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Vol. III. No. 21.

TORONTO, UPPER CANADA, NOVEMBER 1, 1866.

POSTAGE FREE.

## The Field.

### American Farm Implements.

Our friends on the other side of the lines have long been renowned for their skill in contriving and manufacturing labour-saving implements. Their constructive ability was greatly stimulated by the late war, which by rendering labourers scarce, and wages high, put a higher premium on labour-saving inventions. To such a pitch has their ingenuity attained, that thousands of acres are now cultivated at the west, without the use of any tool worked by the human hand: man's part of the task being restricted to the driving of the team by which the implements of tillage are put in motion. Having recently attended some of the States' Fairs, and had an opportunity of inspecting a variety of useful contrivances for doing farm work which were on exhibition, we propose to give our readers the benefit of a few notes respecting them.

To begin with implements for turning up the soil, we believe that a species of plough is in use in the prairie States, which enables the man in attendance to ride instead of walking, his weight having an important influence on the depth of tillage secured. As we attended no exhibition farther west than Michigan, we did not see any implement of this class, and were led to suppose that it is only adapted to the smooth, and regular surfaces of the prairie region. Among a number of ploughs of different shapes and styles of get-up, we specially noticed those exhibited by Collins & Co., No. 212 Water street, New York city. They are described as "*Hartford New Patent Solid Cast-Steel Turf and Stubble Ploughs.*" The mould-boards, land-sides and shares of these ploughs, are made by pouring molten cast-steel into iron moulds. Hence the apparently repetitious name of "cast cast-steel ploughs." After casting, they are highly tempered, ground and polished. Their extreme hardness and smoothness, together with their peculiar shape, give them both durability and lightness of draft. It is claimed for them that they will last from three to six times longer than any other steel plough; that they will "scour" in the most difficult soils, and stand friction in the most "gritty" land; and that they draw fully one-fifth lighter than any other plough while cutting the same width and depth. They will work from four to twelve inches deep; turn under stubble and all manner of rubbish; and with rolling coulter and drag chain attached, will bury weeds of four and five feet in height. They are made from 45 to 90 lbs. in weight, in sizes adapted for one or two horses.

"*McQuiston's Improved Cultivator,*" manufactured by W H Burtis & Co., Maltaville, Saratoga Co., N.Y., is an implement apparently well adapted for cultivating fallow ground, or fall-ploughed green sward

It will also till between rows of corn or potatoes; and being worked by a span of horses, the cultivator straddling one row, and working in two furrows at once, the ground is got over much more quickly than it can be by any single horse-hoe. It is cheap, costing only \$35 American money.

"*Monroe's Patent Rotary Harrow,*" for sale by the inventor, H. F. Monroe, Rockland, Maine, and by Emery & Sons, Albany, N. Y., is a valuable implement and worthy of being widely known, if the merits attributed to it by the maker and users of it, are really possessed by it. It can be worked by a single horse, attended by a boy, it never clogs, is not liable to get out of order, and is warranted to do far more and better work than the ordinary style of harrow.

The days of toilsome potato-planting and digging are numbered! Rejoice all ye whose backs are too stiff to bend, and in whose vicinage the Irish labourer is not to be had for love or money.

"*True's Potato Planter,*" does the work of twelve men; marking the rows, making the furrows, cutting the potatoes, dropping and covering them, all in one operation! It needs but one horse to work it, and will plant six acres per day, any distance apart that may be wished. So says the manufacturer, J. L. True, Garland, Maine. Price \$50.

"*Aspinwall's Potato Digger,*" made by Wheeler, Melick & Co., of Albany, N. Y., is said to do the work of digging potatoes perfectly, and faster than can be done by twenty men. It is drawn by two horses, which travel between the rows. The driving-wheels also run between the rows. A broad shovel plough runs under the potatoes,—the earth, tubers, and vines are thrown back on double vibrating separators, which riddle out the potatoes and leave them lying upon the surface. Nothing more is wanting but a machine to pick the potatoes up. Who will invent that?

Great improvements have been effected of late in mowers and reapers. On no description of farm implements have our American cousins laboured more assiduously or more successfully than on these, and surely no more benign invention was ever bestowed on the farmer than that which has so materially reduced the labour of haying and harvesting. A very thorough trial of mowers and reapers was held in Auburn in July last at which we were, part of the time, present. Never before had we any adequate conception of the amount of close and scrutinizing care bestowed upon this class of implements, both by the makers and users of them. Little points of detail were explained and discussed with a particularity and discrimination, which showed that intelligence and mechanical skill of no ordinary grade, were being expended upon them. Very severe tests were applied in the way of tangled grass and lodged grain, and while really good work was done by most, if not all, the large number of machines that competed, we do not wonder that the judges marked the performance of some

of them "perfection," for surely nothing better in the way of shaving the face of mother earth could be desired! A list of the successful machines has already appeared in this journal, but we cannot forbear adding a few observations in regard to some of them. The "*Buckeye Mower,*" made by Adriance, Platt & Co., of Poughkeepsie, N. Y., and operated by Mr. Adriance himself, is certainly a "jewel" of a mower. For shortest and evenest stubble, durability, least side-draft, superior portability and facility of management, the palm was deservedly awarded to this machine. In some respects, however, the "*Rhode Island Clipper,*" and "*Wood's Mower,*" trod pretty closely on its heels.

"*D. M. Osborne & Co's Reaper and Raker,*" though it did not so completely out-distance competition as the winner in the preceding class, well deserved the gold medal which it got. In Self-Rakers, Seymour, Morgan & Allen, of Brockport, N. Y., took the first prize, their machine unquestionably surpassing all others in quality of work, durability, smallness of side draft, and facility of management; the only objection to it being its greatest draft; this, however, being caused not by excess of friction, but by greater provision to secure durability, the force of the objection is considerably lessened. In "Combined Mowers and Reapers," the competition was pretty close between the "*Eagle*" and "*Woods*" machines, but the advantages of the "*Woods*" were considered slightly to preponderate. In "Combined Reapers with Self-Raking or Dropping Attachments," the machine of Williams, Wallace & Co., took the gold medal, it being best as to quality of work, ease of draft, and facility of management.

Machines for tossing and spreading hay are now coming into extensive use. In the days of scythe-mowing it was necessary when the grass was heavy, to turn it in order to get it well cured. This is even more necessary now that the mower has come to be so generally adopted. The mower leaves the cut grass pretty evenly distributed on the surface of the ground but when the crop is heavy there is a non-conducting layer or top exposed to the scorching rays of the sun, and if this is left undisturbed, the layers below it will remain wet for a long time. It is very desirable to cure hay as evenly and as quickly as possible, so that the nutritive ingredients in it, may not be wasted, or its sweetness and fragrance lost. The "*Hay Tedder*" as it is called, accomplishes this. It shakes up, turns over, and scatters about the newly-cut grass, and in good, airy, hay-weather, the crop may be cut, turned, raked, and carried the same day. Three of these machines came under our notice at recent American Exhibitions. "*Bullard's Improved Hay Tedder,*" is the oldest implement of this description, having been patented, May 21, 1861. John Giles, of South Woodstock, Conn., the noted breeder of Alderneys, nearly all of whose farm is taken up by meadow and pasture, uses this tedder, and speaks of it in the high-

est terms. We saw it first in his barn last fall, and examined the hay made by its aid. Certainly the most fastidious animal could not desire sweeter, nicer hay than it was. Both as a labor-saving machine and for the improved quality of hay obtained by the use of it, this implement is valuable. "Bullard's Tedder" may be had of George A. Squier, Syracuse, N. Y., or S. S. Whitman, Little Falls, N. Y. These parties are agents for S. C. Herring, 251 Broadway, N. Y., by whom the patent is owned. Its price, if we are not mistaken, is \$70. Taylor's Patent Hay Tedder," is a more recent invention than Bullard's, but how it compares with its predecessor, we do not know. It is cheaper, the price being \$60. The "Ohio Mowing Machine Co.," Millbury, Mass., manufacture it. "Craven's Hay-Spreader," works on a different principle from those just described, and may be used either as a simple hay-spreader, or a Combined Hay-Spreader, Raker and Loader." The loading attachment consists of a large wooden tube or spout, through which the hay is forced or driven by sets of iron teeth. We should imagine that it would only work well on very smooth ground, and hence is not likely to come into very general use. The "Craven Tedder" is manufactured by "The Ames Plough Company," Quincy Hall, Boston, Mass.

Revolving horse rakes are now constructed in such a manner that the driver can ride, and yet control the machine more perfectly than on the old plan of walking behind it. One of these machines that we saw, has the rake placed between the wheels and the team. It is thus under the eye of the driver, who disengages the gathered hay, by operating a lever. Others have the rake behind the wheels, but are also regulated by a lever under the driver's command. These improved rakes cost from \$30 to \$10. We have not among our notes the address of any of the parties who manufacture them.

Horse pitch forks in great variety compete for the patronage of American farmers. In this Province, there is great incredulity as to the efficiency and utility of these implements. The more's the pity. Why men should resignedly doom themselves to intolerable back aches pitching hay into their barn-gables, or to the top of high stacks, when an old, broken-winded horse can do it for them faster and better, is a thing we cannot understand. Some ten Canadian dollars will buy one of the best of these horse pitch-forks, and it will pay for itself in a single season in the case of any farmer who has a large breadth of meadow. It is no longer a question whether a horse can be made to pitch hay.—The work is done before the eyes of wondering multitudes at every State Fair, and the number of competitors in this department, together with the large number of sales effected, give proof that this is no longer an experiment. We doubt if there are a dozen horse pitch forks in use in all Canada. There is not, so far as we know, a single implement-maker in this country who is manufacturing them. Yet their name is "legion" in the United States. Hardly a solitary respectable farmer is without one. A single firm has sold upwards of 20,000. How absurd it is then for any man to put on a wise look and say "horse-pitchforks are a humbug!" Among the numerous implements of this description that are now before the American public, it is difficult to say which is the best. The "Little Giant" and "Gladding-Fork," two modifications of the same implement, may safely be recommended. They are made by J. L. Mansfield & Co., of Clockville, Madison Co., N. Y. "Buckman's Patent Grappling Fork," is another good one. It is of light draft, needs no scaffold or inclined plane, works its own way over beams or under barn and shed windows, will grapple short or loose hay and straw, and may be used for hoisting barrels, boxes or bales, grappling for lost articles in deep water, and finally as a pair of ice tongs. S. R. Earls, 23 Church street, Albany, N. Y., is the manufacturer of this implement. The "Elliptic Horse Hay Fork" made by J. K. O'Neil, of Kingston, N. Y., also works well. It will handle corn stalks, flax, hemp, loose or sheaf oats, as well as hay. It can press tightly whatever it lifts, and is said to stow away more in a given space than other forks. "Roger's Patent Harpoon Horse Hay Fork" is a neat, light, simple implement, and takes up but very little room. It is made entirely of iron and steel, and is not much

larger than an ordinary hand pitchfork. It is sold by Nutting, Hull & Co., 357 and 359 River Street, Troy, N. Y. "Walker's Improved Horse Pitchfork," is very like the "Harpoon" fork just mentioned. The "Harpoon" has two barbs which thrust themselves into the hay on the implement being raised. "Walker's" has a single and somewhat longer prong or barb which supports the load taken up. "Walker's" fork is made by Wheeler, Melick & Co., Albany, N. Y. We must not omit mention of another invention for hoisting and storing hay, which differs materially from those just enumerated. "Tice's Hay Elevator and Carrier" consists of a track made of plank and fastened to the rafters a few inches below the ridge of the barn. On this track the car runs, which, by a peculiar arrangement, is held in position over the load to be hoisted until it receives its freight of hay from a horse-pitchfork, when it is liberated and sent along the track to the desired spot. The operator unloads the car by pulling a cord, and the same pull that trips over the hay, restores the car to its position over the load. The car costs \$15, and a track of 60 feet about \$1. All the prices named in this article, it will be borne in mind, are in American currency. Slightly modified, the arrangement just described will elevate and unload coal, plaster, ashes and manure, from barges, canal-boats, &c. Thus it will be seen that with the modern, progressive American farmer, the toil of the hay-field is among the things that were. He cuts his grass with the mowing machine, cures it in double-quick time by the tedder, rides round in a gig and rakes it, puts it on a waggon with the loader, hoists it to the ridge-pole with a horse pitch-fork, freights it to the desired spot on a top-loftical railroad, pulls a string and all is over! The toil that bent the backs and broke the hearts of our forefathers is converted into a series of innocent amusements! Hip-bip-burrah!

Further notice of American Farm Implements must be deferred for the present.

## Familiar Talks on Agricultural Principles.

### THE WHEAT CROP.

WHEAT, furnishing as it does, the most important article of human food,—that which has been expressly called, "the staff of life,"—deservedly takes the first place among the crops grown on the farm. It is an annual herbaceous plant, of many varieties, the diversities being probably the result of difference of climate, soil, and culture. All the kinds cultivated on this continent belong to the same species, of which there are two leading varieties: winter and spring wheat. The root of this plant is well adapted to withstand severe cold, and hence it successfully braves the winters of a high latitude, thriving several degrees farther northward than any point in Canada. The grain is composed chiefly of starch, the per centage of which varies from 50 to 70 per cent; it also contains a large proportion of gluten, the per centage of which varies from 10 to 20; in addition to which it contains from 3 to 5 per cent of fatty matters. It is a note-worthy fact that the per centage of gluten in wheat varies according to the quality of the soil in which it is grown. A crop grown on fertile land not only yields more bushels of grain, but will give more and better flour than that produced on poorer soil. Wheat does best on strong, tenacious land, abundantly stored with both mineral and organic plant-food, in a well-elaborated state. It will neither thrive in poor soil, nor in soil whose resources of fertility are in a crude state. Most of the constituents of the grain can only be obtained from the richer kinds of manure, and there is, perhaps, no crop raised on the farm which is more exhaustive than this. The straw of wheat is composed largely of silica. It also contains lime, gypsum, magnesia, and common salt. Chemistry has shown that the ash of wheat contains a proportion of bone earth or phosphate of lime. About 70 pounds of this substance are taken by a crop of wheat from an acre of ground. This is a substance which is never found in any large proportion even in fertile soils. It abounds most in new lands, in consequence of the ashes of the wood that has been recently cleared and burnt out of the way. Wheat requires not only a rich but a deep soil. It flourishes best in land that has been deepened by subsoiling and underdraining, as well as enriched

by liberal supplies of manure. Manures containing nitrogen, phosphates, and alkalies, are best suited for soil in which it is intended to grow this crop. Guano, liquid manure, animal refuse, wood ashes, and crushed bones, are sources whence such supplies may be obtained. The composition of the plant, and its habit of growth, show what place it should hold in a rotation of crops on the farm. From the fact that it requires to have its material of nutriment in a thoroughly elaborated state, it is plain that the soil should be as mellow, and well-fined as possible. This suggests the culture of roots as an excellent preparation for wheat, as nothing so completely mellows land as a well-cultivated crop of roots. Wheat very readily permits grass and weeds to grow beneath its shelter. This is another reason why it is best a root crop should precede it, since in this way the land is effectually cleansed. Its true place, therefore, evidently is after a root crop and before grass, which last is sown to excellent advantage along with wheat.

It is foreign to the object of this "talk" to refer to the harvesting and after treatment of wheat and its straw. Only a few hints as to the principles that bear on its successful culture can now be given. Wheat, although our most important grain, has come to be looked upon as a rather uncertain crop, especially in the older sections of the country. This arises chiefly from the diseases and insect enemies to which it is liable. The principal diseases are rust, mildew, smut, ergot, and canker or blight. The chief insects that prey upon wheat are the midge, the Hessian fly, the army-worm, and the joint-worm. It is worthy of especial attention that good farming is a safeguard against most of the diseases that affect this crop. Scrupulous care to sow only healthy seed is a most effectual means of securing a healthy increase. Like begets like, and disease is propagated in the plant-world, much as it is transmitted from father to son in the world of human beings. Early sowing is another excellent precaution. Drainage is most important. Wheat growing on low, undrained lands, with a peaty or calcareous soil, is very liable to be attacked by mildew. Keeping this grain in its proper order of succession to other crops, is another means of preventing disease. Thorough working of the soil and keeping it supplied with the right nutritive elements in due proportion, is also of importance. The insect enemies of the wheat crop are not so easily kept under. Though good farming is to some extent a protection against them, yet they frequently defy the utmost skill, industry, and vigilance. Thorough tillage, careful preparation of the soil, deep fall ploughing, burning stubbles, a judicious rotation of crops, rolling the young wheat, &c., have proved themselves excellent precautions. By threshing wheat infected with insects on a tight barn floor, and burning up the chaff and dust, a large proportion of the eggs and larvæ destined for future increase, may be destroyed. A species of wheat called "midge-proof," is pretty extensively sown now, and entomologists hold out the hope that before long the midge will be held in check by other insects preying upon it, as has been the case with the Hessian fly and other pests of the farm.

