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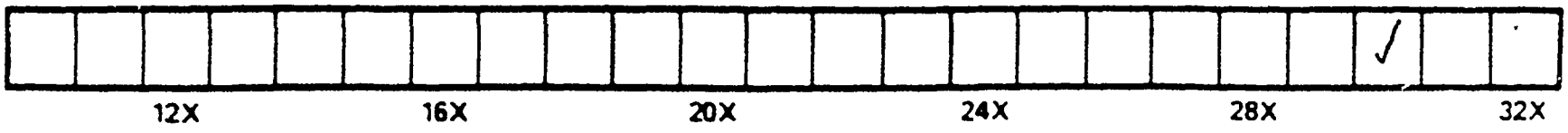


THE CANADA FARMER

VOL. I. No. 16.] TORONTO, UPPER CANADA, SEPTEMBER 1, 1864. [POSTAGE FREE.

The Field.

A Bean Experiment.

I read with much interest in your valuable paper of March 5th, the statements of Christy Greggs, Horace H. Runnels, and others of Deering, in relation to farm crops the past season. Believing that farmers may profit by each other's experience, I will send the result of an experiment with a crop of white beans.

I measured off with chain one-fourth of an acre from ground broken in April—harrowed the ground and planted with white pea beans, the 3rd day of June, in rows three feet apart, put in each hill about one-third of a shovel of muck that had been taken from the meadow a year before and thoroughly saturated with chamber-lye, the fall previous to using. About one cord of muck was used on forty square rods, and no other dressing was put upon the land. Six or seven beans were dropped in a hill. Hoed once, running the cultivator between the rows at the time of hoeing. The soil a light deep loam, inclined to sandy.

Yield, five and a half bushels of plump, perfect beans, which I sold for three dollars a bushel, amounting to $15 50.

I estimate the cost of cultivation as follows:

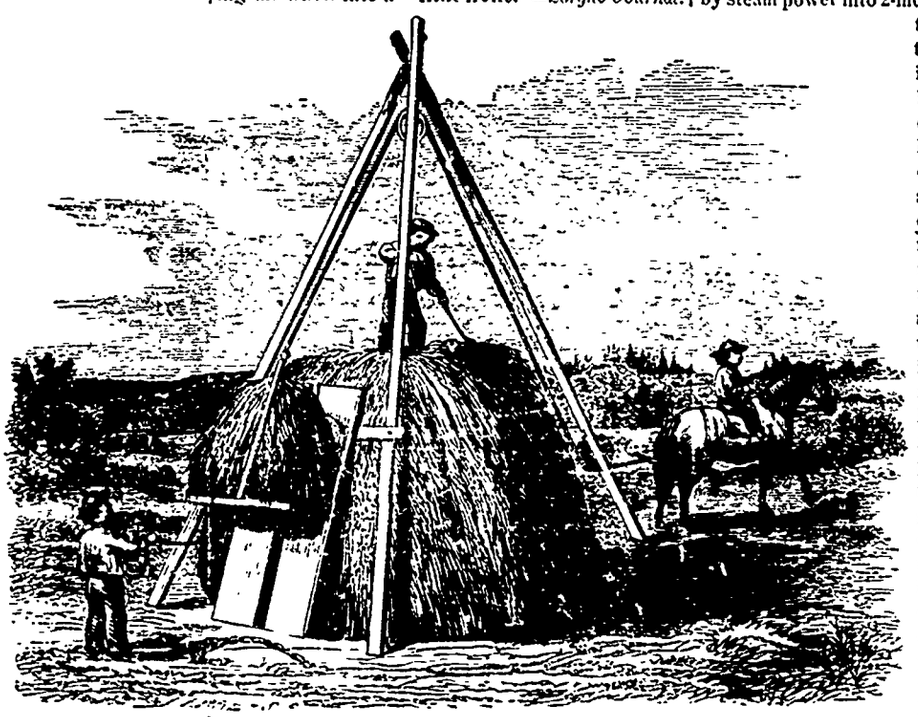
Ploughing and harrowing ground,	$1 00
Manure,	3 00
Interest on the land,	1 00
Planting, hoeing and harvesting,	3 50
Total,	$8 50

Deduct the cost of cultivation from the price for which the beans sold, and it leaves a net profit of $7 for the 40 square rods, or $28 per acre.—*Cor. Journal of Agriculture.*

Only a Little Frolic.

We met a farmer friend the other day who casually remarked that he should soon commence cutting his wheat. We asked him how much he had to harvest? "About seventy-five acres," he replied. Seventy-five acres of wheat to be cut, bound, and shocked we thought or tried to think, for we could not grasp the whole idea at once. And then the memory of our younger days came over us, when the matter of harvesting ten or fifteen acres of grain was the great event of the season, so we involuntarily exclaimed . . . "Seventy-five acres? Prodigious!" "What a job!" "Job," replied our friend, looking at us with a clear suspicion that we had been dreaming. "Job? Nonsense cut it all down in four or five days only a little frolic."

Oh, ye Balls, and Buckeyes, and Kirbys and McCormicks, how much of the romance as well as the toils of harvesting you have obliterated, changing the whole into a "little frolic."—*Sorgho Journal.*



Stacking Hay by Horse Power.

We have had enquiries as to whether the horse pitchfork can be made useful in the field as well as in the barn in unloading and stacking hay. The above engraving represents a very simple and convenient contrivance for lifting hay, by the use of any of the horse pitchforks, and a three legged derrick with rope and blocks. A board-slide is fixed to keep the hay from rubbing against the stack as it goes up. The feet of the derrick require to be sharpened, so that they will keep their place in the ground firmly. The hay may either be brought to the stack on a waggon, or by means of the hay sweep, of which we gave two engravings on the first page of our twelfth issue. Our engraving explains the operation better than a lengthened verbal description could do, and though haying is past for the present season, many of our readers may find this illustration useful in enabling them to make preparations that will lighten their labours in the hay-field another year.

Are not Dung-Heaps Unnecessary?

Most decidedly so, except under particular circumstances. I have now had the experience of several years, during which the bulk of my manure has been taken from under the animals in the covered sheds, and at once applied to the soil. The resulting crops give unmistakeable evidence of the correctness of this practice. If fermentation is so necessary in a dung heap, why does the sheep-fold act so well without it? My custom is as follows: Our straw is cut up by steam power into 2-inch lengths. The action of cutting splits most of it, so that the spongy inside of the straw is at once rendered available to absorb the urine. The outside of the straw we all know is glass, and impervious to moisture. The cut straw is applied as litter from day to day care being taken not to use more than will get thoroughly saturated and intermixed with the solid manure—in fact, enough to keep the animals clean. If you put in too much it will heat and ruin the health of your stock. It is trodden, when so intermixed, into a sort of hodge-podge, which, when applied to the soil, will beat the best guano ever used in the production of crops, and in the matter of profit. The manure is allowed to accumulate under the animals for a month or two, according to the temperature of the season. In winter it may remain long in the summer or warm months you must remove it more frequently, having a watchful eye to the heat of the mass and to the comfort of the animals. If the manure is too warm, it takes the animals off their feed and endangers their lungs, much as a pig gets the heaves or lung disease by lying on hot dung, and then becoming exposed to atmospheric change. When the manure is removed it is completely saturated, so much so that my practical neighbour says: "Mr. Mechi, your dung, although made under cover, is much more wet than ours, which is exposed to rain and the water from buildings."

It is highly desirable that this manure, when taken out from the sheds, should be at once carried to, and spread on, the land; for being so amply saturated it can take up no more moisture, and therefore a shower of rain washes the soluble portions out of it. If we have no land ready, we place it close to our great tank, so that any washing from it goes into the tank, and is thus economised. The floors of my sheds are all, of course, well brick paved. In farm yards the

earth to a very considerable depth absorbs much of the farmer's wealth in the shape of soluble manure, and so we need not wonder at the preference for the sheep fold, where the soil gets every portion of the manure.

Manure is so costly to produce that we should certainly take as much care of it as we do of bird's dung (guano) for I presume that no farmer would see with indifference the latter washed away with the rains. Where is the difference? I cannot distinguish it.

I am always sorry to hear a farmer complain of having too much straw, or, as this last winter, complaining that for want of rain he could not make manure. It is evident that such a man does not keep enough stock: for although I grow an immense quantity of straw, and have all my manure made under cover, and a portion of my stock on sparred floors, I never have quite straw enough, and generally purchase an extra stack or two.

I venture to predict that the time is coming when an open farm-yard and a dung heap will be an event of other days.

I am sorry to see so little summer made beef. The consumption of green food with cake under shelter should go on during summer. Why not continue making good manure all the year round?—J. J. MECHI. *May*, 1864.

The Benefit of Thin Sowing.

THE subject of thin sowing, especially as regards the wheat crop, has been so often and so fully discussed that it may, perhaps, be looked upon as superfluous to say a single word more in its favour. Knowing, however, that not a few are still somewhat sceptical as to the benefits resulting from the practice, we have the less hesitation in recurring to the matter. We do so the more readily, also, that our attention has been directed this season to two contiguous fields, in which the effects of the different sowings, thick and thin, are better illustrated than we have seen them on any former occasion. We have watched the progress of the fields throughout the whole of the season up to the present time, and, consequently, we can speak with some authority on the subject. In doing so, we may premise that our field of observation includes one of the finest wheat-growing localities in the Lothians, and therefore we are the better able to judge of the appearance of any particular merits or demerits in the crop.

The result of our observation as a whole may be summed by saying that the wheat crop is light and the head small. A heavy field is an exception to the rule, and where it is found, there have been particularly favourable circumstances for its development. In too many instances, indeed, the head does not seem much more than half its usual size, and, as remarked by a farming naturalist, it looks in some cases like a "bumbee" on the top of the stalk. The field which shows the largest head and the best crop that we have seen is one which may be taken as a very good example of the benefit of thin sowing. It must be mentioned, however, that the field had lain for four years in pasture, a circumstance of itself sufficient to ensure a heavier return than when the rotation is confined to wheat and potatoes, potatoes and wheat. After the field was sown, the braird came away very thinly and also somewhat irregularly, and had a most unpromising appearance. Matters did not mend much for some time; and so unsatisfactory was its aspect, even when pretty well on in the season, that one-half of it was ploughed up and planted with potatoes. The other half was allowed to stand, not without some misgivings as to the result. As the season advanced, however, the field began to assume a much better appearance. By-and-by, the strong healthy-looking plant showed that a good ear might be expected; and when at last the head appeared out of its sheath it proved to be one of the largest and best developed to be met with this season. Since that time the stalk has gone on increasing in length and strength, and the half-field shows the finest crop in the district. Of course, it is now regretted that the other half is not standing, but the crop of potatoes upon it promises to be as excellent as the crop of wheat on the other half of the field. The lesson however is one which will not be lost upon the cultivator and the hint may perhaps be of use to others.

In the contiguous field there is a very good example of the effects of thick sowing. The small patch of ground is farmed by a gentleman who is a strong advocate for thin sowing, and who has practised it for a number of years with the best results. This season, however, at the sowing of his field, the machine had been set for thick sowing, and as soon as he observed the work which it was making he endeavoured to rectify the mistake. From some cause or another, he was unable to do so, and the whole of his field was sown by the machine in the same way. He was quite aware of the circumstance at the time, and he foreboded an indifferent crop. The result has justified his expectations. The crop is one of the smallest he has had in the same field for many years, and it is quite in contrast with the heavy yield of his neighbour. To show that this is not altogether the result of the season, it may be stated that the thinnest portions of the field are the heaviest and the best. In the thickest places the head is small and ill-formed, and the stalk itself is "spirly" and poor.

A remarkable circumstance in connection with it, and one which the farmer attributes to the thickness of the sowing, is, that the stalk is actually "kneed" and twisted, besides being light and small in the head. As a whole, he does not expect to take much more than half of his usual quantity off the ground this season, and this he confidently asserts is solely to be traced to the fact of the machine having sown the crop too thick. It is seldom that an opportunity is afforded of comparing the two systems so closely or of seeing so accurately on which side the balance preponderates as has been given to us this year. With all other things equal, there is much—very much—to be said in favour of thin sowing, especially of the wheat crop.

As a whole, the size of the wheat ear in the thin sown field is almost double that of the wheat in the other. With wheat growers the size of the ear must always be a great desideratum. This, taken into consideration with the quality of the crop, will ultimately influence growers in their selection of varieties, and induce them to practise thin sowing for the sake of cultivating to the highest degree of of excellence the best varieties of the cereal crops. That this is to be attained by an intelligent culture of the best specimens has been already acknowledged, and the foregoing account may, perhaps, conduce to the further carrying out of the same system.—*Scottish Farmer.*

Oats Transmuted into Barley.

To the Editor of THE CANADA FARMER:

SIR,—The following I have found in the *Banffshire Journal*. In sending it to you for publication, I hope it may call forth remarks from yourself, or some of your readers who know more of the wonders of nature than your correspondent, J. DOUGLAS.

"SIR,—Elihu Burrit in his 'Walk from London to John O'Groat's,' relates a curious natural phenomenon, which he saw at a farm at Woodhurst. "I saw also a curious phenomenon in the natural world, on this farm, which, perhaps, might be regarded as a fiction of fancy by many a reader. It was a large field of barley grown from *oats*. We have recently dwelt on the co-workings of nature and art in the development of flowers and of some useful plants. But here is something stranger still, that seems to diverge from the line of any law hitherto known in the vegetable world. Still, for aught one can know at this stage of its action, it may be the same general law of development which we have noticed, only carried forward to a more advanced point of progress. I would commend it to the deep and serious study of naturalists, botanists, or to those philosophers who would preside over the department of investigation to which the subject legitimately belongs. I will only say what I saw with my own eyes, and heard with my own ears. Here, I repeat, was a large field of heavy grain ready for harvest; the head and berry were *barley*, and the stock and leaves were *oats*. Here certainly is the mystery. The barley sown on this field was the first-born offspring of oats, and the whole process by which this wonderful transformative is wrought, is simply this, and nothing more: The oats are sown about the last week in June, and before coming into ear, they are cut down within one inch and a half of the ground; this operation is repeated a second time. They are then allowed to stand through the winter, and the following season the produce is *barley*. This is the plain statement of the case, in the words of the originator of the process, and of this strange transmutation. The only practical result of it, which he claims, is this: That the straw of the barley thus produced is stouter, and stands more erect, and is therefore less liable to be beaten down by heavy wind or rain. Then perhaps it may be added, this oat straw headed with barley is more valuable for fodder for live stock, than the natural barley straw. But the value of this result is nothing compared with the issue of the experiment, as proving the existence of a principle of law hitherto undiscovered, which may be applied to all kinds of plants for the use of man and beast."

NOTE BY ED. C. F.—We confess that we have but little faith in these transmutation stories. Every now and then one finds its way into the public prints. Generally, however, they are poorly authenticated, and we must see far stronger evidence for their truth than we have yet met with, before we disbelieve the principle, "*whatsoever* a man soweth *that* shall he also reap."

Flax versus Wheat.

To the Editor of THE CANADA FARMER:

SIR,—While harvest is progressing and reports coming from all parts of the country on the prospects of the crops, I have looked in vain for a word on flax, and therefore take it for granted there is not the same cause for complaint, or the farmers who get credit for being grumblers would have been making it known ere this. Now, sir, for the benefit of those who have not been fortunate enough to raise more than fifteen bushels of wheat to an acre, I would beg leave respectfully to call attention to the following calculation, which may not be uninteresting to the agriculturists of Canada generally.

We are told there are some ten thousand acres of land under crop this year in Upper Canada. We will take this for our base, to use a military expression, and see the comparative value produced from the land, if sown with fall wheat or a crop of flax. Taking for granted the cultivation and preparation for market to be equal (if in error on this point I will be glad to be set right in some future number of your valuable paper), with the concurrence of a majority of our farmers, I will venture to put the average quantity of fall wheat to the acre at fifteen bushels, and allow the outside current price *one dollar per bushel of 60 lbs.*, amounting to the sum of fifteen dollars per acre, or for the whole ten thousand acres the sum of one hundred and fifty thousand dollars.

We will take the seed of the flax plant first, the average produce to the acre being ten bushels of 56 lbs. to the bushel, the price, $1½ per bushel, will net just the same as wheat, fifteen dollars per acre. It must be remembered at the same time there are four pounds to each bushel in favour of flax, so that to every hundred bushels you will have seven bushels more than on wheat, or in simple figures it will amount to one dollar an acre in the seed alone more than wheat.

We now come to the fibre, and from the most reliable information we can collect, and which has neither been disputed nor contradicted, 300 lbs. is put down as the average quantity of clean-scutched fibre, when ready for market. At $10 per 100 lbs., this would value $30 per acre, a net profit of itself over wheat, consequently on ten thousand acres there would be the handsome difference of three hundred thousand dollars. Let us divide this last sum by two, which will put any doubt about the quantity of fibre quite beyond dispute, then we will still have one hundred and fifty thousand dollars, just the amount the crop of wheat comes to altogether, showing in plain figures a balance in favour of flax to this amount.

It has been stated that we are likely to have fifty thousand acres next year in flax, but that quantity, large as it may appear to some, would not amount to more than the arable land in one township, which we are told contains in many cases sixty thousand acres. This would leave ten thousand acres still for bush.

The great complaint we hear is that the land has been growing wheat too long; but where this is the case, it will be found on trial that there are properties in the land that has refused wheat which will produce as fine flax as there is in the world. I am credibly informed that numbers of farmers have made up their minds to leave a portion of their fallows they are now preparing for fall wheat for sowing flax in the spring. This is a wise resolution, as they will then be able to judge when they have the two crops side by side. It is not to be expected a farmer is going to give up growing wheat and turn his attention to flax exclusively; but let each farmer try five acres the first year, or even less, until he be-

comes thoroughly acquainted with its cultivation and the process of handling afterwards. We should not lose sight of the prospects of such remunerative prices as are offered at present, owing to the high prices of cotton, resulting from the present deplorable war. While we are losing in one hand from its sad effects, let us try and gain a little on the other, and go in for the growth of an article sure to meet a ready demand, and that will benefit the community at large to have it *grown, manufactured and consumed* on our own Canadian soil. JOHN A. DONALDSON.

Quebec, 9th August, 1864.

Ashes.

To the Editor of THE CANADA FARMER:

SIR,—I send you the following extract from my note-book on the subject of "ashes."

"These are the earthy and saline matters contained in substances subjected to combustion. They vary in their properties according to the material used in producing them, consequently they vary in efficacy. 1,000 lbs. of oak-wood will produce 2 lbs. of ashes. 1000 lbs. of straw of wheat will yield 43 lbs. ashes. In these ashes we find as follows.—100 lbs. of oak ashes give, soluble salts 38 lbs., earthy phosphates 4 lbs., carbonates 32 lbs., silica 2 lbs., oxides 2 lbs., loss, 21 lbs. From 100 lbs. straw of wheat we get soluble salts 22 lbs., earthy phosphates 7 lbs., carbonates 1 lb., silica 61 lbs., oxides 1 lb., loss 7 lbs. The soluble salts are potash; the phosphates are lime and magnesia; the carbonates are lime and magnesia. These are essential vegetable ingredients. It is evident, therefore, our manure heaps are benefited by the addition of ashes. Ashes are an excellent means for ameliorating the soil. They are especially useful on strong clay, and on moist soils. They will remove moss and poor grass from lands. They do not, however, produce their greatest effect, unless they find vegetable matter in the soil, or manure wherewith to combine. A free use of ashes has often doubled a crop of grass.

"Fresh ashes when used should be mixed with pulverized or slaked lime and then slightly moistened. As a top dressing for meadows, sow ashes in April or May. If you sow grass seed at the same time and harrow the meadow, the benefit will be great.

"As food for corn, with gypsum, they are very efficacious. Fresh ashes however ought to be used sparingly say, not over ten bushels per acre, as they are caustic and will contribute to exhaust the soil by too great action.

"LEACHED ASHES.—Notwithstanding the care of those who make potash, the refuse ashes always contain a portion of this valuable salt generally combined with silica. They contain also lime, magnesia and phosphoric acid. They may be applied in the proportion of two tons to the acre, and their effect will continue for many years."

The following mixture may be considered as equivalent to one ton of fresh wood ashes.

Potash 60 lbs: carbonate of soda 60 lbs.; sulphate soda 20 lbs.; common salt 20 lbs.

I have applied 30 to 40 bushels of ashes to the acre upon ground which before did not fully develop the wheat plant. The product was much improved, and gave a full crop. A. K.

