; beginning at the breech 4, ending at the neck 3, which is slightly drawn out and twisted, to form a band. This band is once wound round the fleece where it is fastened, holding it together in the manner shown in our last illustration,

In this form, wool may be conveniently lifted and carried in a sack, or box, to market without exciting any apprehensions of its being disordered when it arrives there.

☞ The Northern part of Brant Township is at present infested with mad dogs, which have bitten several people, besides a number of cattle and sheep. —*Ex.*

Good Fleece.—Mr. Joseph Calvert of Jarvis, clipped eighteen pounds of good clean wool from a thoroughbred Leicester ram, two years old, on the first day of April last.

Wool in London.—The London *Prototype* of Monday says:—"The first load of wool on the London market came in on Friday last, and was bought by Messrs. Hyman & Dunnett, at 37½c. per lb. It was of average quality. On Saturday several loads were in, all of a common kind, which brought a similar price."

A Heavy Fleece.—On Friday last Mr. Skinner, of London township, clipped a sheep on the farm of the late Samuel Peters, Esq., the fleece weighing seventeen and a half pounds. The above animal is of the Leicester breed, and it is expected will be exhibited at the coming Provincial exhibition.—*London Prototype.*

Live and Dead Weight in Sheep.—The English rule is to weigh sheep when fatted, and divide the weight by seven and call it quarters. Thus, a sheep weighing one hundred and forty pounds would give twenty pounds a quarter as the dead weight. If the sheep are in good condition, this rule is sufficient for all purposes. Poor sheep will fall below the mark, and extra fat ones go over it.

The Breeder and Grazier.

"Queen of Athelstane."

We have much pleasure in announcing to our readers, that on the 3rd ult., this celebrated Short Horn cow, the property of the Hon. D. Christie, Brantford, gave birth to a fine heifer calf by "Next of Kin" (20405). We learn that the calf has been named "Crown Princess of Athelstane," a title which is peculiarly appropriate, inasmuch as Queen of Athelstane possesses a large share of the blood of the celebrated bull "Crown Prince" (10087), the property of that most distinguished breeder—the late Mr. R. Booth. "Next of Kin," sire of "Crown Princess," is a son of Mr. Douglas's prize cow "Rose of Sharon," of Mr. Booth's "Mantalini" tribe; she was got by "Heir-at-Law," (13005)—a son of "Hopewell" (10332) out of "Birthright," a grand daughter of the celebrated cow "Bracelet." "Next of Kin" was the winner of the second prize at the Highland Agricultural Society's show, at Kelso, in 1863. In 1864, he won the first prize at the Highland Society's show, at Stirling, beating "Baron Crossley," the winner of the first prize in the yearling class, at the Royal English Society's show, at Newcastle-on-Tyne, in July, 1864.

It may be well to note, in answer to some objections made to "Queen" at Hamilton last Fall, that she has had two living and vigorous calves in eleven months and three days. She was five years old on the 29th of April last, and has given birth to *three* calves, viz., "Princess of Athelstane," "Crown Prince of Athelstane," and "Crown Princess of Athelstane." Her dam "Playful," last summer, in her fifteenth year, had a calf; she has been a regular breeder, and her produce, with one exception, have been distinguished animals. Among them may be named "Hiawatha" (14705) (the grandsire of the celebrated bull "Forth")—"Jenny"—"Lady of Athelstane"—Queen of Athelstane, &c.

Who is the Breeder?

THE skill and perseverence required in the improver of live stock, scarcely admits of being overrated, as the history of all our improved flocks and herds clearly testifies. But it sometimes happens that the mere *owner* of a superior animal gets, in public estimation, the *honour* which rightly belongs only to the *actual breeder*. Our eye caught, the other day, the following paragraph from an old number of *Bell's Weekly Messenger*, which we commend to the attention of our readers:—

"By long established custom, the party in whose possession a short-horn calf is *born* is said to be *the breeder* of that calf, although the dam may have been the property of another person even up to the very day of calving. All the *credit* of having bred the animal is claimed by the dam's new owner, but all the *merit* of having bred the animal is clearly due to another. An outlay of *money* avails to secure the former; but the latter is the result of care, thought, sagacity, anxiety, and experience. It is conceivable that a man of wealth should purchase fifty cows of great value, each in calf to some distinguished bull (a Booth bull, for instance), *obtained by hire*, at a distinguished price; and all within a few weeks of bringing forth their offsprings. The cows in due time calve; and their produce, *the consequence of another man's capital and judgment*, are recorded in the Herd Book, not to *his* honor to whom, in fact, honor alone belongs, but as memorials of the breeding skill of one who may possibly possess no breeding skill at all, and whose part in the transaction was simply that of arranging a pecuniary investment. The real breeder of a calf is unquestionably the person who brings the sire and dam together; and yet, according to orthodox usage, the place of calving constitutes the criterion. We suggest no alteration in the ordinary method of proceeding; it is perhaps as good as any other; but our readers will perceive that it renders the Herd Book a less faithful exponent of the history of facts than it would otherwise be, and very frequently imparts undeserved lustre to obscure names."

Live Hogs and Dressed Hogs.

To the Editor of THE CANADA FARMER:

SIR,—Live hogs weighing under 200 lbs., were found too thin last season, and particularly was this the case with the coarse breeds, which only become fat when very large and heavy. The popular, small, and medium kinds would, beyond question, prove most profitable to feed, and greatly preferable in all other respects, so far, at least, as the English market is concerned, for either summer or winter business. Within the last few years Canadian bacon has risen immensely in estimation with English dealers. Still we occasionally hear complaints against the general mode of handling and curing pork, which at present remains in fashion in this country. The following extract from an English letter may serve as an example:—

"LIVERPOOL, 29th October, 1864.

"The great obstacle in the way of high prices being given for Canadian bacon is its dark color. The meat is most excellent; and if you can arrange to have the hogs killed on your own premises, and salted before the meat is touched by frost, we feel sure an extra price would be made for it. Our impression is that the dark color is caused by curing hogs which have been frozen."

GILLESPIE & Co.

It is to be hoped, for the advantage of all concerned, that farmers will find hog feeding pay, so that there may be a steadily increasing trade in pork, such as will attract attention and large capital to the Province. The present price is, at all events, sufficiently encouraging, and it is likely to remain at a high rate up to the fall, if not through the winter.

SAM'. NASH.

Hamilton, 11th May, 1865.

How to Choose a Cow.

On this subject, the *Working Farmer* says:—"There is always some risk in buying a cow, of whose previous character and history we know nothing, for there are no infallible signs of excellence. A rough, coarse, ill-shaped cow is often a noble milker. Yet there are a few points, generally agreed upon by experienced farmers, which it is well to consider, before purchasing. A small boned head and light horns are better than large. Long legs make too wide a gap betwixt udder and milk pail, and long-legged cows are seldom quiet feeders, but wander about too much. A slender rather than a thick neck, a straight back, wide ribs and broad brisket, are to be sought for. The body of the cow should be large in proportion to head, neck, and legs, though not excessively large; and the hind quarters if large out of proportion indicate good milking qualities. Medium sized cows, all things considered, prove the best milkers for the amount of food they consume. The color of the hair has probably nothing to do with the milking qualities, and good looks should be regarded but little in purchasing dairy animals. As to the color of the skin, a bright yellow, approaching that of gold coins, creamy color within the ears—this and good rich milk are very apt to go together, and, withal, a soft flexible hide, loose over the ribs and rump, is also to be sought. The udder should be large, soft, and full of veins, which ramify over it, with full sized milk veins stretching forward along the belly, and the teats be large and not crowded together. Test the cow's disposition and enquire about it. Irritable and nervous cows are unpleasant to handle, and almost always scanty milkers. Some thing can be ascertained from the looks and motions Large, mild eyes, easy quiet motions when driven, and gentleness when handled, indicate good nature. What butchers term 'good handling' is an important quality in a milch cow, for it indicates not only good milking properties, but easy fattening, when services in the dairy are over"

A PUMP WHICH CATTLE CAN WORK THEMSELVES.—*The Prototype* says a Mr. Cousins, of London, has invented a pump by which cattle can water themselves without human aid. The water is forced up by the weight of the animal operating on a platform which sinks down a certain distance by its weight, causing the water to rise in the pump and to flow out to the extent of three pailsful. As soon as one has slaked its thirst, another takes its place on the platform which brings up another supply, and so on till all the flock are watered. This is a labour-saving affair, certainly.

☞ "Well, John, how much did your pig weigh?" "It didn't weigh as much as I expected, and I always thought it wouldn't."

HOG-PENS.—"S. Massey" in the *Co. Gent.* gives the following caution:—"I would say to all persons intending to build a new hog-pen not to build a granary over or adjoining it, as I have known two cases where grain stored in such places has become so impregnated by the effluvium of the hogs as to be unfit for human food, and I doubt the propriety of making hogs eat grain so saturated with the steam arising from their wet and warm apartments, and *I* doubt if pork thus fattened can be fit to eat, in such damp and dark rooms, where the sun and winds have no purifying influence. A hint may be sufficient."

The Dairy.

Scale of Prices for Factory Cheese Making.

A number of plans have been suggested to get at some scale of prices for manufacturing cheese at factories, that would be satisfactory to both patrons and manufacturers. The scale adopted at the Herkimer County Union Factory appears to have considerable merit. We do not remember to have heard of any other factory making rates on the same basis, and therefore give it for the consideration of those interested in this matter, at various factories.

The price received for manufacturing depends not only upon the sales, but the number of cows from which the milk is delivered, thus making it an object with the manufacturer to produce cheese that will sell high in the market, and for farmers to deliver milk from a large number of cows in order to reduce the rate of manufacture.

The price starts at 10 per cent. on sales for 400 cows, and falls ½ per cent. for every additional hundred cows, as follows:

400 cows	10	per cent.	on sales
500 do.	9½	do.	do.
600 do.	9	do.	do.
700 do.	8½	do.	do.

At this rate 1,000 cows would reduce the price of manufacturing to 7 per cent. on sales, and if cheese sold at 15 cents, would be $1.05 per hundred. At 400 cows, the sales being 15 cents per pound, $1.50 per hundred would be the price for manufacturing. But in this case, allowing the cows to produce on an average 400 pounds of cheese each, the gross receipts for manufacturing would be $1,600, while the 1,000 cows at 7 per cent., would amount to $2,800. If cheese should drop to 10 cents per pound, on the above plan, the price for manufacturing for the 400 cows would be $1 per hundred, while for the 1,000 cows the price would only reach 70 cents. In view of the unstable condition of the cheese market, the above scale of prices seems to be about the fair thing.—*Utica Weekly Herald.*

CHEAP FOOD FOR CALVES.—A good deal has been said as to the best manner of raising calves. Milk is an expensive food, but for a time at least it must be used, as there is nothing that can be so well employed in the early life of the calf. After weaning from milk to whey, we are informed the best results are obtained by feeding the sugar beet. Cut in thin slices, they soon learn to eat the beets, and become so fond of them as to eat with a voracious appetite. This kind of food makes them sleek and fat. It is a cheap food and there is no danger of overfeeding. Where there are several calves together, of different ages, the younger will learn to eat them from the older, and thus they can be often fed at a very early age. One point should be observed in raising calves, which has not been generally noticed, and that is that the calf ought never to be allowed to suck. After the calf has been cleansed by its mother, remove it at once, and feed by hand. It will thus be much easier taught to drink its milk, and, never having learned to suck, there will be no danger of its doing so when turned out to run with the herd. There will also be less trouble of calves, when together, sucking each other—a bad habit which often injures their thrift. When the calf is immediately removed, as above recommended, the mother sooner forgets it, and there is much less trouble on this account. We have heard some insist that calves would not thrive so well under this treatment as when allowed to suck for a few days.—Having repeatedly tried both methods, we have become satisfied that this idea is a mere whim, as the calves uniformly do better that are never allowed to suck. We suggest to those about raising stock at this season, if they have a supply of sugar beets, to try them as food for calves, and note the result.—*Utica Herald.*

Veterinary Department.

Cattle Poisoned by Eating "Splashes" of Rifle Bullets.

The following particulars were communicated to the *Veterinarian*, by Mr. Broad, Vet. Surgeon, Bath:

"On February 15th, 1864, Mr. White called to consult me in reference to his cows, one of which had died on the 1st, and another on the 14th inst. These animals, with several others, had been falling off in condition for several months past. Mr White brought with him, one of the reticulum of the cows, together with a quantity of bullet splashes, which the butcher had accidentally found in the viscus. The first cow that died was not examined. Upon enquiry I found that the cows, during the summer months, had been pastured in a meadow in which some rifle butts are situated, and that they had never since done well. Mr. White immediately, upon finding the lead, suspected that it was in some way connected with the death of the cows. The stomach and contents were laid aside for subsequent examination, and I was requested to visit the place, and further investigate the case. I may here state that Mr. White rents the farm of H. D. Skrim, Esq., who kindly allows the 1st, 2nd, 14th, 17th, and 18th Somerset rifles, and also the militia to practice at the butts.

"Upon inspecting the other cows, I found them as Mr. White had described, to be moping about, and evidently suffering from some chronic impairment of health. They had a somewhat vacant expression, but there were none of the ordinary symptoms of lead poisoning present, such as colic, paralysis, loss of appetite, &c. On visiting the ground, I found a great deal of lead spray all around the butts, and some even at a distance of two or three hundred yards. One important fact which I elucidated was, that the butts had been moved forward last summer, some distance from a bank, and a more sheltered position. This bank had in a great measure prevented the splashes flying over the field, a fact which will to some extent account for animals not having been affected before, as there has been shooting going on for years."

Choked Cattle.

Josiah Allen, of Rolling Prairie. Wis., says he has relieved cattle that had swallowed things, that defied all ordinary attempts at removal, by the use of the following means:—Take a *flexible* stick about the size of your finger and place upon the square end a ball of yarn, the size of a large hen's egg. Cover over the ball, lapping up on to the stick, with a thin piece of calfskin, held in its place by being wound snugly to the stick. Grease the leather, and it is ready for use. Throw the nose and head up, by tying, or by the aid of assistants, and push the ball down the throat. The ball being elastic, it does not injure the throat, or œsophagus in the beast. When it meets with the obstruction, it becomes flattened, fills the cavity, and drives the obstruction before it. The stick being flexible, no harm results by the struggling of the animal. Says, he relieved a cow for a neighbour, in a few moments, after they had striven in vain a whole half day, to remove a potato, that had lodged in her throat.

Tape-Worm and Measles in the Hog.

To the Editor of The Canada Farmer.