DESTROYING CANADA THISTLES.—A correspondent of the *Western Rural* gives the following method which he adopted:—"Some years before I came to Michigan, I purchased twenty-seven acres adjoining my old farm. I made the purchase when the owner was harvesting his wheat; there were twenty acres of it in with wheat, and some nine loads of it were so full of thistles that it was pitched to the waggon and from the waggon to the machine without binding. The same fall I piled over the straw and mixed in twelve bushels of slacked lime to rot and kill the thistle seed. The next season I summer-fallowed and cultivated and sowed to wheat. The following season I harvested a fine crop, and every thistle on the twenty acres could have been bound in a single bundle."

## Experience with the White Willow.

To the Editor of THE CANADA FARMER :

Sir,—Your paper of Sep. 15, page 275, contains a communication from Levi Smith to the *American Agriculturist* respecting the white willow for live fences, which appears to agree with what I have growing on my place, which I planted the beginning of June 1864, and some of which now measure over eight inches in circumference. *Mark*, this is what has grown from the cuttings, which were planted even with the surface of the land. I procured and planted the white willow in the first place in order to test it, to see if it was what it was cracked up to be. From the growth made by the cuttings planted by me I am fully satisfied that with proper management they will answer the purpose for a fence. I am so well convinced of this, that I have set out a fence this summer. But I work on a different plan from what the Yankees recommend. They are for selling as many cuttings as possible—I am for the real use and improvement of the country in appearance. There is a marked contrast between Canada and many parts of the States of New York and Vermont. We in Canada have no shade trees on our road sides or next to none. In many parts of the States of New York and Vermont they have beautiful shade trees on the sides of the roads and in their cities and villages, which serve a twofold purpose, both beautifying the country and making a very agreeable shade for man and beast on hot and sultry days. There is no tree that I am acquainted with that will answer the two purposes of shade and fencing and will grow up so quickly as the white willow. Many of our farmers appear to think that anything they may use in the tree or shrub line, after they have once set it out, ought to grow just as they should wish it to do, so as not to give them any trouble in attending to it. In my view there would be just as much reason in going into the woods and after selecting a tree for a rail fence to expect it to fall into logs and split into rails ready for a fence, as to expect the other. I know of one man who pulled up and threw into the road some white willows because they did not grow as he wished them to do. If farmers would only bestow a part of as much time in attending the white willow as it takes them to stick rails in their old rail fences, they would soon have a fence that would every year be growing better instead of growing worse.

J. CALCOTT.

Delaware, Oct. 17, 1866.

## Ploughing Now and Sixty Years Ago.

We have been much interested and somewhat astonished by reading an article in the *Agricultural Gazette*, of Sept. 29th, in which the wind is taken out of the sails of modern manufacturers and exhibitors, by an account of what was accomplished in the way of ploughing more than half a century ago. The *Gazette* takes the matter up seemingly by way of revenge upon the pushing business firms who are pestering hard wrought editors by making large use of printer's ink and Her Majesty's mails. It complains of receiving almost daily broadsheets announcing the success of Mr Ransome's ploughs and ploughmen at the local matches all over the country. The Messrs Howard, of Bedford, have ceased to compete at these local gatherings, which are valuable to manufacturers only as an advertising agency, but interesting to agriculturists from their influence on rural improvement. Referring to a recent ploughing match at Kingscote, in Gloucestershire, the *Gazette* asks :

"Will Messrs. Ransome, whose man and plough carried every thing before them there, tell us what was actually accomplished? How many cubic feet of earth was turned over, in how short a time, at what a cost of labour? It adds, we think it probable that the annals of that same parish can give instances very many years ago when more was done at smaller cost within as short a time. In the 12th volume of the "Transactions of the Bath and West of England Society," there is an account of a ploughing match at Kingscote, which took place close on 60 years ago. Three ploughs started for the prize. They were all of that description called Beverstone. One was drawn by two small oxen of a mixed breed, with

a driver; another by two horses without a driver; and the third by one horse without a driver. They started together, and their respective half acres were ploughed in the following spaces of time, viz. :—

The plough with two horses, in 2 hours and 28 minutes.

That with two oxen, in three hours and 14 minutes.

And that with one horse, in 3 hours and 17 minutes.

Immediately after the work was performed, the umpires delivered in their adjudication, which was as follows :—

"Hunter's Hall, Kingscote, Gloucestershire, May 10, 1803.

"We the undersigned, having been this day appointed umpires, by a Committee of the Bath and West of England Agricultural Society, for managing a trial of ploughs, to determine on the respective merits of the following candidates to wit :

"Mr. DREW WATER HATWARD of Frocester, a Beverstone plough drawn by two oxen, with a driver; THOMAS COX, ploughman.

"Mr. JOHN HATWARD, of Beverstone, a Beverstone plough, with one horse, no driver; THOMAS PEARCE, ploughman.

"Mr. WILLIAM KIRBY, of Hunter's Hall, a Beverstone plough with two horses, no driver; WILLIAM WREN, ploughman.

"Having carefully examined the work done by each, and judging by the rules laid down by the said Society for our direction, are unanimously of opinion, that the plough drawn by the two oxen is entitled to the first premium offered by the said Society, and the plough drawn by two horses to the second.

Signed,

"ANTHONY ALLEN.  
"WM. CHANDLER.  
"WM. WHITE."

The *Gazette* then proceeds to give a wood cut description of the Beverstone plough. It is a short, stubbed looking implement, very like the plough used by American farmers in the newer parts of the country. It is furnished with a coulter, and wheel of rather large size, so arranged that it can be raised or lowered at pleasure. It is a very plain, unattractive looking affair, and it must be mortifying that it should be considered to have equalled or eclipsed modern and beautifully got up ploughs, in the amount and excellence of its work. The *Gazette* says that a Committee of the Society appointed to investigate the circumstances of this trial reported that the same ploughman who here drove the one-horse plough did, in 4 hours and 35 minutes, plough  $4\frac{1}{2}$  inches deep, in a workmanlike manner, one acre of two-year old Clover-ley; and that "Mr. Tugwell, 22 years before, had with a similar instrument performed the same feat with a horse, which on the preceding day had been purchased for 50s., and which, in conjunction with another horse (in the possession of the same family), had continued to complete their acre with a Beverstone plough almost every day for 10 years afterwards."

Of course the true test of the goodness of a plough is the quantity of tillage accomplished by it in a given time and within a given cost, and the *Gazette* demonstrates that an implement now deemed old-fashioned and comparatively worthless, did nearly 60 years before the time of Mr. Ransome's victory, on the very same land, perform an amount and quality of work which "was economically an even greater achievement and success."

## Alsike Clover.

Mr. Channcy Miller, of the Shaker Family, near Albany, furnishes the following statement of his experience with this plant for the *Country Gentleman* :—

"We find the Alsike Clover a very superior grass in the following points: 1. For its value as a hay crop, on a great variety of soils, being of a growth, in height, varying according to quality of soil, from 10 inches to 2½ feet, and yielding from 1½ to 3 tons per acre, according to soil; thus comparing with our best red clovers, though, of course, not so high as the great western pea vine clover, but, with us, one-third higher than the small, southern, red clover. 2. For fineness of stalk, or haulm. 3. For its multitude of sweet flowers, blooming, perhaps, three or four times as much as red clover, making, when in bloom, literally "a sea of flowers." 4. Its adaptation to heavy soils, clays, or heavy clay loams (as well as sandy soils), not being so liable to heave out by frosts in winter and spring as red clover (trifolium repens), being the product of a cross between the red and white clovers, originated in Germany. 5. To all farmers who keep bees largely, the crop would be of great value, as bees can work upon the flowers equally as well as upon white clover, as they are about the same size, and precisely the same habit as

the latter, but are much more abundant in honey; bees appear as fond of the flowers as of mignonette, and, in its season of flowering, which lasts about six weeks, are continually upon it, from dewy morn until dusky eve. 6. To those farmers raising clover seed for market, the Alsike clover, in our opinion, would be of great value, as it seeds enormously, and the seed threshes easily, by flail or machine, leaving a beautiful quality of hay, the stalks retaining their greenness, when most of the seed is quite ripe. 7. It holds many weeks in bloom, thus giving the farmer lee-way of time and weather, in regard to securing the hay crop."

## The Manure Pit.

The Agricultural Editor of the *New York Times* gives a description of a barn, recently erected by Dr. Hexamer in Westchester county. In alluding to the stables he says :

"The floors of the stables are watertight, and the surface descends a trifle, so that all the liquid flows in gutters into the manure pit directly in the rear of the stalls. Small flap doors are prepared close to the floor, which provide a convenient opening for throwing out all the solid litter into the manure pit, which is about 100 feet long, 6 feet wide, 4 feet deep substantially cemented on the inside and bottom, so that no surplus water can enter or escape. At one end of the pit stands the privy, which furnishes much excellent fertilizing material. The manure is spread around evenly and covered with muck, or rich mellow soil. The pit will contain about 100 loads; and on that small farm it is filled and emptied three or four times annually with the choicest compost. With such a pit no manure is wasted. As the liquid from the stables is not always sufficient to keep the manure, containing a large proportion of nitrogenous matter, from becoming "fire-fanged," the leader from the cave-troughs is so arranged that any desirable amount of water can be turned into the manure pit during the fall of rain. The pit is so arranged that a cart or wagon may be driven along close by its side, from end to end, thus facilitating the great labor of forking and shoveling the compost. The arrangements for making barnyard compost, on which farmers must rely chiefly for material to maintain the fertility of their grounds, are most complete, convenient and economical. Those farmers who waste half of their barnyard manure should learn by these suggestions to save all their manure, and thus raise bountiful crops of grain, roots, fruit or grass."

WORTH RAISING.—Mr. A. T. Gregory, nursery-man of this village, the other day showed us a "specimen brick" of a new variety of potatoes—the "Garnet Chili"—introduced by him which weighed two pounds six ounces. If any of our horticultural friends can beat this, let them bring along the documents.—*Mount Forest Examiner*.

LABOUR SAVING MACHINERY.—A practical, hard working farmer, who attended the late New England fair at Brattleboro', wrote at follows to a local paper :—

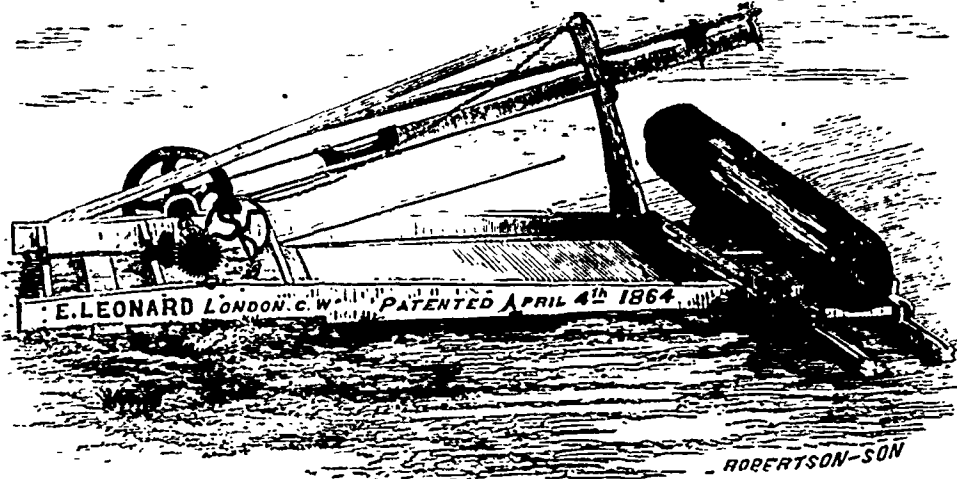
A careful examination of all the labor-saving agricultural machines, establishes the fact, that the days of hard, life-destroying labour on the farm, are about being numbered, and that in rural life, there are to be greater opportunities for leisure, for intellectual improvement and practical progress.

PERMANENT PASTURES AND MEADOWS.—When a meadow is designed more particularly for permanent pasture, a mixture of grasses is desirable. In either case the soil should be rich, or made so before seeding. If it needs help, the following compost, being the proportions required for an acre, will be found of great service. It is scarcely necessary to add that its uses are equally applicable to a meadow when set down to pure timothy. Ten bushels of bone-dust, 20 bushels of unleached ashes, 10 two-horse cart loads of well-rotted stable manure, 1 bushel of plaster and 1 bushel of refuse salt. Form the above into a compost for ten days, then mix, spread broad-cast and plough lightly under.

Quantity of Grass Seed for a Permanent Meadow.—One bushel of orchard grass seed, ½ bushel of Kentucky blue grass seed, ¼ peck of timothy seed, ¼ bushel of perennial rye grass seed, 1 bushel of tall meadow oat seed, and 3 lbs. of sweet scented vernal grass seed. The orchard and Kentucky blue grass seed should be moistened for ten or twelve hours before sowing. They should then be mixed with the other grass seeds, omitting the timothy—after adding twice their bulk of ashes, and should be thus sown. Seed the timothy afterwards by itself. Mow lightly and roll.—*Maryland Farmer*.

### Leonard's Rocking-motion and Self-lifting Sawing Machine.

THE axe, time-honoured tool though it be, is beginning to give place to a more scientific implement. While there are certain operations in the bush that still require the axe, and will continue to do so until the last forest-tree is felled and stripped of its branches, the saw is far preferable for working up the trunk. It makes neater work, effects a considerable saving of chips, and cuts up the tree with far greater celerity. Time is economized and hard work avoided by the substitution of the sawing-machine for the axe, wherever it is practicable to do so. The axe and sawing-machine stand related to one another very much as do the scythe and mowing-machine. We cannot wholly dispense with the scythe.



There are corners, and rough, stumpy fields that only the scythe can operate upon, but wherever it can be used, the mower is far preferable to the keenest scythe, handled by the expertest workman. So of the sawing-machine. The annexed cut represents one of these machines, which is manufactured by Hon. E. Leonard, London, C. W., to which was awarded the

first premium at the recent and previous Provincial Shows. Its chief peculiarities, as compared with other machines of the kind, is a rocking motion, by means of which the saw clears itself, and also a self lifting arrangement, both of which are practically found to be advantages. This machine is warranted by the maker to cut ten

cords of stave wood per hour. Sawn wood is generally regarded as more valuable than that which is chopped. Some railroad companies in the United States pay 50c. a cord more for sawn wood than for chopped. These machines will also cut up knotty, crooked, and gnarled logs, which have been abandoned by choppers. These, reduced to stove length, are easily split into size fit for use. We are not advised of the cost of the machine here figured, but our impression is that it is somewhere in the neighbourhood of forty dollars.

All particulars may be had by addressing the maker.

### Canadian Natural History.

#### The Mink.

(*Vison Lutreola.*)

This lithe and sleek little creature is spread over a large extent of the earth's surface, being found throughout the more northerly portion of Europe, as well as in North America. It ranks high among fur-bearing animals, and is much more in request for its valuable coat than it used to be. For some reason or other, the fur of the mink, though unquestionably handsome in appearance, and very thick and warm, has until recently brought but a low price, thus creating a temptation to substitute it for the sable, a much more expensive fur which it greatly resembles, and to which in real utility it is not much inferior. Mink fur is brown in colour, but the shades are very variable, the darker ones being most sought after. A white patch of dimensions varying much in different specimens, is always found about the jaws of this animal, and in some cases the fur about the head is of so dark a brown as to be nearly black. The mink is a water-loving animal, and frequents the banks of ponds, rivers, and marshes. Naturalists say that it prefers the stillest waters in the autumn and the most rapidly flowing streams in spring. Its food consists mainly of fish, frogs, crawfish, aquatic insects, and the like. In general appearance, it somewhat resembles the marten or ferret.

It is not unlike the otter in some of its characteristics and movements. Indeed, it is called by such names as the Smaller Otter, and the Musk Otter. From its resemblance in some respects to the pole-cat, it has been called the Water Pole-cat. The feet of the mink are slightly webbed, so that they are well adapted to facilitate the process of swimming. Hunting and trapping the mink are familiar pursuits in all the newer portions of this country and throughout the great fur-bearing region known as the Hudson's Bay Territory.