HOW TO ENRICH MEADOWS.—Mr. H. Lewis, of Frankfort, stated that "he had twenty five acres of meadow that would yield annually a quantity of hay sufficient for the winter keep of fifty head of cattle. Some of his grass had already lodged, and he thought would not come up again. He should commence his hay harvest in about three weeks. This extraordinary fertility of soil and growth of grass had been effected by under-draining and by top-dressing the soil with sawdust in which was absorbed the liquid manure from his stock. He regarded the liquid manure of more value than the solid excrements of the animal. The conclusion had been arrived at by experiments and from observation. Stakes had been set in pastures and meadows to note the effects of liquid and solid manures, and the growth of grass was in favour of those spots where the animals left liquid manures. Some few years since he commenced using sawdust for the absorption of liquid manures and spreading the compost on his grass lands, the soil responding in a most remarkable manner. Latterly he had been using the dust at the rate of sixty bushels per week. The manure is hauled upon the land and spread as evenly as possible with a shovel or fork; it is then brushed and completely broken up and distributed in fine particles. This division and fineness of the manure is regarded of peculiar advantage, since the plants are better able to appropriate their food, and it reaches a greater number. About half of the meadow is under drained with horse-shoe tile, the drains being sunk three and one-half feet deep. On this portion of the meadow grows the largest grass."—*Maine Farmer.*

Preparation of Seed Wheat for Sowing.

To the Editor of THE CANADA FARMER:

SIR, As the time for sowing fall wheat is near, I send you a short notice of different ways of preparing wheat previous to its being sown to prevent smut in the crop. Although some of these are already well known and used with success, it may be well to give them all together:—

No. 1.—A method commonly used by English farmers.

Wash the wheat two or three times, or until the water comes off clear, and all the light grains that swim on the top are taken off, then the wheat is put in brine strong enough to float a fresh egg, to steep the space of thirty hours, stirring it now and then. Having steeped the time prescribed, the wheat is spread as thin as possible on a floor, and after you have sifted a quantity of lime upon it, sweep it to and fro till the grains are separated from one another, and are covered with the lime; it is then fit for sowing immediately.

No. 2.—Another method practised by English farmers.

Take of the water that runs from a dunghill a sufficient quantity to cover and steep the wheat you intend to sow; add a pound of saltpetre, and as much common salt as will make a brine strong enough to float a fresh egg, steep your wheat in that brine for the space of twelve hours, then spread it upon a floor and dry it with quick lime in the manner above mentioned. The wheat thus prepared must be sown the same or the next day, as, should it continue four or five days in the lime, it would be rendered unfit for vegetation.

No. 3—A method strongly recommended in an abstract of experiments made in 1755 and 1756, at Trianon, in the presence of Louis XV., which was re-printed at Paris, by the King's order, in 1786.

For every bushel of wheat intended to be sown, take five pounds of hardwood ashes and ten quarts of water; put the ashes in a tub and pour the water upon them; and as a kettle large enough to warm at once the whole quantity of water intended to be used is not easily procured, fill the largest kettle you can conveniently find with part of the water, warm it and put it in the tub; you must thus warm part of the water several successive times, and pour it into the tub until the whole is lukewarm. Stir the ashes often during the two first days, and let them settle the third, taking off from time to time what swims on the surface. On the third day, the ashes being settled, the liquor must be drained clear from the sediment into another tub, by means of a small hole bored through the first, just above the ashes; then take two ounces of quicklime for each quart of that liquor, and after you have boiled part of it, put in the lime to dissolve. When the lime is dissolved, add to it the liquor, which you are to warm and pour into the tub at several times, and repeat the same till the whole is lukewarm. After you have well stirred and mixed the lime in the tub, put in the wheat you mean to prepare and stir it well; let it steep there ten minutes, then take it out and dry it as quick as possible by spreading it as thin as you can, either on boards or sheets. When well dried this wheat may be kept two months before you sow it; therefore, one may choose the most convenient season to make this preparation. If your seed is not clean it will be necessary to wash it previously to the preparation with the lye, in common water, till it comes off clear, taking away at the same time all that swims on the surface; then dry it previous to your putting it into the lye.

No. 4.—Preparation recommended by Mr. Couillard in 1790.

To steep 240 lbs. of wheat requires 25 quarts of water, 2½ lbs. of dung of poultry, the same quantity of sheep dung, or instead thereof pigeon's dung. This mixture must steep twelve or fifteen days in a tub, and be stirred now and then with a stick; at the expiration of which time it must be drained clear from the sediment. Take part of the liquor and warm it; dissolve in it 3 lbs. of slaked-lime, or a pound and a half of quick-lime. If, at the time of the dissolution, the effervescence should be too strong, it must be checked by means of a small quantity of cold water. This lime-water must then be mixed with the overplus of the infusion of dung, then put the 240 lbs. of wheat (after it has been washed, scummed, and dried properly), in that liquor to steep for the space of about ten minutes. Then spread it and stir it often till the next day, when it is fit for sowing.

Mr. Couillard likewise successfully used human urine and chimney soot for this preparation, in which case he diminished the quantity of the other ingredients.

A. KIRKWOOD.

☞ SORGHUM, along the line of the Illinois Central R. R., is reported in a very fine condition. If we have no early frosts, some large fortunes will be made.—*Prairie Farmer.*

☞ A PEAT company is to be formed in Rochester, N. Y., to supply the city with fuel. It seems that the peat can be cut, dried, and conveyed to the city at a much less cost than coal. Long Island and New Jersey, it is said, are likely to produce large quantities, and the method of drying the peat and preparing for market has been patented.

THE JAPAN VARNISH TREE.—*Le Moniteur Illustré des Inventions* recommends the introduction into France of the *Rhus vernix*, which yields the Japan varnish. It is cultivated in Japan and China, and could doubtless be raised to any extent in this country. The varnish is produced by making an incision in the trunk in the same way that is practised in gathering pitch from the pine. The yield is said to be very large, and there is every prospect that the cultivation of the tree would be profitable.

CHESS.—A sensible contributor of the *Ohio Farmer* writes:—"I have known men that called themselves good farmers sow grain that had from 15 to 30 grains of chess in every broadcast handful, and still protest that they sowed clean grain. If some of our opticians could construct a pair of goggles through which farmers could see chess wherever it grows, I think that the theory of its growing from wheat would soon die out, and it would be a great blessing to mankind."

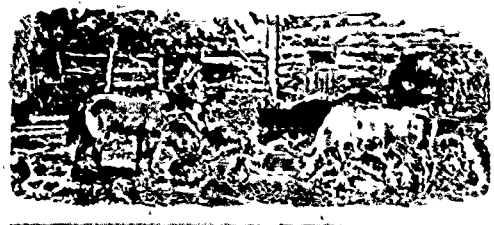
FLAX IN PERTH—The deliveries of flax in this town thus far this season exceed the most exaggerated expectations of Messrs. Black & Forrester, the pioneer promoters of its growth in this section, and the enterprising proprietors of the only scutching mill at present in operation in this county, or in this section of the Province. The deliveries for the past week, we have been informed, average three tons per day, some of it coming from beyond London and much of it from the neighborhood of that city.—*St. Mary's Argus.*

FLAX CULTURE IN AMERICA.—More ground has been put under flax cultivation than for many years, but hardly enough to exercise any perceptible influence on the price of cotton. The great and essential difference between the fibre of flax and cotton is, that the former contains a large quantity of gum, which we are unable to extract by any steeping process now in use. This excess of gummy matter presents a serious obstacle to sliding or drawing the fibre, which is the basis of all spinning operations. When a process shall be discovered by which the gum can be entirely removed from the fibre, flax will be spun as readily and as fine as cotton.—*New York Herald.*

FLAX CULTURE.—But a few days ago we were shown a sample of flax grown on the farm of Sheriff Treadwell, at L'Orignal. It was not quite as tall as the plant usually grows—which no doubt was occasioned by the great drouth—but in every other respect it was of healthy appearance, and inferior to none we have ever seen. Last year there was a considerable quantity of land under flax between L'Orignal and Montreal, but we are informed that this season, the quantity is about six times greater. This, in itself, is a proof that the preceding crop yielded a handsome profit, and that the growth of flax, in this section of Canada at least, may be carried on with advantage.—*Ottawa Union.*

STORING WOOD.—S. G., of Peterboro, N. Y., sends us his mode of storing wood that is green, for the purpose of seasoning it. He has an open shed, 11 by 40 feet—built by setting six posts firmly in the ground—three of them being enough shorter than the other three to give the required pitch to the roof—lay poles on these posts and cover with boards—covering each joint with a good slab. Under this shelter he cords the wood when it is prepared stove length in winter and spring, whether it is green or wet, or both. In November he removes it to his wood-house adjoining the kitchen. He thinks such wood is worth one-third more than wood that has not been cured under cover.—*Rural New Yorker.*

LIME SINKS IN THE SOIL.—A correspondent of the Germantown *Telegraph* says:—"Lime acts upon the soil in two ways: one mechanical and the other chemical. Its specific gravity being greater than that of common salt, it has a tendency to sink until it finds a soil of its own specific gravity. This generally takes place when it reaches the subsoil; hence the benefit sometimes derived from increasing the depth of the surface soil—the lime, which had during the previous cultivation sunk to what was then the subsoil, is again brought up and mixed with the surface soil. This mechanical action may be more readily explained than the chemical action: the lime by sinking loosens the soil, and admits of a free passage of air and moisture.



The Breeder and Grazier.

Hon. E. Cornell's Farm and Stock.

THE admirers of fine stock should treat themselves to the same luxury which we enjoyed last week in making a thorough examination of the herd of Shorthorns, Devons, and Galloway cattle, and South Down sheep, which may be seen at all times at the extensive farm of Hon. Ezra Cornell, adjoining our village. In the amplitude of his means, Mr Cornell has purchased about six hundred acres of land, and stocked it with a herd which is so extensive that it is certainly unsurpassed by only five, and probably by only three in the whole United States. The objects leading to this result have been threefold in their character, viz.: First, to gratify a love for fine animals; secondly, to show to his agricultural friends to what perfection a system of breeding will tend and endeavour to introduce generally, improved stock, and raise the standard of farm productions in that direction; and thirdly, to demonstrate that the interest of every farmer lies in raising superior instead of inferior cattle and sheep, or in other words, that there is money in it, and it pays to feed, milk and fat Short horns and Devons instead of grades, or, in too many cases, animals of no grade at all. He originally imported five animals, cows and bulls, which cost him in the neighborhood of $5,000, or $1,000 each, and he has purchased at every point where sales were made, which promised to increase the value of those before possessed. In one case he paid $1 000 to Mr Thorne of Duchess county, for a calf less than a week old, while several of his cows cost him prices ranging from $500 downward. The result at the present time is a herd of between seventy five and eighty head, which may be surpassed in numbers, but we are confident cannot in quality by any individual stock in the Union This result has been reached by and through a determination to have nothing but the best, and Mr C may to-day challenge competition in this particular Those who have the most casual knowledge of English productions must be aware of the often and honourable mention made of South Down sheep and mutton, ranking, as it does, among the choicest delicacies of the table there. While abroad two years since, Mr. Cornell became so impressed with the excellence of this breed of sheep that he imported some two dozen bucks and ewes, which cost him here about $100 each. He has now a flock which is rapidly increasing, and which promises to be all which could be expected or even desired. In the collection of his herd of cattle and flock of sheep, Mr. Cornell has expended large sums of money, but their value is not to be estimated only by the amount paid for them, but must be increased by the time which he has given to their collection, and the attention requisite to properly care for so large and valuable a herd as he now possesses. The standard of the collection is a high one with him, but having that standard before them, it can be reached by others at a comparatively small outlay at first, which outlay will return in a very few years entirely to the benefit of every farmer who makes it.—*Ithaca Journal.*

TO PREVENT CATTLE FROM JUMPING.—At the last meeting of the Am. Inst. Farmers Club, the following novel way of preventing cattle from jumping fences was promulgated Its parentage is good:—

"We lately learned a curious remedy to prevent steers from jumping fences, which is so easy of application, and appears so effectual that we give it to the public. It is simply to clip off the eyelashes of the upper lids with a pair of scissors, and the ability or disposition to jump is as effectually destroyed as Samson's power was by the loss of his locks. The animal will not attempt a fence until the eyelashes are grown again. Of this we are informed by Samuel Thorne, the great breeder of Duchess County, who assured us that he had tested it upon a pair of very breachy oxen. As it was of great value to him he hopes it will be tried by others."

Shorthorn Herds and Shorthorn Prizes.

GREAT doubts are entertained whether the improvement of breeding stock is really promoted by the annual exhibitions of the Royal Agricultural Society and similar societies, especially as regards Shorthorn cattle. On the one side, there is the benefit which arises from comparisons made by all breeders between his own stock and that of every other exhibitor, as well as the benefits afforded to farmers generally from examining and comparing large numbers of first-rate animals. On the other hand, many of the best Shorthorns are sacrificed to the exigencies of the showyard, for it is certain that the exhibited animals seldom turn out to be prolific, and the tendency of the adjudications of the Royal Agricultural Society especially has been to produce a Shorthorn of too much delicacy of character and constitution. As to putting any effective check upon the high feeding of exhibited stock by means of regulations, as has been often suggested, and of late attempted, we believe that very little good will be so accomplished, for it is absolutely certain that no animal will ever obtain a prize if sent to the show in the form a judicious breeder would deem suitable for breeding stock. That "quality," the soft mellow touch, and the level symmetrical form which judges require in a prize Shorthorn are only to be secured by "training"—that is, confinement and high feeding—whereas exercise and some outdoor exposure are essential to the healthy fertility of breeding cattle. Fat stock shows are different things. There fat animals are sought and the age and condition of those shown may well be accepted as tests of successful breeding for the butcher We believe that the amateur element in the breeding stock shows has much to do with keeping up the excessive fatness of the animals, for the professional breeders all regret the necessity of bringing their cattle to such an abnormal condition as they must necessarily do when they compete for prizes.

What is really required in a herd of Shorthorns, is something very different to, and more difficult to attain than, the quality and condition we find accepted in the showyards as an indispensible, if not the main test of merit. What has rendered the Shorthorn the breed which alone is extending itself throughout this country, and gradually displacing other herds in all directions? Does not this depend on the faculty possessed by this breed of improving other breeds, as well as their own special merits? That the Shorthorn not only possesses the quality of early maturity, and can be fattened at an early age, to a larger size than any other breed, but that it can be applied to more uses, and can be more relied on to reproduce stock like itself, will scarcely be questioned. One great cause is that the Shorthorn has great purity of blood, that is, he is descended for very many generations from animals like himself. The notion some people have taken up that the Shorthorn is a composite animal, created by comparatively modern crosses, seems to be founded upon a rumour (not very well authenticated) that the Collings used in their herd a bull which had a cross of Galloway blood. But even if that be true it proves nothing, but that the effect of a cross on a long-descended race, not being repeated, produces no appreciable effect That the Shorthorns are a long-descended race, bred in the northern counties of Durham, Yorkshire, and Northumberland, probably for ages, and with considerable care, we have every day abundant testimony, so that when Robert Colling in his old age said that, give him but his sight and his touch, and he would soon create a new herd as good as that he had sold off, he referred to what would be done in his own district where the materials for a new herd were around him, and only required his care and judgment in the selection.

After an analysis of a letter of Mr. Thomas Bates written in 1842, and which was given recently in the columns of the *N. B. Agriculturist*, the writer proceeds:—

"Such are the improvements to be made in a herd of Shorthorns when in the hands of a master. Can it be said that the prizes awarded by our Agricultural Societies have any material effect in developing such improvements? The answer of the vast majority of farmers and professional breeders will undoubtedly be in the negative. The true prizes of the successful breeder are found in the sales of his stock, and, except so far as the agricultural shows promote such sales, they are of no advantage to him individually. And if, as it is said, the conditions necessary to win prizes are such as to induce delicacy of constitution, and an aptitude for breeding purposes, it is clear such prizes tend to deteriorate rather than to improve our Shorthorns."—*The Economist.*

Metropolitan Horse-Copers.

AMONGST the mysteries of horse flesh is the noble science of coping, and its practitioners the horse copers. These individuals practice fraud as a trade, and in order to do so they are obliged to pass through an apprenticeship as severe as that undergone by Fagen's school for young pickpockets. Your accomplished horse-coper must possess a shrewd knowledge of men to begin with; and, secondly, he must know horse-flesh well, especially that portion of it in which he deals—the genus screw. He must be to his chargers what Madame Rachel is to her old dowagers—able to restore them to youth, and make them "beautiful for ever," or at least for the half-hour during which it is necessary the screw should put in a good appearance before his purchaser. The horses upon which copers operate are generally nags—such as hunters, roadsters, and carriage horses. . . . The getting-up of these old screws is the first care of the coper when they come into his hands. "The Adam," for instance, has to be rejuvenated, and in order to accomplish this he has to undergo three processes—bishoping, gypping, and puffing his glims. The first is the method of imitating the mouth-marks of a young horse, so called after the name of the original rogue who put it in practice. All old horses have their incisor teeth of an immense length, and they always slant out at a most acute angle; to do away with this mark of antiquity they are filed down to about the ordinary length of a five-year-old, and the dark marks which are always present in these teeth in young horses are made with a red-hot iron, and, by the aid of a graving tool, mouth-marks are engraved so as to imitate nature. The few grey hairs which are scattered about the animal are all reduced to the general colour by means of a paste corresponding in tint with that of the natural coat, a process termed gypping. Finally, those deep indentations which appear over the eyes of all ancient animals are obliterated by pricking the skin in different places, and blowing air into the cavity underneath. The holes immediately close, and a smooth brow is obtained, which is not easily detected. The make-up is just as effective, and perhaps more so, to mere novices in horse-flesh, than is that of the toilet of many *passé* ladies who manage to make a good market in the world. "The Knock," or lame horse, an incurable screw afflicted with disease of the navicular joint, or shoulder lameness, neither of which make any outward show, is a great favourite for horse-coping purposes, as he is often a fine looking animal. The manner in which the lameness is disguised is to take off the shoe from the sound foot, place a pebble or horse-bean between it and the sole of the foot, and nail it on again. A corresponding lameness is thus produced in both feet, and by this means the original defect is masked.—*London Review.*

Hog Feeding.

To the Editor of THE CANADA FARMER:

SIR,—"F. W. Fearman" contends in his letter, which appeared in 1st of August issue of THE CANADA FARMER, that none of the gentlemen who preceded him in discussing the hog feeding question, "have come to the point." It appears to me that the drift of his letter is to show that he feels great anxiety lest the pork trade should prove a failure in Canada. But as the future only can solve that problem, I don t clearly see the strong "*points*" of even Mr. F.'s reasoning, over that of others, on the same subject. For my own part, I have merely aimed to lay before our farmers, such facts and information, regarding the matter, as I thought would be useful, leaving them to judge of the matter for themselves. Mr. Fearman doubts whether it will pay to feed hogs. The same doubts might be expressed, with just as good reason, with regard to the profits of raising five hundred other things. I hope, and I believe it will pay to feed hogs in Canada, if gone into judiciously and on a moderate scale at first, and if the aim be to excel in the quality of the pork, rather than in the extent of supply. And I further believe that the future is full of encouragement in this respect. Mr. F. seems to dread the competition of the Western States. They certainly raise a large quantity of pork, but it is much inferior to the genuine pea-fed article. And has not the Canadian farmer, I may ask, to compete with the States in nearly everything his farm produces, either for export or home use—in beef, mutton, butter, cheese, grain, &c., &c.? I join Mr. Fearman in wishing that practical information may be brought out on the subject. SAMUEL NASH.

Hamilton, August 4, 1864.

The Dairy.

Hints for Butter Makers.

Mrs. Eliza A. Call, of Fabius, N. Y., the authoress of *The Young Dairymaid and Housekeeper's Dictionary*, furnishes the following hints in regard to butter making:—

Everything appertaining to milk things should be kept perfectly sweet and clean. The milk should be strained as soon as it is brought in. To secure the greatest amount of cream set the milk in large tin pans, and place them on a rack made for the purpose. The bottom of the pan thus being exposed to the temperature of the milk-room, cools quicker in summer and warms sooner in winter. The milk-room should be separate from the kitchen pantry; nothing that will cause the milk to sour should be permitted to stand in the room. The milk should be narrowly watched, and as soon as it thickens the cream should be taken off. If suffered to stand long after it coagulates there will be white specks in the butter, which will be hard to wash out. A stone jar that can be covered closely answers very well to keep cream in, but a large tin pail (called the cream pail), we have found to be the most convenient, it is easier handled, and in summer the pail can be placed in cold water to cool the cream, and in winter it is very nice to place in warm water to warm the cream.

For churning, the cream should be at a temperature of sixty-five degrees. At each skimming the cream should be thoroughly stirred from the bottom, with a wooden stick, made on purpose. It may be made something like a common pudding stick. The cream should be covered from the beginning to the end closely. Leaving the cream exposed to the air is one way to make poor butter. It should never stand over three days in warm weather, nor more than six in cold. The cream should be put down from the sides and cover of the churn as soon as the butter begins to come.