Sir,—It occurred to me while reading the objection of Dr. Cobbold, to the use of town-sewage as a dressing to fields, in your article on "The Sewage Question in Britain," to give your readers a more detailed sketch of the tape-worm in man, of which there are two kinds, the *Tænia Lata* and the *Tænia Solium*. The former are often 20 feet long, and some have been seen over 100 feet. The latter have been seen 600 feet in length, and are much more annoying and difficult to expel. These worms have a square flat head provided with four suckers, by which they are attached to the intestines. The rest of the body consists of joints, each one of which is an independent hermaphroditic animal, capable of producing millions of ova (eggs), which are continually discharged with the fæces from the human body. The hog, from its grovelling propensities, manages to swallow more or less of them. Being very small, they pass uninjured through the processes of mastication, chymification and chylification, and are then taken up by the absorbents, enter the circulation, and are finally deposited in different parts of the membranous and cellular tissues of this creature. Once there, they are soon hatched and surrounded by a cyst, they become the *Cysticercus Cellulosa* of Cuvier, or what is popularly called *measles in the hog*. Like all the Entozoa (intestinal worms, 18 species attack man,) they must exist in at least two kinds of animals. In this case man is the victim, for any person eating of pork so affected and badly cooked, is certain to have the creature assume the perfect form in his intestines. From what has been said, it is evident that a person having one of these animals in his body may infect a whole neighbourhood. It is well known that butchers, who are in the habit of eating slices of raw pork, are subject to these parasites They live by absorbing nourishment through their bodies. The best remedy for their expulsion is perhaps oil of turpentine, in from 1 to 3 teaspoonfuls, floating on water, in an emulsion with mucilage, or mixed with the yolk of an egg. (equal parts.) J. McD.

South Finch, Co. Stormont.

The Apiary.

Apiary in June.

June is the swarming month in the Apiary, and at least one new colony should be expected from each old stock. A hive from which no swarm issues should be examined. If they have refused to leave for want of a queen, they will usually be found weak, when it is best to drive them out and unite them with some other stock. If the colony is strong, a new queen, or a cell containing a queen, can be introduced from some other hive. If a hive has failed to swarm from diseased brood, drive them into an empty hive to commence anew. When two swarms issue at the same time, they are apt to settle together. To prevent this, sprinkle the bees of one hive with water, as they are about to start, which may be usually discovered by the commotion about the entrance of the hive, a few moments before flying. The sprinkling will delay them until the first swarm can be hived. The first issue from a hive is usually large enough for a good colony, the second half as large, the third a quarter, consequently two of the second, or four of the third will be needed to make a swarm equal to the first. If second swarms issue late in the month, it is advisable to make one strong stock by uniting two. It can be readily done within a day or two after issuing. It has been proposed to prevent the issuing of a second swarm by returning the old queen to the hive. This would only be likely to end in one of the following results: The queen might destroy all the royal cells, and go on laying eggs for three or four weeks, until another swarm had matured, when she would issue, leading out a second swarm. Or she might leave the royal cells undisturbed, and issue the next day, taking with her a small swarm. Or she might entirely disappear without being heard of again; at any rate her presence would not be likely to prevent a second swarm Prevention can be accomplished in the moveable frame hive, by cutting out the queen cells after the first swarm has issued and after the young queen has taken her place, and not allowing any such to be perfected. If a second swarm can not be well disposed of otherwise, return it to the old stock. Hive it first, carry it near the old stand, and let it remain until next morning, when all the queens but one will usually be destroyed, as well as the supernumeraries in the parent hive. Shake out the swarm, and find and secure the queen; then put a few bees at the entrance, with something on which the rest may creep there, and they will all readily enter. All new swarms should be kept shaded during the middle of the day. When bees cluster in a crowd at the outside of the hive, it is time to add boxes to receive surplus honey. If the honey is intended for home consumption, a wood box will be sufficient; for marketing, those with glass sides are preferable They should be not more than five inches deep. The bees will work in them more readily if pieces of nice white comb are placed in the top. They can be fastened by dipping one edge in melted beeswax, and applying before it cools. Old colonies should be induced to begin in the boxes before they swarm, as the bees will be more likely to finish up the work, than to begin after swarming, especially if the colony be not very strong Remove the boxes as soon as filled. It is not usually advisable to put on boxes immediately after hiving; the bees are likely to rear brood and store bee-bread in them. It is safe to put them on after the swarm has been hived three or four days.—*American Agriculturist.*

Entomology.

A Turnip-eating Caterpillar.

The moths recently forwarded to us by Mr. George Bruce, Markham, for identification, are specimens of *Ceramica exusta*, Guénée. The information afforded by our correspondent is very interesting and useful; for although the perfect insect has been described by M. Guénée, its earlier stages, and the food plant of the caterpillar, have been unknown to science. It belongs to the family *orthosidæ*, the members of which are noted for the ravages they commit in the vegetable world. Their caterpillars are usually regularly cylindrical in form, without any hairs or protuberances; they live either upon trees or low plants, and generally remain in concealment during the day. Those of the insect before us are said to be of a green colour, varying from an inch and a half to three inches in length, and to undergo their transformation in the earth. They feed upon the turnip, to the crops of which they were very destructive, last year, in the neighbourhood of Markham. The most certain mode of preventing their ravages is to go round the plants early in the morning and crush under foot all the caterpillars that can be found, looking underneath the leaves as well as above them; by so doing, not only will the plants in the field be saved, but, probably, many thousands in future years. The use of salt, lime, ashes, or other applications for the destruction of caterpillars is of very doubtful efficacy, the most certain and by no means difficult remedy is to gather them by hand and destroy them either by burning, or crushing under foot. We subjoin a description of the perfect insect, that our readers may be enabled to identify it:—

Fore wings, reddish brown, lighter in the inner part of the wing, and almost yellow in the lower part of the median space. The usual kidney-shaped spot hardly visible, but forming a sort of dirty yellow, or gray blot, edged with black. The sub-terminal line (that near the outer edge of the wing) is only indicated by some yellowish or grayish atoms. The fringe is reddish brown. Hind wings white, with a darker fringe; their underside has a dark central spot, and the front dusted with brownish scales: that of the fore wings being almost entirely covered with dusky atoms. Body beneath, legs, head, and thorax, covered with brownish hairs; abdomen ash-colored. The wings expand an inch and a half; the body is a little over half an inch in length. This moth is not uncommon throughout Western Canada.

Worms and Insects which Attack Beet-root.—The Central Society of Agriculture of the district of Calais has offered a gold medal for the best report on the worms and insects which attack beet-root, and on the best means of arresting their action.

Caterpillar Trap.—A gardener at Glasgow practises a mode of destroying caterpillars which he discovered by accident. A piece of woolen rag had been blown by the wind into a currant bush; and when taken out was found covered with the leaf-devouring insects, He immediatly placed pieces of woolen cloth on every bush in his garden, and found next day that the caterpillars had universally taken to them for shelter. In this way he destroys many thousands every morning.—*Bell's W. Mess.*

The Spider and the Wasp.—I once saw in a hothouse in Shropshire a large female wasp caught in the irregular web of quite a small spider; and this spider, instead of cutting the web, most perseveringly continued to entangle the body, and especially the wings of its prey. The wasp at first aimed in vain repeated thrusts with its sting at its little antagonist. Pitying the wasp, after allowing it to struggle for more than an hour, I killed it and put it back into the web. The spider soon returned, and an hour afterwards I was much surprised to find it with its jaws buried in the orifice through which the sting is protruded in the living wasp. I drove the spider away two or three times, but for the next twenty-four hours I always found it again sucking at the same place. The spider became much distended by the juices of its prey, which was many times larger than itself.—*Darwin's Journal of Researches.*

CORRESPONDENCE

A FAMILY BATH WANTED.—"E. J. Y." Wardsville makes the following enquiry: "Can you or some of your readers suggest a good plan for the construction of a *family bath*?"

THE FLAX MILL ENQUIRY.—A correspondent states in reply to an article signed by John Duncan, of Moore, Co. of Lambton, and headed "Flax Mill Wanted," that he wrote to Mr. Duncan upwards of two weeks ago, requesting some details, as specified, but that he has had no reply. Probably the letter has been mislaid in the Post Office.

HORSE TURNIP HOE AND NORWEGIAN HARROW.—"A Subscriber" makes the following enquiry: "I wish to know what horse turnip hoe is the best, and if any are made with a miniature Norwegian harrow attached, to tear out the weeds that are cut up by the hoe; where it can be got, and the price. Would you or any of the readers of THE CANADA FARMER inform me?"

TO SAVE CORN FROM CROWS.—"W. S.," of Newton Brook, volunteers the following advice to corn growers: "If you wish to save your corn from crows and other birds, take May apple leaves and boil them. Take out the leaves and let the water cool, then put in your corn, and let it remain all night before planting, and rest contented for the result. I have tried the process thirteen years with success."

A BULL NUISANCE.—A correspondent, writing from "Browda Farm," complains of the annoyance caused by so many parties keeping worthless bulls, either running at large, or else in fields, with bad fences, adjoining the road. Our correspondent suggests that some measures should be adopted to render the owners of such animals responsible for the injury they may do to well bred cows, while being driven along the road.

WHERE WINTER BARLEY MAY BE PROCURED.—In reply to the enquiry of a correspondent in our number of May 1st, "J. R. S." writes as follows:—"Winter barley is raised to some extent in this neighbourhood but is more liable to winter-kill than wheat. If your Lambton correspondent will communicate with 'J. R. S.,' box 153, Woodstock, at the proper season, say middle of August, it is likely that he can be supplied with good clean seed."

LANGSTROTH'S NO. 2 HIVES.—A correspondent makes the following enquiry:—"At page 139 last year, "Diogenes" says, he obtained a copy of Langstroth and used his No. 2 hives. Will he oblige me by saying how the fixed bottom board of No. 1 hive (described at page 372), is put in, and what entrance is left? Front and rear [b] $8\frac{7}{8}$, sides [c] $10\frac{1}{2}$; b. $\frac{3}{8}$ below top of c, as the front and rear dimensions are the same, this, allowing $\frac{1}{4}$ for bottom board would leave a space of half an inch between the bottom board and rear of hive."

THOROUGH BRED STUD HORSE.—"D. McDonald" Goderich, enquires as follows: "Can you inform me if there are any thorough bred stud horses in Canada West, and if so, where they are kept, and also price of services? By thorough bred I mean such horses as would rank in the English Racing Stud Book."

ANS. There are several, among which we may name: "The Tester," imported from England in 1863, by Charles Douglas, Esq., of Oak Ridges, Co. York. "The Tester" is out of "Pickledust," by "Melbourne," who is also sire of "West Australian," and the celebrated "Blink Bonny."

"Charon," the property of Mr. John Boulton and Mr. St. George, of this city.

"Vennet," the property of F. Arkland, Esq., of Oshawa.

"Captain Buford," owned by Mr. J. Grand, of this city.

We are unable to state the terms of service; but our correspondent may learn by communicating with any of the gentlemen named

RAISING TURKEYS.—"A Reader" sends us the following bit of experience:—"I set my turkeys in my barn as early as I can, and with not over 15 eggs apiece. When they hatch I put them under a crate and feed them on cracked corn and milk curds, and if I have milk curds enough I feed them on it altogether, and I hardly ever lose a young one. When they are four weeks old I let them out to shift for themselves. The old ones sometimes hatch a second brood. Four of mine have this year. If they lay more than fifteen eggs I set the balance under hens, and so I raised from six old hens ninety young ones, worth now, at market prices, one hundred and fifty dollars."

ADDRESS OF "AGRICOLA."—J. R. Martin, Esq., Barrister, Cayuga, Co. Haldimand—the gentleman who recently used the *nom de plume* of "Agricola" in our columns—in response to the enquiry in our issue of May 1st, forwards his real address as above, and adds: "I have on hand, continually, numbers of farms for sale, in this county, at low rates; though the change in value of American money is somewhat advancing the prices. Should we be favoured by a good harvest, we hope for much higher prices, which would make farms here very desirable and profitable investments."

BEET-ROOT SUGAR.—"Briar" writes to us, on this subject, as follows: "I am satisfied that beets grown in Canada are sufficiently saccharine to make it worth using for sugar or syrup making. I tried a little a few years since by grating and expressing the juice. Not having any means of getting rid of the colouring, it was nearly black and had the earthy flavour of the beet. I have lately been informed by a Prussian immigrant, that the saccharine matter may be easily obtained by boiling the roots. This method appears so simple that I intend trying a small lot, and will give the result."

HAND POWER STUMP MACHINE.—"David Messenger" writes on this subject as follows. In your last issue I notice an enquiry about hand power stumping machines, and knowing your wish to have any information in connection with agriculture, I beg to inform you that the firm of Patterson & Brothers, Richmond Hill, make a very nice little hand power stump machine capable of extracting any ordinary stump, either oak or pine. It is worked by two men, and can be easily carried by them from stump to stump. I have dealt with the Messrs. Paterson, and would willingly recommend them to the public as agricultural implement makers."

TO DISSOLVE BONES FOR MANURE.—"R. S.," Amherst Island, writes:—"Bones are dissolved with sulphuric acid and water. Can you inform me of the proportions, &c?"

ANS.—In determining on any proportion, the strength of the acid and its liability to adulteration must be considered. Presuming that you obtain it of average strength, we recommend you to use one part by weight of water to four of acid. The temperature is immediately raised to 300° Fahr. by this mixture, which of course greatly assists the process of decomposition. Perhaps the best way is to add the water to the bones before pouring the acid over them.

NEW REASON FOR DRAINING.—"J. McD.," of South Finch, Co. of Stormont, writes:—"As this is the season of the year when swarms of mosquitoes are tormenting man and beast, day and night, it is a matter of some interest to farmers and others, who wish to enjoy themselves *in the country*, to know of a remedy which will, in a measure, put a stop to this plague. By making themselves acquainted with the history of these insects, the remedy is plain. The mosquito belongs to the family Culicidæ, order Diptera (two winged), and like all insects, undergoes several metamorphoses before arriving at maturity. In the early stages of its existence, it lives in pools of stagnant water, where they may be seen in myriads, under two forms, the first elongated, consisting of nine segments, and change their skin three times, assuming the second or bean-like form, from which the perfect insect escapes. By draining, the water is carried off, leaving no pools in which the larvæ can be hatched.

A WORK ON CANADIAN BIRDS WANTED.—"N. A. P." writes as follows:—"You would confer a favour if you would inform me, through your valuable paper, if there is any standard work published, in Toronto, on Canadian birds and their eggs, or on the latter only. If so, how can I obtain it? Please answer as soon as possible, as this is the season for birds to build."

ANS.—There is no Canadian work published on the subject alluded to. Audubon's celebrated work is, however quite applicable to this country, but it is costly. "Wilson's American Ornithology" is a cheap octavo work, but we do not know if it is kept in stock by Canadian booksellers.

TURNIP CULTURE IN EAST ZORRA.—"R. W. S." writes in reply to a communication which appeared in our issue of May 1st:—"If that portion of the county of Oxford travelled through by 'W. C. S.,' be taken as a criterion of the whole, the sooner that very flattering title 'garden of Canada' is discarded, the better. But it should be understood by strangers, that he who gave the county such a flattering designation, never saw that portion where 'W. C. S.' travelled; and at that time it was unsettled. It is still the wildest portion of the county, being the latest occupied, and with a class who have given but little attention to root culture. I trust the remarks of your correspondent will awaken them in this respect. The East Zorra Agricultural Society, with a view to encourage this branch of farming, have given liberal prizes in cash, for the best turnips and carrots, judged in the field, for the last five years; and if 'W. C. S.' had been present at the inspection of those crops, I think he would have admitted that roots *are* grown to a considerable extent, and are very much appreciated by the farmers of East Zorra,—still not to the extent they should be in a country like Canada, where we have to use dry food so many months of the year."