**DESTROYING RATS.** A Delaware Co. farmer says:— At this season of the year, when cellars are crowded with fruits, vegetables and all kinds of winter stores, rats often become an intolerable nuisance, which must be abated. Poisoning may afford a temporary relief, but in the end the remedy is worse than the disease, for the rats, after eating the poison,

crawl into inaccessible corners to die, and the house is soon filled with their unwholesome and offensive odor. They may be driven from a dwelling infested by them, by setting, in a measure of meal a steel trap, and covering it lightly with the meal, affixing to it a small chain attached to a spring-pole, with the trap so arranged that when the rat pulls, the trap will be drawn up by the pole. The rat thus caught, will warn his fellows by piercing squeals of the terrible punishment awaiting them, and the premises will be vacated for a season, but they are

liable to return, and the last state of that house is usually worse than the first. When a boy, my father sent me into the cellar to get some apples from a bin which had not been opened, as the fruit being an extra keeping variety, had been reserved for spring use. On returning, I set the family into a burst of laughter, by reporting that "the hogs had gone up the drain and chewed the apples all to pieces." The apples were destroyed, but rats instead of the depredators. A large kettle was immediately carried into the cellar, and half filled with water, then a thick covering of oats poured over the surface, and a short board placed with one end on the ground and the other

against the side of the kettle, and another narrow strip laid across the top of the kettle in close proximity to the end of the board running from the ground to the kettle. In the morning twelve quarts of rats, by actual measurement, were taken from the kettle, and not even a Noahian rat escaped from the flood to disturb the serenity of our repose.

## Stock Department.

### Good Stock.

The recent Provincial Exhibition has been pronounced a decided success. The excellence of the articles exhibited, the throng of visitors, and we presume, the pecuniary results, have realized the most sanguine expectations of the Association. But, to establish the success of all such exhibitions, there is one result requisite, without which all the labor and trouble attending them will be comparatively expended in vain. Unless our farmers are stimulated by what they see to a laudable emulation; unless the display of good field and garden produce incites a desire and effort to raise the like; and unless the show of beautiful animals, in fine condition, diminishes the lazy complacency with which the easy farmer has been accustomed to regard his lean kine, and all the varieties of his ill-favored stock at home, and sets him thinking whether he cannot himself raise a breed of animals that shall at least approximate to the excellence which he sees and admires—unless, as the main result of these gatherings and this competition, the produce and stock throughout the country generally become improved—then must these annual exhibitions, however admirable, be pronounced a failure rather than a success.

Looking now at the department of stock only, let us enquire whether there is any valid reason why the ordinary farmer, who earns his daily bread by his calling, who has no surplus funds to spare for mere display, and can afford no fancy prices to gratify his taste or his vanity—is there any sufficient reason why he should not be the owner of first-class stock of all kinds? and would it not pay him better than raising inferior animals, of the old sorts, and in the old way? It will be found on investigation that many of our most successful stock-raisers have begun with very small means, and have attained their present success by skill and attention rather than by money. Many instances in point could be adduced. One farmer, for example, who has taken prizes for his cattle in local and Provincial Exhibitions for several years past, commenced his farm experience by purchasing from a neighbour, at the ordinary market price at the time, a single cow in calf. The calf proved to be a heifer, a very pretty creature; and from this, by judicious selection of the bull, and intelligent care in rearing the young,—learning his experience as he went on—for he had not been a practical farmer in the old country—he gradually improved his stock, without making a single expensive purchase, till he became the owner of one of the choicest herds in the Province. As another example it may be mentioned

that the animal which took the first prize in the grade class at the recent Exhibition, was raised in the same way; and the best judges on the ground affirmed that it would be difficult, if possible, to distinguish this animal from one of the purest blood.

There are plenty of similar instances, to encourage the poorest farmer in the laudable desire of improving the stock on his farm. Let him remember, that the keep of the best animal is perhaps less expensive than of the poorest of the same class. For, an animal in good condition will eat less than a lean, hungry, half-starved creature, whose appetite is never satisfied, and whose instincts cry out against the low condition in which he is kept.

It has sometimes been objected against high-bred animals, that they are less hardy, and more liable to disease than inferior stock; and that the farmer who raises the finer breed is more exposed to loss, on account of sickness and death, than he who keeps only the common kind. Surely, there is some mistake here. The improvement of the physical con-

dition of an animal cannot render it more liable to disease. It may be true, that in man, increased refinement and mental culture, which are often attained at the expense of physical development, may bring in a train of corporeal maladies to which inferior races, or lower classes, are strangers. But these disorders are not the necessary associates of a higher humanity. They spring from violations of natural laws, and the neglect, often, of the most obvious conditions of bodily health. The higher physical development engenders a vigour of constitution and energy of vital power that will resist effectually those sources of disease by which the feebler body would be overcome. The prejudice in question has, most likely, arisen from the fact that slight notice is taken of the sickness or death of the poor animal of little worth; while the loss, or mere ailing, of a valuable animal makes a great sensation. It is not that good stock are more subject to disease, but that their disorders are reckoned of more account, and their loss more severely felt. But this is surely no

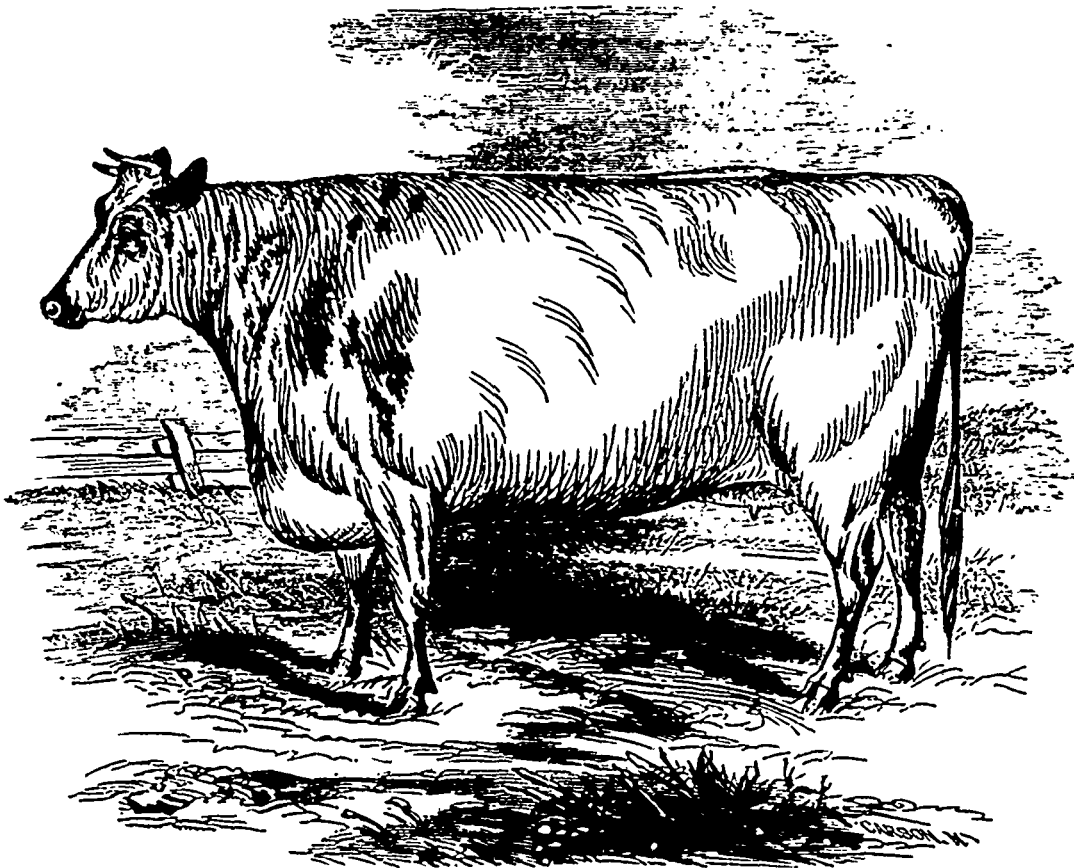
sound argument for keeping inferior beasts. You cannot enhance the value of anything on other terms than rendering its loss, when it occurs, more heavy; but the risk of loss is not thereby increased. In the case under consideration it is even, with proper precautions, diminished, and vastly counterbalanced by the advantages and profit of raising good stock. Every farmer has it in his power to attain this desirable object. Let him, if necessary, sell some of his present inferior animals, and buy one good heifer calf, one sow pig of superior breed, and make a commencement in the same direction among his poultry, selecting any of the excellent varieties that may best suit his taste or his special purpose; and by after care and attention, choosing for breeding always the best females he can raise, and using for service only the males of approved qualities and pure blood, if possible, he will soon see his farm stocked with animals that he will be proud to own, and that will yield him far better returns in pocket than he has hitherto realized. There is one other point he must attend to. Besides the careful selection of the parents, he must never stint the young. Poor keep and neglect will check the growth and alter the form of animals sprung from the very best blood; and, in time, produce a degeneration from which all trace of the original excellence will have disappeared. One of the disadvantages of possessing only ordinary stock is that the farmer will be tempted, on account of their small value, to neglect them; while the owner of a fine animal is impelled by considerations of interest, as well as the pride he takes in his property, to give all due care and attention to the creatures whom he values so highly, and probably elects into the circle of his pets. When right views on this subject become more

general, the raising of first-class stock will be regarded, not as the amusement merely of the wealthy, but as the business of the farmer, whose calling, by this means, and by the enlarged intelligence pervading the other departments of his work, will become more profitable, and will be held in higher esteem.

THE DURHAM COW, "GRACE DARLING."—We commence our series of illustrations of prize takers at the recent Provincial Show, with this choice animal. Her pedigree is as follows:

No. 1006, Light Roan, calved April 1st, 1863, bred by John Snell, Edmonton; Grace Darling, by Baron Solway, 602; 1. dam, Fancy, by John O'Gaunt 2nd, (13089); 2. dam, Fairy, by Logan, A.H.B., 95; 3. dam, Double Rose, by Prince Hal, 137; 4. dam, Roscilla, by Enchanter, (3729); 5. dam, Elvira, by Young Comet, (3437); 6. dam, Emma, by Rockingham, (560); 7. dam, Annabella, by Major, (398); 8. dam, Ada, by Denton, (198); 9. dam, Aurora, by Comet, (150); 10. dam, by Henry, (301), 11. dam, by Danby, (190).

FIRST PRIZE THREE-YEAR OLD-SHORT HORN COW, AT THE PROVINCIAL EXHIBITION OF 1866.



"GRACE DARLING,"

Owned by MR. JOHN SNELL, of Edmonton.

### What Stock most enriches Pasture.

It is generally accepted as a fact that soil under pasture grows fertile. When land is ploughed and tilled, and a pasture forms part of a systematic rotation, the soil under grass recuperates in power to grow grain. This is due to several causes, prominent among which is the thick turf ploughed under, thus supplying a quantity of manure for the succeeding crop. If a field were left in grass for a long time, and all the growth allowed to rot on the ground, we see no reason why the soil would not increase in fertility so long as this practice was continued. But were the grass removed in the form of hay each year and no compensation made, no practical farmer would contend that the soil grew richer when subjected to such treatment for a long time. Land, in grass, then, becomes rich only in proportion as the growth of vegetable matter from it—as roots, stems, leaves and seed—is returned for manure.

Land is enriched by pasturing for the production of grains in two ways; the formation of a sod to be rotted for manure, and the deposition of the solid and liquid excrements of the stock. It is important for the grain farmer to consider the kind of stock which, feeding on his pastures, will enrich them most. There is, perhaps, not much practical difference in the amount of manure made by various animals on the same pasture, but the form in which it is deposited, and the habits of stock in choosing their resting places ought to be well considered. Horses are the very worst fertilizers of pasture; they are very close feeders, and they delight to graze the summits of knolls, and all spots where the herbage is short and sweet. On such spots they are continually feeding, yet their manure there is very little. The observer will find their droppings mostly in rich hollows, and places where the herbage is rank and coarse, showing that the soil is already fertile above the average of the field. In this respect cattle have not the same instinct as the horse, and they are neither so close nor so dainty feeders, but the objection holds against them, as the horse, that their manure is not scattered sufficiently for the good of the land. This is, indeed the chief objection to employing horses or cattle to enrich land by pasturing. If the grass is turned into hay and fed to them in the yard or stable the manure therefrom may all be saved and applied judiciously. But this course involves much labour in the field every observant farmer knows that the droppings of horses and cattle seem to fertilize the soil but little when their bulk is considered, and the best effects are invariably seen not from the solid but from the liquid manures that fall on the field. In pasturing cattle and horses we conclude that not more than one part in a hundred receives any manure while the ninety-nine other parts are impoverished as much as though the grass were cut and removed in the form of hay.

Without doubt sheep are the very best stock with which to enrich land by pasturing. They range over the whole field and refuse hardly anything. Their manure is scattered in the very best form it could be applied as a top-dressing. If they frequent the knolls where the grass is sweet they also enrich them, and they choose for their resting places at night, and therefore fertilize, the highest part of the field. If desirable, a flock may, with little trouble, be nightly folded on the poorest spots of the field. In hot weather they will frequent the shade of trees, but from such places the accumulated manure is easily scraped up and distributed to other parts. And the farmer who is mainly a grain grower will find no stock more profitable and convenient for all his purposes than sheep.—N. Y. Farmer.

**BREEDING IN AND IN.**—Sir John Schright, in his pamphlet on "Improving the Breeds of Domestic Animals," pronounces strongly against continuous close interbreeding. He states: "Breeding in-and-in may have the same effect in strengthening the good as the bad properties, and may be beneficial if not carried too far, particularly in fixing any variety which may be thought valuable. I have tried many experiments by breeding in-and-in upon dogs, fowls and pigeons. The dogs became from strong spaniels weak and diminutive lapdogs, the fowls became long in the legs, small in the body, and bad breeders. There are a great many sorts of fancy pigeons; each variety has some particular property, which constitutes its supposed value, and which the amateurs increase as much as possible, both by breeding in-and-in and by selection until such particular property is made to predominate to such a degree, that in the more refined sorts they cannot exist without the greatest care, and are incapable of rearing their young without the assistance of other pigeons kept for that purpose."

**COWS IN THE YOKE.**—On his way from Paris to Geneva, Mr. Willard, of the *Utica Herald*, saw for the first time cows in the yoke before the plow. He says: "Many of them were in milk, but the udders indicated that the production of milk and the tilling of the soil did not go well together. The color of the beasts is of a light cream. They are of medium size, compact, and many of the herds were in fine flesh. We often passed points where a half dozen cows were being led to water by women. They had ropes attached to the horns, and one woman would manage six or more at a time."

**EXTRAORDINARY PROLIFICACY.**—The *Ingersoll Chronicle* says:—It will be remembered by many of our readers that in the issue of the *Chronicle* of the 31st March, 1865, we recorded the extraordinary fact that a cow belonging to Mr. John Cannom, 3rd Con. West Oxford, gave birth, a few days previous to the above date, to five calves—perfectly formed. We have now to record that the same cow, on Monday last, gave birth to four calves! Three were perfectly formed, were as lively as crickets, and would probably have thriven had not Mr. Cannom killed them, which he did twenty-four hours after their birth. The cow is six and a half years old, and this last batch makes thirteen calves she has given birth to within four years! The cow as before stated is of the Durham breed.

**BREAKING COLTS.**—I am strongly opposed both in principle and practice, to "breaking colts,"—that is, allowing them to attain the age of two or more years before they are taken in hand for learning the principles which are so important a part in their future life. There should be no "breaking" about it. The education should begin as soon as the colt is born, and, if properly attended to, will be perfect by the time he is large enough to drive. Being led or tied with a halter should be his first lesson, and the sooner he learns it the shorter the struggle and the more permanent the lesson. Never give him a chance to break loose, for once done he will remember it for a long time, and, if the lesson be too often repeated he will make a proficient in this not desirable art.—E. Cor.