After the butter is well churned, the sides of the churn should be rinsed down, the butter taken with a butter-paddle into a wooden tray or bowl after they have been well scalded. I say paddle, because if I were to choose from all the different kinds of ladles ever made, I should choose a paddle. The butter should be washed in cold spring or well water until the water comes off clear. After it has been washed it should be salted. The salt should be worked in well. Set it away and let it stand twenty-four hours. Then it should be thoroughly worked and stand another twenty four hours before packing the last time.

It will be a difficult task to give an exact rule for salting butter—there are so many tastes; butter for market need not be salted as much as for family use. For family use we put a heaping tea-saucer full into eight pounds of butter, and the same quantity into twelve pounds for market. Foreign salt is the best to use for salting butter, but we have found that a good article of *Onondaga coarse* salt answers every purpose. We have found, by experience, that it is better than the fine salt made at the same place for salting butter.—*Country Gent.*

Buckwheat for Milch Cows.—Buckwheat is not regarded as either a safe or profitable crop as a rule. But latterly when buckwheat cakes and refined sorghum syrup form the staple for breakfasts in city and country during the fall and winter months, this grain is growing in favor among farmers. The danger from early frosts, and the adherence to the theory that good crops cannot be grown unless the seeding is delayed until July, prevents the investment of labour and capital in it that would otherwise occur. It is safe and best, if seed is the object, to sow before the 10th of June in this climate (Illinois.) The buckwheat plant is valuable forage for stock while in bloom. It is said to be more nutritious than clover. It is valuable as a forage for bees at the same time. In conversation with a gentleman who owns and milks two hundred cows, and sells their product in Chicago, I asked him what kind of food would produce the most milk of good quality? He replied that he fed many tons of middlings every winter, but there was no feed that he had used that would produce as much milk as buckwheat meal. Cattle are fond of it, and it aids the secretion of milk wonderfully. It is often fed unground, and is regarded as very nutritious—a single bushel being equal to two bushels of oats as a horse feed. The milk-farmer referred to said he regarded it as the most profitable grain he could grow for his husbandry. Whether or how it affects the quality of the milk I cannot say; as whether the feed is better mixed with a lighter food, and fed wet or not, I had no opportunity to inquire. Its value for this purpose was new to me, but may not be to some of your readers; if not, their experience will be interesting.—*Rural New-Yorker.*

Hardwick Cheese Factory.—A cheese factory in this town has been in operation a few days, and promises to meet the expectations of the most sanguine. Only the labour of two men and one woman is needed to do the cheese-making, the labour of whom can be little more, if any, than that formerly required to take charge of a large dairy at home. The building improvements for the new mode are so well constructed for the purpose that thirty farmers and mechanics carry milk there, ranging from twenty-four to six hundred and thirty pounds of milk, each one delivering his own once a day in the morning. Eight thousand pounds of milk are received a day, with some new entries occasionally. Ten cheeses are made a day, weighing nine hundred pounds. The milk contributors carry home their share of whey if they wish, but considerable of it remains. The labour of carrying the milk and returning with the whey is no more than that needed to grease and turn the churn at each home the old way; for all milk now entered at the factory could not require less than thirty persons, which is now reduced to three. Poor and the best dairies by this mode of cheese-making are equalized both in quality and price; also the best dairymen are thus benefitted, poorer ones very much more. I could mention many more economical conveniences relating to the new mode of cheese-making, highly beneficial to a farmer, his wife, daughters and servants, but will not now. The factory mentioned is located near the centre of our town. Another cheese-factory located in the south part of the town is building.—C. R. *in Boston Cultivator.*

Deep or Shallow Pans for Cream.—We find in the *Homestead* an experiment by a farmer's wife, to ascertain what depth of pan yielded the most cream. Farmers probably lose largely in this way without knowing it.

In pans containing	1	quart,	the cream measured	1	gill.
"	"	2	"	"	2 gills.
"	"	3	"	"	2½ gills.
"	"	4	"	"	3 gills.
"	"	5	"	"	3½ gills.

The experiments were tried twice with the same result, and her conclusion was that shallow pans yielded the greatest proportionate quantity of cream, and that two quarts are enough for any one pan; also, that the milk should be strained immediately after milking. This seems reasonable, as we know in covered pans cream does not rise well. There must be exposure to the atmosphere, and the more surface the better.—*Rural Advertiser.*

Oneida Co. (N. Y.) Cheese Factories.—X. A. Willard in a late number of the Utica Herald, has an account of a visit to some of the cheese factories in that county. We make the following extracts:

"*The New Hartford cheese factory is a new and* very substantial building, 100 by 30 feet, two stories high. It receives the milk from 600 cows. The ten presses in the manufacturing rooms are so arranged that by raising pannels in the partition, by means of pulleys, the cheeses can be readily moved to the tables of the drying-room. The 10,356 pounds of milk per day are manufactured into ten cheeses, pressed in 20-inch hoops, each cheese being ten inches high. Nine pounds of milk make one pound of cheese as it comes from the press. Some distance *from the press is located the pig-pen, in which 100* pigs are kept on whey alone; 36 calves are also fed on it, and arrangements are being made to run the whey to a stable near, to give 80 cows a morning and evening meal of the same material.

The North Bridgewater cheese factory, which began to run last season, is now receiving the milk from 500 cows. The daily receipts are 11,600 pounds of milk, from which are turned out 11 cheese of 112 lbs. each. They are pressed in 20-inch hoops, and are nine inches high when removed. The average is also at 9½ lbs. of milk for a pound of green cheese. There were recently marketed 11,000 lbs. of hay made cheese 3,000 pounds at 18½c., and 8,000 lbs. at 17½c. per pound. The whey is mostly taken away by the farmers, only 14 hogs being kept near the establishment."

At Trenton Depot, 54 patrons delivered 19,809 pounds of milk daily, the proceeds of 930 cows.

Sheep Husbandry.

Who can beat it.—Mr. Thomas Gay, of Port Oshawa, clipped from two young ewes two fleeces of wool, which together, when cleanly washed, weighed 26 pounds. Some young rams, sheared early in April, produced ten pounds each. As sheep are kept mainly for the amount of wool they will produce, we would suggest that other farmers who have imported breeds of sheep should let the public know what kind of a crop they produce.—*Oshawa Vindicator.*

Sheep Essential to Good Farming. Lieut. Gov. Stanton, of Ohio, in a speech at the late Wool Growers' Convention, said in investigating the subject of levying duties on wool, while in congress a few years ago, he found a very voluminous report made by a committee of the House of Lords in 1828, on the question of the growth and manufacture of wool in Great Britain, with the effect of duties on manufactured and unmanufactured wool imported into the kingdom. He says:—"One thing that struck me rather forcibly was that all farmers testified that sheep-raising was absolutely indispensable to successful farming; that their manure was necessary to preserve the fertility of the soil; and that without them the whole kingdom would, in a few generations, be reduced to utter barrenness and sterrility. It is in this view that I regard sheep raising in this country as more important to the ultimate and permanent prosperity of the country than on account of the present profits. Whatever else may happen, we cannot permit this virgin soil and these beautiful fields of ours to be reduced to barrenness by the time they pass into the hands of our children and grand-children. Their fertility must be preserved at all hazards, even at the expense of present profit."

Nankin Sheep.—J. T. Warder, Esq., of Springfield, Ohio, in a communication to the *Country Gentleman*, explodes the Nankin sheep humbug as follows. He commenced with a buck and two ewes, from which he was to have "ten lambs and two or three bucks in four and a half months." One year from their reception, Mr. Warder writes as follows: "I have had two clips of wool; that which was on the trio upon their arrival weighed in gross eight and one-half pounds before washing, and the present clip, a very little less than one year's growth, weighed in the dirt nine and a quarter pounds. As to jumping, the buck would invariably go over a cross timber in the pen sufficiently high for them to go under without hinderance. My ewes have bred but once each, both having twins. For crossing I selected thirty ewes, embracing as extended a variety as I could procure, and gave them the buck in August. The lambs commenced to drop in the very severe weather of January, the first sixteen dying before one succeeded in proving hardy enough, though all were kept in a stable inclosed with upright siding. There were only six pairs of twins from twenty-eight ewes, the same ewes having yielded a greater proportion of duplicates the previous season.

An Item in Favour of Sheep. There is one item in favor of keeping sheep, instead of cattle, that we have not seen mentioned, and that is the difference in the *labor of taking care of them in winter. The amount* of labour involved, and time required, to take proper care of a stock of twenty-five head of cattle, is about as much as a man can attend to. To see that they all drink at least once a day—that the large ones don't abuse the small ones—that they have a variety of fodder in proper quantities at proper times—that the stables are well cleaned—together with the innumerable other things that always need looking after, keeps one doing about all day. While sheep need prudent and watchful care, they do not require *that constant attention that cattle do. They do not* require to be tied by the head to prevent their doing mischief. They are allowed free and easy access to water, and have sense enough to drink when dry. Their habitations do not need cleaning out daily as do those of cattle. On the whole, we are inclined to the opinion that the farmer who keeps sheep principally can have a pretty easy time through the winter, while those who have large stocks of cattle will find plenty to do.—*Am. Stock Journal.*

Entomology.

A New Wheat Insect.

SPECIMENS have been submitted to us of some different kinds of wheat, all more or less affected by a new insect, which we do not remember to have before heard of or observed. It is a worm more closely described in the communication of Dr. Morris, of this city, given below. This worm, from whatever kind of fly it proceeds, buries itself in the body of the grain, while still in the milk, and gradually destroys it by devouring the contents. There are often several of these worms in a single kernel of wheat, and they seem to have no particular predilection for any kind, as they have been found in several sorts of spring wheat. Whether it is likely to be of any importance, or whether it is a mere casual thing, we cannot, of course say, but it is most sincerely to be hoped that it will be found to be only casual and transitory. This insect seems to destroy the grain in all stages, at all events, in those verging on ripeness. It is evidently deposited in the kernel of the grain, in the same manner as the pea bug is deposited, since many grains were found which only showed by a slight discoloration that the enemy was at work within. We commend the matter to the close examination of our observant country friends and request our agricultural exchanges to favour us with a notice of their opinion on the case, and whether anything similar has been observed in their several districts. The wheat from which the worm was obtained was an experimental patch grown in a garden in this city. Being desirous of obtaining all the light we could in reference to this matter, we sent an ear of the affected wheat to Dr. Morris, an experienced entomologist of this city, who has favoured us with the following communication:

"The parasites infesting the ear of wheat with the sight of which you have favoured me, belong to more than one species and order. On examining the wheat and chaff carefully, I separated two small grubs or caterpillars and three cocoons. The two first are those of some small moth, the latter belong to a wheat midge, probably *Cecidomyia tritici*. The caterpillars may be those of the Angoumois moth (*Anacampsis cerealella*), or some allied species, but it would be very difficult to decide this point without farther information. The caterpillars are two lines, or one-sixth of an inch in length, of a yellowish colour, with three lighter dorsal lines. The head is of a darkish brown. They have six pectoral, eight ventral, and two anal feet. They may possibly belong to some species of *Tinea*, but I am not aware that any of this genus prey upon wheat in the growing state, though they are known to do much mischief to it when stored in granaries. It is, however, ascertained that the caterpillars of the *Anacampsis* destroy wheat both in the granary and the field. I am, on this account, inclined to believe that these little caterpillars do not belong to the genus *Tinea*. They were in a moribund state when I received them, which prevents my being able to rear them, when the point might have been settled.

"The three small *chrysalides*, or rather *larvæ*, covered with a membrane, and in a sort of transition state, belong to the ordinary wheat midge, *Cecidomyia tritici*. On careful examination, one of the membranous cases appears to have lost its inmate, which has probably left it in order to make its way to the earth, in which, it is believed, it goes into its true chrysalis state. These little cases, which are about one line, or one-twelfth of an inch in length, are of a yellowish colour, inclined to orange. I should augur badly for the success of a wheat attacked in its first season by two such parasites as I have above described."

The Hessian Fly and its Remedy.

MR. LEWIS BOLLMAN, of Bloomington, Ind., gives this description of the Hessian fly in his article on wheat in the Report of the Agricultural Department of the United States Government:—

The received account of the introduction of this fly into the United States is known by every person for its common name refers to it. That it was brought in some straw with the Hessian troops, employed in the Revolution against us is possible; but the history of like pests shows that sooner or later they spread over the whole earth where their favourite food may be grown and climate influence will permit. The bee-moth and the curculio are instances of the fact that nearly all the products of the farm have their enemies. It is not necessary to describe this fly, nor particularize the nature of its depredations, except to say that it deposits its eggs, from twenty to forty in number, in the hollow of the blades of the wheat. The egg hatches a small, light-coloured worm, in from four days to three weeks, according as the weather is warm or cool.

"The worm crawls down the leaf between the sheathing of the leaf and the stem, firmly fixes itself there, sucking the juices or sap of the plant on which it lives. It gradually becomes imbedded in the stem by the latter growing around it. As it increases in size, it becomes in colour, size, and shape, like a flax seed; hence this state of the larvæ is called the flax-seed state. In this condition it remains during the winter, unaffected by the severest cold. In May it is changed into the fly, and this fly lays its eggs higher up on the same stock, and no others around it, and also on the spring wheat. These eggs hatch, and the worms undergo the same changes until in August, when they appear as flies, ready to deposit eggs on the young fall wheat plants. The fact that of so many eggs but few hatch (for not more than two or three worms are found in the same plant) shows that the Hessian fly has its deadly enemies. This is true; two of which I will notice, being parasites of this parasite. Both these are flies, one of which deposits its eggs within the egg of the Hessian fly. Both these eggs hatch, but the worm from the last-deposited egg is within the worm of the Hessian fly, and it lives upon it, gradually destroying it, until, having undergone its various changes, it emerges from the skin of the Hessian worm a fly, ready to deposit its eggs in those of the Hessian fly. The other parasitic insect lays its eggs in the larvæ when in the flax-seed state, which hatches within it and lives upon it. It is to these friendly insects we owe the fact that the Hessian fly does not spread over large districts of the wheat region, nor, indeed, in any part of it to any great extent, and that it is seldom destructive in the same place for more than a season or two. The friendly flies, by their rapid increase, soon drive the Hessian fly to other portions of country in order to shun their fatal attacks. The usual remedy against the Hessian fly is late sowing of the winter wheat. Whilst this may afford some protection, it leads to habitual late sowing, by which the plant is weakened and rendered less able to endure the changes of our winters. A greater loss is thus occasioned than would result from an occasional entire destruction of the crop by the fly. A strong-rooted plant will more easily overcome a serious attack of the fly than a late sown and weak one can resist the freezing out to which it is certain to be exposed."

LIFE AMONGST THE SOUTHERN INSECTS.—The thermometer stands at 100 degrees, and he throws himself into a chair at the well-supplied table for his evening meal. Sweets and savoury dishes are attractive not to him alone. Not one flitting, hopping, crawling entomological specimen that has visited him during the day is now without its representative, from the great feathery lepidoptera that will come flopping into the lamp, and hurling itself among the glasses or falling helplessly into the sugar-basin, or the huge coleoptera, two or three inches long, with terrible mandibles and wonderful antennæ, to innumerable smaller beetles, black, brown, and green; daddy long-legs appears with a length of limb incredible: moths come, gnats and mosquitoes—flies, of course, and nondescripts innumerable. Such a buzzing and such a dashing, and such a flirting out of candles, such charges at your nose, such an entanglement of creatures among curls or whiskers, or the braids of hair; such mad plunges into the cream-jug or at preserves, and rash attacks upon soft butter-pats, whence there is no escape; such spinning and fizzing round your teacup, or under the knife and fork upon your plate; such incessant work for servants and children in the catching and despatching of these evening visitors, would be the death of a timid maiden lady of delicate Northern nerves; but the entomologist then dines in Paradise. At length he beats a retreat to his chamber. The evening breeze comes gratefully through the open windows, but so also do the fresh specimens. In a few moments entangled legs and wings are struggling round the candle-wicks. The room is noisy with the monsters that dash against walls and ceilings, whence the concussion sends them whizzing to the floor. The candles are almost extinguished by their reckless assaults, and, in spite of the intolerable heat, even the sated entomologist is fain to close the windows in order that he may take his bath in peace. Then he finds that his skin, moist and sensitive from steady perspiration, is speckled all over. With what? Not only red spots and itching tumours, but with scores of little dark brown creatures, clinging and grappling so firmly that he cannot brush them off.—*Dickens' "All the Year Round."*

Veterinary Department.

Anœmia in a Colt.

Anæmia—Signifies an impoverished state of the blood, usually occasioned by want of nutritious food, and exposure to inclement weather.

I was called a short time ago to see a yearling, said to be ailing and unthrifty, and had been so for some time. The principal symptoms were as follows:—

The head, face, and eyes, were in a dropsical condition and much swollen; underneath the heart and along the lower part of the abdomen, dropsical swellings were also observed; the membranes of the mouth and nose appeared pale, almost bloodless; the pulse was quite slow and the action of the heart feeble; the respirations were somewhat hurried. Yet the lungs were not expanded to their full capacity. I was informed that the urine was thick and of a cream-like colour, and the fæces hard and scanty. The muscular system was spare and wirey; the ribs could be easily counted, and the animal was unsteady on his legs. From such symptoms as these the reader will perceive that the case was one of debility, and from the fact that the animal had been confined to an innutritious diet, or rather like a hen, had to scratch for a living; it will also be inferred that the debility was the result of partial starvation. I gave the animal one drachm of sulphate of iron, and three ounces of the fluid extract of rosin weed, per day, during a period of ten days; at the same time he was liberally fed on oats, and good timothy hay, under which treatment he rapidly gained in health and strength, and soon recovered. *Dr. Dadd.*

Caked Udder.

EDS. PRAIRIE FARMER: The following has been my practice in curing this disease. It sometimes acts very slowly, but generally accomplishes the purpose.

Tie the cow fast and with a sharp knife cut a hole through the skin, in the brisket, four or five inches from the lower or fleshy part, large enough to permit the insertion of your finger, the full length. Take a piece of "garget root," the size of a hazle nut, and push in as far as possible with your finger. Close up the hole, and with a needle and strong thread, take two or three stitches to close the aperture. This garget rowel will get sore, be considerably inflamed and irritated, but as it becomes so the udder becomes less inflamed. The rowel will discharge for several weeks, during which time the garget will disappear.

I give a pailful of bran, into which I stir a tablespoonful of flour of sulphur and a small piece of saltpetre dissolved in warm water, for several mornings, and then a little rosin the same day. I have never found anything ill attending this treatment.—W. R. F., *in Prairie Farmer.*

Ridotte, Ills., July, 1861.

RELIEVING CHOKED CATTLE.—We have seen many cattle choked, but so far have never found but one remedy that was entirely safe to the animal. This is the insertion of a stout wooden frame to hold the mouth open, while the arm is thrust through this frame and down the throat at full length, to withdraw the obstruction. Using a flexible rod for ramming the obstruction downward is unsafe, on account of the liability to bruise the throat, and can never succeed very well, unless the obstruction is already far down. We observe, however, in a late number of the *Rural New-Yorker* the notice of a mode of using this remedy which we think must be attended with very little danger and succeed in all cases where the obstruction is not in the upper part of the throat. It consists in tying a piece of pork-rind on the end of the flexible stick, so that the soft part of the pork shall be outward. It must be secured to the stick immoveably by a piece of strong twine. Its softness and lubricating character enables the operator to push the obstruction downward with more ease and safety than could be accomplished in any other way. The head should be held firmly by the horns in a nearly level position, and the tongue drawn out by the hand. Good management, by seeing that apples potatoes and the other food placed before cattle, are always properly sliced before feeding, would obviate the necessity of anything of this kind; but as we cannot wholly avoid the employment of careless labourers, it is well to understand the remedy.—*Country Gentleman.*

The Apiary.

Bees and the Honey Harvest.