CAN A SECRETARY OF AN AGRICULTURAL SOCIETY VOTE?—"R.W.S." again propounds this question as follows:—"The question, 'can a Secretary of an Agricultural Society vote at a regular Board Meeting,' was asked some time ago, and you answered, 'most certainly.' Notwithstanding this, the question came up at one of our late meetings, and at the request of one of the directors, was put to a vote, before we should vote on another matter, and nearly all voted yea. Still we would like you to give authority, by law or custom, so that it may be understood. If there is no authority to decide the matter, then the quicker it is done the better."

ANS.—The question has been answered fifty times in the affirmative. There is no direct statement of the fact in law, but it is certainly implied and well understood. In the consolidated statutes of Canada, Cap. 32, Art. 50, it is enacted that "the meetings of the officers and directors shall be held, &c."—and "at any meeting five shall be a quorum." Officers, it will be observed, are first named, and of course the Secretary is one of them—while *any* five may transact business.

TO PRESERVE STAKES AND POSTS.—"A Subscriber" writes on this subject as follows:—"We frequently hear enquiries for some process that will prevent stakes and posts from rotting, where they are sunk in the ground. The following, which I copy from an old file of papers, gives a method at once simple and cheap, and is worth a trial:—

"'Quite recently, while walking in the garden with the Hon. J. W. Fairfield, Hudson, N. Y., he called my attention to the small stakes which supported the raspberry canes. The end in the ground, as well as the part above, was as sound and bright as if lately made, but he informed me that they had been in constant use for twelve years. Said I, 'Of course they are cyanized.' 'Yes,' he replied, 'and the process is so simple and cheap that it deserves to be universally known, and it is simply this. One pound of blue vitriol to twenty quarts of water. Dissolve the vitriol with boiling water and then add the remainder. The end of the stick is then dropped into the solution and left to stand four or five days; for shingles, three days will answer; and for posts, six inches square

ten days. Care is to be taken that the saturation takes place in a metal vessel or keyed box, for the reason that any barrel will be shrunk by the operation so as to leak. Instead of expanding an old cask, as other liquors do, this shrinks them. Chloride of zinc, I am told, will answer the same purpose, but the blue vitriol is, or was formerly, very cheap, viz.: from three to six cents per lb. Mr. Fairfield informed me that the French government are pursuing a similar process with every item of timber now used in shipbuilding, and that they have a way of forcing it into the trees in the forest as soon as cut, ejecting the sap and cyanizing it—all on the spot. I have not experimented with it, but Mr. Fairfield's success seemed to be complete. The process is so simple and cheap as to be within the convenience of every farmer, and gardener even, and I therefore thought it so valuable as to warrant a special notice of it.—R. G. PARDEE, *in New Jersey Farmer.*'"

EFFECTS OF BUCKWHEAT STRAW ON SHEEP.—A correspondent, writing from Co. Carleton, describes the symptoms produced by feeding his sheep with the cleanings of buckwheat, as follows:—"Being very short of sheep fodder during the past winter, and finding that my sheep eagerly ate the buckwheat straw, I kept it for them, and fed them chiefly on it, and they did well with it until the middle of March. I had reserved the cleanings of the buckwheat as being somewhat better feed, and at this time began to give them some. As soon, however, as they got this they were seized with an intense itching and a disposition to rub their heads, especially their ears and eyes. They did this so violently as to make themselves bleed, and I was afraid they would injure their sight. Their ears, instead of being erect as usual, were drooping. The lambs, which were then with them, but had been separated all the winter and fed differently, were not at all affected. I immediately stopped the straw and chaff, and gave them all the turnips they would eat, when they began to recover, and all but two that were most seriously affected have now quite got over the attack."

ANS.—Readers of THE CANADA FARMER ought to be familiar with the effects produced on sheep by being fed with buckwheat chaff. If our correspondent refers to pp. 20 and 72, Vol. I., he may read details of symptoms identical with those above described.

AN APPRECIATING SUBSCRIBER.—In the communication appended, "R.W.S." rebuts one of the objections alleged against subscribing for agricultural papers; and points out some of the useful hints he has derived from our columns as follows:

"In canvassing for agricultural papers I am often told as a reason why parties will not subscribe, that they 'print so much humbug,' thus saddling everything on the shoulders of the editor, and ignoring the fact that the humbug generally originates with farmers themselves. For instance: a farmer tries an experiment, it answers to his own satisfaction, and he forthwith transmits an account of the affair to an editor, vouching for its truthfulness, and of course it is published, though neither tested nor endorsed by the said editor. Another tries it, under very different circumstances, and it fails. The editor is censured, and the paper condemned. I have often failed to obtain the results predicated when testing various recipes, and other matters recommended in agricultural papers; but I sometimes get hints worth a year's subscription, in a very brief paragraph. No longer ago than last week, I opened THE CANADA FARMER and one of the first items that caught my eye was a way to make ewes own strange lambs. I lost no time in trying the experiment, on a cruel old ewe that had been tethered from 'tree to tree' for nearly two weeks, and all our efforts had failed in reconciling her to the imposture; but as soon as her blood began to flow on the back of the lamb, and she got a chance to smell it, she was reconciled, and began to make a great fuss over it, after trying to *bunt* it to death nearly two weeks. I have given one simple instance of the value of an agricultural paper, but I could refer to dozens of very important articles, published in your columns, any one of which would well repay a year's subscription, if acted on. THE FARMER is open before me at page 130, and there are two valuable articles following each other. If the advice of 'Holly Tree' were carried out in reference to beautifying our homes, what an influence for good, would result therefrom, on our sons and daughters, and even on ourselves, though we may be getting a little gray, and bowed down with hard work. Then there is the article on '*Early Fall Cultivation*,' every farmer can find some useful hints in it, no matter what may be the nature of his soil. With my circumstances and experience, it accords most admirably; but I forbear making any more references, every subscriber can see for himself, and those whom I would wish to convince, will not be likely to see it."

PROCESS AND RESULTS OF TURNIP CULTURE.—W. C. S., of Haysville, gives the following details of the method he pursues in cultivating this useful root crop. It is satisfactory to learn that our correspondent has had every reason to be satisfied with the results of his labours:

"I lay on 30 waggon loads of dung per acre, in the latter end of September, or the beginning of October, and plough it under as soon as it is spread. If the land is in a dirty, grassy state, I harrow it when it is dry. In the spring I plough, or cultivate as soon as the weeds begin to grow, about the middle of June, then harrow, and roll with a heavy roller, sowing the seed the same day on the level, with a brush drill (made by Blatchford, Haysville, price $5; it sows both carrot and turnip seed). I set the coulter of the drill 2 inches below the wheels, so that the seed will be deposited that depth under the surface. Sufficient loose soil falls in after the coulter to cover the seed. I sow 2 lbs. of seed per acre. In sowing a large breadth of turnips, it is better to sow the seed at three or four different times, on account of the hoeing. In order to test the quality of the seed, take five or six seeds, and lay them on a piece of stout wrapping paper, and crush the seed with a hard substance. If the seed is good it will stain the paper over twice its size, as good turnip seed contains 40 per cent. of oil. It will pay to grow turnips. Our turnip crop has averaged over 600 bushels per acre, for the last five years, and 1000 bushels per acre is not an uncommon crop. Turnips are worth 5 cents per bushel for fattening cattle, and that would give $30 per acre for our turnips."

The Canada Farmer.

TORONTO, UPPER CANADA, JUNE 1, 1865.

Extract of Meat.

The price of fresh meat in nearly all the European markets has been gradually advancing for many years; and this has been especially the case in Great Britain, whose immense manufacturing population, in the various busy hives of her commercial industry, require a large amount of meat as well as of bread stuffs from abroad, to meet the constantly increasing demand for human food. Salted provisions have consequently been sent to these markets from those parts of the world where population is comparatively sparse, and the means of raising and fattening cattle, sheep, and pigs, are abundant; such as is presented by almost any considerable area of this American Continent, both north and south. Salted meat, however will only command an inferior price, as compared with fresh meat, and the expenses incidental to its preparation and freight must always be considerable. Hitherto the transportation of live cattle to distant markets has been found impracticable, as has likewise dead meat in a fresh state. The British farmer has always reckoned on a monopoly, in his own markets, for fresh meat, how much soever his profits in home grown grain may be diminished by importations from abroad. It would now appear that this state of things is about to receive a considerable modification, and that fresh meat, in another and much reduced form, will be sent to Europe, from distant countries belonging to other continents. We will give our readers a glance of what is intended, or rather is now doing. It will afford an interesting illustration of the beneficent application of science to the most pressing wants of man.

About fourteen years ago, a German civil engineer, George Christian Giebert, commenced being employed by the Brazilian Government to construct roads, and while in that country he was much impressed at seeing vast herds of oxen slaughtered, principally for their hides and tallow, the flesh being generally neglected and wasted. It naturally occurred to this observant man, what a blessing it would be if this wasted material could be transported to the populous marts of European industry, where meat is generally so high in price as to necessitate a comparatively small consumption by the toiling and deserving millions. Giebert spent fourteen years in, apparently, unavailing thought upon this subject, till he met with a treatise from the pen of that distinguished chemical philosopher, Baron Liebig, who had devoted much attention to the devising of means for extracting from meat its very essence, and of thus giving, in a small space, a large amount of nourishment. This he had actually accomplished many years before, but to obtain one pound of essence thirty-two pounds of meat are required, and, when the latter is so dear as it is in the most populous countries of Europe, the transformation would be attended by no pecuniary advantage. Liebig, however, continued to cherish the hope that the time would come when his discovery would receive a practical application. That auspicious day for the toiling millions of the old world has at length arrived; the engineer has availed himself of the analysis of the chemist, and is about to afford another encouraging instance of the way in which the discoveries of science are sure, sooner or later, to confer great and lasting benefits on mankind.

"The two men," to quote the words of a most interesting article on this subject, in the last number of the *Popular Science Review*, "each furnishing the completing circumstance which alone rendered the cherished plan of the other possible, discuss the matter together. The one gives his scientific knowledge, gives the result of all his examinations, experiments and trials. The other accepts this as stock-in-trade; he orders boilers, steam engines, and all necessary apparatus; has a plan for a building laid down, with storehouses and workmen's dwellings; and leaving wife and family in Europe behind him, starts off again, with half his fortune, for La Plata, there to put into operation, and carry out, the thought that first germed in his brain fourteen years ago, on the plains of South America. And so, God willing, we, in a month or two, shall have in our kitchens and hospitals the juice and essence of the strong oxen now feeding on the Pampas."

The mode by which this invaluable preparation is obtained is thus described: "From a certain quantity of fresh beef every particle of fat, bone, and tendon is carefully removed. It is then chopped up, and placed in a vessel, with a small quantity of water, in a water-bath, great care being taken to remove the albuminous coagulation which forms, as well as any fatty matter, which may show itself. After a time a pale brown, thickish fluid, of the consistency of treacle, will be found in the vessel. This is pure meat-juice; the sap, so to say, of the flesh. It is then poured off, leaving behind all the fibrous remains."

It should be borne in mind that one pound of this preparation contains the essence of thirty-two pounds of beef. All the nourishing properties of the meat are entirely concentrated, and what remains is perfectly innutritious. This extract of meat possesses the valuable quality of keeping many years, without undergoing the least change. It can be kept in ordinary jars, simply tied down with paper, as with domestic preserves, and it is not liable to be affected by damp, or changes of temperature. It is stated, "that two pots had been kept ten years in a cellar, where, owing to the damp of the place, a furry mould had formed about them, and even on the edges inside. But wherever the slightest particle of this essence

had touched the earthenware pot, there was no trace of mouldiness. * * * One quarter of a teaspoonful of this juice, that for ten years had been barely covered, with but a sheet of paper, tasted, when mixed with hot water and a little salt, like delicious beef-tea made that same morning." The exact proportions are, one-eighth of an ounce of meat essence, and one-sixteenth of an ounce of common salt. This makes a breakfast-cupful of beef tea. The extract admits of ready and cheap transportation to the most distant places, and will keep in all climates,—a tin case of it weighing 10lbs. contains the essence of 320lbs. of meat.

It is stated that several cases of this essence have already been received in England from Monte Video; and that a cup of beef tea, made with half a spoonful of the extract, is quite delicious. It has a peculiarly fine, delicate flavour. The extract of the flesh of sheep is thought by some to be preferable to that of beef. Herr Giebert has at length got his apparatus in full working order, and will be able to furnish 5,000 lbs. of essence per month.

This discovery, it is asserted, will cause a revolution in continental cookery, in which the daily plate of soup is considered indispensable. The meat which now is boiled, will then, in many families, be roasted; and the soup will be made with a spoonful of the extract, and the usual addition of vegetables. This would be a gain in every way. Not only is roast meat more palatable, but it contains a greater amount of nourishment than that which has been boiled, in order to procure soup. When a good soup is thus obtained, the meat looses its amalgamating properties. They have been extracted from it. The usual *bouilli* of the continent, which is mere fiber, supports and supplies strength only because the soup is eaten with it. Without the soup, it would afford very imperfect sustenance. Herein lies the great difference betwen boiled and roasted meat. The Englishman eats his soup *in his roast beef*.

The manufacture of the pure essence of meat admits of several most valuable applications, in the interests of humanity. The material, apart from its use as ordinary food, among the myriads of workers in the great centres of industry, will prove quite a God send in our hospitals, and on board of ship, in long voyages; and in fortresses, and in the battle field, may do no small service in mitigating the suffering incident to war. In how many ways does Science minister to human welfare!

☞ F. W. Stone, Esq., of Guelph, has been appointed to the vacancy in the Board of Agriculture, resulting from the demise of Col E. W. Thomson. The honour is richly deserved, and the vacancy well filled.

SEEDS RECEIVED.—We have to acknowledge the receipt of a package of choice flower-seeds from Mr James Vick, of Rochester, N Y: also an assortment of vegetable-seeds from Mr. J. A. Simmers, of this city. They are sown in "good ground," in a place that we wot of, and we may have somewhat to say of their quality, when the plants they produce shall have come to perfection.

PEAT AS FUEL.—We learn from the *Syracuse Journal*, that an experiment has been tried on the New York Central Railway, in using peat for locomotive fuel. A train of one car and a locomotive was run a distance of twenty miles, consuming less than half a ton of peat, while the consumption of coal for a similar distance is never less than a ton. The peat was obtained from near Fulton, Oswego Co., this State. There are 150 acres of peat in the beds.

LUSUS NATURÆ.—The Milton *Champion* says Mr. Dennis Noonan, residing near Milton, has on his place a colt with only three legs. The left fore leg is entirely wanting, and has the appearance of being taken off at the shoulder joint. The shoulder blade, or to speak technically, the scapula, is fully developed, and in all other respects the animal is perfect. It is lively and in perfect health, hopping briskly about, like a three legged stool in motion. Mr. Noonan has refused $100 for the colt. Probably it will be bought up for exhibition.

The Weather and Crops.