### The Dairy.

#### Management of an English Dairy Farm.

THE *Agricultural Gazette* gives the following interesting account of the dairy farm carried on by Lord Granville, near London:

The following are the leading particulars regarding the farm: It is 340 acres in extent, of which about 300 are pasture. All this grass land is mown twice. When the cow-stalls are full, holding from 100 to 120 cows, about three-fourths of an acre are needed daily as cut forage carted home, and the whole land is twice cut over in this way between the end of April and the beginning of October; all that is fit for hay being, both in June and again a second time as "rowen" in August, mown and made. The remainder is grazed with sheep during the autumn months, 300 being purchased for this purpose in September, and sold at Christmas. There are thus about 600 loads of hay made annually, and of this nearly half is consumed upon the premises and one-half is sold. The produce of the land is thus (at an average yield of first and second cuts equal to 26 cwt. of hay per acre) about 3,000 tons of grass from the pasture land (of which 1,000 tons are sold as hay, leaving 2,000 tons to be consumed), and probably 600 tons of mangel wurzel and cabbages from the arable land, making 2,600 tons of green food, either succulent or dried as hay, consumed per annum by 120 cows, which amounts to about 1½ cwt. daily a piece (taking both grass and hay into account.) In addition to the produce of the farm, some 80 loads of straw per annum, and 150 quarters of grains per week, and probably twenty or thirty tons (2 to 3 cwt. a day upon an average) of peas, barley, and pollard, are purchased and consumed per annum. The cows receive 1½ to 1¾ bushel of grains in two meals daily—in winter they receive 15 lbs. of hay and 30 lbs. of mangel wurzel, and in summer grass—about ¼ of an acre of a crop, equal to 30 cwt. of hay, sufficing for 100 or 120 cows. In addition to this they receive 2 to 4 lbs. of meal a day when in full milk, and again when their milk is shrinking rapidly, and when it is desired to fat them for the market. As soon as a cow shrinks to five quarts of milk a day, she is dried off and fattened, and in this way continual purchases of stock are being made to keep the houses full; 150 to 160 are annually purchased and sold to keep 120 cows in constant milk. Where the state of the market recommends it, the cows are fattened up to nearly their

original value when in full milk; at other times they are allowed to go sooner, and the original value is not realized. In two years of which Mr. Panter has been good enough to give us an account, the average price on purchase was £19 17s. and £19 18s. respectively, while the price obtained on sale was only £14 14s. and £13 14s. respectively. This, however, represents a much greater loss than usual, owing to the severity in these years of pleuro-pneumonia and the foot-and-mouth disease. On an adjoining dairy farm, in 1863-4, about 90 being continually in milk, the cows, kept a shorter time and continually fed as well as milked, reached on sale within £1 of their purchase price. But 163 were purchased and sold per annum to keep a stock of 90 good, so that they could not have been kept longer on an average than seven months each.

In 1862-3, upon the Golden's Green Farm, 100 cows being daily milked upon an average throughout the year, the return for milk sold was £3,900, or £39 per stall. In 1861-5, 120 cows being kept, the return was £1,900, or upwards of £40 per stall. In the latter year 164 cows had been bought for £3,077, or £18 15s. a head, and 161 were sold for £2,317, or £14 8s. apiece, being a loss of £760 in all, equal to nearly £5 per cow, more than £6 per stall; and it must be borne in mind that the return stated above, amounting to nearly £40 per stall per annum on an average, corresponds to only £30 or thereabout per cow during the eight or nine months' feeding spent upon her. On the whole, the return in 1864-5, may be stated at £4,140 for about 2,000 tons of grass, 80 loads of straw, 8,000 quarters of grain, and 20 to 30 tons of meal and cake, a large expenditure on labour, and the use of a large amount of capital. The men employed upon the farm and in attendance on the cows, correspond to one to every ten cows, and in addition to this there is the cost of hay-making, let at 25s. an acre, or thereabouts, and the cost of horse labour, including 13 or 14 horses in five or six teams. To the receipts from the cows must be added the proceeds, about £300 per annum, from wheat and potatoes grown on the arable land, and some £100 or thereabouts realized from the sheep, together with the price of 200 or 300 loads of hay; and to the expenditure must be added a good deal of extra labour connected with harvest work upon the arable land. The reader will work out the calculation for himself. But keeping to the return in milk for the 2,600 tons or thereabouts of grass, both succulent and dried, consumed by the cows, we make the net profit, deducting rent at £3 per acre, and 5 per cent. upon the probable capital employed, to be about 6s. or 7s. per ton of the grass thus grown and consumed.

#### Churning, Washing, and Coloring Butter.

The following directions for churning milk and working butter are supplied by a correspondent of the *Rural New Yorker*:

"The churn should be as nearly straight up and down as possible, as the dash should stir all the milk every stroke it makes, so that the butter in the churn should all come at the same time. If the milk is too cold, the only plan to warm it is to place a pail of milk in a large boiler of warm water to bring it to the exact temperature, which is about 55 to 60 degrees—a few degrees warmer in cold than in warm weather. As soon as the butter has come and gathered, take it immediately from the churn in its warm state and put it in a large wooden bowl, which is the best vessel for the purpose; then put it in cold soft water; then commence pulling the butter over with the ladle in so gentle and careful a manner as not to affect the grain, for as sure as that is injured at the washing or the working, the butter becomes oily and can never be reclaimed. Every particle of milk must be washed out, and then season with the best Liverpool salt. Set the bowl away until the next day, and when sufficiently cool, work the mass thoroughly, but not so as to make it oily, and on the third day pack it away if it has assumed the right colour. Examine it well before packing, and be sure that no milky water runs from it, for if packed with the least drop, you will hear from it in next April.

"If your spring or well is hard water, save ice from streams, as lime never congeals with ice. Save rain-water, and then with ice you will have soft, cool water to wash your butter, without which you cannot get the milk out without injuring the grain. Soft water is as indispensable to wash butter as it is fine linen. Washing butter is not positively necessary if it is to be used within a few weeks.

"The idea of colouring butter with anything after it is made is as absurd as painting rye bread white, with the expectation of making it taste like wheat."

## The Apiary.

### Management of the Apiary for November.

BY J. H. THOMAS.

If the weather is cold and snow has fallen, all stocks should be put into winter quarters. I am often asked, "What is the best method of wintering bees?" I would say, any method that will secure the following conditions:—an even temperature, neither too cold nor too warm; proper ventilation; freedom from moisture; perfect darkness; and quietness. A good cellar or room away from the fire may answer very well, or a house built for the purpose would probably be still better. To secure proper ventilation with common box hives, they may be inverted, and wire cloth or stiff net tacked on the bottom of the hives to keep the bees in. Moveable comb hives should have the honey board removed and wire cloth or stiff net put on in its place. Stocks that are to be wintered out of doors, if in box hives, should be so ventilated that there will be no danger of the ventilation being closed up by snow or ice; if in moveable comb hives, all under ventilation should be closed up, the honey board should be removed, and after putting on the wire cloth, it should be covered with corn cobs or dry straw—all that the cap or cover of the hive will shut over. It having been a very bad season for bees, where natural swarming was allowed, nearly all swarms will require feeding, and if not already fed, should at once be removed to a warm room and fed enough to winter them, so that it will not be necessary to disturb them during the winter. It would be better to feed a stock two dollars worth of sugar, rather than lose it. Where artificial swarming was practiced, and swarms were made early, not much if any feeding will be necessary. I would impress upon the minds of bee-keepers generally, the necessity of carefully examining their stocks as many will perish if not fed, and though feeding should be attended to in September, yet, by following the directions given above, many stocks may be saved even now.

### The Proper Dimensions for a Bee-Hive.

To the Editor of THE CANADA FARMER:

SIR,—In THE CANADA FARMER for September 15, there appears an article from the pen of John Jewitt, of Lucknow, C. W., under the head—"Hive Improvements," in which he says, speaking of the Thomas hive, "There is no doubt but it is a very good hive. But if the bees could speak they would say the hive is not perfect." The opinion advanced by him is, that the hive is not of the right size and shape to allow the bees to form a natural cluster. He then gives the size and shape of a hive made by himself, which he considers superior to the Thomas hive. I must, however, beg to differ from him in several particulars. In the first place, according to his own reasoning, the Thomas hive is a better shaped hive than his own, for as he remarks a "natural cluster of bees is half as deep again as it is broad." Therefore as "that is the position they like to be in" a hive should be made nearly as deep again as it is broad; which is about the shape of the Thomas' hive, while Mr. Jewitt's hive is considerably more than as deep deep again as it is broad; being only 9½ in. broad and 22½ deep. Now, there are many swarms of bees which in a cluster measure from 8 to 9 inches in diameter. Such a cluster in Mr. Jewitt's hive would come in contact with the walls of the hive at the sides, while the end walls would be about 3½ in. from the bees, and the distance from the bottom board would be still greater. In the Thomas hive the distance from the bees to the walls of the hive is far more uniform, being at the sides 1½ inches, and 2½ inches at the ends, which proves it to be the best proportioned hive. As to the size of the hive, it is now admitted by nearly all leading apiarists that a hive containing about 2,000 cubic inches is sufficiently large for any climate. Says Quimby, "Every inch over 2,000 is worse than useless," and my own experience has been that it

is sufficient. I find, however, that the Thomas' hive contains about 2,100 cubic inches, which is even more than is necessary. But Mr. Jewitt's hive contains about 3,375 inches, being 1,275 more than the Thomas' hive, or 1,375 more than is required. According to Quimby this extra space is "worse than useless"; and yet it is the smallest of three sizes which Mr. Jewitt makes. The entrance to a hive I think should always be at the bottom, as bees always prefer to go up to deposit their stores. In conclusion, I would say that I have seen and used a great variety of hives but have never used any that, all things considered, equals the Thomas' hive; although perhaps Mr. Hill, of Cape Breton, speaks rather strongly when he pronounces it "a perfect hive." Perfection is a big word to use about anything human.

BEE FANCIER.

Toronto, Oct. 23, 1866.

## Entomology.

### A Plague of Ants.

Numerous and not uncalled for are the complaints that notable housewives make in this country respecting the inroads upon their sugar and preserves and other goodly stores by the swarms of little ants that infest our houses in the summer months. There are at least two species that affect our domestic arrangements in this way, while several other kinds are to be found in our woods and fields; a full investigation of them, however, and an account of their curious habits and instincts still remains unaccomplished, and will well repay any careful student of natural history who takes it in hand. But the annoyance caused by these little insects in this country cannot for an instant be compared with their fearful ravages in hot climates. Some idea of the amount of damage they at times inflict may be formed from the following account recently laid before the Entomological Society, in London, England, and reported in the *Zoologist*.

About twenty years ago a small species of white ant was introduced into the island of St. Helena, in some timber from the west coast of Africa, but its ravages only became serious within the last ten years. "At the present time," Mr. Layard relates, "Jamestown may be said to be devastated by it, the whole of the Cathedral is destroyed, and indeed everything in the town made of wood is more or less injured; the library is also destroyed by them, and it has been noticed that the theological works were eaten first, which he attributed less to the fact that the insects studied divinity, than to these books not being consulted by the reading public as novels and lighter works, and the insects less disturbed in their work of destruction. Teak seemed to be the only wood they did not eat, but they would freely bore holes through it in order to get at other kinds more suited to their tastes: this fact had been proved by placing a deal plank between two pieces of teak, when the latter were perforated and the deal devoured. They might even be said to make their way through tin cases, for in the Government stores it was found that their moist grass on the outside of such cases caused rapid oxidation of the metal, which enabled the insects to make their way in and devour the contents. He believed that unless some effectual remedy could be provided, it would, ere long, be impossible to use timber on the island for any purpose; anyone who could suggest such means would confer a vast benefit on the inhabitants. The ravages of the insect were at present confined to Jamestown, but might spread all over the island at any moment, and even reach vessels in the roadstead in firewood, or by other means, or be carried to the Cape, Ascension or elsewhere. It was a subject for serious consideration; the injuries done to the Government buildings, &c., would necessitate an outlay from the public purse of many thousand pounds."

## Poultry Yard.

NEWLY HATCHED CHICKS.—The brooding hen affectionately adopts all the chicks brought to her indiscriminately and blindly—on the same footing, those which she has hatched herself, and those hatched by others. She has the same tenderness and care for all. Twenty-four hours after they are hatched the chicks show evident signs of hunger; but it is better

first to give them some pure water to drink, in a shallow plate. The food for the chicks must be prepared with great care. It is composed of stale bread crumbs crumbled fine, hard boiled eggs chopped fine, with lettuce leaves, young sorrel or turnip, cabbage and beet root, also chopped very fine. The proportions are—bread crumbs 3 lbs.; eggs, white and yolk together, 1 lb.; green food, 1 lb. of the mixture. The whole is mixed together without kneading, in the form of a paste; but the different substances remain separate, and may be picked out by the chicks without difficulty. The green food has the effect of retaining the bread crumbs fresh, and preventing it becoming too hard by drying. Only enough for one day's consumption is made of this paste at a time. A little practice will soon show how much must be prepared for the wants of the day. The chicks show great relish for it. If they appear delicate, a little cider or ale may be mixed with the bread crumbs, in lieu of green food; it has a beneficial effect generally. The second or third meal should consist of oatmeal porridge, made with milk when possible. Whatever the article of diet, a small quantity of salt should be mixed with it.—*Cassell's Family Paper*.

## Veterinary Department.

### Fardel Bound; or Impaction of the Third Stomach in Cattle.

The digestive apparatus of the ox differs materially in its structure and magnitude from that of the horse. The stomachs are four in number. The first is called the Rumen, or Paunch, and is the largest. The second receives the name of Reticulum, or honey-comb, so called from its peculiar appearance. The third is the Anasum, or manfolds, and is lined internally by a number of leaves presenting various characters. It is in this receptacle that the coarser portion of the food, after rumination, is triturated or broken down and made better fitted for the true process of digestion, which takes place in the fourth, or Abomasum. In certain seasons of the year the food becomes firmly embedded betwixt the leaves of the third stomach, interfering with the digestive process, and in very many cases terminating fatally. In the spring and fall a common cause of this disease is the eating of indigestible food, as animals grazing in woods, where, with eating the fresh grass, they swallow considerable quantities of coarse herbs, &c. In the summer months, it is often brought on from an insufficient allowance of pure water; and in winter from continued feeding on pea straw, without any more nutritive or succulent food.

*Symptoms.*—If in a milch cow the secretion of milk is lessened or altogether suspended, rumination ceases, and very often in the early stage there is slight diarrhoea, which is very speedily followed by obstinate constipation: the pulse is quickened, the mouth hot, and the muzzle dry, the roots of the horns warm, and the body alternately hot and cold. As the disease advances, the breathing becomes accelerated, and the brain affected sympathetically. In some cases the animal is dull, the eyesight is impaired, whilst in other cases the brain becomes excited, and the animal gets into a frenzied state, which is followed by convulsions, and then death.

*Treatment.*—As in other diseases and derangements of the stomach and bowels, when caused by an over accumulation of food, large doses of purgative medicines should be given, and perhaps the best purgative for cattle is Epsom salts, which should be given in doses of one to two pounds, combined with powdered gentian or ginger. In obstinate cases we would also use croton seeds or oil combined with calomel; warm oatmeal gruel should be administered every four or six hours, and the patient encouraged to take plenty of liquids, and in some cases stimulants are of decided benefit in promoting the action of the bowels. Stimulants applied to the belly and sides are also useful, and enemas of soap and water should be given three times a day. When an animal becomes very much excited treatment in these cases is generally useless.





**Comparative Merits of Guano and Barn-yard Manure.**

To the Editor of THE CANADA FARMER:

Sir, Referring to the subject of comparative value of Peruvian Guano at \$10 per ton, and of stable manure commented upon in your issue of 18th Oct., it is right that there should be no doubt upon a subject of so much importance in the economy of the farm.

Let us suppose a farmer, upon the completion of his harvest, setting to work to get in his fall wheat, and determined so far as his intelligence will allow him to get it in as quickly as the short interval will admit of, and at as small an expense for manure as possible, consistent with the assurance of a prime crop. He has at most three weeks for his operations. If stable manure is to be used it must be brought, hauled, turned and spread, and must be of the very best, and in the best condition to make the comparison a fair one. All this must be done before the seed can be put in, and can only be satisfactorily accomplished in suitable weather. The cost of this operation may be computed, supposing the farmer to have enough manure on his own premises, which is never practically the case at the lowest estimate, at \$2 per ton. As no farmer can produce natural manure sufficient for his purposes, and as large quantities have invariably to be procured elsewhere, frequently from a distance of several miles, we will be within the mark if we set down the cost of manure on the ground at \$3 per ton.

Now it is as easy to apply guano as it is to sow the seed, the mode of operation and the time occupied being the same for one as for the other. The price of Peruvian Government Guano is quoted at \$60 per ton of 2,000 lbs.

It is considered by chemists that 2,000 lbs of Guano is equal to about 30 tons of farm-yard manure.

The comparison of price is therefore as follows:  
 30 tons farm-yard manure at \$3 per ton..... \$90  
 2,000 lbs. Peruvian Guano at \$60 ..... 60

Saving by use of Guano..... \$30

To make a just comparison we should credit the Guano with the saving of valuable time in getting in the fall wheat, and which is very often the saving of the crop.

Every farmer knows the importance of early seeding, especially in this climate.

These remarks are offered not to disparage farm-yard manure without which artificial manure would be of small value, but that it may be more economically used, and with better effect, than by the present mode of using it.