A "BEEMASTER" writes to the *Times*:—"I have ten stock hives. I never destroy or kill my bees. I look on the system of the sulphur match as barbarous and unprofitable. I leave each family on an average not less than 25 lb. of honey for their winter stores, and the surplus only I take away. Should any hive swarm, which I can generally prevent, and the remaining stock be therefore deficient provision for the winter, I feed them in the course of the early spring with barley sugar. This and other little attentions endear the bee-master to his bees as they are very susceptible of gratitude and have long memories. A hive is very like a church- when, in May, it increases rapidly in numbers, and the temperature rises inside, you either increase their accommodation in area or in height, or you will have a secession. Should a secession take place, bees set an example ecclesiastics might copy. The new church never falls out with the old one. Side by side, they work in perfect harmony, believing there is plenty of food for both. The only incidental mischief-maker is the wasp, whether he be prelate or presbyter I cannot say, but I know well he is a thief, an intruder; and after a fight the bees, who in this matter are rigid non-intrusionists, eject, maim, or kill him and he deserves it. Queen Victoria's Court is modelled on the apiarian Queen's. You may see the Queen bee by means of my glass windows going her rounds, and giving orders with her royal ladies, who never turn their backs on Her Majesty The exceptional instance occurred on one occasion, when it became necessary to give a rather sickly establishment rum and sugar, of which they drank to excess and got drunk. As long as the stimulus lasted the monarchy became a fierce democracy, and Queen and subjects were confounded in the *melee*. The only vice among bees is their passionate liking for rum and strong ale. But the teetotaller would fairly reply that they never care about either, unless it is pressed upon them. My bees at present have begun the massacre of the drones. These are a sort of Benedictine monks, who, like a Brother Ignatius, prefer enjoyment to hard work. They are round, fat, and lazy, making much noise, and eating of stores to which they do not contribute. About this time the queen, and her active subjects, have awakened to the truth of the text, "if any will not work, neither should he eat," and the drones are being garotted. But you want to hear about the harvest? In one square box there are forty lbs. of honey, and a corresponding super rapidly filling up, there is likely to be for me as much more. In three Scotch or Ayrshire hexagonal hives, which I have found to answer best of any, the three supers are in two almost full, and in one there is at least 40 lbs. weight in the super, and over the super is a bell glass, with 7 lb. or 8 lb. additional. In one of Neighbour's very beautiful straw hives, I have two bell glasses almost full, and a month ago, I removed from this hive a very beautiful glass of honey. In one of Petit's lateral hives, the bees passed the subterranean archway a month ago, and have nearly filled this compartment. On this, also, I have placed a super bell glass, which is beautifully stored. From a common cottage-straw hive I removed a bell glass super, three weeks ago, weighing 18 lb. This season I shall have nearly 200 lb. weight of surplus honey, and yet leave in each hive more than enough to last the producers till April 1865. Why should not cottagers cultivate bees? There is nothing to pay for pasture, very little labour is required, and that labour amusing, in taking care of them, and for very early virgin honey there may be had 1s 6d a pound. The poor cottager might thus easily pay his rent."

Italian Queens.

To the Editor of THE CANADA FARMER:

SIR,—There is a general complaint among bee-keepers that they have but few swarms, (and those not until late in the season) many not having on an average more than one, from half a dozen stocks. The great drouth which we have had this summer, is generally supposed to be the principal cause, but it cannot be the sole one, as the complaint is heard every season. In my opinion it is chiefly owing to the inability of common bees to prepare themselves earlier for swarming on account of the common queens not being sufficiently prolific at the commencement of the season. To avoid this difficulty I have procured from L. L. Langstroth & Son, of Oxford, Butler Co., Ohio, Italian queen bees at a cost of ten dollars each in "green-backs." I was rather dubious as to whether they could be safely sent such a distance but was agreeably disappointed as they arrived in small boxes in perfect condition. They are very fine specimens as they certainly should be, coming from what I consider to be the "fountain-head" in America of this variety of bees. I was induced to procure them from having heard that they swarm from ten (10) to twenty (20) days earlier than the common kind, and in this climate such a difference in time is sufficient to change into a profit the loss which generally arises with common bees. As a result of my experience, I have reason to believe that their qualities have been correctly represented by their breeders. Purchasers should be careful to obtain pure-bred queens, for the reason that those which are not pure-bred are useless in extending the breed.

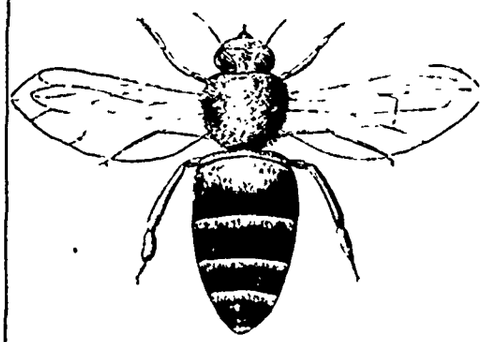
I do not expect to have any queens to dispose of for at least one or two years, and I make the above statements from having been asked by several persons where they could be obtained, and from having seen inquiries in THE CANADA FARMER to the same effect. My queens came without delay, and without doubt other orders would receive as prompt attention. A. C. CASE.

Barton, Aug 1st, 1861.

FREAK OF BEES.—On the afternoon of Tuesday, 17th May, a swarm of bees descended the chimney of the drawing-room of Whitland Abbey, and alighted in a dense mass on the wall between the windows, which, though open at the time, they did not think fit to avail themselves of for exit, but remained perfectly quiet on the spot they had chosen. Towards dusk, one of the farm labourers was introduced, bearing a common straw hive and slate. In this he raked the whole lot with his hand, no disinclination thereto or disposition to sting him being evinced by the bees. Having covered the hive with the slate, it was placed in the proper position, on a small table, where it stood during the night, the inmates being allowed free egress through the hole at the bottom. On entering the room next morning, the bees were found flying about in all directions; and, upon the window being opened, they all speedily took their departure. However, strange to say, every one of them returned in the evening, and peaceably entered the hive, which was then carried to the garden and placed in an eligible situation. They have ever since taken most kindly to their new habitation, and appear now to be as busy and happy as bees can be. It is the largest swarm that any one remembers to have seen in this neighbourhood; and they must have travelled a long distance at their arrival, from the symptom of fatigue shown. No fire had been lit in the grate of the room since the warm, dry weather set in.—*Welchman.*

A SWARM WITH THREE QUEENS.—In the summer of 1856, I hived a swarm of bees, in Northern New York. Before they had all entered, they commenced rushing from the hive. I sprinkled them with cold water and turned them back, but they soon commenced sallying out again. I discovered a queen on the wing, near the hive, which I soon succeeded in getting to enter the hive. The bees soon became quiet, and those outside to make towards the entrance. While watching I discovered a second queen, which I carefully caught. Soon after, I saw still another, this I succeeded in catching. Suspecting that the one that I saw enter, had again issued, I retained the two I had caught, until I could watch and satisfy myself, if the swarm still retained a queen. They remained quiet and I took them to their permanent stand. In a few minutes I saw bees issue, mark their location, and start for the field. Satisfied that all was right, I killed the two queens I had caught. The swarm prospered, so there could be no doubt about the swarm having three queens.—L. L. LANGSTROTH, *in Rural New Yorker.*

Exhibition of Italian Bees and the Moveable Comb Hive.



ITALIAN WORKER ENLARGED.

WE had an opportunity of witnessing an interesting exhibition on the 25th ult., by Mr. J. T. Martin, of Tiffin, Ohio, of a colony of Italian bees in one of Langstroth's moveable comb hives. Mr. Martin is an enthusiastic apiarian, and on coming to visit some relatives near Weston who keep bees, brought a hive of Italian bees as a present to them. Learning that a number of parties interested in bee culture, would like to see the much talked of Italian or *Ligurian bees he very kindly entered into arrangements* to exhibit the hive he had brought with him in Mr. Fleming's garden on the day above mentioned, when a number of gentlemen and ladies assembled to see them. The advantages *connected with the* moveable comb hive were very manifest on this occasion. Mr. Martin exposed the whole colony to view, removing frame after frame with the bees attached, and appeared to have perfect command of the entire community of insect workers. The Italian bee is larger than the common bee, and a much more beautiful insect. It has three belts of a yellow colour across its body, whereas the common bee is plain black. The accompanying engraving of an Italian worker magnified, will give a better idea of this species of bee than any lengthened description could do. The Italian queen differs from the worker about in the same respects and proportion as in the case of the common bee, and by referring to the illustrations on the 19th page of our 2nd issue, and comparing them with the above engraving, a pretty fair idea will be had of the comparative size and appearance of the various classes of Italian bees. The Italian queen has a fourth yellow belt, of which a slight trace may be seen in the above cut of the worker. Mr. Martin handled the bees without any protection to his face or hands, and quieted them when excited by blowing a little tobacco smoke among them. No one could witness his expert management of them without feeling satisfied of the ease with which a person, having composure and self-command, can do what he pleases with these little insects. The Italian bees are considered preferable to the common ones chiefly on these accounts:—1*st*. They are more prolific and swarm earlier. 2*nd*. They are more hardy, and stand our winters better; and, 3*rd*. They will gather honey from sources unvisited by the common bees. Any parties who would like to see the above-mentioned hive of bees, can do so by calling at Mr. John C. Devins, Lot 20, 6th Concession, Township of York, about three miles north of Weston.

BEE PROFITS IN 1863.—We are indebted to Mr Sheriff Treadwell for the following account of the bee operations carried on in 1863 by Mr. J. C. Marston, of L'Original:—

"I commenced in the spring with 40 hives; they increased during the summer to 86, from which I took 600 lbs. of pure honey, in top boxes, about 100 lbs. strained honey—and 25 lbs. wax. The price I received for the honey—in boxes averaged 9d. per lb., the strained do. 7½d., and the wax 1s. 3d., which will make, when footed up, the following total: 600 lbs box honey, at 9d. per lb, £22 10s.; 100 lbs. strained do., at 7½d., £3 2s. 6d.; 25 lbs. wax, at 1s. 3d £1 11s. 3d.; number of hives with bees sold, 43, at 15s. each, £32 5s; total, £60 4s. 9d. The amount of honey raised in this section in the summer of 1862 was double that of 1863."

Correspondence.

EXAGGERATION.—"A Canada Farmer," who writes us from Mandaumin, must have been labouring under a fit of the blues, when he penned his doleful account of farming life in this country. We have as little fondness for exaggeration and over-colouring as himself, but it must be remembered that these defects may characterise unfavourable as well as favourable accounts, and sure we are that they largely tincture such statements as that nothing can be made at farming, and that "Canada is not a country for *money-making* by *honest* means."

WHEAT SAMPLES.—"John Marshall," of South Elmsley, Co. of Leeds, has sent us a head of fall wheat raised by him the present summer, and plucked from a patch which has produced 25 bushels of threshed grain from a sowing of 45 lbs. on the 10th of September last. He thinks he lost at least 5 bushels by the depredations of birds and squirrels. He strongly recommends this species of wheat, as not only very prolific, but free from rust, &c. He cannot give the name of the grain, but says it was imported by Mr Joshua Bates, of Smith's Falls.

LIVE HEDGES.—An "Old Wicker Worker" is very anxious that the farmers of Canada should give a fair trial to the white willow, and every other candidate for public favour as a live fence. He thinks it high time to begin to think of sweeping away altogether "the endless unsightly worm fence." This done "Canada would appear more like a garden than it now does, to the emigrants coming from the pleasant countries of Europe." He adds. "I hope, Mr. Editor, you will keep the hedge question before the farmers of Canada." It is our purpose to do so.

PEAT AS MANURE AND AS FUEL.—"I. S. B." of Breslau, states that in digging out swamp muck, he has come upon what his labourer (a German) considers to be the "purest peat," and wishes to know whether it is "in reality peat," and whether it is probable that it "would be durable in this country for fuel purposes."

ANSWER.—Under the general name of peat are comprised several varieties of swamp muck of different qualities, from that which is rich in vegetable matter, salts of lime, potash, &c., to those pond muds which are little but barren sand. The value of the article to which our correspondent refers, for fuel purposes, could only be satisfactorily ascertained by actual experiment, or by applying chemical tests.

SUPPRESSED COMMUNICATIONS.—A correspondent makes the following complaint: "I have made several attempts at giving my experience on different subjects, but without notice; whether the communications were considered too illiterate, or egotistical, or what was the reason, I do not know. I allow I am apt to condense too much, write and spell wrong, and perhaps be indefinite, &c., but this is no reason why a printer should not make the most of what he gets." The only communication we remember to have received from this correspondent, consists wholly of a sort of autobiography, detailing his birth-place, age, parentage, character of his father and mother, his business and with whom he learnt it, that he is enthusiastic on bees, poultry, &c., has had experience at almost everything, &c.; all of which may be of the deepest interest to the writer, but is not just the right material for filling up the columns of THE CANADA FARMER.

MULE BREEDING AND COST OF JACKS.—A Lindsay correspondent says:—"I observed in a late CANADA FARMER, some one proposed to breed mules: It would pay well to do so; they are easily raised, easily and safely transported, and always bring a first rate price where wanted. The writer says a good jack might be got in Toronto, then again one might be had in England, for seventy dollars. We proposed raising mules a few years ago in Demerara, and we found that we had to send to old Spain to get proper jacks. Fifteen hundred dollars was voted by the Combined Court, for two first class jacks, and an order sent to our agent in London to purchase. He wrote back to say they were to be had, but not at that price. Nothing less than two thousand five hundred dollars ($2,500) for the pair, and thus the matter dropped. How if the House of Assembly here would vote five thousand dollars for four, two for Upper and two for Lower Canada; they would be a boon to the farmers."

SEX OF EGGS.—"R. M. B." says:—"In one of the back numbers of THE CANADA FARMER, it was asserted that the shape of eggs had something to do with their sex; but I am of opinion it has nothing to do with it. But I will give you a way to find out the sex of eggs, which has been known for centuries I suppose, for it was known in my great grandfather's time. I have tested the certainty of it this spring, and feel confident of its correctness. All eggs have a vacancy, or air cell in the large end of them, and the place of this vacancy depends upon the sex of the egg. If it be a male, this vacancy is directly on the end, if a female it will be a little to one side. Now to find out this vacancy is very easy. In all opaque shelled eggs you must place your tongue over the large end of the egg and move it round till you find the warm spot, which is directly over the vacancy. In duck eggs and others which are transparent at the ends, this warm spot or vacancy can be seen, as it will be darker than the rest of the transparent end."

SOIL FOR FLAX, ROLLING SOD, AND SOWING GRAIN.—"Thomas Easton," of South Dunfries, writes as follows:—"By furnishing an answer to the three following questions, in the columns of your much esteemed paper, you may confer a favour on many of its readers. Firstly, what kind of land is best adapted to the raising of flax? Secondly, would rolling inverted sod, as in summer fallow, tend to make it rot? Thirdly, whether does rich or poor soil require the thickest seeding of grain?"

ANS.—1. Flax may be grown successfully on any soil of ordinary productiveness. A strong loam, rather inclined to clay, is, however, considered best adapted for it. 2. Sod will no doubt rot quicker if it lies in a compact state, but we question if rolling it would have much effect. 3. Thin seeding as a rule is best for every quality of soil, but the richer the soil, the ranker the plant will grow, and the ranker the growth, the more space it will require for its development. In a poor soil the plant will grow less rankly, so that more seed will be required to cover the ground with plants on poor than on rich land.

The Canada Farmer.

TORONTO, UPPER CANADA, SEPT. 1, 1864.

The Provincial Exhibition.

THE approaching Provincial Exhibition at Hamilton promises to be fully equal to any of its predecessors in interest and importance. The entries, we believe, up to the present time, are quite as numerous as at the corresponding date on any previous year. It was feared that, owing to the excessively dry summer, the samples of grain would be very inferior, and that cattle would be in very poor condition for showing. We are happy to learn, however, after all, that the quality of the grain in many parts of the country is very good indeed, and that the crop is even abundant in some places; while the late copious rains will freshen the pastures and assist the live stock wonderfully in putting on a creditable appearance. Root crops, also, will now have a chance to attain a growth to fit them for exhibition.

There will be a large display of newly-imported stock, consisting of horses, cattle, sheep, pigs, and poultry, at the coming Show. Amongst the new importers may be mentioned Mr. Geo. Miller, of Markham, who brings out an extensive lot of splendid sheep and other stock, Hon. D. Christie, of Brantford, Mr. James H. Peck, of Prince Edward County, Mr. Geo. Rotch, Hamilton, Mr. Thos. Stock, Waterdown, Mr. Joseph Thompson, Pickering, &c. In regard to implements, &c., also, we do not doubt that the Exhibition will be quite as extensive as on former occasions.

The preparations for the accommodation of stock and other articles at Hamilton will be ample, as the extensive buildings erected for the Exhibition of 1860, will be available, and thoroughly repaired. Additions to the departments for the cattle and sheep are in progress. The preparations are already in a satisfactory state of forwardness.

The ploughing match will be an interesting feature of the Exhibition, the first prize being one of the splendid Ball's Ohio Combined Reaping and Mowing Machines, presented by Joseph Hall, Esq., of Oshawa, and worth $150. The other prizes given by the Association are also on a handsome scale. The attendance at the ploughing match is expected to be large, and the competition of the keenest possible character. We beg to direct attention to an advertisement in another column, in regard to the entries for this match.

The leading railway and steamboat lines have made the most liberal arrangements for the carriage of passengers, stock, and articles, to and from the Exhibition. Passengers will be carried both ways for a single fare; stock, implements, &c., will be taken to Hamilton at the ordinary rates, and carried back to the station whence they came, provided that they have not in the mean time changed hands.

The amount of prizes offered for competition exceeds $12,000, which is a larger amount than is offered by any similar institution, except the Royal Agricultural Society of England.

We trust that neither our farmers nor our mechanics will be lacking in their efforts to render the greatest public gathering of the year both instructive and profitable. The advantages for improvement and learning are very great, and we hope a general effort will be put forth to make the most of them. We fully endorse the following admirable remarks, which we find in an American contemporary, the *Massachusetts Ploughman*:—

"Farmers learn very much and very fast by sight and comparison. These annual gatherings of persons engaged in the same useful and ennobling pursuit, need only the countenance and aid of all their members in bringing together the choicest animals which each one possesses for the inspection of the rest, to render the annual cattle show the most improving of any day in the year. The trouble and expense of such participation in a work which has for its object not only the good of the individual but the general welfare, is nothing in comparison to the satisfaction which every one must experience who contributes to an object so worthy; and we cannot but hope that many of our readers who have heretofore been so lukewarm in the matter as to leave their cattle in the fields when they went to the cattle show themselves, will turn over a new leaf during the present season, and resolve, now, that they will contribute their full share of personal effort to make our autumnal exhibitions this year not only more attractive to the public and more instructive to themselves, but more illustrative of the skill, industry, and success of the intelligent yeomanry, who till the rugged soils and pasture the herds under the austere skies of New England."

Moreton Lodge Farm, Guelph.

THIS fine domain, consisting of about 800 acres, the property of F. W. Stone, Esq., lies just outside the town of Guelph, and forms an estate which even in its present partially-improved condition would be, were it within reach, a tempting object to many a British capitalist farmer. It consists of hill and dale, woodland and clearing. Out of the 800 acres, nearly 600 are under cultivation, or in pasturage. Almost every variety of soil presents itself, though clay loam predominates. Abundant facilities exist alike for grain, stock, and dairy farming. During a recent visit to this beautiful estate, we were particularly impressed by the manifest advantages of two branches of farm economy which are in general but too little attended to, viz., draining and stock-keeping. Low-lying and formerly worthless pieces of land have come by drainage to be the most valuable and productive parts of the farm, and the benefits of liberal manuring are everywhere apparent. Fields which had been considerably exhausted before coming into

the hands of their present proprietor, are fast being restored to their original fertility, and unfavourable as the present season has been, the crops produced are truly bountiful. Spite of the drouth, the wheat, peas, and oats are heavy both in straw and grain. Not only is manure liberally applied, but it is of superior quality, from the fact that large quantities of grain, meal, and cake are fed to the stock during the winter. About 120 head of cattle are kept, between 400 and 500 sheep, horses enough to do the work, and a pretty large stock of pigs and poultry. From all these sources a large amount of dung of the richest description is obtained, and when arrangements are completed for protecting it from the weather, and preparing it for use without loss or waste, its effects upon the land will be still more apparent.

Most of the stock on this farm is of the very best description. Mr. Stone's high reputation as a breeder is fully sustained by the appearance of his flocks and herds. His stately Short horns, and solemn-looking Herefords, are well worth going far to see. Though the pasture has been short in consequence of the drouth, these fine cattle are in excellent condition, thanks to certain fields of green rye and tares into which the scythe has evidently been making daily inroads. A number of Mr. Stone's cattle are wholly kept on the soiling principle; the bulls for example, and some of the young growing stock. About six acres of rye and 20 of tares have gone very far in keeping up a good supply of succulent food. Not only have the cattle been thus provided for, but the sheep have been hurdled upon vetches, rape, &c. Is it not strange that in this wooden country hurdles should be so scarce? Mr. Stone uses a kind that any farmer could readily make at leisure times, while no great amount of lumber is required for them Each hurdle is 8 feet long and 4 feet high. The end posts are 1½ by 2½ inches in size, and there are five horizontal bars 2 by 1 inch, crossed by a perpendicular bar in the middle, on each side of which is a brace. The bars are morticed into the post, an operation soon performed with a boring machine, but where that cannot be had, and the process is too slow, notches instead of mortices can be made in the posts. The hurdles when in use are supported by stakes, to which they are tied. An iron crow-bar is used to make the stake-holes. The advantage of penning sheep on a green crop is two-fold. They are economically fed, and the land they go over is left by their droppings in excellent condition for the next crop. Hurdles and sheep ought to be inseparable. Mr. Stone expresses himself satisfied that he can keep double the amount of stock by soiling and hurdle-feeding that he can in the ordinary way. In seeding down for pasture, he is accustomed to sow such a mixture of grasses as will keep up a succession of feed. When one kind fails another takes its place. In addition to the well-known timothy, white and red clover, &c., he sows largely of yellow trefoil, rye grass, and rib grass, all of which furnish feed of which cattle and sheep are very fond.