It is now sufficiently far on in the season to begin to indulge in somewhat confident anticipations as to the present year's return for the labour of the agriculturist; and we are happy to say, that the tidings from all parts of the country, are of the most cheering description. The past winter was remarkably favourable for fall wheat and the grasses, which commenced their spring growth most vigorously, and at an early date. Nothing, thus far, has marred the prospects presented at the beginning of the season; indeed, if we except a few very cold days, the weather has been extremely propitious. The spring crops have been got into the ground in good time, and have made early and rapid growth. In some parts of the country there has been rather an excess of rain, rendering it difficult to get the land properly worked, but on the whole, the spring of 1865 will take rank as one of the best we have known in Canada. Of course there are still contingencies and uncertainties enough to moderate expectation as to the coming harvest, still there is thus far cause only for encouragement and gratitude to the Giver of all good. We are pleased to notice less of a disposition to spoil a hopeful present, by the indulgence of apprehension as to the future, than we have sometimes observed when prospects were cheering early in the season. This foreboding tendency has earned for the farming community, a reputation for discontent and distrust of Providence, of which it would be well to get rid as quickly as possible. It is of course unwise to be too sanguine concerning that which is yet dubious, but a cheerful, hopeful spirit, is at once the most becoming for us to cherish, and is the best incentive to earnest effort on our part.

Fruit promises well, so far; indeed there is not often a greater profusion of blossom than we have beheld this spring. The country has been perfectly gay with bloom for some time past, making the fortunate possessors of orchards feel that their trees are worth not a little for the beauty of their flowering, as well as the yield of their fruit. Small, as well as large fruits promise a fine return: currants, gooseberries, raspberries, &c., looking remarkably well. Rarely have we seen strawberries throw up so large a quantity of flower trusses as they have this year. This is owing doubtless to the steady protection afforded by last winter's snow, and it suggests the advantage of some artificial covering for this and other choice fruits.

Owing to the scarcity of fodder during the past winter, stock, generally speaking, entered on the spring in poor condition, but the early bite of grass which has been afforded, has wrought a great change for the better. There is, we apprehend, a diminution in the number of cattle throughout the country, in consequence of the large sales effected last fall; the prospect of a hard winter inducing everyone to sell all he possibly could. As the result, meat is high, and likely, many buyers think, to continue so for some time.

Thus far the season has been a very favourable one for dairy operations. Butter, of the best quality, and at reasonable price, abounds in our markets, and no doubt the manufacture of cheese is going on with vigour, both in large and small dairies.

We are very anxious to be able to keep our readers informed of the state of the weather, and the progress of the crops, and shall most thankfully receive communications on this subject, from all parts of the country. Last year several correspondents regularly sent us notes from their respective neighbourhoods, and we hope they will resume the task. The Secretaries of Agricultural Societies, especially, are hereby solicited to forward us all information of interest, respecting the agriculture of their districts. If THE CANADA FARMER is to be the means of making the various parts of the country acquainted with one another, our readers must send us items of farming news. We trust they will do so.

Agricultural Intelligence.

Meeting of the Board of Agriculture.

AGRICULTURAL HALL, TORONTO, May 11th, 1865.

The Board met this day, in accordance with adjournment from previous meeting.

PRESENT.—Hon. D. Christie, Vice-President; Hon. H. Ruttan, Hon. G. Alexander, Hon. A. A. Burnham, R. L. Denison, Professor Buckland, W. Ferguson, Rev. Dr. Ryerson, J. C. Rykert, President of Association, Dr. Richmond, Dr. Beatty, President Board of Arts.

The minutes of last meeting were read and approved.

It was then moved by Hon. H. Ruttan, seconded by Rev. Dr. Ryerson,—That this Board would reverently recognize the solemn dispensation of Divine Providence in so suddenly removing from them their late most highly esteemed and efficient President, who was among the first projectors of the Provincial Agricultural Association, and who efficiently sustained the honourable position of the President of this Board from its first organization; whose life was largely devoted to the promotion of objects of the highest benefit to his country, especially in promoting the interests of societies in relation to agriculture, and at all times, and in all his social relations, evincing himself a useful citizen and exemplary Christian; that this Board further desires to express their deep sympathy with the widow and family of the deceased, in this their great bereavement; and that the President be requested to transmit to them a copy of the foregoing resolution. Carried.

It was then moved by Mr. Burnham, seconded by Mr. Alexander—That Hon. Mr. Christie, Vice-President of the Board, be President for the current year, in the room of the late President, deceased. Carried.

Moved by Mr. Rykert, seconded by Dr. Richmond, —That Mr. Ferguson be Vice-President for the current year. Carried.

The following mentioned communications were then submitted and disposed of as stated:—

From Mr. J. Phillips Day, dated Quebec, April 10th, offering to dispose of to the Board a copy of his work, "English America," in which he had devoted some attention to the agriculture of Upper Canada. The Secretary instructed to procure a copy for the Library.

Letter from J. C. Taché, Esq., asking for minutes of the last meeting of the Board at London, and also the following letter in reference to the action taken at that meeting in regard to the Report of the Minister of Agriculture:—

"BUREAU OF AGRICULTURE AND STATISTICS,
"QUEBEC, 22nd April, 1865.

"SIR,—The Honourable Minister of Agriculture, before leaving for Europe, has given me instructions to write to you concerning that part of the minutes of the last meeting of your Board, by which it appears that a committee is appointed to prepare an answer to statements made in the Report of the Minister of Agriculture, and alleged to be a criticism directed against the Board of Agriculture. Mr. McGee deeply regrets that such a construction should have been put on the referred to paragraph of his Report, in which no criticism is made, and no criticism is intended, against neither the Boards of Agriculture nor the Boards of Arts. The paragraph in question merely states the fact that the relations between this Department and the different Boards connected with it had not been intimate as they should have been, and the whole context of the Report shows that this fact is to be attributed to the previous state of disorganization of this Department. For my part, I am sure that nothing was further from the Hon. Minister's intention than to reflect upon the efficiency of your Board, knowing as I do the high personal regard he entertains for the gentlemen composing it.

"I remain, &c.,
"J. C. TACHE,
"Deputy Minister of Agriculture."

This communication was referred to the committee appointed to answer the Report of the Minister of Agriculture.

From Mr. Taché, accompanying 50 copies of a pamphlet written by Mr. Hunt, at the requisition of the Hon. Minister of Agriculture, for distribution at the Dublin Exhibition, entitled "Canada: a Geographical, Agricultural, and Mineralogical Sketch." Pamphlet accepted with thanks.

From the same, dated May 1st, acknowledging the receipt of the official announcement of the death of the late President, and stating that the question of the vacancy in the Board would be submitted to the Government, as also the suggestion relative to a postponement of the question till the next meeting of the

Board had taken place. In reference to this, it was unanimously agreed by the Board to suggest the name of Mr. Cowan, M. P. P., to the Government, to supply the vacancy in the Board.

From the same, in reference to an epizooty said to prevail in some parts of Upper Canada, and asking the attention of the Board in the matter. Referred to Mr. Smith, veterinary surgeon, to report to the Board.

Copies of the pamphlet written by Mr. Donaldson, on "The Cultivation and Treatment of the Flax Plant," as ordered by Board at last meeting. Also, a Report from Mr Donaldson, of the progress he had made in lecturing, and otherwise endeavouring to promote the cultivation of flax since appointed by the Board. Received with approval.

Copies from Mr. Tache, of the catalogue of articles sent from Canada to the Dublin International Exhibition of 1865. Received with thanks.

The Board adjourned at 1 P.M. for one hour.

The Board resumed as Council of the Agricultural Association, and took up the business connected with the Provincial Exhibition.

The following communications and reports were received:—

From Major Campbell, President of the Lower Canada Board of Agriculture, in reference to the Upper Canada Provincial Show being appointed to be held during the same week as that of Lower Canada. The Secretary stated he believed the late President had replied to this letter, regretting that the two Exhibitions should clash in point of time.

From Mr. Johnson, of London, suggestions in reference to the Ploughing Match, and stating that he would be happy to act with Hon. Messrs. Christie and Alexander in arranging the particulars, as requested by the Board. Referred to committee on the prize list.

From the committee on the prize list, Report submitting draft of Rules and Regulations, and list of prizes, as revised by them. Received.

On motion for the adoption of the Report, rule 17, prohibiting articles from competing at more than one exhibition, was ordered to be amended so as to prevent manufactured articles or works of art from being awarded prizes at more than two exhibitions.

Ordered, also, that the prize tickets be coloured as follows, viz.: 1st, red; 2nd, blue; 3rd, yellow.

Ordered,—That the Prince of Wales' prize be offered for the best bull of any age or breed.

Resolved,—That the following gentlemen be appointed Superintendents for the current year, viz.:—General Superintendent, W. A. Cooley; Superintendent Agricultural and Horticultural Departments, James Fleming; Superintendent Arts and Manufactures Department, J. E. Pell.

Some further amendments of the rules and of the prize list were adopted, and the Committee Report was then adopted as amended. The Council then proceeded to appoint the judges for the Exhibition.

The Board then resumed the consideration of Board business.

Moved by Dr. Richmond, seconded by Mr. Rykert,—That the sum of eighty dollars be given to Mr. McEachran towards defraying his expenses in giving lectures to the Students of the Veterinary School in materia medica. Carried.

Moved by Professor Buckland, seconded by Mr. Denison,—That the Secretary be instructed to communicate the thanks of this Board to Dr. Bovell, for his valuable lectures on physiology, given to the students of the Veterinary School during the last session, and for the interest he has expressed and shown in the welfare of that undertaking. Carried.

The Secretary submitted copy of Transactions of the Board from 1860 to 1863, which had lately been completed and bound. Laid on the table.

The Board then adjourned.

THE FERGUS MONTHLY FAIR was held on the 18th ult., and largely attended. The prices paid exceeded those given at the last Monthly Cattle Fair, and the buyers seemed to think that there would be no important reaction in the present exorbitant rates for some time to come.—*Guelph Herald.*

☞ It is thirty-four years since the Spring has been as promising and forward as it is on this *fourth day of May*. Many of the shrubs are in full leaf—early flowers are developed—the meadows are beautifully green—the swallows are twittering as they dart on active wings through the air—and there is a cheering prospect of vigorous vegetation.—*Free Press, N. S.*

ADVENT OF THE GRUB.—The Prince Albert *Observer* regrets to learn that the grub, which destroyed so much wheat three years ago, has made its appearance in the 11th concession of Reach township. They are found on the high land, and the ground appears to be literally alive with them. The *Observer* thinks that to roll the grain at night is a sure remedy.

SCARCITY OF FODDER.—A scarcity of fodder exists to an alarming extent in several parishes on the Island of Orleans. At St. Laurent one farmer lost five cows, and another three, in consequence of dearth, and almost all the inhabitants have suffered more or less in the same way. At St Joachim, on the North Shore, the want of fodder is also severely felt, as well as throughout the parishes on the South side.—*Daily News.*

THE CROPS.—The Belleville *Intelligencer* says:—"From all parts of this county we have the most flattering accounts of the manner the fall grain stood the winter. A much larger breadth of ground was sown to fall grain last year than for several years, and it presents a most promising appearance. A large quantity of Spring grain has been sown, a good deal of which has already made its appearance above the ground, and although the weather has been cold, and there has been too much rain for lowlands, on the whole the Spring has thus far been favourable, and the prospects are in every respect encouraging."

RAIN AND HAIL STORM.—Yesterday this township was visited by one of the most severe and destructive wind and hail storms which we have ever witnessed. In many places the fences were carried away by the freshet, and many farmers are to-day lamenting the destruction of some of their choicest and most promising fields of grain. Messrs. Vernon, McGill, Taylor, Wales, Gilroy, and Robson, are the principal sufferers of whom we have heard. On the ridges the hail storm was most severe, and many of the stones were as large, *some of our informants say*, as pigeons' eggs.—*Prince Albert Observer, 18th ult.*

British Gleanings.

The Folly of the Ridge and Furrow System.

WE make the following extract from *Bell's Weekly Messenger*, premising that the paper, of which it forms a part, was read before the Wigton Farmers' Club, Mr. R. Jefferson, of Preston House, Whitehaven:—"Now for a tilt at the barbarous custom of ploughing our land into small ridges. Can any practical man tell me the use of it on any land which is thoroughly drained? And we all know it is a waste of capital to cultivate undrained land, and that no man with common sense will attempt it. To illustrate the folly of the ridge and furrow system, I will take, for example, a fallow field. We have it manured with farmyard dung, and ploughed into ridges; and, after sowing with wheat, we water furrow it, and do all we can to facilitate the quickest escape of the surface water. What is the result? Why, the first heavy rainfall washes away the very essence of the dung. You may see the rich brown fluid floating off the field like a stream of liquid manure (which in fact it is), and making its escape to the nearest river, thus polluting our waters with the material which we intended to enrich our soils. Now, supposing we plough our land as level as possible, and have no water furrows in it, what would be the effect? The rain water would gradually percolate down to the drains, and thus legitimately make its escape in a limpid stream, having been purified by passing through that best of filters, mother earth. I could enumerate many other evils attending upon the ridge and furrow system, besides its unsightly appearance. The land is more liable to drought; the grain does not ripen so equally; it militates against the free use of machinery; and the furrows act as so many traps to catch our sheep, where we will find them, feet in the air, and unable to rise. Indeed, the loss of many a good sheep can be attributed to no other cause. I shall feel obliged to any gentleman who will tell me what advantages we derive from adhering to this old-fashioned custom, which can compensate for the evils I have enumerated."

How to Keep Cattle on Thirty Acres of Land.

One of the most interesting papers, in the *Journal* of the Royal Agricultural Society of England, is that in which the Rev. J. L. Brereton relates his experience in the use of bought food upon about thirty acres of grass land, the extent of his glebe. On this small plot about £1500 worth of stock has been kept by a purchase of food and manure to the amount of nearly £500, that the result is a profit of about £100, beside manure, "worth about £200." The following are Mr. Brereton's conclusions on the question of feeding cattle on bought food:—1. That it is quite possible to feed animals on purchased food alone. 2. That a mixture of the common grains and pulse, *e.g.*, linseed, peas, beans, wheat, &c., may be made for £10 per ton, which will fatten any animal. 3. That the addition of seasoning (aniseed and fenugreek are those that I have used for five years), at an additional cost of £1 per ton, appears to pay well in the added relish and the improved condition of the animals. 4. That doubling the quantity of linseed, though raising the price, probably gives quite a proportionate increase to the value of the mixture. 5. That by the use of this meal the farmer may fearlessly increase his stock, without adding to his acres; and yet, *by that increase of stock, greatly increase the* productiveness of his farm. This consideration both suggested and replied to the following exclamation of a neighbouring farmer:—"Mr. Brereton, if you're doing all this on thirty acres, I'm thinking what's to *become of the landlords.*" 6. That the use of seasand as bedding will enable the farmer either to dispense with straw, or to use it more profitably as food; and that besides possessing, according to its quality, manurial properties, the sand acts as a purifier of the land, and seems to allow of a closer herding of stock than might be otherwise safe. 7. That sheep may be folded on grass with great advantage, if some shelter and dry treading are provided in adjacent yards during excessively wet weather; but *the bullocks and horses do best in yards and sheds*, the grass grown after the fold being cut by the scythe and carried to them.—*Scottish Farmer.*

LARGE PRICE FOR A TRIO OF DORKINGS.—The *Scottish Farmer* says:—"It is not long since we knew of a Dorking cockerel and two pullets being sold for £15; and another instance, where the birds were sold for the same sum, with the proviso, that if they won a prize (which they did) at a certain large show, the seller was to get it."