By applying guano alone to land, hitherto well manured with farm-yard manure, wonderful results would follow; and the farmer would thus have it in his power to use his farm-yard manure on land where no artificial manure could be applied with advantage.

That this mode of manuring land would be not only less laborious but more economical than the indiscriminate use of farm-yard manure must commend itself to the common sense of everyone.

CULTIVATOR.

Toronto, Oct. 25, 1866.

THE AMERICAN BEE GAZETTE.—In reply to enquiries about this periodical, we may state that J. H. Thomas, of Brooklyn, C.W., is agent for it, and will send it for one year to any address in Canada, on receipt of one dollar.

STONES VS. DRAINS.—Thomas E. Lockie, of Toronto, writes "With reference to your article on Stones on Cultivated Lands" in last number, allow me to suggest that where land is not thorough drained, small stones would help to loosen the soil, and serve some of the ends of drainage though imperfectly. It is no better to drain the land well, and then have the surface as like a garden soil as possible, neither stones nor Canada thistles are commonly seen in gardens, and if not there, why should they be in fields? Your extract is dated 1773, when drainage was scarcely heard of."

LARGE POTATO YIELD.—"J. M.", of Hamilton, writes:—"I planted a single large potato, of the long red kind, in my garden on the 16th May, and on taking it up this day I found forty potatoes, weighing fifteen pounds, most of them very large. I also had a meshannock in the same ground that weighed two pounds. Can any of your readers beat that?"

FRactURE OF A MARE'S HIND LEG.—G. W. Thomas of Phoenix Farm, Arran, sends the following account of a fracture and its cure:

"A four-year old mare the property of James Monkman, J.P., of Arran, was harrowing on the 2nd May last, when in turning, the trace got round her leg and cast her. I was called in to see her, had to make my examination by moonlight, and found that she had received a compound fracture of the metatarsal bones, of the off hind leg, a little below the inferior tarsus. The owner was advised to shoot her but I said no, not having the least doubt but she would be all right by the fall. I would not sling her, as most of the farmers in this vicinity are bad nurses for sick horses. I procured splints, cotton batting, and bandages, manipulated the bones into their proper position, applied the splints &c., and ordered her a bran mash. May 3rd 6 o'clock A. M. found her standing, splints and bandages all right; pulse about forty, with very slight fever. I ordered cut grass and bran mashes—after treatment, none. I saw her Oct. 4th, she is quite well; can trot and gallop in the field, as smartly as the other horses. Mr. Monkman's son told me he rode her, but of course I interdicted that for the present."

BREEDS OF PIGS.—A correspondent writes on this subject as follows:

"Some time ago you gave a description of the "Essex" breed of Pigs, with a lively cut of a very fine pair of them, with which I was much pleased, and I fancy your readers generally would not find fault if you should see fit as soon as you can make it convenient, to give a description of some of the other valuable breeds of Pigs, such as Improved Berkshire, Suffolk, York-hire, &c., with cuts of the same. I think the people should be better acquainted with the different breeds than they are, even judges at our County and Township Shows might be somewhat benefited."

Ans.—We have already illustrated the breeds of pigs mentioned by our correspondent. The Berkshires and Yorkshires will be found in our issue of March 15, 1861, and the Suffolks in our issue of Oct. 16, 1865.

**The Canada Farmer.**

TORONTO, UPPER CANADA, NOV. 1, 1866.

**The Markets.**

PRODUCE of various kinds is now being moved to market, and on the whole, the prices given rule quite as high as under all the circumstances we could reasonably expect. The season of grain-buying has commenced later than usual this year, owing mainly to the delay of harvesting and threshing, occasioned by the long-continued wet weather. Possibly, too, the absence of any urgent demand the present season, and the degree of uncertainty as to prices, may have operated in delaying the movement of grain to market. This time last year we had a rush of American buyers, and the approaching termination of the Reciprocity Treaty, hurried produce forward. It was feared that as the time of its expiry drew near, the markets would grow slack, and prices decline. These fears were not realized, but they helped to hasten the delivery of grain and other products. There is a perceptible want of the bustle and stir which reigned last fall, and the produce business has certainly thus far been a very quiet one. A leading produce dealer in Western Canada gives it as his opinion, in a letter to the *Trade Review*, that the quietness in the produce market is caused by the fact that the extent of our grain crop has been over-rated,—that after threshing out, the farmers find they have not nearly the quantity they anticipated. We agree with the journal just named in the opinion it expresses, that while

this may perhaps be true of the particular section in which its correspondent resides, it does not apply to the country at large. Taking Canada generally, we think there is no longer reason to doubt, that the late harvest was fully up to the average, although the heavy rains caused much loss, and injured the quality of the crops very considerably. On this latter point, there is much complaint among our produce dealers. In the older settled districts the wheat was mostly harvested before the wet weather set in, but even there the quality is below the mark, in consequence of midge-proof and other inferior grains having been sown instead of A No. 1 white wheat. In some sections we hear of wheat being offered for sale in so moist a state that neither millers nor grain-dealers dare touch it. There ought to be in all our large market-centres conveniences for kiln-drying wheat. These would be valuable even in ordinary seasons in preparing wheat for shipment to hot countries. Unless artificial heat is applied in drying the grain previous to grinding it, flour is very apt to turn sour, when shipped to warm latitudes. There is reason to believe a large flour trade might be done by Canadians with the West Indies and other tropical countries, if we produced an article which would endure the ordeal of great heat to which it must be subjected. It is said that one or two cargoes of Canadian flour sent to those regions, turned out badly, and hence there is hesitation about dealing with us. Kilns, therefore, might be turned to some account in the best of seasons, while in a season like the present, they would convert a large quantity of dubious grain, into a safe and sound material for milling purposes. Barley has been largely grown during the past season, but we regret to say it comes to market without that bright appearance for which our barley has been renowned in former years. There is, of course, less demand for it for the American trade than heretofore, in consequence of the high tariff now in force. Still some orders from the United States, both for wheat and barley, have been filled, and some of our shrewdest men of business, predict that the demand from that quarter will increase. It is contended that the Americans must have our fine wheat or 1 barley, and that though they may hang fire at first, as they did at the opening of the wool season, they will have to order sooner or later. Peas have suffered much from the wet weather, and are injured both in appearance and actual value, by the cracking of their skins. This grain is in considerable demand by American buyers, and some of our produce dealers are shipping it to commission merchants to await the best prices likely to be offered. In connection with peas, one of the rare beauties of the present United States tariff shows itself. The shipper must make oath as to the use to which the peas are to be put. If they are to be ground up to make bogus coffee, the duty is only ten per cent.; but if they are for seed it is thirty per cent! Only in the case of definite orders can oath be made as to the purpose for which the peas are intended, and we fancy the coffee trade will be a large one this winter, at any rate on the Custom house exhibits! Business people on both sides of the lines may well exclaim concerning this precious tariff, "O reform it altogether!" The time is near now when we shall know by the sure test of experience the effect of the repeal of Reciprocity, upon our agricultural and commercial interests. Most of our last years' produce was sold before the Treaty expired, and the demand for everything we had to sell, was so brisk that we had no fair test of the effect of a loss of Reciprocity. Thus far we have not suffered, nor is there any reason for serious apprehension. Still there is a degree of uncertainty, and as the result, our grain dealers and millers are moving cautiously. It is well that they are, and meantime it will be the part of wisdom for all classes of our population to do what they can to encourage commerce with the Maritime Provinces, and other parts of the world; to develop manufactures; and in every possible way to promote dependence on our own energies and resources. By such means, the selfish policy of our American neighbours, will have the sting taken out of it, so far at least as we are concerned.

## County of Wentworth and Hamilton Annual Exhibition.

THE Annual Show of the Wentworth and Hamilton Agricultural Societies was held on the 11th and 12th of October, at Hamilton. The exhibition was, as a whole, a very creditable and satisfactory one. Not having attended on any previous occasion when the Wentworth and Hamilton Societies held their show, we cannot say how the exhibition just held compares with its predecessors, but we imagine that few if any of the local shows held throughout the Province have been in advance of it. There was a very fine display of horses, most of the classes being well represented, and the ring in which their fine proportions and splendid action were exhibited was constantly surrounded by a crowd of admiring spectators. The cattle department was well filled, there being no less than 127 entries. Of these, 44 were Durhams, the chief exhibitors being Messrs. Stock, Weir, Ely, Russell, McDougall, and Douglas. About the same number of grades were shown, and some of these were very superior animals, evincing to how high a pitch our native stock may be brought by judicious and continuous crossing. Ayrshires, Devons and Galloways made up the balance of the entries in this class. There was a fair display of sheep and pigs, but we forbear particularization. In poultry, the leading varieties of fowls were represented, and there were ten entries of ducks and geese. A few pigeons and a pair of rabbits were also shown. In the implement department the exhibition was rather meagre as to the number shown, but the samples were of excellent quality and superior workmanship. Ploughs, harrows, mowers and reapers, grain-drills, cultivators, fanning-mills, horse-rakes, and grain-cradles figured in this department. Seed-drills, for sowing artificial manures along with grain, were shown by Messrs. Clayton, of Whitby, and Walker, of Brampton,—a description of implement which it is desirable should come into much more general use. In grain and seeds, the show was very fine, comprising wheat, barley, peas, oats (white and black), rye, buckwheat, Indian corn, white beans, vetches, flaxseed, timothy, clover (common and Alsike), turnip, carrot, mangold, and onion seeds. In some cases, the samples were unusually good. The potatoes formed a fine collection, but we have seen larger at other shows this fall, especially of the kidney sorts. The field roots in general were very good, but the turnips were not quite up to some we have seen elsewhere. The horticultural department of the exhibition was well filled. Finer apples and pears it would be hard to produce anywhere. Three plates of good-looking peaches were shown, and a like number of well-grown quinces. The grapes hardly did justice to the fame of Hamilton and vicinity as a vine-growing district. The garden carrots were magnificent, so were the cabbages and Scotch kale. We saw the best assortment of tomatoes we have ever beheld in Canada. The capsicums were in wondrous variety and number, so much so that one might imagine that even the gardeners had been preparing to pepper the Fenians. Finer onions we never saw. There were immense garden squashes and very fine citrons. Domestic manufactures of considerable variety and good quality were shown; among them fulled cloth, coloured and white flannels, mitts, stockings, and coverlids. Sewing machines and one of Lamb's knitting machines were exhibited in actual operation. Dairy products mustered exceedingly well, there being twenty jars of packed butter, thirty baskets of fresh butter, and a number of good looking cheeses. Home made wines, preserves, canned fruits, sugar-cured hams and bacon, mixed pickles, tomato, mustard and sauce, flour, and specimens of bread-making, displayed themselves beside the dairy products. In the Fine Arts, we observed several good oil paintings, portraits, &c. Conspicuous among them were Mr. Gourlay's cattle pieces, and Mr. Davidson's picture, "Duncan Grey cam' here to woo," which attracted much attention at the Provincial Exhibition.

## South Wellington Agricultural Exhibition

We had the pleasure of attending the above-named show, but having received an account of its leading features, as compared with previous exhibitions, from Mr. George Murton, the effective secretary of the association, we prefer inserting that gentleman's communication, rather than any description we might otherwise have given. We can testify to its essential correctness in every particular.

"The Union Agricultural Exhibition South Wellington, was held in the town of Guelph on Tuesday and Wednesday, the 9th and 10th of October. This has been the first year that the townships have been induced to amalgamate with the County for the purpose of holding a joint exhibition, and I think any one that attended it will pronounce it a complete success, and a great improvement on the old method. The number of entries amounted to 1,250, which is a large increase over any previous year. There were 105 of horses, which as a whole were pretty good; still they show that the farmers of this county do not take the same interest in breeding them that they do in the raising of cattle and sheep. The show of cattle, sheep and pigs could not be beaten at any County Show in the Province. Durhams, Herefords, Galloways, Devons and Grades, many of them having taken prizes at the late Provincial Exhibition, were on the ground, and certainly did credit to the County of Wellington, not only in numbers but in quality. The entries of cattle amounted to 160; 58 of these were Durhams. The other distinct breeds were well represented, but the grades were in full force, no less than 27 cows being exhibited, besides heifers and calves. They showed very careful breeding, many of them being equal in appearance to the thorough breeds. The sheep were pronounced by all to be the best ever seen in this part of the country. Leicesters, Cotswolds and Devons numbered 116, really all first class animals. Many of the lambs were said by good judges to be the best they had ever seen. The show of pigs, both large and small breeds, was excellent,—many of them were very superior animals. I will now give you some few facts about the other departments of the Exhibition, which was held for the first time in the Agricultural Hall, a spacious building and well adapted for its purposes as an Agricultural Hall and Drill Shed combined. The chief feature of this part of the show was the magnificent display of butter and roots. There were 36 entries of butter for exportation, and 50 of fresh. Certainly, Mr. Editor, you must allow that the farmers' wives of Wellington did their part towards the success of the exhibition. I cannot say much for the cheese, the number of entries being small and the quality not first rate. The show of grain was as good as could have been expected after such a wet and backward harvest. The spring wheat was very good, but the fall not equal to what we have seen before. Other grains were well represented, and of very good quality. But when we come to the roots we find such a display as may challenge any county in Canada to produce their equal. Turnips, potatoes, carrots, onions, &c. &c., were in profusion and of the very best quality. The entries in turnips numbered 58; potatoes 94, and carrots, 61. I must not omit to mention that Mr. Thomas, of Brooklin, was at the show, and interested the people much by proving how easily bees may be managed by the use of his moveable-comb hive."

## County of Russell Agricultural Show.

THOUGH we had not the pleasure of attending the above exhibition, we give editorial prominence to it, because it presents a feature or two worthy of being universally adopted by our Agricultural Societies. It was held in the village of Metcalf, and we learn from the *Ottawa Times* that the attendance was large, and the weather all that could be desired. Indeed our contemporary waxes quite eloquent in his account of the human portion of the exhibition, as the following little extract will show:—

"In these days of pale cheeks, drooping eyes, and fatiguing waterfalls in our cities, it is a luxury occasionally to catch a glimpse of ruddy cheeks, flowing tresses, and the sprightly innocence of rural beauty, such as flash among the 'sinewy toilers of the soil' at the annual gathering in Russell."

The usual display of stock, grains, roots, vegetables, and other products was made, and at 1 o'clock on the second day of the exhibition, the assembled multitude

was called to order, and a number of essays and addresses were delivered in their hearing. Three essays on "The importance of agriculture," were read by Messrs. McNab, McEwen, and McTavish. Next followed two lady essayists, Misses Kennedy and Perkins, who dilated on "The requirements of a good farmer's wife." The prize list was then read, after which several speakers addressed the assembly. Dr. Grant spoke at considerable length, and in a most practical common-sense way. The following passages from his address are so good that we quote them for the benefit of our readers:—

"What we needed at present was a more extended agricultural education—an education which would enable us not only to comprehend mechanical rules and all established practices, but the reasons upon which they were founded. Labor was the chief source of national and individual wealth, and the greater degree of intelligence we could infuse into it, the greater were the returns we might expect. Within the past few years science had contributed greatly toward the advancement of every art and every department of industry, and there was no art which owed more to science for its prosperity than that of agriculture. Farming must be reduced to a system, that like law, medicine or mechanics, it might be studied both theoretically and practically by those who entered upon it. It must be interwoven with our ordinary education, and paid special attention to in our schools. How valuable is a knowledge of the constituent parts of the soil, of their combinations and the elements of fertility they might lack, of the chemical composition of the plants we might wish to produce, their habits and food they require. All such knowledge must give its possessor a vast advantage over those less informed. Failure in growth might be thus frequently guarded against, and various means devised to improve modes of culture. Thus to the scientific agriculturist such knowledge was power."

"The principles of agriculture once thoroughly understood, would be found as invaluable as the principles of chemistry, mechanics or astronomy. Farmers might live, grow rich, and all that, without considering the issue; yet it was a well established fact, that those who cultivated the highest, employed dressing most skillfully, who farmed most scientifically, that is least by arbitrary rules, and most by experience and intelligence, were the very men who made their farms most productive. The cultivation of the soil carefully followed up would afford ample room for the rising generation to exercise both their mental and physical powers. Was it wise, then, or prudent for so many tillers of the soil to send forth their sons to other pursuits and retain upon their soil not enough of skilled labor or wealth to develop its resources? Was it wise or prudent for so many of the rising generation to leave their old homes and residences to seek for riches in foreign lands, while fortune waits to smile upon them at their very doors? To those who long for riches he would say, cultivate the soil properly and it will yield an ample return without seeking for wealth either in the auriferous mines of Australia or California. No man was dwarfed upon the farm for lack of room to develop what was in him. It was the school of all manly qualities and a wide field for their exercise, and in so far as the country was concerned,

The rudiments of empire here,  
Are firmly set and sure,  
To form as one a British power,  
From sea to sea secure."