Having a large lot of stock to provide for, and being anxious to keep them in good order, Mr. Stone goes largely into root culture. This season he has 50 acres of turnips which promise to yield a heavy crop. One field of 27 acres is remarkably fine. Land thoroughly prepared for turnips is in prime order, after the roots come off, for a crop of wheat.

The farm-yard at Moreton Lodge is enclosed with a stone wall, and the accommodations for the stock are of the most spacious and comfortable description. The buildings already erected are chiefly of stone, and the steading, when complete, will be of a character seldom equalled. A large and handsome villa residence is in course of erection. Only one deficiency is visible, and that is ornamental fruit and shade-tree planting. This will probably in due time be supplied.

To return for a moment to the stock. While a detailed account of this would occupy too much space, we cannot forbear adding a few particulars and remarks. The herd of Short-horns is in a most flourishing state. It consists of about 30 animals, and almost faultless specimens of this world-renowned breed may be seen at various ages. A three-year-old bull promises to eclipse his ancestors and contemporaries, and be an animal of rare size and beauty Some very perfect heifers also are coming on and will, if they do well, figure honourably on future prize-lists. The Herefords, of which there are about 30, are evincing, equally with the Short-horns, their adaptation to this climate. Their grave white faces give them a particularly sage and sedate look. Mr. Stone represents them as being quite as early in their development as the Short-horns, and like them, of varied quality as milkers. He considers the chief excellence of the Herefords to consist in their aptitude to take on flesh and fatten. In this respect he thinks they surpass all other breeds. Among the sheep are fine specimens of South Downs, Leicesters, and Cotswolds. The latter, as is well known, are Mr. Stone's favourites, and they are certainly a noble breed. Two of his Cotswold rams are of gigantic size, and make common sheep look like Lilliputs. Mr. Stone keeps the Yorkshire and Berkshire varieties of pigs, of both which he has excellent samples. His Dorking fowls and Aylesbury ducks are exceedingly good also At the approaching Provincial Exhibition our readers will have another opportunity of seeing for themselves a selection from all these choice animals, which no doubt will as usual make considerable havoc among the prizes. It is certainly matter of no little gratification that we have so much superior stock in the country, and we hope many of our farmers, catching Mr. Stone's spirit, will take pride in owning and raising the best animals to ornament and improve their farms.

Royal Agricultural Society's Show at Newcastle.

Eighteen years have elapsed since the former meeting of the Royal Society at the ancient town of Newcastle, and during this interval British agriculture, more particularly as regards its mechanical appliances, may be said to have undergone a complete revolution. Ten acres formed a space sufficient to accommodate the Society in 1816, while an enclosure of forty acres was required for the recent exhibition. "These great annual gatherings," remarks the *Agricultural Gazette*, "can no longer now be marshalled for anything like organized Agricultural discussions, and Mr. Parkes or Prof. Johnston, whose addresses upon land drainage and manures were 18 years ago among the leading features of the meeting, would hardly now obtain a hearing. The strong and general excitement are too great, and all the Society can do is to give the multitude sufficient opportunity for the self-directed examination of the agricultural results which are displayed."

In the number of visitors and the amount received for admission tickets, the late show at Newcastle has been rarely exceeded by any of its predecessors. The total number of visitors that entered the yard was 114,281, and the amount received £8,002, a sum, we believe, that has only been exceeded by one or two thousand pounds, in a few of the most populous centres of the Society's operations. The number of entries both of live stock and implements has been much exceeded at some previous shows, but the *quality* of the material constituting the Newcastle exhibition would stand the test of the most rigorous examination.

"Agriculture may be said to begin with the tillage of the soil, and end with the manufacture of meat; and Mr. Fowler's steam plough standing at the one end of the manufacture, and Mr. Cruickshank's Short-horn "*Forth*" standing at the other, may be thus considered to include between them its whole scope, extent and range. Every line upon the scale which separates these extremes has been well represented at this meeting, but the best and most numerous illustrations of the whole are those of tillage implements on the one hand, and of Short-horn stock upon the other. Never before has so good a collection or so thorough an examination of tillage implements been made, and never before have better classes of Short-horn cattle been exhibited. The excellent quality and easy management of the steam tillage accomplished by many of the rival manufacturers must convince the farmer of plough land how thoroughly practical and efficient a thing steam cultivation has at length become." Mr. Fowler's apparatus, having an engine at each end of the furrow, co-operating in their pull upon the tillage-tool going to and fro between them, is a great step in advance of all previous experience, and received the prize of £100 offered for the best application of steam power to the tillage of the land. Ploughs, cultivators, and grubbers, propelled by steam, made by Howard, and others, were severely tested, both as to the quantity and quality of the work done, and the force expended in its performance. Several of these machines worked admirably,—the improvements effected in them within the last three or four years are truly astonishing. The Howards, of Bedford, occupy a first position in this important department of agricultural mechanics. The writer of this abstract purchased one of the first batch of their improved iron ploughs, now upwards of a quarter of a century ago. The improvements subsequently effected by the same makers in their implements may to some extent be comprehended by an inspection of their recently-imported specimens in Toronto and elsewhere. Yet the improvements made of late years in the ordinary ploughs bear no comparison whatever with those which mechanical skill has achieved in steam implements.

In the implement department there appears not to have been many decided novelties. Among them may be noticed a potatoe-planter, which is said to perform quick and regular work. By means of a grooved wheel, into which holes adapted to various sizes are pierced, the potatoes can be dropped into the ground at regular intervals with the greatest certainty and precision. The potatoes fall into the wheel from an ordinary hopper above.

With the exception of Durhams, which in point of number and excellence could not be excelled, the cattle classes were not so numerous as on some former occasions. The show was too far north to have a large number of Herefords, Devons, and other Southern breeds, and not far enough north to attract in large quantities the various kinds of Scottish cattle, although several excellent specimens of the latter carried off prizes. The show of the different breeds of English horses was, as is usual at these exhibitions, nothing remarkable. The Yorkshire Society in this respect often exceeds the Royal. The Clydes imported over the border seemed to have formed the most prominent feature in this department.

The various breeds of sheep dispersed over the British Islands appear to have been well represented and they form an interesting and instructive study, both to the farmer and the naturalist. It is only on such great national occasions that an opportunity is offered for the study and comparison of these different groups. The same remarks will apply to pigs and poultry. We know of no lessons in farming so suggestive and informing as those which may be learned by any mind endowed with ordinary power of observation and analysis, at the great national exhibitions.

The Show of the Highland and Agricultural Society of Scotland.

The exhibition of this venerable Society was held in the King's Park, immediately adjoining the old picturesque town of Stirling, the beginning of August. A space of about sixteen acres was enclosed, and the internal fittings and arrangements seem to have given entire satisfaction. Hitherto the Society provided no cover for implements and machines, a desideratum long felt in so uncertain a climate as Scotland. This year sheds were erected for that purpose for such as wished to occupy and pay for them. It is the practice of the English Society to charge a rent for stalls and sheds, whether occupied by stock or implements. In this respect, we in Canada are a little more liberal toward exhibitors.

From the accounts that have reached us, the Highland Society Show appears to have been highly successful, whether as regarding the number and quality of the articles exhibited, or the visitors who came to inspect them. Thirty-one years have elapsed since the Society's Show was held in Stirling, and the improvements in Scottish cattle and husbandry during that period have been truly astonishing. Thorough draining was at the beginning of this period in its

infancy at Deanston, and a writer in the *Quarterly Journal of Agriculture* states that by means of the operation of that system "whole parishes in the vicinity of Stirling are completely transformed from unsightly marshes into beautiful and rich wheat fields; and where the plough could scarcely be driven for slush and water, we see heavy crops per acre, and heavy weights per bushel, the quantity and quality alike improved."

In the stock department the Show was pronounced far above an average. Short-horns mustered strong, and, as a class, possessed high qualifications, amounting to 95 animals. That superb bull, "*Royal Butterfly the 11th*," was unfortunately absent, in consequence of having suffered severely in his feet on his journey to and from the previous meeting at Newcastle. The Polled Angus comprised 40 animals, and the Galloways 28; the average quality of both being considered superior. In the Ayrshire class, the exhibition was unusually numerous, 132, and the quality fine. The milking properties of this breed, it is said, are still improving. The West Highlanders amounted to 51, several of which are said to be perfect beauties. The total number of sheep reached 262, composed mainly of 70 Leicesters, 52 Cheviots, 79 Black-breed, and 18 South Downs. In sheep, the show was rather deficient in point of numbers, but above the average in quality. The horses numbered 162—none but agricultural are admitted. There were some beautiful specimens of the Clydesdale. The swine amounted to 47, and poultry to 81. Implements about 1,100, being little more than a fourth of what was shown at the Newcastle meeting, much of the same character, many of the articles being identically the same. An elaborate speech on the state and prospects of British agriculture was made by the President, the Duke of Argyle, at the dinner, and a highly useful and suggestive lecture was delivered by the Society's chemist, Dr. Anderson, the evening previous, an epitome of which we may give in a future issue.

Weather and Crops.

As the season advances, our weather and crop record becomes more satisfactory, and we hear from all quarters more hopeful accounts in reference to the needed supplies for man and beast. A month since we expressed the opinion that abundance could not be expected, but scarcity and famine did not threaten. That brief interval has witnessed a wondrous change in the face of nature, and all late crops have revived and promise well. The grain yield is on the whole better than could have been anticipated, though straw is deficient. Fall pasture will probably be abundant, and should we have an open season, there will be less trouble about wintering stock than was apprehended. The scarcity of fodder will cause an unusual slaughter of cattle this fall, so that the meat market will be well stocked, and prices will not be high. Though not a year of plenty, our supplies will we believe be adequate to our wants, and the crops as a whole, will not fall far short of an average yield.

"J. S. JOHNSTONE" writes from Rugby, August 8, 1864, in reference to the crops in Oro, as follows:—

"In this part of the country the crops are being gathered into the barns with amazing rapidity, and although the yield will be greatly below former years there will, we think, be enough and to spare. Fall wheat, of which a greater number of acres were sown than has been for many years past, was a tolerably good crop, and an average of 25 or 30 bushels per acre will, I believe, be realised. Up to this date, with the exception of a few showers, which barely wet the surface of the earth, since about the beginning of June, we have had no rain to do the crops any good, so that the later planted fields present a very miserable appearance, and begin to suffer sadly by reason of the extreme heat. Oats are very short, and the potato crop, on which farmers greatly depend, unless visited very shortly by plenty of rain, will decidedly be a failure. Few of the farmers here have been able to obtain a braird of turnips, the drouth or fly having prevented them from coming up or doing any good, and added to this a very scanty hay crop, will, I fear, bring about severe and pinching times amongst the residents of the barnyards here this winter. For weeks past, 'all hearts have been turned into an earnest prayer for rain,' but still it comes not. The pastures are withered and void of vegetation, and large tracks of forest have been burned and destroyed by ungovernable fires which have been raging and still rage throughout many parts of the country. One farmer lost a field of fall wheat, into which the fire had run. Another about 15 or 20 acres of hay, and some 2,000 rails. Pasture fields have been swept by the devourer, and left, stript of all verdure, bare and blackened wastes. Villages have been in danger, the inhabitants filled with excitement, by labour and watchfulness barely saving their homes.

For burning brushwood, log piles, and for summer fallow, we have had an excellent summer, and for exterminating weeds, Canada thistles excepted, it could hardly be equalled. Harvest in this neighborhood will be generally over about the middle or 20th of this month. The farmers are preparing to sow a greater extent of fall wheat than usual, as the dry seasons do not injure it so much as spring wheat. Weevil and midge have appeared here this fall, but their ravages have not been so great as in former years.

In conclusion, I hope there may yet be enough throughout the land for man and beast, and that our hearts may be filled with gratitude to the God of Providence for what we have, which is more, I believe, than we deserve."

"I." writes from Hay, county of Huron, Aug. 9th, 1864:—The drouth still continues. Day after day the sun looks fiery red, the sky brazen, and the earth more and more parched. Water is getting scarce, and that ubiquitous individual, the oldest inhabitant, says that springs and wells are getting dry that he never saw dry before. But withal, it appears from all accounts that we have been more favoured with rain than many other parts of the Province. The showers we had in the early part of July acted like magic in lengthening out the short shooting grain, verifying the old Scottish by-word, that a "short shoot made a long shear," not that we have a long shear, but it is longer than could have been expected when it began to shoot. The last shower we had, on the first day of this month, was most acceptable and refreshing and did much good. But if the weather has been unfavourable to vegetation, it has been splendid for harvesting. Fall wheat and peas are well-nigh secured, and we are fairly started into our spring wheat and oats. Spring grain of all kinds is light of straw, but promises a beautiful sample, and will thresh well to the bulk.

As I promised in my last, I can now give you some definite information as to the yield of fall wheat. I have before me the returns of about a dozen who have threshed in this neighbourhood. The highest is 35 bushels to the acre, and the lowest 22. The average of the twelve is about 30; and from all I can learn, I think I am safe in saying that the townships of Hay and Stanley will average 30 bushels to the acre of fall wheat this year. Peas are really a nice crop; the straw is perhaps one-third less than usual, but it is clean and well saved, and will go far to make amends for the light hay crop. It was delightful to handle the golden-tinted bunches, and the weight of a pitchforkful told one of an abundance of well-filled pods. Rain soon will give us plenty of potatoes, but turnips, I fear, will soon be out of the question. The pasture fields have gone from bad to worse, till even the highways cease to be a comparison,—a brickyard would be nearer the mark; but as the fields are cleared, the animals get a fresh bite, and are doing better. I may say that the midge has hurt us very little. I occasionally see one or two of the orange-coloured rascals in a head of wheat, but the damage done is immaterial. I don't see the little round fellow with the long name that hurt our oats so badly last year at all.

Your humble "Weather and Crop" correspondent, who is very tired swinging the cradle, will now close this his epistle for August, in the hope that in his next he will be able to tell you of green pastures, harvest finished, and something definite regarding the yield of spring grain.

THE CROPS IN SIMCOE.—We are pleased to hear from all sections of our county, that the crops are turning out better than was expected, and, with the exception of the hay crop, which is light, there is a fair average yield, the chief drawback being that the straw is rather short. Considering the great drouth we have had, this result is very cheering, and we should be thankful for the measure of agricultural prosperity vouchsafed to us. But though the crops have been on the whole good, great loss has been caused by the fires running in the woods and which are still apparently raging, in many instances the fire has entered the clearings, and not only swept down the standing crops, but also destroyed houses, barns and cattle; and in several instances the most strenuous exertions have been necessary to prevent it spreading into the towns and villages. As one passes along the roads, here and there gangs of men may be seen digging trenches to arrest its progress, and considerable anxiety is felt among the farmers that still further destruction of property may ensue, unless we get rain speedily.—*Barrie Spirit, 17th.*

GREY.—On the whole, the news of the crops in this county is of a cheering character. Fall wheat is principally housed, and the farmers are now busy at spring wheat, which, as a general thing, promises well. The weather has been all that could possibly be desired to get the crops in good condition, although rain is much required for potatoes and turnips.—*Owen Sound Advertiser, 17th.*

FULLARTON.—The crops in Fullarton, and generally in the county of Perth, have turned out much better than was anticipated, we are happy to say. Mr. Samuel Jordan, of Fullarton, thrashed from six acres 220 bushels of fall wheat, being a little over 35 bushels per acre. Mr. John Moore, old Mitchell road, realized from eleven acres, no less than 260 bushels, being a little over 35 bushels to the acre. From every section of the county we hear the most cheering accounts of the crops. The recent refreshing showers will greatly benefit the root crops and bring them up to an average yield.—*St. Mary's Argus.*

PRINCE EDWARD.—We believe that we are correct in saying that Old Prince Edward is as well off this year as any county in Upper Canada, in reference to crops, although the yield will not be by any means large, or average. In some parts of Hallowell, especially between Picton and Wellington, and on the farms near this route, the crops are very good, the land being of a loamy nature, and not so liable to be injured by the dry weather. The gravelly lands in Hillier and Ameliasburgh, where grain is generally the best, will suffer very much this year, but the farms in Hillier near the Lake shore will produce well. Some sections of Sophiasburgh have suffered very much, but that township will in the aggregate, we think, do more than was anticipated. The lower portion of Marysburgh is perhaps the worst off of any section of Prince Edward, there being a great deal of high land, which has completely dried out. Athol has also suffered severely, but any injury there has been of a more general character, as there is much sameness in the land, and consequently an unpropitious season affects almost all alike.—*Picton North American, 18th.*

VICTORIA.—The wheat crop is unquestionably better than that of last year. Oats, though somewhat light, are not by any means so deficient as a few individuals, whose impoverished or badly cultivated fields have produced correspondingly scanty crops, would have us believe. Indeed, we think that in a majority of cases a close inspection would show that the yield is nearly or quite an average one, and would prove the truth of the saying that "it is not the heads highest from the ground which have the most in them." Hay is scarce—there can be no doubt of that; in spite of which, however, a considerable quantity—good, well-cured samples, too—has been sold in Lindsay during the past two or three weeks, at from eight to ten dollars per ton. These prices would indicate anything but a light crop, were they a fair criterion to judge by, which they are not. There is no great demand at present, and the loads which have already been disposed of have been sold to raise a little money for a special purpose, or the owners have very probably, in some cases at least, thought it better to get rid of their hay, even at a rather low figure, than to run the risk of having it burnt up by the fires which have recently been raging on every man's farm, or in the immediate vicinity. Straw, like hay, is very short, so that strict economy will have to be practised with regard to fodder to make it last until pasturage is to be had; but it has been observed that when feed is very dear in the spring, it is generally after a tolerably abundant harvest, which, leading people to believe that the supply is inexhaustible, has induced that "wilful waste" which almost invariably results in "woeful want." Root crops are short, particularly potatoes, and terrible prices are predicted; but we hope they may turn out to be more plentiful and cheaper than is just now anticipated.—*Lindsay Advocate, 19th.*

LEEDS.—During the past week, several fine showers of rain fell in this neighbourhood, and the thirsty soil is accordingly greatly refreshed. The fields are again becoming green, and the root crops now promise to be good. In many places the wheat crop is too short to harvest, but wheat that can be harvested will give a good yield in grain though not in straw. Oats, barley, and other late sown grains are rapidly improving. Altogether the late abundant rains have made the prospects of the farmer look much brighter, and matters are not going by any means to be as bad as people supposed. Business continues exceedingly dull in Brockville, and will not improve much till the fall trade commences.—*Brockville Monitor, 20th.*

EASTERN TOWNSHIPS.—The Eastern Townships have been very highly favoured the past season. While Upper Canada, New England, and the Western States have suffered more or less from drouth, we have had, with the exception of about two weeks, a very

fair proportion of sun and rain. On dry and poor land, the grass suffered in the latter part of June for the want of rain, but on the whole we believe there is a full average crop of hay, of better quality than usual, and generally well cured. Last week we passed through Barnston, Stanstead, and some of the frontier towns of Vermont, and wherever we went the crops looked very fine. There appeared to be more oats sown than any other grain; next in extent we should name buckwheat, corn, barley, and wheat. Barnston takes the lead in wheat. We saw a great many fields of it in that township, and few, if any, would yield less than 15 bushels, and most of them would go a high as 20 or 25 bushels to the acre. The fly does not appear to have injured it at all. We also saw some very fine fields of wheat in Stanstead Oats barley and buckwheat all promise large crops. Potatoes look green and healthy, but the reports as to the yield are quite contradictory. From the fact that they are now sold in our market, of the best quality, for 31 to 10 cents a bushel, we infer that there will be a large crop. We have not heard of the rot except in one instance, in the west part of Oxford. On the whole, we have great reason to rejoice in the prospect of an abundant harvest.—*Sherbrooke Gazette, 20th.*

New Brunswick.—The *Colonial Farmer* says:—From all parts of the country we have the cheering news that the crops are looking well, and should the weather continue favourable, the yield of grain and roots will probably equal that of any other season. In some localities buckwheat will be an exception, the drouth having seriously affected that crop. In some few places the hay crop exceeds that of last year, but taking the Province as a whole, the yield will be considerably below the average.