PRODUCE OF GREAT BRITAIN.—A correspondent, writing to the *Mark Lane Express*, estimates the yearly consumption of wheat in the United Kingdom at *twenty-four millions of quarters. The imports* are calculated to average six millions of quarters; thus leaving eighteen millions as the produce of the British Islands. The live stock is estimated to consist of 28 millions of sheep, 8 millions of cattle, and 4 *millions of pigs. As feed for stock, wheat is now 40* per cent. cheaper than oil cake; while the average price, for the last nineteen years, was 53*s.* per quarter.

"SIR ORACLE" ON BREEDS OF POULTRY.—We quote the opinions of a British journal respecting what it deems the most profitable breeds:—

"*For chickens for the table*, nothing like Dorkings.

"*For size of egg*, nothing equal to the Spanish; but they do not lay very regularly.

"*For number of eggs*, nothing like the Hamburghs, but the size of egg is small compared to the Spanish. The Hamburghs lay about eleven months in the year, and never sit.

"*For eggs during very hard frost and snow* there are nothing like Brahmas. Hard weather does not seem to affect them, and they always look well and 'soncy-like,' let the cold be never so severe."

LIME.—The *Mark Lane Express* gives the following table, furnished by Prof. Voelcker, showing the amount of lime, in pounds, actually removed from the soil by the different crops of the farm, per acre:

	Grain.	In the straw or roots.	Total.
Wheat, 25 bushels.....	1	12	13
Barley, 40 bushels.....	1½	15½	17
Oats, 50 bushels.....	3	19	22
Rye, 26 bushels.....	1½	15½	17
Beans, 25 bushels.....	2	34	36½
Turnips, 20 tons.....	46	72	118
Potatoes, 8 tons.....	8	31	39
Red clover, 2 tons.....	0	77	77
Rye-grass, 2 tons.....	0	30	30

As to the quantity of lime applied per acre in different districts, the following is given by the authority above quoted: Roxburgshire (applied to the fallows), 200 bushels corn, 19 years; Ayr (applied to the fallow or lea), 40 bushels every 5 years; Carse of Stirling (applied on the fallows or lea), 50 bushels every 6 years; South Durham (applied to the fallows or lea), 90 bushels every 12 years; Worcester (applied before grasses or tares), 70 bushels every 6 or 8 years. "It thus appears," says the professor, "that in these counties 8 or 10 bushels a year are pretty uniformly applied." The following is a resumé of the opinions of the Professor on the practical use of lime. "While some farmers prefer using lime in large doses at one application, others prefer to give small doses at intervals. The former method appears to be the best in soils naturally destitute of lime, or in which there is a superabundance of vegetable matter. But as soon as such land is brought into good culture, the safest way undoubtedly is, to

supply lime to it in small doses, at short intervals, say at the rate of about 8 bushels in the year per acre. But repeated liming with small doses at larger or shorter intervals is necessary to keep the land at its maximum rate of fertility; for, in the first place, lime has a tendency to sink into the soil beyond the reach of plants, and this tendency is greatest in light soils, but still it is met with in heavy ones. For this reason lime should be applied at the surface. Heavy rains increase this tendency in lime to sink into the soil, and dissolve also a large proportion of it. Hence badly drained require larger supplies of lime than well drained soils. Finally, all our cultivated crops take from the soil certain constituents. Lime is required to be added from time to time, and as some crops take more lime than others, it is necessary to give at times special supplies to the soil when such crops are taken."

AGRICULTURAL EDUCATION.—This subject is attracting much attention in Britain just now, and recently a paper was read before the Kingsbore Farmers' Club by Mr. Want, the head master of the middle-class school at Dursley, on "Education, that of the middle classes generally and the farmers in particular." After an interesting discussion, resolutions somewhat to the following effect were adopted:—

"That a sound, religious, moral, and general education should form the groundwork of the education of the farmer.

"That a means of instructing youths after they leave school, between the ages of 15 and 21, is greatly needed.

"That while fully appreciating the importance of the practical experience obtained by them at home on the farm, it is very desirable that they should receive sound scientific instruction.

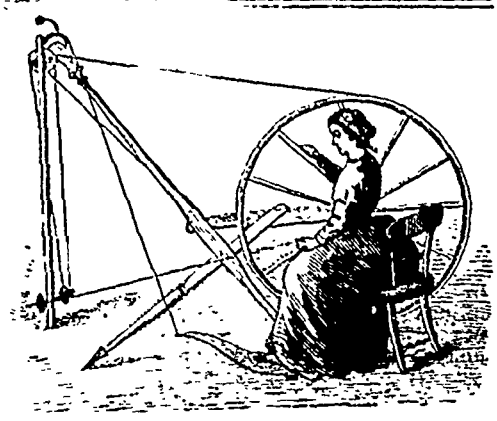
"That for this purpose a person properly qualified should be engaged to afford such instruction

"And, provided a sufficient number of young men unite and engage such instructor, *Resolved*, That this association grant from their funds the sum of £10 towards the purchase of chemical and other apparatus."

MANURES.—We condense a few observations on this topic, from the *North British Agriculturist*. With every advance in the cultivation of the soil, the importance of manures becomes better understood, because they are more imperatively required to maintain fertility, and to ensure abundant crops. The larger the crops produced, the more is the fertility of the land exhausted. Exposing the soil to the action of the atmosphere, by frequent stirring, tends to produce changes in these elements of plant life, which have laid in a state of unavailable combination, and renders them suitable food for the growing plant. Summer fallow is one of the oldest methods used for this purpose; while another method in more general use, consists in stirring the soil between the rows of plants, the chief difference being that in the one case the whole soil is turned up and reduced, in the other, only the portions not occupied by the crop. Advanced modern husbandry is based upon the right practice and appreciation of the drill and manure systems, and on the judicious use of both depends the profitableness of farming. Every species of manure which tends to hasten the growth and full maturity of the crops, increases their value, as whatever contributes to diminish the risk of comparative failure, renders the amount of produce more certain, and usually of a superior quality. This remark applies to all kinds of field crops, where the period of growth is in some measure circumscribed by the shortness of the season of growth, beginning with spring and ending with the close of summer. The same holds good under variable conditions of climate, such as where the growth of spring is suddenly checked by the draught and heat of summer. Any manure which tends to develope the roots, and expand the leaves, operates most beneficially by the early establishment of the plants in the soil. This is very apparent in the growth of turnips and mangold wurzel.

A SAMPSON FUNGUS.—The inhabitants of Goswell Street, London have lately had a curious instance of the enormous strength of the growth of Fungi forced upon their attention. At a particular spot in their street one or two of the pavement stones were observed to be pushed up and dislodged. On examination it was found to be caused by the growth of a mass of *Agaricus cartilagineus* (*Bull.*) growing below the stones. It had raised a pavement stone weighing two hundred weight, and measuring 4 feet 1 inch by 2 feet 1 inch. The specimen has been sent to the British Museum.

The Household.



Improved Spinning Wheel.

To the Editor of THE CANADA FARMER:

SIR,—There are various sorts of work to do on a farm both in and out of the house. In general, however, farmers are more careful to provide good implements for the land than for household pursuits; although the chief in-door occupation—spinning—is very hard, tedious work, and requires a stout, healthy person to do it. More especially is this the case when the old method of walking backward and forward during the whole time, is pursued. In using the improved machine, figured above, the spinner may sit down, and move the spindle back or forward at her pleasure. This is effected by pressing the foot on a lathe, which pushes the spindle backwards with great ease, and in half the time that the distance could be walked over. By means of this machine, a person with one leg or one whom age has rendered comparatively infirm, can spin just as well as if young and smart. Perhaps such a person could not make so much thread; but it is not necessary to stand, or walk to and fro, as the spindle comes and goes at the pleasure of the operator. I deem it a great acquisition to females, who have a large share of house work, and who would often like to sit down, but yet not be idle. This patent pendulum spinning wheel saves time and trouble, health and strength; and cannot be surpassed by any other in Canada. It has been thoroughly tested, and found to be almost faultless. It can spin filling, or warp, or any sort of woollen yarn, and may now be pronounced the Champion of the West.

ROBERT A BROWN.

Nissouri, St Mary's, Mar. 28th, 1865.

Presence of Mind and Common Sense.

If a person swallow poison deliberately or by chance, instead of breaking out into multitudinous incoherent exclamations, despatch some one for the doctor; meanwhile, run to the kitchen, get half a glass of water in anything that is handy, put into it a teaspoonful of salt, and as much ground mustard, stir it an instant, catch a firm hold of the person's nose, the mouth will soon fly open—then down with the mixture, and in a second or two up will come the poison. This answers better in a large number of cases than any other. If, by this time, the physician has not arrived, make the patient swallow the white of an egg, followed by a cup of strong coffee, because these nullify a larger number of poisons than any other accessible article, as antidotes for any poison that may remain in the stomach. If a limb or other part of the body is severely cut, and the blood comes out by spurts and jerks, be in a hurry, or the man will be dead in five minutes; there is no time to talk or send for a physician—say nothing, out with your handkerchief, throw it around the limb, tie the two ends together, put a stick through them, twist it around tighter and tighter, until the blood ceases to flow. But to stop it the tie must be above the wound, or it does no good. Why? Because only a severed artery throws blood from the heart; hence, to stop the flow, the remedy must be applied between the heart and wounded spot—in other words, above the wound. If a vein had been severed, the blood would have flowed in a regular stream, and, on the other hand, the tie should be applied below the wound, or on the other side of the wound from the heart; because the blood in the veins flows towards the heart, and there is no need of so great a hurry

Preservation of the Teeth.

HORACE WALPOLE says ("Letters," vol. iii. p. 276): "Use a little bit of alum twice or thrice in a week, no bigger than half your nail, till it has all dissolved in your mouth, and then spit it out. This has fortified my teeth, that they are as strong as the pen of Junius. I learned it of Mrs. Grosvenor, who had not a speck in her teeth till her death." Do not let your brushes be too hard, as they are likely to irritate the gums and injure the enamel. Avoid too frequent use of tooth powder, and be very cautious what kind you buy, as many are prepared with destructive acids. Those who brush their teeth carefully and thoroughly with tepid water and a soft brush (cold water should never be used, for it chills and injures the nerves) have no occasion to use powder. Should any little incrustation (tartar) appear on the sides or at the back of the teeth, which illness and very often the constant eating of sweet-meats, fruit, and made dishes containing acids will cause, put a little magnesia on your brush, and after two or three applications it will remove it. While treating on the care of the teeth, which is a subject of the highest importance to those who have young families, and in fact every one who wishes to preserve them, I beg to remind my readers that as the period generally occupied by sleep is calculated to be about (at least) six hours out of the twenty-four, it would greatly promote the healthful maintenance of the priceless pearls whose loss or decay so greatly influences our appearance and our comfort, if we were to establish a habit of carefully cleaning them with a soft brush before going to bed. The small particles of food clogging the gums impede circulation, generate tartar and caries, and affect the breath. Think of an amalgamation of cheese, flesh, sweetmeats, fruit etc., in a state of decomposition, remaining wedged between our teeth for six or seven hours; yet how few ever take the trouble to attend to this most certain cause of toothache, discoloration, and decay, entailing the miseries of scaling, plugging, extraction, and the crowning horror—false teeth!—*Godey's Lady's Book.*

OUT-DOOR WHITEWASH.—C. E. B., Champaign, Ill., asks us to republish the following recipe which he has lost and regards valuable: 2 quarts skimmed milk; 2 ozs. fresh slaked lime; 5 lbs. whiting; put the lime into a stoneware vessel, pour upon it a sufficient quantity of milk to make a mixture resembling cream, and then add the balance of the milk. Crumble the whiting, and spread it on the surface of the fluid. Stir or grind as you would lead paint, and apply as you do other paints. It dries quickly, and a second or third coat can be added if desired. It is inodorous, does not rub off. This quantity will cover 57 square yards with one coat. It may be colored, if desired, by adding coloring matter.

HOW TO CLEANSE A CISTERN.—Another simple thing I have accidentally learned; and it, too, if not generally known, ought to be, relating to stagnant, odorous water in cisterns. Many persons know how annoying this sometimes becomes. After frequent cleanings and other experiments, all to no positive permanent utility, I was advised to put, say two pounds of caustic soda in the water, and it purified it in a few hours. Since then, when I tried what is called concentrated lye, I had quite as good a result. One or both of these articles can be obtained at almost any druggist's.—*Working Farmer.*

LIEBIG ON HUMAN MILK.—Woman's milk contains less salts than cow's milk, but it possesses a stronger alkaline reaction, and contains more free alkali, which in milk is always potash. It is clear that we can easily calculate what mixture of cow milk and flour will contain the same proportion of blood and heat-producing ingredients as woman's milk (that is to say, the proportion 1:3.8); but in other respects it would still not replace woman's milk, because wheaten flour has an acid re-action, and contains less alkali than milk. This alkali we must pre-suppose is requisite in the body for the normal functions of the child. And even although starch be not unfitting for the nourishment of the infant, the change of it into sugar in the stomach during digestion imposes an unnecessary labour on the organization, which will be spared it if the starch be beforehand transformed into the soluble forms of sugar and dextrine. This is easily done by adding to the wheaten flour a certain quantity of malt. If a sort of pap be made by boiling milk and wheaten flour, and adding to this a given quantity of malt flour, the mixture will soon become fluid and acquire a sweet taste. It is on this transformation of starch into sugar, and by supplying the failing alkali in the milk, that the preparation of this new soup is based.—*Popular Science Review*

Mulch.

Too many are apparently quite ignorant of the value of mulch. Indeed we have met with parties making some pretensions to be gardeners, who did not know the meaning of the term. As a protection and help to newly planted trees, there is nothing like it. Few transplanted trees would fail, if this precaution were taken. A good mulching of straw, litter, leaves, newly mown grass, weeds, spent tan bark, or saw-dust, keeps the ground loose, friable, moist, and in the best state generally for securing steady and thrifty growth. A correspondent of the *Rural New Yorker*, writing on this subject, urges the use of all manner of material for the purpose, that may happen to be within reach, and says that shavings, brush, cut short, chips, and even cobble-stones will make a mulch, if nothing better is at hand. He also gives an interesting account of "the philosophy of mulching," a point on which little has been written. He observes: Downing says, "by preventing evaporation it keeps the soil from becoming dry." This is the general theory, right as far as it goes, but is far from expressing the whole truth. Mulching is actually watering. It is providing a constant and ample supply of moisture. It does more than this; it provides a constant supply of fertilizing matter. Some years since, observing the remarkable effects of mulch, the writer tried some experiments, which, to his mind, tended to throw some light upon the mode of its action. Perceiving that a heavy mulching of saw-dust produced all the apparent effects of heavy manuring, and kept the ground moist in the driest season, the bulb of a thermometer was sunk to the bottom of the mulch, and the mercury fell ten degrees. This demonstrates to my mind the cause of the moisture and fertilizing. The mulch being always porous, permits the free circulation of the air, and being ten degrees cooler than the general atmosphere the moisture of the air is condensed. This accounts for the constant moisture of the earth under it, even in the driest season. The fertilizing matter of the air consisting of the ammonia and carbonic acid, are deposited by the condensation of moisture under the mulch. We are all familiar with the fact that frequent stirring of the soil, in a dry time, will prevent injury to a crop for want of rain. This acts on the same principle as the mulch. The soil being kept porous receives its moisture by condensation from the air. Nitre is often gathered from the earth in damp, dark cellars, and from under rubbish which has been long undisturbed, and it was deposited there in the same manner as under the mulch.