We have often regretted that so fine an opportunity as is afforded by these gatherings for directing attention to the principle and facts of practical agriculture, is not turned to better account. The delivery of essays and addresses like the above cannot fail to set people thinking and to send them home with better impressions of farming as a business, and with resolves to do their part toward raising it to the position it ought to hold in public esteem.

THURBER'S ROYAL ANTI-FRICTION METAL.—We call attention to an advertisement in the present number of the above article, and from the high testimonials acquired by the enterprising proprietors, we commend it to the notice of farmers, steamboat proprietors and others, who have machinery and rolling stock to be cared for. Amongst the advantages of this description of metal are the following:—Their density is sufficient to support any weight or stand any velocity applied to it in connection with Brass, Composition or Iron as the base. Their durability will equal any metal in use, and the cost is much less.

## Agricultural Intelligence.

### Tour in East Northumberland.

To the Editor of THE CANADA FARMER :

SIR. - I had the pleasure of attending an Agricultural picnic in connection with the Brighton and Cramahoe Farmers' Club on the 10th ult. It was the second anniversary of that useful society; G. F. Burrell, Esq., President, who devotes much time and attention to its management, and also to the improvement of the live stock and agriculture of the district. A very pretty grove had been selected as the scene of the festivities, but unfortunately the weather proved unfavourable to an out-of-door gathering, and the meeting had accordingly to be held in Mr. Burrell's barn, the capacious floor of which afforded accommodation to the company present, the number of which would doubtless have been larger had the skies been more propitious. Notwithstanding, the affair went off exceedingly well, and Mr. Burrell, his good lady and family, did everything in their power to make up for the deprivation of out-of-door enjoyments amidst the varied and exquisitely beautiful sylvan scenery of our glorious autumn.

Soon after midday the tables were bountifully supplied with a variety of creature comforts, from a number of ladies interested in the welfare of the club. Mr. Burrell presided, and after full justice had been done to the repast, made some general observations on the working and success of the society, and concluded by calling on your correspondent to address the company, which he did for about an hour, embracing some of the more important considerations relative to the functions and benefits, of farmers' clubs, and the advancement of agriculture, with special reference to the position and wants of Canada. The chairman next called on his venerable friend, J. B. Marks Esq., who gave some excellent practical advice, clearly expressed, in reference to farming operations. His presence was quite a feature of the meeting. It will gratify many of your readers to be informed that Mr. Marks attended this meeting on his 89th birthday! After devoting much time and thought during half a century to the means of improving Canadian farming, occupying the honourable position of President of the Provincial Association, and for several years an active member of the Board of Agriculture, Mr. Marks continues to feel a lively interest in this useful and noble pursuit. Judge Boswell, of Cobourg, who happened to be in the neighbourhood on professional business, addressed a few words of encouragement, and bore testimony to the substantial improvement effected of late years in every department of Canadian agriculture. After a patriotic song, by a young lady, and the national anthem, the company, consisting of both sexes and of all ages, separated, evidently much gratified with the afternoon's proceedings. It would be a happy thing if social meetings of this kind were generally known throughout our rural districts.

During my stay in this part of the country I attended the county show of eastern Northumberland at Warkworth, and the exhibitions of the townships of Brighton and Cramahoe, the former held at Hilton, the latter at Colborne. There was little that would call for special remark at these exhibitions, and in communications like this, but little space can be afforded for particulars. The Warkworth show in point of magnitude fell short of what might be expected from a Riding. A similar remark will apply to the Brighton show, at Hilton. At each, however, there were some good specimens of live stock, and particularly of grain, butter and vegetables. There is evidently in this section the material for making a good exhibition, but a more united effort seems necessary to accomplish fully what is desired. I understood that the Brighton society had fallen off partly in consequence of THE CANADA FARMER not being supplied to the members as formerly. I find

wherever the club system has been adopted for procuring THE FARMER it has worked beneficially for the societies. I am at a loss to conceive how any farmer of ordinary enterprise and intelligence can afford to do without an agricultural paper, especially one of his own country. At Warkworth, the show of the township of Percy would succeed that of the county, the following week. In most cases would not the union of the two, better accomplish the objects of such organizations? I throw this out as a suggestion. The show of the Cramahoe society, at Colborne, was, I should suppose, a fair exposition of the state of agriculture in that township. The quality in all departments was good, but in some the competition was not so great as is desirable. The number of visitors was quite large, as was also the case at the two shows before mentioned. It was pleasing to observe the interest taken by the people in the different departments of the show, at the latter place, especially, the ladies' productions attracted much attention.

There are but few pure bred cattle in this section. Mr. Burrell, however, has kept up a small herd of Devons for many years, (some excellent specimens of that beautiful breed), the beneficial effects of which on the grade stock of the neighbourhood are quite apparent. At these shows there were some well bred sheep, chiefly Leicesters, but many of them are small, and not purely bred. Mr. Burrell has some good Southdowns, and I observed other very fair specimens, both as regards carcass and fleece, but more pains and outlay are required in this, as in other departments of live stock, before a satisfactory point of improvement can be generally reached. Judging from what I saw at the shows, and in the farm yards, the quality of the various breeds of pigs is very satisfactory. Sheep were also much improved of late years; and wherever pure bred bulls have been introduced, especially the Durham, the effects have been obviously beneficial. The large number of animals, especially horses and horned cattle, which were purchased last year by Americans, explain in some degree the falling off in these departments at our exhibitions this autumn. It is well, however, to bear in mind that it is *quality* rather than *quantity* that constitutes the true measure of agricultural progress—a test which, happily, we can generally abide.

I may here remark, that as much of the southern part of this Riding has a light soil, in some places approaching almost a fine sand, the cultivation of roots and the pasturing of sheep, appear to indicate the most profitable and improving management of such lands. The first and most important difficulty to surmount, is the getting of sufficient grasses to form a compact pasturage. The breeding of sheep will in time do something towards consolidating the surface soil, and their excrements will gradually manure it, or, in other words, feed and strengthen the grasses. A top dressing, now and then, of marl, ashes or plaster, would tend to render the pasturage more productive and durable; and thus, in time, when its feeding power becomes lowered, such land might be profitably put under a course of grain crops, to be again, in due course, succeeded by pasturage. This appears to me the most practicable and profitable way of managing light soils; and upon heavier and richer land even our farmers would often do better by cultivating less, and pasturing more.

I subsequently attended the annual show of the East Durham Society, in the flourishing village of Millbrook, in the township of Cavan. Here the county and township united, and the result was a complete success. The display of horses both for farm work and the carriage, was highly satisfactory, and the same remark will apply to sheep and pigs. In horned cattle, Mr. Choates' Devons occupied a conspicuous place, and there were a few good specimens of Durhams, Galloways, Ayrshires, and a young Hereford bull, imported, I understand, from the States. The grain and dairy products, which were very fine, were exhibited in a separate building; and ladies' work, fine arts, fruit, flowers and vegetables, were shown in another building, a small charge being made for admission to non-members. The work and productions in these buildings were generally of excellent quality, and formed strong points of attraction. The day being one of the finest of our splendid autumns, drew an immense crowd of visitors from all sections of this productive county, imparting life and gaiety to the village, which will not probably be seen again till another agricultural show occurs.

GEO. BUCKLAND.  
Board of Agriculture. }  
Toronto, Oct. 17, 1866. }

## Kentucky State Fair.

To the Editor of THE CANADA FARMER :

SIR, I have thought that perhaps a few notes from a Canadian, at the Kentucky State Fair, might be of interest to some of your readers. The State Fair, for this year, is being held in Paris, a small town of ancient appearance, about eighty five miles up from the Ohio river, or from Cincinnati, situated in the midst of a very fertile and wealthy county. The Fair was opened on Tuesday, the 2nd inst., that day being devoted to the exhibition of cattle, sheep and hogs, the three following days to horses, mules and jacks. It is surprising to see such a very large attendance when you learn that the show is confined to livestock alone, but the fact is, that live stock is the principal, and indeed almost the only source of the wealth of the people.

Their plan of conducting an exhibition makes it very interesting. All the stock is shown inside the circle of a large amphitheatre, capable of seating from ten to fifteen thousand persons, so that all have a fair chance of seeing the animals. In the centre of the circle is the judges' stand, the upper story of which is occupied by a band, which furnishes music at intervals, making it pleasant for the people, as well as causing the stock to show to better advantage. The animals in the different sections are called in by ringing a bell which is hung in the judges' stand. A blue ribbon is tied on for the first prize, and a red one for the second. A marshal proclaims to the crowd the names of the successful competitors in each section. When the names of fortunate men are announced a cheer is generally got up by their friends, or those partial to the prize animal, for there is great interest taken in the decisions; a good deal of excitement prevails, and among a certain class considerable betting is indulged in on the chances of the judges' decisions. The judges are appointed some time previous to the Fair, and their names appear in the printed prize list. If any of those appointed fail to appear, others are chosen by the Board of Directors, and in case a majority of the committee fail to agree as to a decision, another is called in to decide. No tickets are placed upon the animals. The judges ask no questions with regard to breeding or owner, but take the animal on his own merits, and are not supposed to know who is the owner until after the decision is given, and the marshal enquires of the groom the owner's name, and announces it to the crowd. I am of opinion that at our Provincial Fairs too much importance has for the last two or three years been attached to the pedigree of animals shown in a certain class of cattle, and I am not alone in that opinion. An exhibitor of long standing remarked at Toronto, that in future it would be only necessary to produce the pedigree of an animal in competing for a prize, if the same course is pursued. While I freely admit that in breeding, the pedigree is of the greatest importance, I hold, that in the show ring it should have no weight, as long as the animal is entered as pure bred, but the animal combining the most good points should have the preference, irrespective of fashionable blood or wealthy or honourable owner. Another good feature in the rules of the Kentucky and other State Societies, is that the same person is never allowed to serve as judge for two successive years upon the same class of animals. I think our Provincial Association should take a lesson in this respect from our American neighbours. Here there is only one set of prizes for cattle, and all breeds are allowed to compete, but there are no cattle in the State of any other breed than the Short-Horns, except a few Alderneys. The Short-Horns and their grades are considered the most profitable to keep on the rich pastures of Kentucky, and they are raised here in great perfection. Wealthy men have spared no expense in procuring the best animals from Europe, and this State I have no doubt contains more good Durhams than any other State or Province on the conti-

ment. Their cattle are not generally as large as ours in Canada. Breeders have aimed at producing animals with fine bone, and an aptness to lay on flesh, smoothly and rapidly, so as to secure early maturity, and in this they seem to have succeeded, for it is not uncommon to see three-year old steers weighing 2,000 lbs., fed on grass alone.

The show of Short-Horns here is far superior to anything we have ever seen. Mr. Christie's cows are perhaps better than any cows exhibited here, but one can hardly judge with certainty, from the fact that the cows here were not in nearly as high condition, none of them were too fat for breeding purposes. In the ring of aged bulls the premium was given to Mr. Renick's "Airdrie," a magnificent, red, seven-year old bull, by imported "Duke of Airdrie." In aged cows Mr. E. G. Bedford's "Laura" was justly awarded the premium.

There was a sweepstakes prize of \$50, for the best bull of any age. A splendid ring of ten bulls of different ages was entered, the best ten bulls I ever saw together. There is a style, and showiness of head and neck about these bulls that is remarkable. They owe it, I learn, to the improvement made by the celebrated imported bull "Duke of Airdrie." In this ring the blue ribbon was given to Mr. Renick's "Airdrie." For the sweepstakes prize of \$50, for the best cow or heifer of any age, 28 animals entered the ring, and this was certainly a brilliant display of the merits of Short-Horn stock. I think I am safe in saying there was not a second-class animal in the ring. The judges had a difficult task to perform, and after a good deal of delay, decided upon placing the blue on a yearling heifer, belonging to the Messrs Warfield, of Lexington; a beautiful red and white heifer, by Jeremiah Duncan's "Duke of Airdrie." The third prize of \$50, for the best bull and five cows and heifers, was deservedly awarded to Mr. E. G. Bedford, of Bourbon. This herd was comprised of the roza two-year old bull "Romeo," by Duke John, which had taken the premium in his class, and five very fine cows and heifers. In the sheep department, Cotswolds and South Downs alone are encouraged. The show of Cotswolds was very good, but this is accounted for by the fact that some of the sheep shown by Mr. John Snell, at Toronto, were here; having been purchased some time ago by Geo. M. Bedford, of Paris. Mr. Snell's Cotswold ram, weighing 406 lbs., was a living wonder to the people here. Mr. Geo. Miller, of Markham, is also here with Long-wooled and Shropshire sheep, and I understand has sold a number, and exchanged others for heifers. A few enterprising men here have imported very fine specimens of Cotswolds from Canada, and they have now the nucleus of flocks, which, if properly cared for, can scarcely fail to make their mark.

The horses are the leading feature at these State Fairs. They draw the crowds and make the money for the societies. But the tendency to bring the show ring down to the level of the race course, is too prevalent, and the crowd of gamblers at one side of the ring, openly shaking their greenbacks at each other, is a poor comment on the morality of the affair. The show of horses was certainly very fine, and the riding and driving most proficient. Heavy horses are not encouraged, and indeed are not needed, a lower class of animals (mules) do the work here, and horses are only used under the saddle or in the buggy. They raise splendid mules, a useful kind of animal, which might be very profitably used in Canada. The ring of Jacks was an interesting show, fifteen of them would probably average sixteen hands high.

Kentucky, just recovered from the annoyance and inconvenience of the late war, is now in a prosperous and peaceful state, and a more fertile, healthy and beautiful country no one need wish to live in. "Auld nature" must have tried her "prentice han" a good many times before she made this country, for it is as near perfection as one can imagine. Here you behold no waste land, no swamps, or gullies, or barren hills, but as far as the eye can reach you see green fields, carpeted with soft blue grass, and corn fields yet unharvested. Even the woodlands produce abundant pasturage, and vast herds of magnificent cattle grow into money without much expense or labour. Nature has done so much for the people that they do not require to do much for themselves.

#### YOUNG CANADA.

Paris, Ky., Oct. 8, 1866.

**THE NORTH RIDING OF OXFORD.**—The annual Exhibition of this Society, which came off on the 4th and 5th inst., we regret to say fell short of public expectation. The quality of stock, excellent grain, splendid roots and vegetables, choice butter and cheese and excellent specimens of manufactures and arts, were not behind former years; but the decreased quantity in display revealed the fact, that some yet unknown cause is at the bottom of this falling off of that countenance hitherto given to the annual exhibitions of this society.—*Woodstock Sentinel*.

## The Illinois State Fair.

From the report of this Exhibition in the *Chicago Republican*, we learn that it was in many respects very successful. Out of from 130 to 150 cattle present, about 100 were Short-Horns, and in this class the following are among the prizes awarded.

**Herds.**—Best bull, and five cows or heifers, one year old and upward, owned by one individual or previously existing firm, James N. Brown & Sons, Berlin, \$50; 2nd. J. M. Hill, Harristown, \$25. Best five head of calves, male and female, under 1 year, owned by one individual or previously existing firm, J. M. Hill, Harristown, \$40; 2nd. J. H. Pickrell, Tallula, \$20.

**Sweepstakes.**—Best cow or heifer of any age, Grace Young, James N. Brown & Sons, Berlin, \$100. Best bull of any age, Minister, W. R. Duncan, Towanda, \$100.

The report before us comments upon the Exhibition as illustrating the direction in which Illinois stock-rangers are breeding. "The docility, early maturity, symmetry and excellent grazing qualities of the Short-Horns are fast driving from the State the other distinct breeds of cattle. Individuals, for specific purposes and in localities in the State, may prefer and rear other breeds; but the ruling family, both for breeding pure and crossing on native stock, is the Short-Horn." The show of horses, generally, appears to have been a very good one, and, in draught horses, "superior to any ever before seen in the Northwest, if not in the United States." The reporter thinks, however, that (in Illinois, as elsewhere), "the tendency of horse breeding is toward development of speed in the animal, combined with strength and endurance for farm purposes," and that with this tendency in force the heavy draught breeds will grow in favor very slowly. Another interest fairly represented, and which is increasing in importance annually, was the breeding of mules. Among the sheep, Spanish Merinos were present from Vermont and Michigan, as well as Illinois, but they are thought not to have included as many excellent animals, in as good condition, as previous fairs of the Society. A limited number of South-Downs were shown, and some Cotswolds, the latter principally from Canada.