☞ The hay crop in Connecticut, the *Hartford Courant* says, is immense, and of the very best quality, one ton being considered equal to two tons of last year's crop. The second crop is cut short by the drouth, but the quantity and quality of the first crop will more than make up for the loss.

New York State.—The rain which fell on Wednesday last, Aug. 17, in Central New York, was so copious, that it insures the main crops, particularly fall seed, and will prove of the very greatest benefit to farmers, some of whom are almost solely dependent upon grass and its fruits in dairy products. Their prospects are now flattering. Even Indian corn will turn out very much better than any one anticipated a few weeks ago. We have never seen a greater change in the appearance of corn than has occurred since the first of August. Late oats are headed heavily. Buckwheat, which appeared to be lost, will make more than half a crop. Potatoes, which have been selling in Syracuse and other central New York Towns, at $3 a bushel, will soon come down from that elevation. The late planted crops will be pretty fair.—*N. Y. Tribune, 20th.*

The Drouth and Next Winter.—It would seem from some observations by Mr. C. L. Flint, Secretary of our State Board of Agriculture, in his last report, that we have reason to expect the next winter a hard one. We might infer so, any way, from the fact that the last two have been so open. But Mr. Flint's views relate to the connection between severe drouths and subsequent cold weather. He says:—"The cold winter of 1641 preceded a summer marked by a sore and long-continued drouth in July and August. In 1748 the drouth was intense in New England, and this summer was followed by so hard a winter that the suffering was intense. In 1749 there was another 'melancholy dry time,' the winter following 'long and dreary;' and the summer of 1762 accompanied by a drouth of terrible severity." The writer further cites the drouths of 1851 and 1856, and the winters following, as evidence conclusive upon this point. We sincerely trust that this will be another instance of the old saying that all signs fail in dry times, but economy and foresight ought to be exercised in view of what may ensue.—*Boston Journal.*

Importation of Stock. That enterprising stock-breeder, Mr. George Miller, of Markham, has just made a fresh importation of Cotswolds, Leicesters, Shropshire Downs, and Oxford Downs, together with a choice lot of poultry, and what is believed to be the best shepherd dog ever brought to this country. They came in the ship *Pericles* to Montreal, and were brought by rail, under the charge of Mr. Miller himself from that city, reaching Markham on Tuesday night. The sheep were selected in various places by Mr Simon Beatty, who, we believe, has the reputation of being one of the best judges in America. The flock consists of 20 rams and 25 ewes. They cost, we are informed, a goodly price, but we trust Mr. Miller will be well rewarded for the enterprise he has displayed in bringing them out. Those of our readers who like to see good breeds of sheep will probably have an opportunity of inspecting this last importation of Mr. Miller's at the Hamilton fair.

Peruvian Government Guano.

We would call attention to an advertisement with the above heading, which appears in another column, from which it will be seen that Messrs. Duncan, Clark & Scott, of this city, have on hand a small consignment of this highly concentrated manure, and intend to import it direct from the Chincha Islands should they receive sufficient encouragement to render it worth while to do so. The lot now offered for sale has come here by way of Liverpool, and having been doubly shipped and handled, cannot be afforded so cheaply as it could if brought directly here at one shipment. Its price is $1 per 100lbs., and it can be had in any quantity that may be desired. Messrs. Duncan & Co. being anxious that it should be extensively tried by the farmers and gardeners of Canada.

This manure has for a quarter of a century been fully and satisfactorily established by the opinions of the most eminent agricultural chemists, confirmed by the results of innumerable experiments of well known practical agriculturists in all parts of the world, not only as the most valuable, (as containing ammonia, the vital principle of plants, in far larger quantities than can be procured from any other source), but also as the cheapest of all manures, natural or artificial, for every diversity of soil and climate, and for all kinds of crops.

Prof. Nesbit, F.G.S., F.C.S., &c., of London, says:

"Of all the artificial manures, Peruvian Guano is perhaps not only the most concentrated, but is from its composition adapted to the greatest variety of crops. The chief mineral constituents of plants—lime, magnesia, potash, soda, chlorine, sulphuric acid, and phosphoric acid (the last the most important), are found in guano. Nitrogen, the most valuable constituent of manures, is found in Peruvian guano in great abundance, and in a condition adapted for vegetation.

"The experiments of Mr. Robert Monteith, of Carstairs, on oats and on hay—of Mr. Geo. B. Osborn, of Elbaston, Gloucestershire, on potatoes—of Mr. Campbell, of the Botanic Gardens, Manchester, on grass—and of Mr. R. Osborn, of Henbury—show the enormous productive power of the application of small amounts of Peruvian guano to each."—*Nesbit's Lectures on Agricultural Chemistry*, pp. 116, 117, 118.

Mr. Kuhlman, the French Agricultural Chemist, experimenting on the action of ammonia on grass land, proves guano to be one of the most important manures for increasing the productive power of our pasture and meadow land. He applied ammonia, alone and combined, and found in all cases the amount of grass or hay produced was in exact proportion to the amount of nitrogen contained in the manure. Guano, containing a large amount of ammonia, and being its cheapest source, must prove of great benefit in the production of grass.

The following table, made by R. Osborn, Esq., of Henbury, shows the relative profit from the application of different proportions of guano.

Guano per acre.	Grass per acre.	Hay per acre.	Increase per acre.
	Ton cwt.	Ton cwt	
2 cwt.	7 10 0.0	2 7 0.26	From use of 2 cwt. guano, 17 3.25
4 cwt.	10 1 1.36	3 2 1.8	From use of 4 Tons.
None.	4 12 3 12	1 2 1.34	cwt. guano 2 0 1.22

Mr. Caird says: "Increase of produce of nine bushels per acre in 100 acres of wheat, and of straw 10 cwt. per acre, manured with Peruvian guano at 2 cwt. per acre."—*Letter to the "Times," Sept. 10th, 1853.*

Mr. Lewis, of Rothamsted, has shown that two cwt. guano per acre give an increase of eight bushels, with no other manure applied, and in a field of 14 acres, twenty years consecutively in wheat, by increasing the application of guano from year to year, that eminent agriculturist has increased its production from 20 bushels to 56 bushels per acre, and of superior quality.

☞ The United Exhibition of the West York Riding and York Township Agricultural Societies, will be held in the Village of Yorkville, on the 11th and 12th of October next.

Agricultural Croakers Rebuked.

As the farmer, of all men, seems nearest to God in his works, he should be the most faithful and the most confiding. But it has been said—though it may be slanderously—that of all men they are the greatest croakers, and have the least hope and faith. It is too wet or too dry—there is too much or too little produced. If too little, it does not pay, at prices ever so high; if too much, the crops will not reward the harvesting. There are worms and birds, bugs and mildews, and diseases to cattle and vines, named and unknown, that are present or anticipated. There is a story of an eccentric lawyer, Burgess, who was famous in his village for his sceptical notions and also for his wit. He was once listening to a group of farmers -pious men lingering about the church-door, as is the custom in the country, to talk of the bad weather, the fly, the rot, the drought and the wet, when one turned to Burgess, and asked:—

"How comes on your garden?"

"I never plant anything," replied Burgess, with a solemn face; "I am afraid to put even a potatoe in the ground."

"It's no wonder," groaned one of the most eminently pious persons present, "it's no wonder, for a man who disbelieves in religion could not expect to have his labours blessed."

"I am not afraid of failing in my reward for my work," replied Burgess, "but I am afraid that agricultural labour will make me profane. If I planted a single potatoe, what would be the result? Why, I should get up in the morning, look about and growl, 'it's going to rain, and it will ruin my potatoes;' then in dry weather I should say—'the drought will kill my potatoes;' then I should be unhappy because the rot might destroy my potatoes; in fact, gentlemen," concluded Burgess, in a solemn manner, "I should be afraid to do anything that would induce me constantly to distrust Providence."

Literary Notices.

The Cream of Scottish History.—This is a little work of 136 pages, by the Rev. William Ferrie, A.M., a second edition of which has just been printed at the *Guardian* office in this city. It is intended as a handy compendium of the leading facts in Scottish History, from the earliest times of which we have any annals, down to the union of the crown of England and Scotland, in the person of James VI. The title page states that it is taken principally from Buchanan's History of Scotland, and Chalmers's Caledonia. An appendix gives a very full account of the extinct peerage of Scotland in 1746.

Selections from Canadian Poets, with occasional Critical and Biographical Notes, and an Introductory Essay on Canadian Poetry; by Edward Hartley Dewart, pp. 304; Montreal, John Lovell. To make a clean breast of it, we must confess we had no idea Canada could boast such a galaxy of real poets, and such a collection of genuine poetry as make their appearance in this goodly volume. The compiler states that these selections might have been indefinitely extended, as "an immense quantity of verse, much of it of high merit," passed under his notice, and great difficulty was felt in deciding what to insert and what to omit. He has certainly exercised good judgment and correct poetic taste in the selections he has made, and deserves much credit for thus bringing together and compacting in a book, a large number of fugitive pieces that are too good to be lost. The Introductory Essay is a well written dissertation on Canadian Poetry, in which the causes which have repressed the poetic fire in this country, and the reasons why it should be cherished and encouraged, are very forcibly stated. We believe in the elevating, refining, inspiring power of true poetry—we are glad this volume has appeared—we sincerely hope it will run through several editions enlarged and improved—and we intend occasionally to pluck a flower from this bouquet of Canadian Poetry, to grace the button hole of The Canada Farmer.

Value of Heat.

WHILE the thermometer is standing at ninety in the shade, and many are complaining of the intensly hot weather, and wishing it were cooler, we would take the opportunity to say a few words to our readers, about the value of heat to the horticulturist. We probably know as yet very little of what is daily going on in that natural laboratory which we call our garden; but there are a few things, which we think we do know, and are encouraged to believe that though we stand now only in the outer porch of that great temple, man shall yet enter its halls and penetrate within the veil. It may be that we shall never know how the changes are made, how the spring dressing of decaying matter, which we yearly spade into the soil, is so transformed, and combined with the rains and dews and air as to produce those nice vegetables which we lay with so much satisfaction upon our tables or those tempting fruits so refreshing and so wholesome. But we are rapidly learning the conditions under which these changes go on most readily and successfully, and how to supply these conditions most advantageously. Now one of the conditions necessary to the perfect development of our garden products, is a certain degree of heat. In our anxiety to lengthen these short summers, we make spring hot beds and try to supply the lack of solar heat, by bringing to our aid the heat of fermentation. In this way we are enabled to bring many things on to such a degree of maturity that by the time the warmth of the atmosphere has risen high enough, the plants are sufficiently advanced to come to maturity before the return of frosts. Observation will soon teach us that some plants grow to perfection in the cooler weather of early summer, and accordingly we sow our peas and lettuce, expecting that by mid-summer the ground may be sown with turnips, or planted with late cabbage. Others of our garden vegetables require the whole season to come to maturity, and when the hot weather of July and August is not accompanied with frequent showers, we find that heat alone makes the garden a desert. But we must not, therefore, conclude that it is not in our power to mitigate the disadvantages arising from lack of rain, nor that the heat is not doing a valuable work. The evaporation that is going on so rapidly in hot weather, at the surface of the earth, is in a degree counterbalanced by the rising of moisture from below. It follows then that the deeper down the soil is pulverized, the more readily this flow of water upwards to the surface will take place. The force which draws the water upwards is known among scientific men as "capillary attraction," and though so contrary to our common experience, that water will run down hill, as none the less true and real. This water in the earth is more or less charged with soluble salts, such as help to form the plants we cultivate, which salts are thus brought to the surface, and as the water evaporates are left there unless taken up by the growing vegetation. If then we pulverize the soil deeply, we are not only allowing the air to permeate it, and enabling the roots to penetrate it, but we are opening a source of supply of moisture when the rains fail, and not of moisture merely, but of moisture filled with food suited to the support of vegetation, which the heat is drawing to the surface by the process of evaporation.

But there is other work which the heat is doing. Within certain limits the processes of assimilation go on more rapidly in a high temperature, and we believe in many instances more perfectly. This is more clearly perceptible in the case of fruits. Strawberries that are ripened in cloudy and damp weather, may have greater size, but they are wanting in sweetness of flavor and depth of colour, in comparison with those that are ripened in hotter weather and in a bright sun. And what is true of strawberries is true of all other fruits, and of some in a yet more marked degree. How tasteless are melons in a cool season, peaches also seem to have lost their flavor and even pears and apples show a difference. The flavor and value of grapes depends greatly upon the amount of heat crowded into our short summers. For many varieties our seasons are too short, but there are those which will mature perfectly in a short season if it be only sufficiently dry and hot.

But heat in summer does an important work in preparing our trees, shrubs, and vines to withstand the cold of winter. We well know that when the young growth has been moderately fast and has been thoroughly ripened, when the cells are small and only moderately filled with sap, the trees, &c., pass unharmed through a degree of cold that would otherwise have destroyed their vitality. In a hot season, not accompanied by excess of moisture, this ripening of the wood is obtained in the highest degree, the growth is moderately rapid, the cells are not disturbed beyond their natural size, nor filled with superabundant moisture, and when winter comes the tree or vine is prepared to drop its leaves and withstand the cold.

These are some of the offices of heat. Our summers are short, and it is a blessing that they are hot. When they are cool all our plants, grains, fruit, &c. are not quite perfectly matured. A proper course of cultivation will economize all the value of the heat, while the evils will be visited only on the sluggard or the unthoughtful.

Budding Fruit Trees.

THIS is the season when most of the fruit trees are in the best state for performing successfully the operation of budding. It is of the first importance that the buds should be well matured. They are taken from the shoots of this season's growth, and are to be found at the base of the leaf-stalk, usually termed the axile of the leaf. Those buds which are found near the point of the shoot are not usually ripe enough to be used; the wood of the twig is soft and the bud green; those which lie at the base or butt end of the shoot are not often well developed, being mere rudiments of buds. The buds which lie about the middle of the shoot are those most suitable and in the best condition for budding. After cutting off the twig from the tree the leaves should be all cut off, leaving a portion of the leaf-stalk attached, and the soft end of the shoot containing the unripened buds cut away. The twig when thus prepared will resemble *fig.* 1.


FIG 2

FIG. 1.

The stock into which the bud is to be inserted should be thrifty and growing well. If in this state the bark will peel freely from the wood. A smooth place on the stock should be selected, and a straight perpendicular cut be made with a sharp knife through the bark, and another horizontal cut at the upper end of the perpendicular cut, making a mark not unlike the letter T, as shown in *fig.* 3. Now cut off a bud


FIG. 3. FIG. 4. FIG. 5.

from the twig with a smooth, straight cut, taking as little of the wood of the twig as possible. The bud when cut off should resemble *fig.* 2. Then raise the corners of the bark of the stock where you have cut it sufficiently to insert the lower end of the bud under the bark, and gently crowd it down the slit until it is introduced under the bark. It will then be in the position shewn in *fig* 4. If any part of the bark of the bud extends above the cross cut, it should be cut off by pressing the knife through it, into the cross cut, thus making the bark of the bud to lie evenly with the bark of the tree. Now the bud should be tied in its place with a strip of bass bark or a bit of woollen yarn. This needs to be snugly and thoroughly done, so that nothing can be seen but the bud and the portion of the leaf-stalk attached. When tied it should resemble *fig.* 5. In a fortnight the buds should be examined, and when the bark of the tree begins to swell, so that the binding is cutting the stock, the string should be removed. With these directions and illustrations any one may, by a little practice, put in buds with the fullest expectation that they will grow.

Rogers' Hybrid Grapes.

WE request such of our readers as have fruited any of these grapes, to give the readers of THE CANADA FARMER the benefit of their experience. Mr. Rogers has attempted by fertilizing the blossoms of native wild grapes with the pollen of the Black Hamburg and other foreign varieties, to combine the hardihood of the native with the flavor of the foreign. With what success, there is already a diversity of opinion. A writer in the *New England Farmer* says, "Rogers' No. 19, is proving to be an excellent out-door grape for the latitude of Massachusetts. I am confident that it is one of the very best of Mr. Rogers grapes. Persons with whom the Black Hamburg is a favorite, will be likely to select No 19, because it so much resembles the former. No. 19 within my observation proves to be as hardy as any of our out-door grapes, is a vigorous grower, bears large crops of large fruit, both bunch and berry being large: the quality is generally admitted to be superior to the Concord, and it ripens at least one week earlier than the latter."

DRESSING FOR STRAWBERRIES.—It is said that no dressing will so delight the strawberry as a heavy coat of dark forest mould. They are the children of the wilderness, force them as we will; and their little fibrous roots never forget their longing for the dark, unctuous odour of mouldering forest leaves.

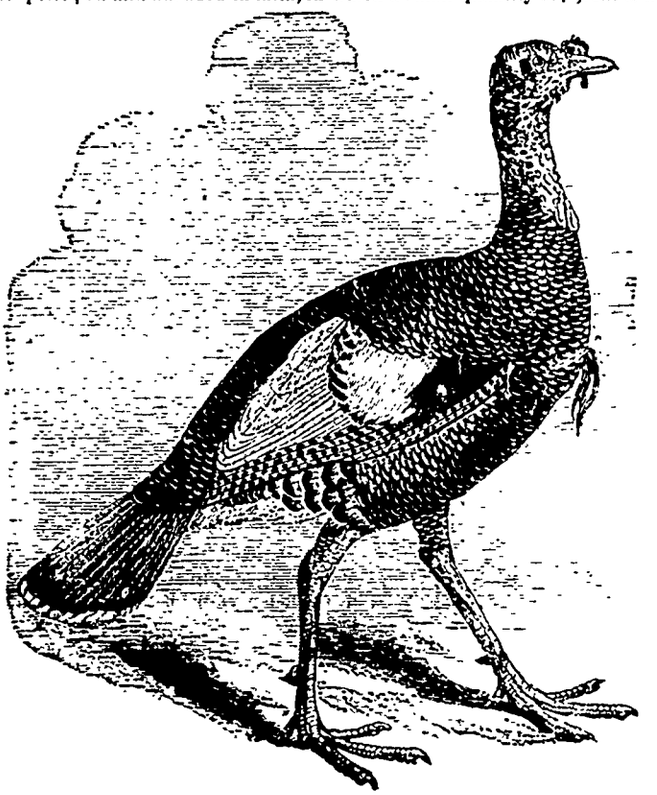
A ROSE TREE, now in Glencove, Long Island, is described as decorated with some 9,500 buds and roses, hanging in bunches of twenty to thirty each. It is one of the family of "*Rosa Rubifoli*;" its standard or trunk stands six feet in height, measuring five inches in diameter; the branches form an umbrella-shaped arch, and measure twelve and a half feet in diameter, or thirty-six feet around.

THE ONION MAGGOT.—The *Boston Cultivator* says of these pests, and of the remedies applied to the crop, when their presence has been discovered. "These maggots on emerging from the eggs laid by the onion flies, bore through the leaves into the bulb which they soon destroy. As soon as the visitation of this pest is observed, the plants attacked are easily detected by the yellow fading leaves; these should be pulled, burned, and lime-water poured into the holes whence extracted. Strewing soot or powdered charcoal round the remaining plants, leaving a few unprotected, as recommended, as traps, is found useful. It is also recommended to saturate the bed with strong soap-suds."