Mulch has another remarkable quality. It will render the hardest and most compact earth loose and porous in a few months. The benefit of summer-fallow is based upon the free circulation of air through the soil, caused by many ploughings. If the soil is left unused, but without stirring, it becomes compact and little or no benefit arises from a year's rest. If the ground were mulched, it would need no ploughing to produce the same benefit. It is recommended by some horticulturists to remove the mulch in September, for a time, to prevent too much water from being taken up between the bark and sap-wood, which, it is said, will freeze in winter, and cause the frozen sap-blight; the mulch may be returned at the commencement of the cold weather. This may be done by those who believe the winter-blight thus produced. But let no one neglect to mulch who has anything to do it with.

——"Hyacinths, Tulips, and Daffodils
That come before the swallow dares, and take
The winds of March with beauty; Violets bright,
But sweeter than the lids of Juno's eyes,
Pale Primroses that die unmarried;
The Crown Imperial, Lilies of all kinds,
The Flower-de-Luce being one,
To make you garlands of"—*Shakespeare.*

The Orange Tree.

As an ornamental plant the orange has been greatly undervalued. In the estimation of the fairer sex, at least, its delicate, white and deliciously fragrant blossoms are Flora's gems; and every cultivator of this plant knows that, however fragrant and beautiful the flowers of a bouquet may be, when it contains "a sprig of orange blossom" it is all the more prized. It is singular that so little attention is bestowed upon its cultivation, considering the preference of those whose taste it is the interest of gardeners to study.

For general pot culture, the more delicate growing varieties—as nobilis, japonica, myrtifolia, &c.—should be preferred, as to keep these varieties in moderate bounds it is not necessary to resort to means injurious to the health of the plants; and if these are propagated by cuttings instead of budding or grafting, there is little danger of over-luxuriant growth.

In selecting cuttings, choose half-ripened wood, and insert them in light, sandy soil, plunging them in a bottom heat of about 65° or 70° (they will require attention in regard to shading from strong sunshine, &c.), where they will root with certainty; but if the operation is deferred till October, and the cuttings placed in a temperature of 55° to 60°, and in the spring removed to a sharp bottom heat, hardly one will fail. As soon as they are sufficiently rooted, they should be potted off singly into four-inch pots, and, if at command, placed in a gentle bottom heat, where they will grow rapidly if kept close and moist, and shaded from the mid-day sun. Keep the plants growing on rapidly till the month of October, shifting them on as they require it, when they should be gradually hardened off by a free circulation of air and a drier atmosphere to ripen the wood. They should then be removed to a light dry part of the greenhouse for the winter months, where they should be kept all but dormant.

When grown in heat, the orange is very liable to the attacks of brown scale; and as soon as it makes its appearance, advantage should be taken of the firm state of the foliage to remove every vestige of this. In spring, the plants should be removed to a pit, and plunged in a bottom heat of from about 65° to 70°, treating them in the same manner as recommended before, only using less shade, but stopping all gross shoots, so as to secure nice bushy plants. By the end of the second year's growth the plants will be handsome little specimens; and if the wood is properly ripened, will flower profusely in spring.

As soon as their flowering season is over, the plants should be pruned, all weakly shoots removed, and the stronger ones shortened; and see that the foliage is perfectly clean. Insects will now be got much more easily rid of, than when the plants are covered with tender foliage. The most effectual way to proceed in this matter is to lay the plants on a clean mat, syringing them with water at a temperature of about 150°. This, however, will neither kill nor remove the brown scale, which must be brushed off with a dry brush afterwards. Such plants as require a shift should be attended to: others which may not require it should be surface-dressed with a rich compost.

To secure a succession of flowering plants is a very easy matter, requiring no further care than to grow the stock at two or three seasons of the year, slightly forcing some and retarding the others. There is no plant more accommodating in this respect, or that is more easily had in bloom all the year round.—W. F. W., *in Scottish Farmer.*

A Day-Labourer's Garden and Home.

G. W. Lawrence, of Oswego, N. Y., writes to the Utica *Herald* that, in 1850, he bought a lot of land in the outskirts of Oswego, 66 by 198 feet, one end of which was a ledge of rocks, the other a pond of water. Putting up a rough shanty, he went to work evenings, after labouring for his employer all day, making ditches and digging rocks. The next spring it began to look a little more like life, and he set out a few trees that he dug from the woods, and borrowing Downing's fruit book, went to grafting on his own book. No other time than "odd spells" when he had no other employment, has been devoted to his land or buildings. He says:

"Fourteen years have passed away, and now we behold on the lot 66 by 198, a snug house, barn and other out-houses, a good well of water, and all done by my own hands—shingled my house, dug and stoned my cellar by candle light. The fruit is as follows: eight apple trees, bearing thirty-five varieties, choice kinds, ripening in succession, from earliest to latest; sixteen cherry trees, all choice varieties; nineteen plum trees, bearing twenty-five different varieties; forty pear trees. All the above are standards; I cultivate no dwarf trees; all the pear, and a portion of the plums are on trellises, the trees now bearing being from seven to fifteen feet high. The number of varieties of pears I cannot give, as some of the buds are not yet in bearing, but will venture at least from sixty to seventy-five different kinds, ripening in succession, from the earliest to the latest varieties. One of my largest and best trees is on a thorn. The tree has seven varieties, and has borne a full crop for five years. The tree grafted on mountain ash, bore more pears than I ever saw on a standard of the same size. The third crop it was exhausted and died. In addition to the above, on the same lot, we find the Lawrence seedling grape. This grape was found ten years ago by my wife, while picking blackberries. The grapes resemble the Isabella, but the bunches grow more compact, and they ripen from ten to fifteen days earlier. As to productiveness, I challenge any other variety to beat it. I sell these vines readily to our citizens, who saw them in bearing, at $3 a piece. I will venture to challenge any man in the State, under the same circumstances, and with the same means, to produce equal results. I have taken five first prizes at four different State Fairs, two first prizes at Provincial Fairs in Canada, and at County Fairs for the last seven years."

Glazing Greenhouses without Putty.

In compliance with your requst for information respecting the above mode of glazing, I have to state that I saw one greenhouse so glazed in the neighbourhood of Boston, U. S. It had a neat, clean appearance, and was most favourably reported of as a secure house. My informant stated, that the glazing was not so liable to be injudiciously influenced by the weather, as when done with putty, which one can readily believe, as most of the leaks in our houses are caused by defects in the putty or puttying.

The way in which the house alluded to was glazed was this—after the priming coat the glass was laid on in the usual way, but without bedding; the panes were securely pegged in, and then three or four coats of white lead given, which proved quite capable of resisting the great extremes of heat and cold in that country, and I should imagine would prove fully as efficient in this. At all events it would be worth trying whether putty cannot be dispensed with, for it is a source of annoyance in more ways than one. I should think that if the glass were laid in a fresh coat of white lead, and three coats over it, it would be still more secure than the above mode.

I have learned that white zinc is a better paint for out-door work than white lead. Can you, or any of your readers, confirm the report? - *J. K., Arch Hall Gardens.*

The Petunia.

The Petunia is a well-known and favourite bedding-plant, though more generally, perhaps, treated as a hardy annual. Plants in pots may be obtained at most of the nurseries, though, as they can be grown easily from seed, and flower easily the first season, this course is the most common way of obtaining plants. Perhaps no flower has been more improved within the past ten years than the Petunia. We now have flowers of extraordinary size, striped, blotched, veined and mottled, single and double. Double flowers can only be obtained by procuring plants, as there is no certainty that seeds will produce double blossoms. For a brilliant, showy bed, the single varieties are the best. If seeds are sown in a hot-bed or cold frame, in April, or in the open ground about the first of May, the plants will begin to flower by the last of June. If planted about eighteen inches apart, by the middle of July, the whole bed will be covered, and exhibit a mass of brilliant yet delicate flowers, until hard frosts make an end of their glory.

The following are some of the best varieties I have ever grown, and they are exceedingly fine:

Kermisena Grandiflora, a very large flower, ranging from crimson to scarlet. There is one variety in other respects the same, with a white throat, and it is elegant.

Maculata Grandiflora, has white ground, spotted, striped and marbled with red or purple. It is a large and magnificent flower, somewhat of the character of Buchanan's Blotched, but larger, and of more robust growth.

Marginata, is mottled and veined with green. More singular than brilliant, and not always true.

Rosea Grandiflora, a very fine, large, deep rose-coloured flower, with white throat. This is a truly beautiful flower.

Venosa Grandiflora, is of a variety of good colours finely veined, with a delicate net-work of a deeper colour than the ground of the flower.

Countess of Ellesmere, is a smallish rose-coloured flower, with a white throat, always comes true from seed, and makes a most magnificent bed.—*J. V. in Rural New Yorker.*

☞ The fruit prospect in Ohio is reported unusually promising. Peaches, pears, apples strawberries, and all the early and late small fruits will be abundant if no killing frost comes to blast them The slight frost of the last two weeks does not appear to have affected unfavourably, and the foliage is now so well advanced as to furnish the tender fruit protection We may, therefore, calculate on an abundance, and lower prices this year.—*Cin. Com*

RHUBARB AND ROSEBUGS.—It is said that rosebugs will resort to the flowers of rhubarb in preference to any other plant, and that consequently grapes, &c. may be saved from their ravages by planting rhubarb among the vines.

AGE OF SEEDS.—Paschall Morris, in the *Rural Advertiser*, says: "We *prefer* turnip seed one year old to raise a crop of turnips from, and instead of only 5 per cent. germinating, when four years old, it is more probable, if the seed has been properly kept, that there will not be five per cent. which will *not* germinate. While there are some seeds of vegetables which it is unsafe to rely on over a year old, it is also well established that there are others actually improved by age, and which seem when a few years old, to run less to vine or top, and more to fruit or crop. The melon family is of this class; and for our own planting, we would *prefer* watermelon or cantelope seed four years old."

MR. VICK'S FLOWER-GARDEN.—A correspondent of the *Rural New Yorker*, gives an account of a visit paid by him to the gardens of Mr. James Vick, the noted Seedsman and Florist, of Rochester, N. Y. Our contemporary thus comments on the communication:—

"The above is from one of our special contributors, who has just visited Mr Vick's splendid garden. That he is a little excited and poetical, although numbering nearly four score years, will not be considered strange by our readers, when we inform them that Mr. Vick now has more than *Thirty thousand Tulips* in bloom, dazzling the eye with their brilliant and varied colourings. An acre of such splendour is enough to intoxicate the most sober-minded, and its effect upon our venerable friend is apparent. Long may he live to appreciate the beautiful in Nature and Art!"

TO CURE WORMY TREES.—The following receipe is published in the New York *Evening Post*:—"With a large gimlet or augur bore into the body of the tree, just below where the limbs start, in three places, a groove inclining downwards. With a small tunnel pour a shilling's worth of quicksilver into each groove. Peg it up closely, and watch the result. Had it been done when the sap first started on its upward circuit, it would have been more efficacious—yet, even now, it will greatly abate the nuisance. The plan was first tried for a wormy apple tree by Samuel Jones, Esq., of Canaan, Columbia Co., N. Y., and with entire success. It is believed that, far from damaging the trees, it will even add to the beauty of the foliage. In case of the fruit above mentioned the cure was suprising, not only the fruit becoming perfect and beautiful, but the very leaf seemed to grow larger and far more dark and glossy."

HOW TO HAVE CLEAN GARDENS.—First, hoe early. Weeds when first up are very tender, but when large, many will live unless buried, but if buried when fresh, will decay before another hoeing becomes necessary. Continue the hoeing through the season, or as long as weeds grow. A few weeds allowed to go to seed will stock a large garden. Purslane in particular, one of our most troublesome garden weeds, has a multitude of seed, and ripens it while the capsules are green, and many a cornfield has been stocked with it by manure from the hog-yard.

Second, put no yard manure on the garden that has not been thoroughly fermented. Hen manure, guano, phosphate of lime, ground bone and wood to mix intimately with the contents of the privy a sufficient quantity of some suitable absorbent, such as coal ashes, clay, swamp, muck or charcoal ashes are all good, but poudrette is better than either of them singly, and every family should manufacture their own. Nothing more is necessary than dust, which should be dry, and improved by the addition of gypsum. To facilitate the operation I have so constructed my privy that whenever a lid is closed a given quantity of absorbent is deposited underneath, and besides answering the purpose intended, it operates as a disinfectant, allaying the unpleasant odour of the premises to such a degree as in my opinion to pay for all the trouble and expense, if that alone were the object. —*Country Gentleman.*

Poultry Yard.

Dosing Hens with Lime.

To the Editor of THE CANADA FARMER:

SIR,—In your last number I observed a letter, by Mr Gregory, copied from the *Country Gentleman*, and headed—"Shall we Dose the Hens with Lime?" and as my experience points to an opposite conclusion from that indicated by the writer in question, I submit it, in order that your readers may judge of the relative merits of two conflicting theories.

During the past winter (1864-5), I virtually experimented upon some very valuable fowls of a particular breed (Brahmas crossed with Dorkings, but bred with much care, and crossed backwards and forwards in the same blood, so as to avoid immediate relationship), for having to move my residence in the winter, the fowls were obliged to remain for some time in a place, where they could receive no other attention than plenty of the best possible food and water. With this feeding, I thought, I might spare the trouble of providing pounded bones, mortar, &c. I therefore only kept them supplied with hard coal ashes to dust in, and left them to find the necessary amount of grit for digesting their food, as best they might. There were seven hens and a cock,—all last summer's chickens, and besides these a hen of 7 or 8 years old. The hens began to lay soon after the snow fell, and even for some time after it was so deep, that they could not get out of their house. At first they produced plenty of eggs with good hard shells. In about a fortnight, however, the eggs ceased coming, most mysteriously, and one or two soft shelled ones were observed under the perches, which were, of course, eaten by the fowls. Close watching revealed the fact, that the hens continued to lay, but that the eggs were eaten by them as fast as they were laid. The fowls were quite fat, weighing from 5 to 6 lbs. each, and they always had the best of grain before them, besides the scraps of the house, such as potatoes, bread, &c., but the *dog*, which was kept at some distance from the fowls, got all the bones and the meat. I could not believe that with such feeding, want of phosphate could exist. I therefore blamed the old hen, and she was sacrificed to the pot. The young ones still devoured the eggs, although every means were tried to cure them. Close watch was kept, and the eggs removed as quickly as possible, and after a time each nest was supplied with 8 or 9 artificial eggs, so that the fowls might not know which were real and which were not, and the real eggs quickly removed. The full number of eggs expected was then obtained for a short time, while the hens tried to break the artificial eggs, but of course they were disappointed, and gave up their bad habits. However, they ceased laying for such a length of time, and became so very discontented as to convince me that there was really the *want* of something for them, and they were at once supplied plentifully with crushed bones. Within a week, 6 eggs a day were obtained, and the destruction of the eggs entirely ceased.