"The exhibition of agricultural implements was large and excellent. It is noteworthy that so large a proportion of this exhibition consisted of implements relating to corn culture. There were ploughs, and reapers, and mowers, and threshers; but the feature of the exhibition, aside from these, was that made by corn-shellers, corn planters, and cultivators. Even a machine for picking corn from stalks in the field was exhibited. It is to be remarked, also, that the interest taken in sorghum mills and evaporators is flagging; significant of the decline in sorghum culture. With the revival of sugar production in the South, there has been less effort to produce sugar from sorghum here. And the want of a market for crude syrup is affecting the culture of this product."—*Country Gentleman*.

**USBRIDGE FALL SHOW.**—The best Fall Show of the Urbidge Agricultural Society that we have seen for some time was held in the village of Goodwood, on the 2nd instant. The young horses and sheep were excellent, and the entries in all classes more numerous than for some years past.—*Port Perry Standard*.

**CROPS IN OHIO.**—The *Ohio Farmer* says that since the drenching rain in September they have had fine fall weather. In some of the north-eastern counties, back from the lake, the corn has been injured by the frost; but in the northern section of the State the crop is ripening tolerably well. The grape crop is not very good—the weather affecting it adversely.

**NORTH YORK SHOW.**—The Fall Show of the North York Agricultural Society, says the *Newmarket Era*, exceeded by all odds, any former exhibition of the Association, both as regards entries of competitors and visitors. One thousand three hundred and sixty-five entries were made and we think the estimate within the mark in saying that not less than 5,000 people visited the grounds.

**WEST DURHAM FAIR.**—The thirty-ninth annual exhibition in connection with the West Durham Agricultural Society, was held in Downmanville on Thursday and Friday of last week, and was in many respects very successful. On the field the show was particularly good. Of horses, cattle, sheep, implements, &c., there was a large number, in quality equal to what can be found anywhere.—*Downmanville Statesman*.

**ANCASTER TOWNSHIP SHOW.**—This exhibition was held on Wednesday, and proved to be very successful, there being a large number of exhibitors and visitors. The arrangements were not so good as

formerly, the horses being exhibited at one end of the village, and the cattle and products at the other. The Society should endeavor to obviate this difficulty next season. Having no time or space to particularize, we simply append the list of the successful competitors.—*Dundas Banner*.

**LANARK EXHIBITION.**—The *Almonte Advance* reports that the North Riding of Lanark County Agricultural Society held its Annual Exhibition on Tuesday and Wednesday last, in the splendid new Hall and Drill Shed, in this village. The weather was excellent, and the number of visitors in town was unusually large. The number of entries this season was larger than heretofore; and the show of grains, roots, dairy products, &c., was excellent, much of which should be particularized.

**COUNTY OF GLENGARRY FALL EXHIBITION.**—This exhibition was held at Alexandria on Wednesday and Thursday last. The greatly increasing interest manifested by the agriculturists of the county in the exhibition must be gratifying and encouraging to the directors and those members of long standing who originated the society and who have stood by it under less cheering circumstances. The attendance was on all hands admitted to be the largest ever seen on any similar occasion. The variety and extent of the entries in all departments fully harmonized with the large attendance.—*Cornwall Freeholder*.

**LAMBTON AGRICULTURAL SHOW.**—The Fall Show of the Lambton Agricultural Society was held on the Society's grounds at Sarnia on Thursday. There was a good attendance of visitors, and on the whole a very creditable exhibition of horses, cattle, grain, fruit, implements, &c. The *Sarnia Observer* says in regard to the Exhibition itself, we think, on the whole, it came short of that of last year from the long spell of wet weather which prevailed during the greater part of the harvest, which had the effect of damaging the grain materially, and rendering it unsuitable for exhibition purposes.

**MR. McCRAE'S SALE.**—The sale of Galloway stock, sheep and pigs belonging to Thomas McCrae, took place at his farm on Tuesday. There was not a large attendance. The aged bull "Dred" was sold to Mr. Finlay for \$90. The bull "Selkirk," calved on the 20th February, 1866, was sold to Wm. Hood for \$70. The Leicester sheep sold well. Mr. Hume, of Galt, bought a ram for \$26.—The ewes sold for from \$17 to \$19 each. The ewe lambs from \$10.50 to \$12.50 each. The ram lambs ranged in price from \$9.50 up to \$11. The Essex boar pigs sold for \$10. One sow fetched \$16. She was sold to Wm. Hewer.—*Advertiser*.

**WHITBY AND EAST WHITBY AGRICULTURAL FAIR.**—The Fall Exhibition of the Agricultural Society of Whitby, and East Whitby, held at Oshawa, on Thursday last, was not so great a success as was expected. In fact it fell far behind many former Township Exhibitions. Farming operations just now, and the hurry of preparing a late harvest for market, doubtless caused the decline. There was, however, a goodly crowd present, and minor hosts, Messrs. James Pringle and Hynes did a thriving business. The courteous attendance at both those respectable hotels, and the excellent quality of the viands supplied, were the theme of general praise.—*Whitby Chronicle*.

**NORTH ONTARIO FAIR.**—The Fall Show of the North Ontario Agricultural Society, which was held at Port Perry on Tuesday, 9th inst., was a decided success as far as the objects of the Fair are concerned. The number of articles on exhibition was unusually large and of first rate quality. The Floral Hall was all that could be desired. The show of grain, roots and seeds was excellent, and exhibited to great advantage in the large commodious hall in which they were placed. The outside arrangement was not quite so suitable, and the pelting, drenching rain rendered it very disagreeable indeed. Doubtless a large amount of the success of the Fair is due to the energy and liberality of our Port Perry friends. The amount collected at the Floral Hall was \$65.—*Ontario Observer*.

**EAST BRANT AGRICULTURAL SHOW.**—The Annual Exhibition of the East Brant Agricultural Show commenced on Tuesday last and closed on Wednesday. There was a considerable concourse of people, though, perhaps not so large as we have seen on some previous occasions. The threatening appearance of the weather, no doubt, preventing many from attending. On the whole, the Show was a great success. In many things it surpassed any Show previously held in this county. In roots, fruits, flowers, &c., the Show was of surpassing excellence, and we doubt if it was much surpassed, with respect to quality, even by the Provincial Exhibition. Of potatoes alone, there were no less than 64 different entries. Turnips, carrots, &c., were largely exhibited, and could not be surpassed in any part of the world. Cabbages, cauliflowers, onions, &c., were also largely exhibited.—*Paris Star*.

## Horticulture.

## Flowering Bulbs.

These are so easily grown, and form such desirable objects of floral decoration, both in the out-door garden and in the sitting-room or parlour, that it is really wonderful they are not more widely cultivated. What more beautiful than a collection of Hyacinths or a bed of Tulips in the open grounds? What

second year of a hyacinth, it is less beautiful than the first, and in another season or so, it dwindles away in a few little spikelets of bloom. If some method of treatment could be found by means of which its career could be made like that of the tulip, it would be a great boon to the lovers of fine flowers. But still the small outlay required to purchase an assortment from year to year is well repaid in the beauty, elegance, fragrance, cheerfulness, and education and gratification of taste thereby secured.

Those who wish bulbous flowers for winter and early spring flowering, must select, buy, and plant in

should be raked off in the Spring, as soon as hard frosts are over.

So much for the out-door culture of bulbs. In-doors they may be grown either in pots or glasses. Pot culture is similar to out-door culture so far as the preparation of the soil is concerned. After planting they should be kept in a moderately cool, dark place until the roots have time to form, when they may be brought into a lighter and warmer place. Hyacinths may be grown in glasses filled with water, which should just touch the root of the bulb. They should be kept from the light, until the roots have struck



more enlivening and love, than a few glasses or pots of such flowers in the house during mid-winter? The attention they require is mere child's play, for no vegetable even is more simple of culture, than are these bulbs. Their cost too is comparatively trifling, especially tulips. The outlay of half a dollar or a dollar will secure a beginning from which, multiplying year by year, a very large supply may soon be obtained. Hyacinths are somewhat more expensive, and the worst about them is that they deteriorate, and at length fizzle out in the hands of ordinary flower-growers. Their course is akin to that of a splendid rocket, which, after displaying its magnificence for a little while, breaks into a number of beautiful fragments, and then disappears. The sec-

the autumn. Any good garden soil will grow them well. It should however be drained, because if the ground is too moist the bulbs will be likely to rot. A poor soil may be enriched with well rotted stable dung, or with surface earth from the woods. Cow manure is excellent for bulbs. The dung should be well mixed with the soil, and it is a good plan to put a little sand round the bulb at planting. A good deep soil is best. If it is too clayey, it may be improved by a little leaf mould from the woods, or by the addition of some sand. Liberal doses of cow dung and sand will fit any soil for the growth of bulbs. After planting and before winter sets in, the beds should be covered with a few inches of leaves, loose litter, or coarse stable dung. This covering

well. The single hyacinths do best in glasses, and the double ones in pots. Tulips can only be grown to advantage in soil, but they do exceedingly well in-doors, and greatly enliven a room in the winter time.

We present herewith beautiful engravings, life-size, of the Single and Double Hyacinth. Magnificent as these blooms appear, our artists have not exaggerated them, and, at a trifling outlay, every dwelling in the land might have just such splendid floral ornaments. We also give on the opposite page, illustrations of the Duc Van Thol and Double Tournesol Tulips, the two best varieties for in-door pot culture. It is not yet too late in the season for our readers to furnish their homes with some of these desirable and easily procured decorations.

Wintering Plants.

ONE reason why choice and tender plants are not more extensively grown, is the difficulty of keeping them through the winter in this cold climate. If our houses were provided with double windows, as they ought to be, there would be far less trouble in keeping plants in-doors than there is, but with single windows, there are few if any dwellings impervious to frost. An exchange recommends the construction of a frost-proof pit, and says:—"This may be easily done by making an excavation four or five feet deep, that will be large enough to contain all the plants on hand and a good many more. This pit should be lined with boards, which should project about two feet above the surface and be banked and roofed like a hot-bed. The excavation should be perfectly drained; without this advantage it will be utterly useless. In places where drainage to a sufficient depth cannot be effected, the pit must be constructed so far above ground as will keep it dry. The pit may be constructed on the plan of an ice-house—a double row of posts and boards, the interstices being well packed with saw-dust. Light is essential, and in admitting it, caution will be necessary, as glass will admit frost. The best plan is to cover the glass with closely jointed boards, a space being left between the glass and the boards, which should be packed with hay or straw in very severe weather. The covering should be removed occasionally and air admitted. This may be done about noon on fine, mild days. In this pit a large number of half hardy plants and flowers may be safely kept during the winter."

Grape-Growing in Canada.

To the Editor of THE CANADA FARMER:

SIR,—In looking over the columns of the last CANADA FARMER I was much pleased to observe an article on the "Clair House Vineyard." It is highly gratifying to many of your readers in the "far west" to notice that the attention of the agriculturists of Canada is at last being directed to this subject. Being deeply interested in the cultivation of the vine (having, with a number of others, embarked in the enterprise this spring), any information on this subject is received with the greatest satisfaction.

It has long been a subject of surprise to persons from Northern Ohio who have visited this shore that, with the evidences of the success of grape culture, as it were, at our very doors, and with our fine land and genial climate, we should so long have hesitated about investing in an enterprise which has not in any one instance failed to surpass the most sanguine expectations.

We are situated on the north shore of Lake Erie, about 25 or 30 miles north of the far-famed Kelley's Put-in-Bay, North Bass, Middle Bass, and other islands of grape-growing celebrity. And although they may claim a small advantage over us in regard to the early frosts, still it is admitted by all who are acquainted with our climate, that it is sufficiently mild for the successful cultivation of most of the early varieties, such as Delawares, Concords, Hartford Prolifics, &c. Even Catawbas and Isabellas, where they have had the least advantage of a proper cultivation, have established the fact beyond a doubt that, when properly managed, they are capable of being cultivated with success. I have a few vines of Isabellas and Catawbas in bearing this year for the first time, and they are so far matured already, and are bearing such an abundant crop, that I have been assured by competent judges, that these varieties can be cultivated here with equal success as in any part of Northern Ohio or the islands. My next neighbor has a Concord vine which was examined a few days since by a gentleman from the islands, and he assured me that he never saw a better show of fruit in his life, although the mode of cultivation it has had has been highly

prejudicial to its bearing. The mode of planting and pruning adopted by the grape-growers of Ohio, is widely different from that reported in your paper.



They generally plant 6 x 8 feet, and train 3 or 4 canes of bearing wood about 5½ or 6 feet high. But the produce per acre as stated by you, far exceeds anything



ever heard of here. C. J. Parsons, of Sandusky, Ohio, last fall offered a prize for the largest amount of grapes per acre, and it was awarded to Lorenzo Mil-

ler of Put-in-Bay Island, he having raised eight tons to the acre. Now you speak of 15 to 25 tons produced by Mr. DeCourteney, which seems well nigh incredible even to us who have been accustomed to hear almost fabulous accounts of grape growing for years past.

I have been told by a friend who visited the Clair House Vineyard last summer, that the Clinton is the variety grown by Mr. De Courteney. This may account for the difference of the amount produced per acre, as the Catawba and Isabella are the staple article of cultivation in Ohio. They look upon the Clinton as a very inferior grape—so much so that they will not raise it on any account. It is, therefore for the purpose of gaining all the information possible on this subject that I have ventured to address you, hoping that it may be the means of bringing the knowledge and experience of the grape growers of Canada before the public through the medium of your excellent paper.

We have adopted the mode of culture in operation on the Islands, but as there is a prospect that there will be a large amount of grapes planted next spring, it would be a great benefit to those about to embark in the business, to hear the different modes discussed by those who have had experience as vine growers in Canada. We have planted several varieties—Delaware, Concord, Hartford Prolific, Oporto, Catawba, Isabella, Diana, and Clinton, but it would be greatly to our advantage as new beginners to be able to know the best kind for our soil and climate.

A company of gentlemen from Kentucky, who have been in the business for fourteen years, have purchased a farm on Pellico Island (fifteen miles south of us) and planted 30 acres this spring, and intend to plant 20 more next spring. A considerable extent of land has been planted by others on the same Island, and there is every reason to believe that ere long this profitable branch of agriculture will be regarded by the people here as a matter of great importance. The history of the Clair House Vineyard, mentioned in your paper as forthcoming soon, will be hailed with delight by your readers in this part of the country.

Kingsville, Essex, Sept. 12, 1866.

A gigantic melon was sold the other day at La Halle Centrale, in Paris, the largest that has been heard of in the memory of man. It weighed no less than 72 lbs., and was grown in a garden at St. Denis.

THE ROSE TRADE IN FRANCE.—The trade in roses, as is well known, is of considerable importance in France. Rose trees are cultivated in different parts of the country in open fields, just as turnips or cabbages. Thus, there are 500,000 rose trees near Orleans, 200,000 near Metz, 1,000,000 near Angers, 1,500,000 near Lyons, 2,000,000 near Paris, and 5,000,000 in the 13 communes of Bries-Comte-Robert. The varieties called Rose-The, the Bourbon, and Mousseuse flourish in the environs of Paris and Orleans.

CARE OF TENDER PLANTS.—Many beautiful plants that are safely bedded out in the spring, and prove ornaments to the flower-plot all summer, will be utterly destroyed if left in the open ground during winter. A good plan is to pot them and keep them in the house during frosty weather. In taking them up care should be taken to preserve the roots as much as possible, and they should be either stripped of a portion of their leaves, or shortened in, to compensate for the disturbance to which they are subjected. It is best to use pots just large enough, that after they have commenced to grow they may be shifted into larger ones, and have the stimulus of fresh soil to promote their further growth. After potting they should be put into a shady place, and the earth well soaked with water. Many plants if well treated, will give quite a profusion of flowers during late winter and early spring, and as the time comes round make splendid objects for summer decoration again.

## Upper Canada Fruit Growers' Association.

The Fall meeting was held in the Town Hall, Grimsby, on Wednesday, the 3rd October. The President, Judge Logie, took the chair at 11 o'clock, a.m. After the reading of minutes of last meeting, and the transaction of some routine business, the meeting proceeded to the discussion of grapes, of which there was an unusually fine show on the tables, comprising many new and exceedingly interesting varieties.