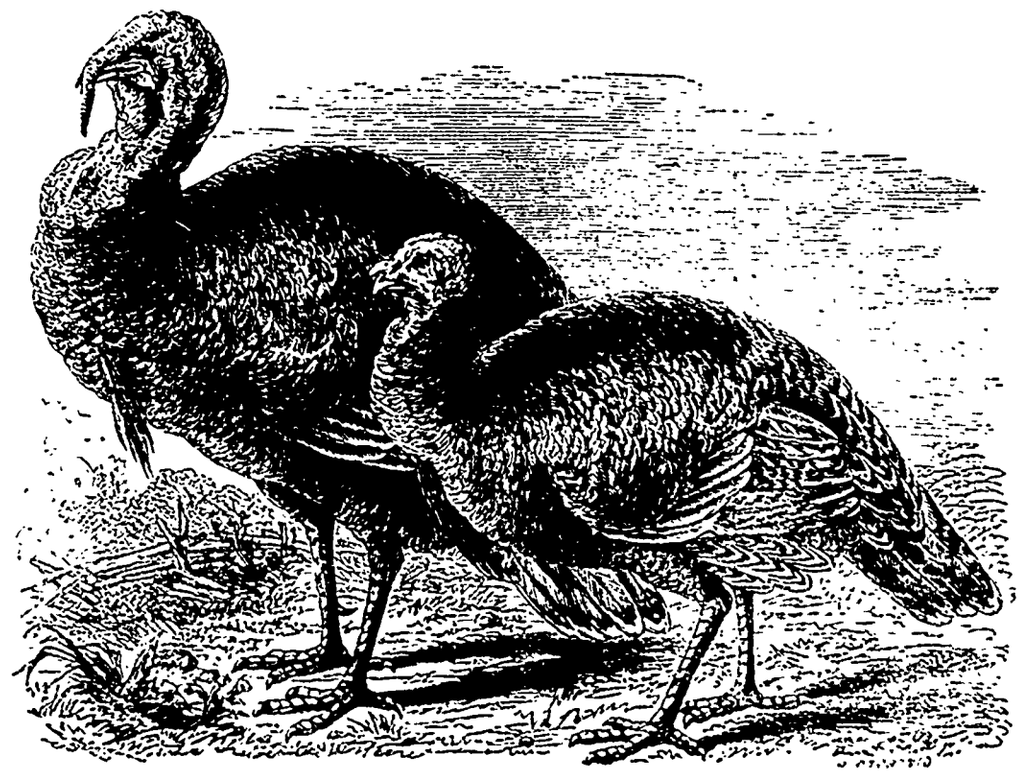
RASPBERRIES AND BLACKBERRIES.—The New York *Tribune* says:—"The old canes have about performed their duty, and the new shoots are aspiring to overtop their parents. Remember, that the next year's crop will depend entirely upon these new canes. To insure a vigorous growth, cut out all the old ones as soon as the fruit has been gathered—they would never bear again—and unless an increase of stock is wanted, cut out a portion of the weak canes of the present year. This will throw all the growth into the remainder and secure strong shoots for future fruiting. They are often left too crowded. If in large hills four feet apart, four raspberry, or three blackberry canes are quite sufficient for a hill. We prefer them in drills, to be trained upon a trellis, with single canes of raspberries fifteen inches, and blackberries twenty inches distant; the rows four feet apart for raspberries and six feet for blackberries. On rich ground, well tended, the growth will be sufficient to fill the trellis, which need not be more than two wires or slats in height. When too aspiring, nip off the shoot a reasonable height, to induce side branches. This will make a miniature tree, which, with the Lawton blackberry, has been known to produce six and even eight quarts per cane."

Turkeys.

Next to the common fowl, the most useful tenant of the poultry yard is the turkey. It is a native of North America, and was unknown in Europe prior to the discovery to the New World. There can be no doubt of the existence now in this country, of two distinct classes, the Wild and Domestic Turkey, though they must have originally sprung from a common stock. The only varieties among the domestic turkey, are those of colour, there being a general similarity of form, appearance, and habits.



The wild turkey is, as our engraving will show, a noble and beautiful bird, slender and erect in form, of stately proportion, dignified carriage, and plumage of the most brilliant hues. In exquisite colouring and graceful bearing, the wild turkey is only surpassed by the peacock. Its plumage is very firm and close, and this as well as its long slender legs, adapts it for going through tangled brushwood or fallen timber. Even when partially tamed, it is greatly given to wander long distances, and hence it is difficult to keep pure, or indeed to keep at all. An occasional specimen or pair will be found in the collection of a poultry fancier, but for purposes of food and profit, the domestic turkey is generally and justly preferred, Our artist has given an excellent representation of a pair of these useful birds, and we cannot do better than accompany the illustration with the following remarks on the rearing and fattening of turkeys, which we find in an exchange paper.—Both the hen and turkey are, by naturalists, included in the *Gallinaccous* family. The turkey is certainly one of the most valuable fowls kept on the farm, or which have been domesticated, but without much care and circumspection is somewhat difficult to rear. The hen of this species ordinarily produces from fifteen to twenty eggs, and then incubates, and will commonly produce, with good care and keeping, two broods a year. She rarely, except in extraordinary cases exceeds this. The eggs are highly praised as an article of food, being far more delicately flavored than those of the common hen. The period of incubation is from 27 to 28 days, and a full sized hen rarely produces more than sixteen or eighteen eggs at one setting. The young fowls upon emerging from the eggs are extremely weak and require great care and attention. They should be removed at once to a place where they will not be exposed to the rays of the sun, which are at first too powerful for them; a copse, or yard sheltered with trees affords the most eligible situation for them during the first two or three weeks of their existence. They should also be protected from rain, which generally proves fatal to them. If they get wet they should be immediately dried and kept in a warm place till the effects of the drenching have passed off. On such occasions, bread moistened and kneaded in milk, in which a small quantity of ground pepper and ginger has been mixed, should be given to them; it should be formed into small particles like peas. It is said by some that dry bread or dry Indian meal should never be given them. During several weeks of the young life of the chick the mother hen ought never to be allowed her liberty in the morning until the dew is wholly dissipated, for her wandering propensities lead her early into the fields, and the turkey poults, as a matter of course, follow in her trail, dew or no dew, cold or hot.



A turkey will do better if she is not allowed to incubate till she is two years old, after which she may be entrusted with eggs till she is eight or ten years of age. During the entire period of incubation, so great is her zeal and assiduity that she seldom forsakes the nest for food, or leaves her eggs. It is therefore necessary to see that food and water are kept constantly supplied, for if they are not, she may starve. The turkey is remarkable for its bibaceous habits, requiring large supplies of drink at all times; it should, therefore, be placed near a pond, brook or spring, when it is convenient, when its wants can be easily supplied at all times.

After leaving the eggs, the young should be secluded from cold and wind for at least twenty-four hours, without food; they may then be fed on eggs, boiled very hard, and chopped into minute pieces, for like all the gallinacea, the turkey swallows its food whole. A few crumbs of soft bread may be sprinkled with the chopped eggs and if fine pieces of curd are intermixed it will be no disadvantage. When from one to two weeks old, their diet may be changed, and barley boiled in sweet milk substituted for the eggs; pebbles and small gravel stones should be given, and if the boiled eggs are continued, the shells should be dried, and crumbled, and mixed with the other parts to assist in digestion, which is sometimes difficult in young fowls. The more stimulating the food, the better it will agree with their constitution. When one month old, they may be permitted to go into the fields and pasture grounds, and procure their own subsistence. They will subsist on the numerous bugs, worms and insects which infest vegetation, and of which they are particularly fond. In fattening turkeys for the table, it is well to permit them to run at large for some weeks, allowing them three meals a day of hearty stimulating food in addition to what they pick up. The first meal should be given in the morning, before they go out. At night, just before they are ready to go to roost, they should have as much as they will eat. Boiled carrots, mashed fine, with oatmeal, potatoes and sweet apples, with a plentiful supply of barley or oats, in the grain, constitute an excellent feed. A very minute portion of salt mixed with their food, has a good effect. One week before they are killed, they should be confined to a room, and the food supplied be of the richest and most stimulating kind. Boiled oats, cooked carrots, sprinkled with pulverized charcoal, bread soaked in milk, are all excellent articles, and cause them to take on fat with surprising rapidity.

Good turkeys, however, may be raised by a very simple process, so far as feeding is concerned, if the

suggestions are observed with regard to cold and wet. Exposure to these is the cause of more loss in young chickens and turkeys than all other causes combined. If one is ambitious to produce the nicest article in the market, and one which will bring a very high price, painstaking may be profitably observed.

We think that turkeys can only be profitably raised on farms where there are pretty large grain crops harvested, and where the flock can ramble at will and glean what the harvesters have left. This manner of feeding is agreeable to their habits, and they find a suitable amount of animal, to mix with their vegetable food. Under such circumstances the cost of fattening is so trifling that there is a handsome profit in raising them.

Their rambling habits render them unsuitable for small farms, or where neighbors are quite near each other No strictly conscientious farmer will allow his stock of any kind, turkeys, hens, cattle or swine, habitually to enter upon the premises of another.—

Chickens vs. Green Fly.

THE subjects of which the two parts of this journal treat gardening and poultry keeping are usually supposed to be antagonistic. Poultry are gardeners detestations, for they believe that their trim gardens are sure to be spoiled by them. Build up the wall of separation high: let not the fowls, the awful fowls, into the sacred garden; they peck, they scratch in short, "My good sir," exclaims the gardener, "don't, please even name the horrors to me: I shall dream about them, and wake in a fright."

Now for many years I have held, up to a certain point, an opposite theory, and carried it out in practice by keeping a few bantams, which have access to every part of my garden, being quite sure that they do more good than harm. As a case in proof the other day I was walking among my last year's budded roses, brushing off the green flies with a painter's brush (the best and most efficacious thing I know; indeed, I usually carry a short one in my pocket for the purpose,) when some six-weeks-old chickens happened to be near, and first one and then another tried a green fly or two, and they settled that they were very good eating. I encouraged the chickens to follow me; so I went from rose to rose, brushing the tender shoots and buds, and finally, before leaving each tree giving a shake of the stem, when down rolled the already-disturbed troublers from the leaves, to which in their perplexity and distress they were clinging: once on the ground they were eagerly eaten by the chickens. Pleased with my success, I then went to another part of my garden, to my old standards calling to me another brood of chickens of a similar age The same scene was again enacted, and in addition I threw every grub I found, green, or white, or brown, to the old hen, which accepted my offerings with manifest delight. Thus I managed to dislodge and put beyond all power of re-appearance some thousands of green flies, at the same time giving a treat to my chickens WILTSHIRE RECTOR, *in Cottage Gardener.*

IMPORTATION OF EGGS It is a startling fact, that in fourteen years the importation of eggs into this country has increased more than one hundred and sixty-nine millions. In 1849 there were imported 97,715,849, and in 1863, 266,929,680. The wholesale price in France is 6s. for ten dozen.—*English Paper.*

PRESERVATION OF EGGS FROM INJURY WHEN TRAVELLING A correspondent, "*Ovarium Faber,*" who forgets alike our rule and his name, suggests that the railways should make a special provision for conveying eggs for hatching. Such a proposal is quite Utopian, but if eggs are packed in a hamper with abundance of soft hay, they may be sent thousands of miles without injury One of the very finest birds that ever took prizes in this country came in an egg across the Atlantic. It is by no means so easy to damage the organisation of an egg by shaking as some people imagine There is an old trick of making any egg stand on its large end on a smooth table we do not mean as Columbus did it, but without breaking the shell. It is done by breaking the connections and coverings of the yolk by the most violent shaking and those only who have tried the experiment know how violent and sudden the concussion must be to derange the internal organisation of this piece of nature's perfect handiwork. However, when the yolk is broken it will sink to the part of the shell held lowest, and the egg may then be balanced on its large end like a tumbling figure —*The Field.*

The Household.

Uses of Ice.

IN health no one ought to drink ice-water, for it has occasioned fatal inflammations of the stomach and bowels, and sometimes sudden death. The temptation to drink it is very great in summer: to use it at all with any safety the person should take but a single swallow at a time, take the glass from the lips for half a minute, and then another swallow, and so on. It will be found that in this way it becomes disagreeable after a few mouthfuls. On the other hand, ice itself may be taken as freely as possible, not only without injury, but with the most striking advantage in dangerous forms of disease. If broken in sizes of a pea or bean, and swallowed as freely as practicable, without much chewing or crushing between the teeth, it will often be efficient in checking various kinds of diarrhœa, and has cured violent cases of Asiatic cholera.

A kind of cushion of powdered ice kept to the entire scalp, has allayed violent inflammations of the brain, and arrested fearful convulsions induced by too much blood there. In croup, water, as cold as ice can make it, applied freely to the throat, neck, and chest, with a sponge or cloth, very often affords an almost miraculous relief, and if this be followed by drinking copiously of the same ice-cold element, the wetted parts wiped dry, and the child be wrapped up well in the bed clothes, it falls into a delightful and life-giving slumber. All inflammations, internal or external are promptly subdued by the application of ice or ice-water, because it is converted into steam and rapidly conveys away the extra heat, and also diminishes the quantity of blood in the vessels of the part.

A piece of ice laid on the wrist will often arrest violent bleeding of the nose. To drink any ice-cold liquid at meals retards digestion, chills the body, and has been known to induce the most dangerous internal congestions. Refrigerators, constructed to have the ice above, are as philosophical as they are healthful, for the ice does not come in contact with the water or other contents, yet keeps them all nearly ice cold. If ice is put in milk or on butter, and these are not used at the time, they lose their freshness and become sour and stale, for the essential nature of both is changed, when once frozen and then thawed.—*Hall's Journal of Health.*

LAMB PUDDING Take the breast and remove the big bones: cut it crossways, season lightly; have some veal stuffing ready, and lay the meat and stuffing in alternate layers in the pudding, with a gill and a half of water to every pound; boil one hour and a half, serve with melted butter over the pudding, and a little chopped parsley on the top—it has an inviting effect. Any part of the lamb may be done in the same way.

VALUE OF OATMEAL.—In Scotland, the nourishing quality of oats, both with respect to man and brute, is well known. With respect to oatmeal, the people of England seem to have fallen into an egregious error respecting its qualities; from its producing in some a sensation of heartburn, or heat at the stomach, they have condemned it as heating; and from a mistake in regard to the nature of diseases, have supposed it to give cutaneous affections—not more frequent in Scotland than in other countries; and which, indeed, arise from no peculiar ailment, but always from a contagion communicated from one person to another. Besides the most eminent French physicians speak of oatmeal as cooling, and consequently prescribe it in fever; and the inhabitants of the East and West Indias prefer it to arrow-root, when labouring under inflammatory diseases. Though oats be the food of horses in England, yet the people of Scotland live principally upon it; and in no country in Europe do we find a more healthy and vigorous race of men. Oatmeal porridge is the best food for children; and, as an old author has justly observed: "It is the king of spoon-meats, and the queen of soups, and gratifies nature beyond all others."—*Dr. Willan.*

Miscellaneous.

Transportation of Fish Ova to the Antipodes.

THE following extracts from letters on the transportation of valuable fish to the Antipodes, the first explaining the method adopted, and the second the result, are of sufficient importance to persons interested in Natural History pursuits to be worth recording in our pages. The original letters were addressed by Mr. James A. Youl, to the *Times*:—1. Jan. 21, 1864. "Notwithstanding all the efforts made by the fishermen, we were unable to obtain a single ripe fish so long as the severe frost lasted, which appears to have prevented the spawning fish from leaving the sea and ascending the tributaries of the larger rivers to deposit their spawn. This bears out the opinion expressed very recently by Mr. Frank Buckland, 'that the salmon is a very knowing fish,' and would not, therefore, quit the estuaries so long as the spawning beds were frozen and unfit for the reception of the ova." Ripe ova were obtained from Scotland, Lancashire, Worcestershire, and Wales, from fish which had ascended the rivers a few days after the breaking up of the frost The ova were received between 5 A.M. and 10 A.M., and were placed safely in the ice-house of the Norfolk by 4 P. M. "The boxes in which the ova are packed are made of inch pine, 11¾ inches long, 8¾ wide, and 5¼ deep, perforated with holes top, bottom, and sides, to allow the water from the ice as it melts to flow into the boxes, and percolate through the moss and ova inside. The manner of packing is as follows:—A couple of handfuls of charcoal are spread over the bottom of the box, then a layer of broken ice, after this a bed or nest of wet moss is carefully made and well drenched with water; the ova are then very gently poured from a bottle which is kept filled with water: the box is now filled up with moss, and pure water poured upon it, until it streams out from all the holes; another layer of finely pulverised ice is spread all over the top of the moss: the lid is then firmly screwed down. As soon as this process is completed, it is most desirable, in my opinion, that the boxes should be placed in immediate contact with ice One hundred and sixty-four boxes containing above 99,000 ova so treated, were firmly packed at the bottom of the ice-house, covering the entire space Upon these a solid mass of ice was piled, to the height of 9 feet, so that as long as any ice remained the ova would derive benefit from it."—2. June 4, 1864. "I have just received a telegram from my friend Mr. Edward Wilson that the salmon ova by the Norfolk arrived safely at Melbourne, and have been transmitted to Tasmania, and were showing signs of life in the breeding ponds of the River Plenty"

Flax Movement.

To the Editor of THE CANADA FARMER:

SIR, As the cultivation of flax is now engaging the attention of the farmers of Canada, I would beg to say that the farmers of this Township are fully alive to the importance of the subject, believing that this Township is as well adapted for the growing of flax as any in Canada. A meeting was called by the Reeve of this Township, John Fisher, Esq., to take the matter into consideration. It was held on the 17th inst., and was well attended, considering the busy season of the year. John Fisher, Esq., was called to the chair, and having stated the object of the meeting, wished those present who were in any way acquainted with the cultivation of flax and the proper course to pursue in order to obtain a market for the sale of the raw material, to address the meeting.

John Mulholland, Esq., said that from the long experience he had had in Ireland in the growth of flax, and also in the manufacture of it, he was convinced that the Township of Haldimand was very well adapted for the growing of flax, and felt convinced that it would be a source of profit to the farmers here if a market could be obtained for the sale of the raw material in the Township Mr Thurston Fish gave some very good statements in regard to flax raising, and urged the necessity of the farmers turning their attention to this matter. Joseph Flynn, Esq., said he had been communicating with a party in Massachu-

setts who wished to erect in Canada a manufactory such as the farmers wanted. He stated that he had offered the party a good water-power, rent free for five years and was prepared to make the same offer to any person who would put up such a manufactory. He also stated that in the event of no person doing so, he was willing to put up a scutching machine at his own expense, provided the farmers would raise the flax. Benjamin Jackson, Esq., considered it necessary that the farmers of the Township should mutually agree to raise a certain number of acres of flax each year, in order to induce a person to enter into such an arrangement.

In accordance with the above suggestion a number of farmers signed an agreement to that effect.

Several others expressed themselves strongly in favour of using every effort to induce some party to erect buildings and machinery for the manufacturing of flax, expressing themselves willing that even pecuniary assistance should be given by the Municipal Council to secure us a market for flax.

It was then moved by Mr. John Mulholland, seconded by Mr. Thurston Fish, and

Resolved,—That this meeting is of the opinion that the cultivation of flax would be beneficial to the interests of this Township, and that a committee be named to further the objects of this meeting, and if deemed necessary to wait upon the Corporation of this Township to solicit pecuniary aid to induce a practical operator in the dressing and manufacture of flax to erect suitable buidings for the same.

The following gentlemen were then appointed as a committee for the above object:—Jas. G. Rogers, Esq., Joseph Flynn, Esq., John Mulholland, Esq., Platt Hinman, Esq., and Mr. Dudman.

Moved by James G. Rogers, seconded by Platt Hinman, "That John Fisher, Esq., Reeve of Haldimand, be requested to communicate with any party who would be likely to engage in the manufacture of flax in this Township."

Moved and seconded that the Secretary forward a copy of the proceedings of this meeting to the Editor of THE CANADA FARMER for insertion in that paper.

THOMAS H. McAULEY, Sec'y.

Grafton, Township of Haldimand, Co. Northumberland, August 18, 1861.

Notes on Sundry Topics.

[BY H. P. H.]

WILLOW.—The most absurd project I ever heard of is that of using willow for a hedge. I should as soon think of planting some old umbrella, or kidney bean sticks. A hedge implies a *fence* to keep cattle within bounds, &c. The most enterprising nurseryman in Canada, George Lesslie of Toronto, has some acres of the real sort. At Stouffville there are several acres planted by J. A. Sangster, formerly basket maker to Mr. Angus Dallas. The only willow in this country, adapted for basket making, is imported from England in slips; there we call them "withy pitchers." It is the *Salix viminalis*. All our indigenous willows are too brittle or too sappy for basket work. The *S. alba*, recommended by your Delaware correspondent, grows to the height of 50 to 80 feet—rather unsuitable dimensions for a fence.

GROOMING HORSES.—If your Markham correspondent will go to the barracks on the common here, and speak to one of the artillery train, he will explain the reason why artillery horses are groomed beginning at the tail instead of the head.

WILD LUPINES.—Can any of your readers inform me where, and at what price per peck, I would get some wild lupine seed? There is abundance in the woods near the Humber and Port Credit.

BRETONNE COWS.—Who will join the writer in importing a small herd of these valuable animals?

HAZELS AND FILBERTS.—For centuries past in Europe, the hazel has been protected and guarded on account of the manifold agricultural benefits it confers. To state these in detail, would occupy more space than you could afford now. The filbert is cultivated more for dessert, &c. Mr. Turner of 105 Sherborne street, Toronto, had a splendid filbert hedge, of many years growth. There are many others in Canada who grow them with success. With very little trouble, and a few years patience, the Meaford lady's children, might go nutting in their own orchard, and get a rare lot of Kentish filberts; let her try, and record the results. Hazels and filberts also grown in the Lower Province. The common nut is of fine flavour, though small, and would doubtless rapidly improve by culture.