Now, these facts cannot be denied, and the natural inference is that the hens from not being able to range, could not get their proper supply of lime or phosphates, and felt such a *want*, that it overcame the natural affection all birds feel for their eggs. The old hen doubtless showed the young ones where the want could be supplied, by eating their own eggs, and so long as they did this they continued to lay,—that source being stopped, they ceased laying. Ground bones were supplied, thus furnishing both albumen and phosphates, when laying was resumed, and the depraved habit ceased. These facts surely ought to convince even Mr. Gregory, the author of the quoted article, that we *should* "dose the hens with lime."

There is another point in which the article is wrong The author says that egg-shells are carbonate, and not phosphate of lime. The actual manufacture of the shell is not well understood, but it is believed that the phosphoric acid is generated in the ovarium of the hen, and combining with the carbonate, which is deposited on the surface of the soft shelled egg, forms the hard solid shell. At all events the shell is more phosphate than carbonate, and from the quickness of its formation, we can only suppose that the hardening of it is effected by some rapid, though natural, chemical change and affinity, carried on in the body of the hen. I think the writer in question, is wrong on some other points, but they are of minor importance. The fact is, we require more eggs than would be produced in a state of nature, and we select the breed which will afford the supply. Such breeds naturally require more "*egg material*" than others, and we must supply that material in the food and other things we provide for them. We thus meet the drain with a supply of phosphate, obtained from crushed bones, or otherwise, and if we stop the supply of such articles, the eggs stop also. When hens can get to where a dog is tied, they never want phosphate, as they devour, with great avidity, the hard white excrement of the dog, which is the result of digested bones. C. A. J.

Toronto, May 6, 1865.

Devices in Egg Hatching.

PUT eggs under three hens at the same time, a full number, thirteen. Should they all come out, each hen must keep her lot. If they only partially hatch, put all the chickens at once to two hens, and let the third be one of three more put on fresh eggs, taking care that the second time she is allowed to cover those she has hatched. But in order to reduce hatching almost to a certainty, the eggs should be examined at the end of a week or ten days. All the bad should be thrown away, the good ones put under hens that were nested at the same time. It may be done in this way: Choose a sunny morning, and the middle of the day. Hold the egg against any small opening in the door or other part of the building, where there is a strong concentrated ray of light. Look at it through both hands placed telescope fashion. If the light comes clearly through it, and the whole of the egg is of one uniform warm bright colour like the sun, it will never produce a chicken; but if, like the moon, it has dark shades and spots, it is good. These may be seen at the end of four days. Then when the eggs are within two days of hatching get a pailful of warm water, and choosing the time when the hen is feeding, put the eggs into it. They all swim, and after a minute or two, one will give a sort of jerk, because he feels the warmth, another and another will do the same, till they are all dancing the most extraordinary quadrille ever seen. They elbow, kick and bang each other, and seem to enjoy it so heartily, that one is almost tempted to put the ear down to the water, in the expectation of hearing laughter inside the shell of a merry one, or a deep "gluck, gluck, gluck," like the Domine in "Jacob Faithful," from some staid and steady chick that is obliged to laugh, but thinks it *infra dig.* The eggs seem to enjoy it immensely, and our conviction, founded on considreable experience, is, that the chickens hatch all the better. The softening of the shell renders their exit easier, and they come into the world stronger. The two or three sulky eggs that take the blows and return none may be discarded. It may be truly said they have no life in them. These little precautions make hatching almost a certainty, and by discarding the bad eggs at the end of a week, and just before hatching, time is saved. Perhaps after the water test, one-third of the eggs submitted to it are rejected. All the good and lively ones are put under two hens, and the third is put on fresh eggs. Spite of all these precautions some will fail, but where they are adopted there is little disappointment.—*Cottage Gardener.*

A NEW LIGHT ON THINGS.—"Holloa, young fellow!" said the cock to the shepherd's dog, eyeing him very fiercely as he ran by, "I've a word to say to you."

"Let me have it," said Shag, "I'm in a hurry."

"I wish to remark," said the cock, "that there has been a great mistake made in the stack-yard, and you can tell your master that he and the other man, instead of turning the corn end of the sheaves into the stack and leaving the stubbles outside, should have done it the other way. How are my hens and I, do you think, to get at the grain under the circumstances?"

"Anything else?" asked Shag.

The cock was offended, and shook his wattles, but answered "Yes, I have also to remark—"

"Never mind, never mind," said Shag, interrupting him, "you're under a general mistake I see, and one answer will do for your objections. You fancy that farm-yards were made for fowls, but the truth is, fowls were made for farm-yards; get that into your head, and you won't meddle with arrangements which you can't understand, and in which you and your affairs are not taken into account."

☞ Oh! what a the use of fretting
At imaginary things,
Despair not at mere trifles.
See what the morrow brings.
Look boldly up—push forward,
'Tis the only way to do,
But never trouble trouble,
'Till trouble troubles you.

Miscellaneous.

Visiting Farmers.

In ancient times, the English law required a young man, on completion of his apprenticeship, to travel over the country a certain number of years, working at his trade, before he could be licensed to make a permanent beginning for himself. The object was to compel him to become familiar with the different modes in which other craftmen conduct the business he had learned, so that by knowing all he might become a perfect workman.

Travelling from one farm to another, to learn what was going on upon each, how this or that process was conducted, what machines were successful, which were failures, what was the most profitable fruit crop and how best to produce it, who had the most successful garden and how it was managed, with the long catalogue of items on kindred topics—would be a mere repetition of the English obligation to become perfect in the farmer's calling.

There are times throughout the year when most men can indulge in this useful recreation, and there are those who systematically devote to it a portion of every season. I have indulged in it myself, and have rarely gone anywhere without learning something that was new to me, and many times useful.

On these brief perambulations I have uniformly found the latch string of the door within sight and reach. Going in unheralded, and even anonymously, I have never been received discourteously. The house-dog may have been snappish, but the proprietor has been all suavity.—*Author of "Ten Acres Enough," in Horticulturist.*

Dog Slaughter.—The work of destroying the surplus masterless and unregistered dogs, is carried out with more gusto than caution, by the St. John's constables. People complain that the dogs, are shot in the street during the day, at the risk of the lives of passers by. From morn to dewy eve the crack of the musket and the "yowlings" of mortally wounded curs make a melancholy music, that has no resemblance to the "Old Dog Tray" melody.—*Halifax Weekly Citizen.*

Polishing Ploughs.—The following recipe, sent us by a practical as well as scientific farmer, will be found useful at this season:

The application of sulphuric acid, diluted with its own weight of water, to the mould-board of a plough, and allowing it to remain on the iron for twenty-four hours, would be calculated to eat the surface into holes, and destroy the iron. Diluted sulphuric acid will not only dissolve the oxides of iron, but will destroy the metal. If those who wish to spare themselves the trouble of polishing a rusty mould-board, will have recourse to muriatic acid (quite as cheap an article), they will find that this acid will not touch the iron, but will render the rust soluble and easily removed. I would not advise allowing the surface to remain moist with any acid twenty-four hours. Muriatic acid will do the work in five minutes, and should be either washed off, or cleansed by running through the soil without delay.—*Farm Journal.*

Scalliwag Farmers.—This is a funny heading, and it goes against the grain to write it. But there are scalliwag farmers in the country—a few black sheep in a very large and fine flock—and we feel a grim satisfaction in pointing them out. Who are they? We will tell you. That farmer is a scalliwag—a ne'er-do-well, a weed, a black sheep, who strips his farm of lean stock, just when the grass is starting, and turns it over to Yankee drovers who are taking it out of the country just now by a sort of wholesale. Some men can't help this—they are forced to sell, or permit the Bailiff to sell for them—and such, when they are forced into this position, we pity. But we have no sympathy with the lazy, thistle-growing, fence-neglecting, land-robbing varlets, who sell because they are too shiftless to keep, and are tempted by a little extra price to part with the young, lean stock which should be the life-blood of their farms. It never did pay to sell golden-egg-layers, even at gold price, and never will. The farmer's young cattle are his manure manufacturers; and if he sends them adrift he puts his hands into his own pockets and turns them inside out. And to sell lean stock now, with a good summer's grass growing for their feed, is as suicidal as taking laudanum by the quart, or arsenic by the pound. We don't know how to speak of the miserable culprits who are guilty of the practice. We hope that the want of beef next winter, and a six month's regimen of potatoes and salt, may be the least penalty to be borne by them for their sin. Farmers, who are worthy the name, frown them down! Let them know that you have your eyes upon them!—*Elora Observer.*

A Word to Farmers' Boys.—We hope every farmer's son will set out at least one ornamental tree on the homestead this spring. It will be one of the first things he will look at when he returns home at some future time. We always search out the apple trees that we raised from the seed—large venerable looking trees, and derive a peculiar pleasure as they help the memory to run back to the scenes and pleasures of boyhood. To-day we saw a beautiful maple that we set out twenty-six years ago. Go and get a healthy looking sugar maple, with as many roots as possible. Cut the top off, but leave the small underbranches. Set it out before the buds begin to swell, in a rich soil, and it will grow and be an ornament to your home. Almost every boy is anxious for the time when he shall go away from home and see the world for himself, but after he has been bruised about a few years, he turns his eyes towards the home of his boyhood where every object has a peculiar interest, and if he can see a beautiful tree that his own hands planted, it will add much to his pleasure. Parents are often advised to make home attractive to their boys, but boys can do much themselves to make it pleasant by planting trees. We hope that when we ride by your home, we shall see some trees planted by your own hands.—*Maine Farmer.*

Markets.

Toronto Markets.

"Canada Farmer" Office, Monday, May 29, 1865.

Nothing could exceed the general fineness of the weather for the last two weeks. We have had almost uninterrupted sunshine and warmth, and now on the opening of June, the heat of our Canadian summer begins to be felt. There has been more activity in our street market during the past fortnight, owing to farmers having got through their seeding, and are now at liberty to come into town with what produce they have for sale. The wool season, too, is about to open, and for the next few weeks we may expect a continuance of this activity until the hay crop requires attention. In our breadstuffs market there has been no small amount of irregularity and fluctuation. Prices have advanced considerably in all branches, and this, coupled with the lightness of stocks, which are held in a few hands who refuse to operate, in anticipation of still higher rates, has made the market sometimes panicky, other times advanced, stationary and irregular, with but few transactions. In live stock there has been a steady exodus to the States, both from this market and other ports on the lake. There is less demand now, however, than formerly, when the immense American army, which is now reduced to one-fourth its original size, had to be fed by Government. In all branches of trade on the other side there is, strange to say, more or less dullness, which the stoppage of the war, and the opening up of the South, would scarcely seem to warrant. Lumber has begun to move from our port to the American market with a good deal of briskness since the opening of the canals, which causes a further activity in our shipping and harbour. Several large cargoes have cleared during the past fortnight for Oswego, Chicago, Ogdensburgh and Buffalo. The *Seagull*, Captain Jackman, also left here with a large cargo of pine lumber for Port Natal, in South Africa. She is the first vessel ever left here for such a distant port, and she was towed out of the harbour with all honours, amid the greetings and good wishes of our citizens.

Flour in good demand; No. 1 superfine at $5 25 to $5 30 per bbl, extra, $5 75 to $6 00; superior extra, no receipts; fancy, nominal.

Fall Wheat steady, firm, wanted; small receipts; selling at $1 20 to $1 30 per bushel; lower on the street.

Spring Wheat—In active demand firm and advanced, at $1 12 to $1 15 per bushel.

Barley quiet and unchanged, at 55c to 65c per bushel.

Oats at 48c to 50c per bushel, from teams and in store.

Rye 60c per bushel.

Peas dull, nothing doing, at 80c to 85c per bushel

Hay—Market fairly supplied at $14 to $18 per ton.

Straw in poor supply at $14 per ton.

Provisions—*Butter*—Fresh, wholesale, per lb, 15c to 18c, retail, per lb., 18c to 20c; in tubs, wholesale, per lb., 14c to 15c.

Eggs—Wholesale, per dozen, 12c to 12½c, retail, per dozen, 12½c to 13c.

Hams—Wholesale, per lb., 12½c to 13c, retail, per lb., 14c to 15c.

Flitch Bacon—Wholesale, per lb., 11c to 12c, retail, per lb., 12c to 14c.

Cheese—Wholesale, per lb., 11c to 12c; retail, per lb., 14c to 15c.

Lard—Wholesale, 12c to 12c½ per lb.; retail, 14c to 15c.

Beef in small supply at $5 50 to $6 50 per 100 lbs.; 7c to 7½c per lb., wholesale; 12c to 14c per lb., retail.

Calves $4 to $6 each; large number in market.

Sheep, by the car load, $5 to $6 50, each, $5 to $7.

Lambs, $2 50 to $3 00; very good bring $5 00.

Pork $6 50 to $7 25 per 100 lbs, small supply.

Hides (green) lower; per 100 lbs., $3 00 to $3 25; dry hides, 6c to 8c per lb; cured and tanned, 4½c to 5c.

Tallow—rough, 5c per lb.

Wool, 30c to 35c.

Calfskins (green) 7c to 8c per lb.; dry, 16c.

Sheepskins (green) $1 75 to $2 00 each; dry, 16c to 18c.

Lambskins 16c to 20c each.

Coal, Lehigh $9 25, Scranton $7 75, Bituminous $7 50 to $8.

Wood $4 50 to $5 50 per cord.

Salt $1 60 to $1 75 per bbl.

Water Lime $1 50 per bbl.

Potatoes in good supply at 40c to 45c per bushel retail.

Apples, $3 to $4 per bbl.; American do., $4 50 to $5.

Ducks, 35c each.

Chickens, 30c to 35c each.

Turkeys, 75c to $1 each; $1 50 asked for prime birds.

Oil Cake, $32 per ton, or $1 75 per cwt.—Very fair demand.

Montreal Markets, May 27.—*Flour*—Receipts, 4,800 barrels; market very quiet; quotations nominally unexchanged; Extra, $6, Fancy, $5 60 to $5 90; Canada superfine, $5 30 to $5 50; Western wheat superfine, $5 05 to $5 15; coarse grades scarce and wanted, bags dull. *Wheat*—No transactions in quantity. *Corn*—No sales reported. *Ashes* dull at a decline. *Pork* unchanged with sellers, to arrive at lower rates.

London Markets, May 27.—*Spring Wheat*, per bushel, $1 to $1 03. *Fall Wheat*, per bushel, $1 05 to $1 08. *Flour*, per 100 lbs, $2 50 to $2 75. *Barley*, per bushel, 55c to 60c. *Oats*, per bushel, 40c to 42c. *Peas*, per bushel, 70c to 75c. *Fresh Butter*, per lb, 14c to 15c. *Eggs*, per dozen, 10c to 11c. *Hay*, per ton, $12 to $15. *Potatoes*, per bushel, 30c to 35c. *Dry Hides*, per lb, 4c to 5c. *Dressed Hogs*, per 100 lbs, $6 50 to $6 75.—*Free Press.*

Sarnia Markets, May 27.—*Fall Wheat*, 75c to 80c. *Spring Wheat*, 70c to 77c. *Oats*, 50c to 52c. *Flour*, per barrel, $4 to $4 50. *Beef*, per quarter, $7 to $7 50. Shamble Cuts, per lb, 12c. *Potatoes*, per bushel, 50c to 75c. *Apples*, per bushel, $1. *Fowls*, per pair, 40c. *Hay*, per ton, $18. *Pork*, $7 to $7 50. *Butter*, per lb, 16c. *Eggs*, per dozen, 15c. *Cheese*, per lb, 12c to 15c. *Hides*, $2 50 to $3. *Sheepskins*, 75c to 87c. *Wood*, per cord, $1 75 to $2. *Beans*, per bushel, $1. *Dried Apples*, per bushel, $1 50.—*British Canadian.*

Berlin Markets, May 27.—*Fall Wheat*, $1 to $1 06. *Spring Wheat*, $1 to $1 06. *Flour*, per 100 lbs, $2 75. *Oats*, 40c to 45c. *Barley*, 70c to 75c. *Rye*, 70c to 75c. *Peas*, 50c to 55c. *Potatoes*, 25c to 35c. *Onions*, 75c to $1. *Fresh Butter*, 14c to 15c. *Hay*, $15 to $16. *Beef*, per 100 lbs, $5 to $6. *Pork*, $6 50 to $7 75.—*Telegraph.*

Ayr Markets, May 27.—*Fall Wheat*, $1 to $1 10. *Spring Wheat*, 90c to $1. *Flour*, $2 25. *Oatmeal*, $3. *Oats*, 37c to 43c. *Butter*, 12c to 14c. *Cheese*, 8c to 12c. *Eggs*, 9c to 10c. *Hides*, $3 to $3 50. *Calfskins*, 8c. *Sheepskins*, $1 to $1 75. *Peas*, 70c to 80c. *Pork*, $5 to $6 25. *Barley*, 60c to 70c. *Potatoes*, 25c.—*Observer.*

Welland Markets, May 27.—*Fall Wheat*, per bushel, 95c to $1. *Spring Wheat*, 90c to 95c. *Pork*, per 100 lbs, $8 50 to $9. *Beef*, per 100 lbs, $7 to $8. *Fresh Butter*, 16c to 18c. *Cordwood*, per cord, $2 to $2 25. *Eggs*, per doz n, 10c.—*Tribune.*

Barrie Markets, May 27.—*Fall Wheat*, per bushel, $1 to $1 03; *Spring Wheat*, per bush., $1 to $1 02. *Flour*, per bbl, $5 25 to $5 50. *Barley*, per bush., 50c to 55c. *Oats*, per bush., 60c to 62c. *Beef*, per cwt, $6 to $7. *Mutton*, per lb, 7c to 9c. *Pork*, per 100 lbs, $6 50 to $7. *Hay*, per ton, $19 to $20. *Butter*, per lb, 20c to 25c. *Eggs*, per dozen, 8c to 10c. *Potatoes*, per bushel, 40c to 45c. *Peas*, per bushel, 60c to $1. *Hides*, $3 to $3 50. *Sheep*, $5 to $5.—*Spirit of the Age.*

Whitby Markets, May 27.—*Fall Wheat*, $1 05 to $1 10. *Spring Wheat*, $1. *Barley*, 50c to 55c. *Oats*, 38c to 40c. *Peas*, 75c to 82c. *Potatoes* 25c to 30c. *Hay*, $12 to $14 per ton. *Eggs*, 8c per dozen. *Butter*, 15c to 20c per lb. *Apples*, 40c to 60c. *Pork*, $5 50 to $6. *Cordwood*, $2 25 to $2 50.—*Gazette.*

Port Hope Markets, May 27.—*Fall Wheat*, $1 15 to $1 20. *Spring Wheat*, $1 05 to $1 10. *Barley*, 70c to 75c. *Corn*, 50c. *Peas*, 70c to 80c. *Oats*, per bushel, 40c to 45c. *Potatoes*, per bushel, 30c to 35c. *Hay*, per ton, $8 to $10. *Pork*, per 100 lbs, $5 50 to $6 50. *Beef*, per 100 lbs, $5 to $6. *Mutton*, per lb, 6c. *Fresh Butter*, 10c to 15c. *Cord Wood*, $2 25 to $2 50. *Eggs*, 7c to 9c.—*British Canadian.*

Cobourg Markets, May 26.—*Spring Wheat*, $1 10 to $1 15. *Flour*, per barrel, $5 to $6. *Oats*, 40c to 50c. *Peas*, 70c to 75c. *Potatoes*, 30c to 35c. *Barley* 50c to 60c. *Wool*, 30c to 35c. *Hay*, per ton, $9 to $10.—*World.*

Detroit Markets, May 27.—*Flour*—$7 25 for superior, extra at $7. *Wheat*—No. 1 red at $1 50. *Corn* 63c. *Oats*, 52c to 54c. *Barley*, $2 to $2 40 per 100 lbs. *Potatoes*, at 62½c to 65c. *Butter*, 22c. *Eggs*, 15c. Provisions—*Mess Pork*, $25. *Lard*, 19c. *Hides*—Untrimmed, 5c, trimmed, 6c. *Calf*, green, 10c to 12c, pelts, 50c to $2 50. *Freights*—3½c offered from East Saginaw to Toledo.—*Tribune.*

Buffalo Markets, May 27.—*Flour*—firm, and in moderate demand, Canada bakers at $7 25, *Red Winter* and *White* at $7 62½ a $8 75, $7 25 for Illinois spring. *Wheat*—market firm; No 2 Chicago without certificate at $1 25, No 1 Chicago spring at $1 30; No 1 Chicago spring, sold in Chicago to arrive at $1 40. *Corn*—market firm, with a light demand; mixed at 67c. *Oats*—market firmer and active at 50c, barged at 52c. *Barley* dull and inactive, held at $1 to $1 05. *Rye* nominal, held at 75c. *Peas* firmer at $1 40. *Butter* in moderate demand and lower, held at 15c. to 20c.—*Express.*

New York Markets, May 27.—*Flour*—Receipts 10,676 barrels, market quiet and without decided change; sales 5,000 barrels, at $6 to $6 40 for superfine State, $6 80 to $6 95 for extra State; $7 to $7 10 for choice dutto, $6 to $6 40 for superfine Western, $6 90 to $7 25 for common to medium extra Western, and $7 25 to $7 35 for common to good shipping brands extra round hoop Ohio. Canadian flour dull, sales 300 barrels, at $6 80 to $7 10 for common, and $7 15 to $9 for good to choice extra. Rye flour quiet. *Wheat*—Receipts, 7,450 bushels, market firm, with only a very limited demand, sales 7,000 bushels No. 1 spring. *Rye* quiet. *Barley* dull. *Corn*—Receipts, 7,450 bushels, market 1c to 2c better. *Oats* firm, at 57c for Western. *Pork* firmer; sales 700 barrels, at $23 to $23 25 for new mess, $21 for 1863 and 1864 dutto, and $18 to $19 25 for prime. *Beef* quiet.

Advertisements.

1865. 1865.

NOTICE.

THIS YEAR'S IMMIGRATION.

IMMIGRANTS of the classes so much needed in Canada, Domestic Servants, Mechanics, Farm Laborers, &c., are now beginning to arrive and may shortly be looked for in increasing numbers. It would therefore be very desirable that parties in Canada wanting any of the above classes, should signify their wishes (the kind of person wanted, wages, &c., &c., and the best mode of reaching the applicant), and address any of the following Government Immigration Agents :—

HAMILTON, - - R. H. RAE.
TORONTO, - - - J. A. DONALDSON.
KINGSTON, - - J. McPHERSON.
OTTAWA, - - - W. J. WILLS.
MONTREAL, - - J. H. DALEY.
QUEBEC, - - - - A. C. BUCHANAN,
CHIEF AGENT.

A record of such applications will be kept, and no pains spared by the various Officers of the Department to supply all wants.

Proprietors or Agents having improved farms or lands for sale or lease are invited to forward printed descriptions of same for the free inspection of immigrants and distribution.

A. C. BUCHANAN,
GOVERNMENT IMMIGRATION OFFICE, *Chief Agent.*
Quebec, 1st April, 1865. v2-7—6t.

SUPPORT HOME MANUFACTURES!

The Farmers of the Counties of Huron, Bruce, Perth, and Grey, will find the best Threshing Machines, Reaping and Mowing Machines, and Agricultural Implements generally at the Foundry of

GLASGOW, McPHERSON & Co.,
Clinton, C. W.

The Farmers of the Counties of Elgin, Middlesex, Lambton, Kent, and Essex, will find the best Threshing Machines, Reaping and Mowing Machines, and Agricultural Implements generally, at the Foundry of

MACPHERSON, GLASGOW & Co.,
Fingal, C. W.

Farmers should bear in mind in getting Repairs for Machines purchased from a distance; that they frequently incur extra expense, delay, and vexation.

The Kirby, Harvester, Ball's Ohio, and Victoria Reaper and Mowers, at either of the Foundries.

v2-11—1t

"ANGLO SAXON!"

THE BEST HORSE IN CANADA.

WILL be in Hamilton on Mondays and Tuesdays, in Grimsby on Wednesdays, in St. Catharines on Thursdays, in Toronto on Fridays and Saturdays, until June 10th; in London on the 22nd, at his stables in Delaware on the 23rd, to remain for the season.

Groom's fee, 25c., for showing the horse, and $1 for service.

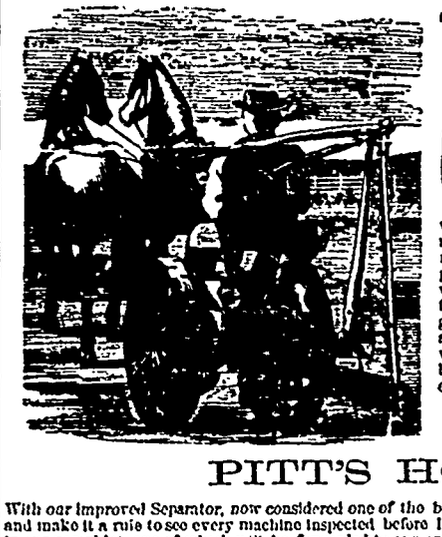
Terms:—Single Service, $10; Season, $16, to Insure, $25 Where more mares are offered than are required, preference will be given to gentlemen that pay the highest prices.

☞ Wanted to hire, a few good Mares, to raise colts.

W. WELD.
June 1, 1865. v2-11—1t

1864. FIRST PRIZE MOWER & REAPER. 1864.

MESSRS. L. & P. SAWYER,



TAKE pleasure in informing the Farmers of Canada West, that they are this season manufacturing a large quantity of their

CELEBRATED BALL'S OHIO

COMBINED MOWER & REAPER

which they have manufactured for the last three years. As we are practical mechanics, and have had nineteen years' experience in the manufacture of machinery, eleven with Messrs. McQuesten & Co., and eight as the proprietors of the establishment formerly carried on by them, we feel confident we can turn out machinery that cannot be surpassed by any other manufactory in Canada. Our machine took the first prize and diploma at the great Provincial trial of 1864, in Mowing and Reaping. We have this season added all the late improvements made by Mr. Ball, the patentee, together with some very important ones of our own. We still continue to use none but the best iron, and having always a large stock of lumber on hand, are enabled to use all seasoned and of the best quality.

We continue to manufacture

PITT'S HORSE POWER,

With our improved Separator, now considered one of the best for threshing barley in use. We keep none but the best of workmen, and make it a rule to see every machine inspected before leaving the shop. We guarantee our machines to do all that is claimed in in our pamphlet, one of which will be forwarded to any one sending a post stamp. We also manufacture Drag-Saws for cutting wood, cutting boxes, &c.

Hamilton, June 1, 1865. v2-11—1t*

IMPROVED FARM FOR SALE

IN THE COUNTY OF GREY.

ADJOINING the Corporation boundary of the Town of Owen Sound. 200 acres, nearly 100 cleared. Soil of first-rate quality. A large Spring Creek running through the estate. Buildings are quite new and well finished. Residence is a large double Cottage, well painted inside and out, with a stone Cellar 40 x 40 feet, and out-buildings. Offices comprise, main building, containing Horse and Cattle Stables, Hay and Straw Lofts, Granaries, Sheep-house, Waggon-house, and root Cellar, with two Barns as wings, and Cattle Sheds in yard.

FRED. PEETE,
Owen Sound, C. W.
22nd May, 1865 v2-11—1t*

FARM FOR SALE.

A FARM containing 86 acres of excellent land, being part of Lot 41, in Con 2, and part of 41 and 42 in Con. 3, Township of Ancaster, about 8 miles from Hamilton, and one from Ancaster, and on the Macadamized Road leading from Hamilton to Brantford. Stone Cottage 60 x 60, Frame Barn 125 x 35, with Cattle Sheds, Stables, and necessary out-buildings; all having recently been thoroughly repaired. A large orchard of excellent fruit trees, and never-failing springs of water.

This property is in a respectable and healthy locality, the scenery unrivalled, and is known as the

"HAMMERSLEY FARM."

Any gentleman in search of a desirable residence should not lose the earliest opportunity of inspecting this property. Terms liberal.

Apply to
MOORE & DAVIS,
v2-10—3t *General Agents, &c., Hamilton.*

GROUND BONE MANURE.

REDUCTION IN PRICES.

FINE BONE DUST, 60 CENTS PER BUSHEL; Half-inch Ground Bone, 50 cents per bushel.

On all orders over $25, a discount of 10 per cent. will be allowed.

PETER R. LAMB & CO.

P.S.—Delivered at the Railway Station free of charge.

March 1, 1865. v2-5—8t

ONE DOLLAR PER ACRE.

The Canadian Land and Emigration Company

(CAPITAL £250,000 STERLING,)

ARE at present selling at the above price their excellent Lands in the rapidly-improving settlement in the

TOWNSHIP OF DYSART, CO. PETERBOROUGH.

For information, apply to the Secretary,
C. J. BLOMFIELD, Esq., Toronto;
or to C. R. STEWART, Esq., P.O. Haliburton, Co, Peterborough.
March 15, 1865. v2-6—6t

ROOT SEED SOWER,

AND

Manure and Plaster Distributor.

THE Subscriber has obtained a patent for the above Machine, which he desires to introduce to the notice of the Farming community. It will sow, and evenly distribute all kinds of root seeds, in any required proportions. It will at the same time distribute manure or plaster, in any required quantity.

It will sow and distribute the seed with or without any manure or plaster. It will distribute, without injury, plaster or ashes over plants when they come through the ground. It will sow double or single—two rows, or one at a time. It can be worked by manual labour, or by horse power. It is the most complete article of the kind, and one of the greatest LABOUR-SAVING INVENTIONS yet brought under public notice.

Patent Rights for Counties and Townships for sale. Applications to be made to

JAMES CLAYTON,
Farming Implement Manufacturer, &c.
Whitby, April 15th, 1865. v2-8—6t

SOMETHING NEW UNDER THE SUN!

ALSO IN CANADA.

IMPORTANT TO CHEESE MAKERS. The undersigned is prepared to fill any amount of orders for **CHEESE BOXES** and **SETTERS**, at a very low rate. All orders will be strictly attended to.

ADAM OLIVER.
Ingersoll, March 24, 1864. v2-7—6t

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