BETTER USE FOR PRIZE MONEY.—How much better it would be if the Provincial *Agricultural* Society would encourage the growth of a variety of useful things, instead of giving away hundreds of dollars every year for needle work, confectionary, or drawings, which have been exhibited for years, and which should have been burnt then. If some of our Squires' could have heard the shouts of laughter in which some English gentlemen indulged, at the last London (C. W.) show, at the rubbish displayed, it might cause some reform.

NOTE BY ED. C. F.—Our correspondent is rather hasty in passing judgment on the fence willow. Has he ever seen it tried? Its tendency to grow to the height of 50 or 80 feet is, we are told, checked and corrected by pruning. Opinions formed in advance of actual experiment often prove erroneous.

Ice-Houses.

To the Editor of THE CANADA FARMER:

SIR,—As the season for constructing ice-houses is approaching, your views and remarks as to the making of such, I have no doubt, would be very acceptable to the readers of THE CANADA FARMER, particularly to those residing in country places, who have not the opportunity of contracting with dealers in ice for a supply for the season, and who must preserve ice themselves, if they desire the luxury. In order to direct your attention to the matter, allow me to ask you if the following will answer the purpose of an ice-house:

LOCATION.—Take a corner, say 10x12 feet, in a dwelling-house cellar, the walls of which are stone and the floor brick, having in said corner a drain; height of cellar, say eight feet, well aired, well lighted, and as free from damp as the generality of underground cellars.

CONSTRUCTION OF THE ICE-HOUSE.—Lay 4x2-inch scantling on the brick floor; on the scantling lay inch boards or plank, unjointed, and sufficiently open to allow waste ice-water to escape to the cellar-floor and drain.

WALLS.—The ice-house being in the corner of the cellar, two walls of the ice-house are ready-made, (unless these should be lined with inch boards); the other two walls are to be made eight or ten inches thick, with partition studs 8x2 inches, cased on both sides with inch boards, matched and battened; these walls to be stuffed with sawdust, and the ice-house to have a double entrance-door.

ROOF.—The roof of the cellar to be the roof of the ice-house.

VENTILATION.—By cutting a hole in the roof of the ice-house or cellar, say five inches square, the air of the ice-house will escape above the cellar. In the writer's house the ventilator would open under an inclosed stairway, the door of which is open daily.

GENERAL REMARKS.—The inside floor and walls to be covered with straw, and the ice, say ten or twelve loads, to be packed in the centre of the ice-house, to be covered with straw, loose, also in bundles. If an ice-house that will keep ice can be constructed as above, in a house-cellar, two walls and a roof in the making will be saved, while the ice will be in the most convenient place about a house for keeping butter, meat, &c., &c. J. W. K.

St. Thomas, C. W., Aug. 3, 1864.

NOTE BY ED. C. F.—We have some fears whether an arrangement like the above would answer a good purpose. It would be likely to make the cellar damp. Besides, we doubt if there would be insulation enough to preserve the ice. If, however, our correspondent has faith in the plan, and will try it the coming season, we shall be happy to give publicity to the result.

Agricultural Schools.

To the Editor of THE CANADA FARMER:

SIR,—Doubtless most of your readers are aware of the existence of an agricultural college in England, of which the late Prince Consort was the patron. The advantages of such an establishment should be plain to all agriculturists; for let us look at agriculture in the abstract. I assert, and doubt it who can, that agriculture is the primary mover of all trade. What do we work for in this world?—chiefly for food and raiment. We could not have bread and meat had we not grain and stock. In former days agriculture was looked down upon as an idle and amusing *occupation*. It is a scientific and practical *profession*. It requires just as good abilities, and just as much head work, to become a good farmer as to rise high in the professions of law and medicine. One of the chief resources from which England draws her immense capital is agriculture. To become a good farmer a man must have an early and thorough education in the principles of agriculture. All the chief sciences bear chiefly on agriculture. Botany teaches us the natural history of plants, their various forms, and ways of living. Chemistry shows us on what natural elements the plant thrives, on what it dies. Entomology points out those insects which directly and indirectly both kill and nurture our crops. Veterinary science gives the structure and form of stock, their good and bad points, their diseases and the cure. No man can become conversant with any of these unless he acquire a good solid foundation in his early days. A school education is as essential to the farmer as the doctor or lawyer.

Considering that Canada is a new country, I would earnestly say, by all means begin now, and put not off, the founding of agricultural schools. Instead of sending their sons to wayside schools, our farmers will, without doubt, patronize such institutions. We must not imagine, as some do, that because the midge and other pests have made fearful havoc amongst our wheat, it follows that agriculture is not a paying speculation. Canada is a country at whose markets agricultural products will always find a ready sale. Let us look to the future, and profiting by past experience, defy the ravages of the midge. Depend upon it, that if we give up slovenly and untidy farming, we shall strike a blow at the very root of blight and disease. Great advantages in the way of inducing a better style of farming would accrue from the establishment of agricultural schools in Canada.

AN OLD COUNTRY MAN.

Fish Culture.

To the Editor of THE CANADA FARMER:

SIR,—The subject of Fish Culture is one which is sadly neglected in Upper Canada. In Lower Canada they have Fish Preservation Societies, and Game Protection Societies. Here, we have nothing of the kind.

The Emperor of the French is spending millions of francs annually in stocking the lakes and rivers of France, with a view of supplying a cheap and nutritious food for the people. Salmon and trout spawn are exported in large quantities, and at great cost, to Australia. A writer in your last number enquires whether trout spawn is imported, and where it is to be had. Why should we in Upper Canada import an article of which we have such abundance at our doors? What is better, we have millions of trout in the brooks within ten miles of Toronto! These, however, are the victims of "pothunters" before they reach the weight of four ounces. Two young men of this city went out last week and caught more than 300 of these tiny fish. The river Don and Ashbridge's Bay swarm with fish of various kinds, and among them the best kind of silver eel, a fish more sought after in England than any, except those of the rarer kinds, such as salmon, turbot, soles, &c., &c. There are 500 shops in London, England, where nothing is sold but eels, cooked in a variety of ways. *Here*, it is with difficulty you can procure a single fish of this nutritious species.

There are a hundred "creeks" within twenty miles of Toronto, where trout might be preserved most easily, and as "Angler" says, would conduce to the amusement and luxury, and profit of the owner. Two days labour would make a dam in some of those creeks, with a run-way for the trout to go up stream to spawn. The 300 murdered trout I wrote of just now, would in two years, weigh from one to three pounds! The water, thus dammed up, could in many cases be made available for irrigation, a subject utterly unknown or neglected in Upper Canada. Canadians, however, know nothing of angling, beyond what consists of a worm at one end and the "pothunter" at the other. Scarcely any one knows how to cast a fly. If one were always sure to have an English regiment here, a Trout Protection Society might soon be raised.

ISAAC WALTON.

NOTE BY ED. C. F.—We think there are enough anglers not of the "pothunter" species, to organize a "Trout Protection Society," irrespective of the military gentlemen, who, while here, would doubtless co-operate in such a scheme. The subject is of sufficient importance, even in an economical point of view to justify effort, and we shall do our part to keep it before the public mind.

Markets.

Toronto Markets.

"CANADA FARMER" Office, August 25, 1864

Flour weak; superfine and fancy $4 per barrel; extra $4 40 to $4 80.

Fall Wheat dull at 85c to 90c per bushel, the latter for few samples.

Spring Wheat none offering, held at 90c to 94c per bushel.

Barley nominal at 60c to 70c per bushel.

Oats unsteady at 46c to 48c for Canadian.

Peas 50c to 55c per bushel.

Rye 55c per bushel.

Hay in good supply and demand at $14 per ton for best.

Straw active at $7 to $8 per ton.

PROVISIONS—*Butter*—Fresh, wholesale, per lb, 15c to 20c; retail, per lb., 20c to 25c.

Eggs—Wholesale, per dozen, 12½c to 14c; retail, per dozen, 12½c to 15c.

Hams—Wholesale, per lb., 11½c to 11¾c, retail, per lb., 12½c.

Pitch Bacon—Wholesale, per lb., 8¾c to 9c, retail, per lb., 10c.

Cheese—Wholesale, per lb., 10c to 10½c; retail, per lb., 12½c to 14c.

Hops—Wholesale, 15c to 17c per lb.

Lard—Wholesale, 11c per lb., retail, 12½c.

Beef—Market well supplied—light demand, inferior now offering; second quality, $3 to $3 50, extra, $4 to $4 50

Sheep scarce; $4 to $4 50 by the car load

Lambs each $2 to $2 25 for good.

Calves—Each $3 to $4.

Hides (green) per 100 lbs., $4 to $5

Calfskins per lb., 18c to 20c.

Sheepskins 75c.

Lambskins 75c.

Sheep Pelts 25c to 35c each.

Coal $7 to $8 per ton.

Wood $4 to $4 75 per cord.

Salt $1 25 to $1 50 per bbl.

Water Lime $1 to $1 50 per bbl.

Potatoes—New plentiful at 75c to $1.

Oat Oil at 30c to 40c for Canada; 45c to 55c and 60c for Pennsylvania.

Pears—Market nearly over; held at $4 50 to $5 per brl.

Peaches scarce at $2 to $3 per bushel.

Plums very scarce, except "greengages;" held at $2 per bushel.

Tomatoes going up; sold at 85c to $1 per bushel.

Chickens 40c to 50c per pair.

Ducks 50c to 70c per pair.

Figs 2c to 15c per lb.

Peanuts $3 to $3 50 per cwt.

Almonds 12c to 15c per lb.

Filberts 9c to 10c per lb.

Guelph Markets, Aug. 23.—*Fall Wheat*, per bushel, 85c to 90c. *Spring Wheat*, 75c to 90c. *Oats*, 33c to 42c. *Peas*, 50c to 52c. *Barley*, 55c to 60c. *Pork*, $5 to $7. *Hay*, per ton, $8 to $10. *Straw*, $2 to $2 50. *Beef*, $3 50 to $5 50. *Potatoes*, per bushel, 75c to 80c. *Butter*, 12½c to 15c. *Eggs*, per dozen, 9c to 10c. *Wool*, 35c to 38c. *Apples*, 62c to $7½c.—*Herald.*

Galt Markets, Aug. 23.—*Fall Wheat*, per bushel, 85c to 90c; spring do., per bushel, 70c to 75c. *Barley*, per bushel, 50c to 55c. *Oats*, per bushel, 45c to 50c. *Butter*, per lb., 13c to 14c. *Eggs*, per doz., 10c to 12½c. *Mutton*, per lb., 5c to 10c. *Lamb*, per lb., 7c to 10c. *Veal*, per lb., 4c to 7c. *Pork*, per lb., 5c to 6c. *Apples*, per bushel, 50c to $1. *Hides*, per 100 lbs., $5. *Pelts*, 35c to 40c. *Lambskins*, 50c.—*Dumfries Reformer.*

Hamilton Markets, Aug. 23.—There is little or no change in our market report The markets have been well supplied lately, every commodity bringing good prices. GRAIN—*Wheat*, per bush., fall, 90c to 95c, spring, 85c to 90c *Barley*, per bushel, 60c *Oats*, per bushel, 40c to 43c. PROVISIONS—*Potatoes*, per peck, 25c to 30c *Apples*, per peck, 20c to 25c. *Butter*, per lb., 20c to 25c. *Eggs*, per dozen, 12½c. *Cheese*, per lb., 12½c to 15c. *Hay*, $10 to $12 per ton. *Straw*, $3 to $4 per load.—*Spectator.*

Cobourg Markets, Aug. 24th.—*Fall Wheat*, per bushel, 85c to $1, *Spring Wheat*, per bushel, 75c to 80c, *Barley*, per bushel, 70c to 80c; *Corn*, per bushel, 50c, *Peas*, per bushel, 50c to 60c; *Oats*, per bushel, 40c to 45c, *Potatoes*, per bushel, 25c to 30s, *Hay*, per ton, $9 to $11; *Straw*, per load, $2 to $2 50; *Butter*, fresh, per lb., 15c to 17c; *Eggs*, per dozen, 7d to 8d, *Wool*, per lb., 45c.—*Star.*

Montreal Markets, August 25, 1864.—FLOUR, per barrel of 196 lbs—Superior extra $4 70 to $4 80; extra $4 60 to $4 60, fancy, $4 25 to $4 40, superfine from Canada wheat, (old ground) $4 05 to to $4 10; do., (fresh ground) $4 10 to $4 25; superfine from Western wheat, $4 05 to $4 10; Western States flour $4 00; superfine No. 2, $3 80 to $3 90, fine, $3 50 to $3 75; middlings, $3 10 to $3 30; pollards, $2 90 to $3 00, bag flour, $2 35 to $2 55 per 112 lbs. Market flat,—but few sales reported, and transactions on 'Change limited to Superfines. A 200-barrel lot of freshground from Canada wheat was sold at $4 25, and a lot of 400 brls. at $4 15,—some smaller sales having been made last evening at $4 17½ and $4 20, a few hundred barrels of Super from Western wheat also changing hands at $4 05. Western States flour brought $4; No. 2 Superfine $3 85; and Middlings $3 10. Some good bag flour was sold at $2 25 per 112 lbs. *Oatmeal*, per barrel of 200 pounds.—range for good $4 75 to $5. *Wheat*, per bushel of 60 lbs.—A cargo of Red Winter was sold yesterday p.m. at 94c, a cargo of North Western on prt., and one of No. 1 Chicago at 88½c. *Ashes*, per 100 lbs.—Sales of Pots reported at $5 50 for firsts, and first Pearls at $5 85. *Lard*, per lb.—Bull, kegs, 9½c to 9¾c, barrels and tierces 7¾c to 8¼c. *Cheese*, per lb.—Good dairy about 8¾c to 8¾c.

Chicago Cattle Market, Aug. 20.—BEEVES—The receipts of beef cattle during the week have been unusually large, and plainly evince the increasing resources of the country, despite the prognostics of the various speculators upon the shortness of the stock available for the current wants of the market. We have, however, had few of the old fashioned prime grades of stock. The supply has been almost exclusively confined to medium grades, the demand for which, on army account, has been very active, at prices ranging from $4 25 to $6 per 100 lbs. The receipts during the previous days of the week consisted of fair medium cattle. There has been no disposition to concede higher rates, and towards the afternoon sellers were disposed to make a concession rather than hold over for the demand which may exist during the ensuing days of another week. Entered sales amount to 3,312 head, at prices ranging from $4 to $7 10, chiefly at $4 45 to $5 50 per 100 lbs. HOGS—The supply during the past week has been in excess of the usual supply. There has been a less degree of activity in the market. Shippers are influenced by the unfavourable condition of the eastern markets, and further by the loss that may be sustained in shipping during the present temperature of summer. The idea of the supply of hogs being exhausted, seems as remote as ever, although the continuance of dry weather is acting unfavourably upon our corn crop, thus inducing farmers to send in stock that was intended for the autumn supply. With the large supply of the week there has been fair activity, but at a decline of 50c to 75c per 100 lbs. on the quotations of last Saturday. Sales amount to 3,243 head, at $5 50 to $10 50, chiefly at $9 to $9 50 per 100 lbs.—*Tribune.*

Chicago Markets, Aug. 24.—*Wheat*—No. 1, $2 04 to $2 06. *Corn*, $1 30½ to $1 36. *Oats*, 66c to 67c.

Buffalo Markets.—*Flour*—Double extra State $10 25; red winter Ohio, $9 87½; Illinois baker's, $13 *Wheat*—No. 1 Milwaukie Club, $2 28; amber Michigan, $2 34; white Ohio, $2 40. *Corn*, $1 45. *Oats*, 75c to 78c. *Barley*, $2 05. *Peas*, $2.

Oswego Markets, Aug. 24.—*Flour*—Red winter, $11 50 to $11 75; white winter, $12 25 to $12 50. *Corn*—No. 2 Illinois, $1 48. *Oats*, 71c to 72c.

New York Cattle Market. BULL'S HEAD, Monday, Aug. 22.—The cattle market opened with bullocks of a better average quality than last week, but that does not enable us to say the quality was good. There was a small number of pretty good bullocks, and nearly a full supply of medium quality, and more than enough very thin cattle, such as dry cows, oxen and young steers, which have never eaten corn Best cattle about half a cent higher than the regular price last Monday, selling a small number at 19c to 19¼c per lb., net, for the very choicest, and 16c to 18½c for those generally rated first quality, and 15c to 16c for the next grade. From this prices ran down all the way to 9c, and as the day advanced these prices declined and trade became very dull. We saw some cattle taken by butchers, who always try to get first-class, at 18½c per lb., to kill and weigh. This we consider the fair rate of quotations for really good cattle. Choice sales were higher, and many buyers undoubtedly find their purchases higher than they anticipated, because the cattle at this season of the year never weigh as well to their looks as they do in winter and spring, and they are said to be lighter than usual this year. The average quality of stock is better than last week, and some of the earliest sales a little higher. The sheep market is decidedly higher than last week, first-class lots of sheep selling at 8¾c per lb., live weight, and one extra lot that averaged 120 lbs. each, sold at 9½c. *Lambs* are worth 10c to 10½c per lb. Very little is doing in the swine market to-day; the nominal price is 11c to 11¾c per cwt., live weight.—*Tribune.*

AUG. 23d.—*Beef Cattle*, first quality, $18 to $19 50, ordinary to good quality, $14 50 to $17; common quality, $9 to $13; inferior quality, $5 to $9. *Veal Calves*, first quality, 10c to 11c per lb; ordinary, 8¾c to 9½c, common, 7½c to 8¾c, inferior, 7c to 7½c. *Sheep* and *Lambs*, extras, $7 to $9, prime, $6 to $6 50, ordinary, $5 to $6; common quality, $4 50 to $5; inferior quality, $3 50 to $4 50 per head. *Swine*, corn fed, 11¼c to 11¾c; still-fed, 11¾c to 11½c per lb.

Boston Markets, Aug 23.—FLOUR—The market is firm and prices have advanced on the lower grades. Sales of *Western Superfine* at $10 to $10 50; *Common Extra* $11 to $11 25; *Medium do.* $11 50 to $12; *Good and Choice do.* $12 to $14 50 per bbl. GRAIN—*Corn* is firmer and prices have advanced. Sales of *Western Mixed* at $1 09 to $1 10; *Oats* are dull; *Canada* at $1 to $1 08 per bushel, *Rye* is scarce at $2 25 per bushel. NAVAL STORES—*Spirits Turpentine* is selling at $3 60 to $3 65 cash. In *Rosin*, sales of 15 bbls. No. 2 at $13 cash. PROVISIONS—*Pork* is firm, but the demand is moderate; *Prime* at $36 to $37; *Mess* $39 to $40; *Clear* $42 to $44 per bbl. cash; *Beef* is dull; *Extra Mess* at $20 to $25 per bbl. cash; *Lard* firm at 23c to 23½c per lb.—*Advertiser.*

Liverpool Markets, Aug. 10.—*Pork*, duty free, U. S. Eastern prime mess, per barrel, 200 lbs., 75s. to 77s. 6d.; Western, 70s. to 72s. 6d. *Bacon*, per cwt., duty free, U. S. short middles, boneless, 43s. 6d. to 44s. 6d.; do. rib in, 42s. 6d. to 43s. 6d.; long middles, boneless, 43s. to 43s. 6d.; do. rib in, 41s. to 41s. 6d.; Cumberland cut, 37s. 6d. to 39s. *Hams*, in salt, long cut, 40s. to 43s.; do. short cut, 41s. to 42s.; do. shoulders, 33s. to 33s. 6d. *Lard*, per cwt., duty free, U. S. fine, 43s. to 44s., middling to good, 41s. 6d. to 42s. 6d. *Cheese*, per cwt., duty free, U. S. extra, 50s. to 54s., fine, 44s. to 48s. *Butter*, per cwt., duty free, U. S. and Canada, extra, 90s. to 95s., good, middling to fine, 80s to 88s. *Wheat*, duty 1s. per quarter, Canadian red, per cental of 100 lbs., 8s. to 8s. 4d. *Flour*, duty 4¾d. per cwt, Canadian, per barrel of 196 lbs., 21s. to 22s. 6d.; extra Canadian, 23s. to 24s. 6d. *Indian Corn*, duty 1s. per quarter, yellow, per 480 lbs., 29s. to 29s. 6d., mixed, 28s. 9d. to 29s. *Peas*, duty 1s. per quarter, Canadian, per 504 lbs., 34s. 6d. to 35s. 6d. *Beans*, duty 1s. per quarter, Egyptian, per 480 lbs., 36s. to 36s. 6d. *Ashes*, Montreal pot, per cwt., 29s. 6d. to 30s.; do. pearl, 33s. 6d. to 33s. 9d.

Advertisements.

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