**Hartford Prolific.**—Mr Mills, of Hamilton, said it was hardy, but the berries drop from the bunch, and as a table fruit it was inferior in quality. It ripened ten days before the Delaware, in a not very favorable locality. Mr. Smith, of Grimsby, considered it valuable because it is early, though it had all the faults that had been mentioned by Mr. Mills. Mr. Arnold of Paris, had heretofore valued it because it was early, but this year he had found the Delaware quite as early. It drops badly and thought it could be dispensed with. Mr. Holton, of Hamilton, values it because it is early and prolific; it usually ripens much earlier than the Delaware—the berries do drop some from the bunch. Mr. De Courtenay, of Clair House, Cooksville, said that its foxiness made it unsuitable for wine. Mr. Haskins, of Hamilton, does not think much of its quality, but considers it valuable because early. Mr. Pawling, of Port Dalhousie, considers it a good early grape. Mr. Murray, of Hamilton, classes it as a valuable early grape, hardy, but falling from the bunch when perfectly ripe. Mr. Kilborne, of Beamsville, prefers the Isabella and the Creveling, particularly the Creveling. Mr. Kitchen, of Grimsby, "they have a bad fault of dropping from the cluster, but I get 15 to 20 cents per pound for them, and shall value it until I get a better." Mr. Beadle, of St. Catharines, expects that in two years we shall have other varieties of grapes as early and so much better that this will cease to be cultivated.

**Concord.**—Mr. Nixon, of Grimsby, considers it a valuable hardy grape, two weeks later than the Delaware. Mr. Smith, of Grimsby, thought it better than Hartford Prolific, and one of the most healthy varieties and hardy in wood and foliage that we have. Mr. Arnold, of Paris, had found it very hardy, and one of the best of its class. Mr. Holton thinks it will be very valuable for some time yet. Mr. De Courtenay, of Clair House, said that compared with the Hartford Prolific it was a fine grape, but he did not know whether it would be valuable for wine. Mr. Morse, of Smithville, said that he thought very favorably of it. Mr. Murray, of Hamilton, ranks it as one of our best market grapes as yet, it ripens about ten days later than the Delaware. Mr. Kilborne, of Beamsville, finds it very productive, yielding more than most varieties. Mr. Kitchen, of Grimsby, had found it to sell well and is experimenting on its value for wine, thinks it will be good for wine. Mr. Beadle, of St. Catharines, values it very much, has found it hardy, productive and well adapted to our climate.

**Diana.** Mr. Mills, of Hamilton, said it was a favorite grape with him on account of its peculiar flavor, but it does not ripen evenly on the bunch and is late, two to three weeks later than the Delaware. Mr. Smith, of Grimsby, "some seasons it ripens well, this year it will not ripen." Mr. Arnold, of Paris, has found it subject to rot. Mr. Halton, of Hamilton, "a superior grape when ripe, but is late." Mr. Haskins, of Hamilton, said the lateness of ripening was the great objection to this variety, and in this opinion all the members concurred.

**Delaware.**—Mr. Mills, of Hamilton, had found no grape comparable to this for wine and for table use. The vine is perfectly hardy. This year, for the first, I have been troubled with the *Thrip*, which little insect injures the foliage. Mr. Smith, of Grimsby, thought as highly of this variety as Mr. Mills, but this year had found serious trouble in the premature dropping of the leaves, they had dropped more than a fortnight ago. Mr. Arnold, of Paris, said it was a nice little grape, but a slender grower. Mr. Halton,

of Hamilton, considered it a very fine grape and at present indispensable. Mr. De Courtenay, of Clair House, Cooksville, thought it one of the best wine grapes, very closely resembling if not identical with the Balsamin, and that the premature dropping of the foliage this year was caused by the excessive cold rains. Mr. Haskins, of Hamilton, said it was the best hardy grape, in which opinion Mr. Murray fully coincided. Mr. Kilborne, of Beamsville, had five years' experience with this grape and values it very highly. Mr. Kitchen, of Grimsby, would plant ninety nine Delawares out of every hundred vines, it is the hardest vine I know, and I have kept the fruit until March. Mr. Beadle, of St. Catharines, said that it is the best grape we have—as yet.

**Creveling.** Mr. Kilborne, of Beamsville, exhibited two bunches of black grapes which grew on a vine that he obtained direct from Dr. Grant, of Iowa, and remarked that some doubt had been thrown on the genuineness of this grape by gentlemen who said they had grown the Creveling. None of the members present had ripened the Creveling sufficiently to decide whether the specimens shown were the true Creveling. The bunches were less loose, and the berries larger than those usually shown as Creveling. Mr. Kilborne said that he obtained this vine three years ago last spring, that last winter it remained exposed on the trellis and had borne this year 35 clusters of grapes, three of which were awarded the first prize at the Provincial Fair in Toronto for the best three clusters of grapes. The vine had proved thus far in wood and foliage as hardy as the Concord. The grapes were tested by the members who considered them of very good quality and perfectly ripe. Mr. De Courtenay thought it very promising for wine.

**Iona.**—Mr. Kilborne, of Beamsville, exhibited some clusters of this variety taken from a vine which grew by the side of the Creveling—and was exposed in like manner all last winter; it bore 27 clusters. He remarked that members would perceive that the grapes were not ripe, and yet Dr. Grant said it ripened with the Delaware, which had not been the case in his experience. The Delaware on the same trellis is nearly all ripened and gone—at least two-thirds of the Delaware grapes were fully ripe. Mr. Beadle, of St. Catharines, said that one of his Iona vines had a few grapes on it this year for the first time, but they were not yet ripe, while his Delawares were chiefly ripe.

**Isabella.**—Mr. Kilborne said he procured this vine and the Iona direct from Dr. Grant. This vine is only two years old, and has three small clusters, that he thought the flavor good, but the berries dropped from the cluster worse than the Hartford Prolific. He here exhibited a handful of grapes, nearly all of which had dropped from the cluster that lay in his hand. The skin was very tough and flavor not equal to the Creveling.

**Oporto.**—Mr. Kitchen, of Grimsby, exhibited this variety and remarked that he thought it a good wine grape. That he had found the vine vigorous, free from mildew, hardy, yet not very productive. Mr. De Courtenay examined it, and expressed the opinion that it will be a very desirable wine grape. Mr. James Taylor, of St. Catharines, though not able to be personally present sent a large collection of grapes, among which were many of Rogers' Hybrids, and other new grapes. These were examined by the members present and those who had cultivated them gave their opinions. Mr. Arnold, of Paris, said that Rogers' Hybrid No. 15 was his favorite grape, and esteemed by him as one of the best for table. Mr. Kilborne said that this year, comparing it with others, he thought it a very fine grape. It was a strong grower and ripened its wood perfectly. Mr. De Courtenay remarked that it had a muscatel flavour, and that some of the muscatel grapes were valuable for wine.

**Rogers' Hybrid No. 33.**—Was thought to be a very fine early grape.

**Rogers' Hybrid No. 4.**—Was pronounced by Mr. De Courtenay to be a promising grape with a great proportion of saccharine matter.

Mr. Arnold, of Paris, exhibited six new hybrid grapes of his own raising, designated by the Nos. 1, 2, 5, 8, 11 and 16. They were not yet perfectly ripe, though fully as much so as the Hartford Prolific, grown on the same trellis. No. 5 was a white grape, the others were black. They had the flesh of the Hamburg grapes, and nothing of the tough pulp of the Isabella.

At this point Mr. De Courtenay was requested to give an account of progress in vine culture and wine-making at Clair House, Cooksville to which he responded by a brief statement of the good success obtained in the culture of the vine on the Italian method of training, by which he obtains this year from that portion of the vineyard that has been longest in cultivation some fifteen tons of grapes per acre. He briefly alluded to the charter recently obtained, and the privileges granted thereby to the Canada Vine Growers Association, and hoped that

the grape growers of Canada would take up the stock now offered for subscription and thus secure the direction in the hands of practical wine dressers. A wine could be manufactured resembling claret which he thought could be afforded at fifty cents per gallon, and a pure brandy manufactured and sold at a price that would compete successfully with the miserable compounds now in our markets. He gave a cordial invitation to the members to visit the vine yards at Clair House during the vintage now approaching, and judge for themselves of the results obtained, adding that if such good success could be had there under all the difficulties of that climate, what must the results be in the more favored climate of the County of Lincoln.

On motion the subject of apples was then taken up to give several members an opportunity to have their apples correctly named. There was a large and very interesting collection of apples, pears and grapes.

Mr. Morse, of Smithville, exhibited an extra large green apple, good for cooking in Nov. and December but the name was unknown to any one present. A large number were brought forward by him and others, some of which were readily named, others were not recognized. Mr. Mills, of Hamilton, exhibited some very fine Plums, of the Columbia, Washington and Jefferson varieties. He is able to raise them abundantly and in great perfection by jarring the trees and killing the curculio. He is not troubled with the Black Knot.

The meeting was one of great interest, and occupied the whole day. The next session will be held in the County Buildings, in the City of Hamilton, on the third Wednesday of January 1867.

## Miscellaneous.

### An American's Thoughts about the Canadian Exhibition.

Mr. Sanford Howard, Secretary of the Michigan State Board of Agriculture, has written a very full account of the recent Provincial Exhibition, from which we call here and there a few extracts. The communication from which we quote, appeared in the *Country Gentleman*, of Oct. 11th:—

"The fact may have been noticed in your column<sup>9</sup> before, but if it has there is no harm in keeping it before our people, that the Canada West Provincial Agricultural Association holds its exhibitions at four places, alternately, viz: Toronto, Kingston, Hamilton, and London. This routine of course brings the exhibition at each of these places once in four years. It is obvious that the system possesses important advantages.

"Is not this the right way? Let each of our State associations fix on the number of places at which their annual exhibitions shall be held, and then, with the contributions which can be obtained, proceed to put up the best buildings which their means will allow. In general, it is probable that the people of the various localities would bear the greater part of the expense.

"Another part of the programme of our Canadian neighbors might be adopted by us with advantage: the making of *catalogues* previous to a given day preceding the exhibition. This is also the English plan, and why it should not have been long since adopted by our agricultural associations, is passing strange. It is the only way by which a large exhibition can be properly systematized. There seems to be a reluctance to the adoption of this system on our side, for fear the people will not "come into it." Let it be tried and adhered to strictly, and exhibitors will need but one lesson to secure their cordial co-operation.

"The arrangements for the late exhibition at Toronto were as complete as could reasonably have been expected, and the exhibition would have appeared to excellent advantage, had the weather been favorable.

"In Short-Horn cattle there was a good show. Prominent among the exhibitors were the Hon. David Christie, F. W. Stone, John Snell, and John Miller. Mr. Christie showed no bull except a calf. His famous trio of cows, Placida, Queen of Athelstane, and Pride of Athelstane, constituted a show of themselves, which would well compensate a spectator for a long journey.

"The classes of younger female Short-Horns, from three-year olds down to calves, were well filled, each class comprising several fine specimens, and the calves, ten in number, were an unusually fine lot. The Short-Horn bulls were not, on an average, as good as the cows and heifers. In the class of yearlings, the first prize bull, Nelson, was a remarkably good one. He was by Mr. Christie's Oxford Lad, and was owned by George Wood, of Downie. In the class

of calves was Mr. Christie's Oxford of Athelstane, about eleven months old; his sire, Oxford Lad; dam, Pride of Athelstane. He is one of the best bulls of his age I ever saw—his shape, coat, and handling indicating that he may make another Hubback. He came into the ring as a competitor for the prize on the best Short-Horn bull of any age, and notwithstanding the difficulties of comparing such young animals with those of mature age, the judges declared him the winner.

"The Herefords were somewhat more numerous than at the show at London last year, there being 36 head. Most of them were owned by Mr. Stone, of Guelph, and I think the others were derived from his herd. As a class, they were entitled to a high rank—certainly as high as any other breed on the field. In symmetry and quality of flesh, several of Mr. Stone's cows and heifers could scarcely be excelled. In the bulls, too, there was much merit. The Herefords seem to be gaining in favor in Canada, and there is no reason why they should not. Where speculation is thrown out of the question, and cattle are kept for use and profit in the ordinary markets, the Herefords will be esteemed.

"The Devons were most numerous of any breed on exhibition, numbering, I think, 120 head. As a class, they were very good, and many specimens were excellent. Some people who see no merit in any breed of cattle except that to which their own herd belong, and vent their prejudices on what they call "little rats of Devons," would have been likely to open their eyes and shut their mouths, if they had seen some of the stock here exhibited—bulls weighing from 1,800 to upwards of 2,100 pounds, and cows as large according to the sex. The bull, Prince of Wales, bred in England by Lord Portman, which took the first prize, I found to measure at the girth seven feet and eight inches, *snug*, although in only *working* condition. Several large bulls were exhibited; but he was regarded as large enough, and the scale was turned in his favor by other points. He is six years old, is of the Quartley family; is owned by John Pincombe, of London, who has several younger bulls, cows and heifers, of similar strain of blood, and carried off various prizes.

"The Galloways were an interesting class, though somewhat less numerous, I think, than at London last year. They are said to be rapidly increasing in Canada, having proved themselves well adapted to the climate. I feel confident that they will also prove to be a very valuable breed for Michigan, and all the northern section of our country. Wisconsin, Minnesota and Iowa would act wisely by introducing them. There were many good specimens on exhibition at Toronto—short in the leg, long and round in the body—cylinders of beef of the best quality. Their cousins, the polled Angus cattle, were represented by a dozen or fifteen specimens. Several of the cows were very pretty—thinner in the fore-rib, and with more prominent hips than the Galloways, with perhaps more indications of milking properties than they, but with a thinner skin, lighter coat, and a less strong and rugged appearance.

"The Ayrshires were quite numerous, and there were good specimens among them, but the average standard of the class would not be very high. The breed is justly very popular with Canadian dairymen, but judging from the stock on exhibition at Toronto, there is a want of attention to the points and qualities of breeding animals. If such bulls as some of the best that were shown were used in all herds, the improvement would soon be very great.

"Coming to sheep, the long-wools were much the most numerous, and those shown under the name of Leicester were the leading variety. Still the popular tide seems to be setting in favor of the Cotswolds—the heavier fleece of the latter, under the high price which long wool brings, making them more profitable, as is claimed. Mr. Stone of Guelph who has heretofore kept both Leicesters and Cotswolds, has lately sold out the former. His Cotswolds are very fine, and several of the highest prizes were carried by specimens from his flock. Some of his rams weigh upwards of 400 pounds each. Mr. Snell, of Edmonton, showed both Leicesters and Cotswolds—some of the former, eighteen months old, weighing nearly 300 pounds each, and a three year old Cotswold upwards of 400 pounds. Many sheep in the long-wooled classes were ruled out from competition on account of not having been closely shorn, according to the requirements of the Association. Mr. Kirby, of Milton, showed four of the fifteen Lincolnshire rams lately imported by him. They are all large, well shaped sheep. One, a yearling, is said to weigh over 300 pounds, and was sold on the ground for \$300. They have heavy fleeces. Whether they will excel the Cotswolds in profit, can only be determined by actual trial. South-Downs were not very numerous, but the specimens were generally good. Mr. Stone carried off nearly all the first prizes, though other lots were not without merit. Shropshire Downs and Hampshire Downs were represented by a few specimens. George

Miller, of Markham, was the principal exhibitor of the Shropshires, and H. Spencer, of Whitby, of the Hampshire. A few specimens of Merinos were exhibited. It was difficult to find judges for the class among the Canadians; but a Michigan man was finally found, who has done much of that business on this side, and by his aid the prizes were soon awarded. One of the competitors said he thought the prizes would otherwise have been awarded to the *fattest* sheep, though but very little fat could be found on any of them.

"The show of Swine was very large. The medium sized Berkshires took the lead, and seem to be a very popular stock. There were a few specimens of the Essex breed. Of white hogs, the large Yorkshire were represented; they are as large or larger than the so-called Chester county stock, and much finer in bone, and stronger in the back. The Suffolk, or a variety of similar character, was shown to a large extent—many specimens being very good.

"The Poultry show was very large. Nearly all the most popular varieties of fowls were represented. The show of the Spanish variety was the largest I ever saw, and comprised many excellent specimens. Several lots of Bremen or Embden geese were exhibited, which were equal in size to any that used to whiten the fields or waters of the Ten Hills Farm, near Boston—the late proprietor of which, Col. Jacques, was perhaps the first importer of the breed to this country. The Toulouse and other varieties were also exhibited.

"The implement show, though good, was not as large as that at London last year. The ploughs were nearly all of the Scotch style—long, low, rakish-looking, without wheels—the Scotch contending that "a wheel is better on a cart than on a plough." Harrows, as usual, were better than we generally see on this side. In fact, in the class of implements used for cleaning the land and producing a perfect seed-bed, the Canadians excel us. It is a pity that some of their grubbers and horse-hoes should not be introduced among our farmers. In root-cutters, too, I know of nothing equal to Gardener's, which turned one way, cuts in strips half an inch thick and three-quarters of an inch wide, and turned the other way cuts in slices. I saw no root-pulpers, and could not learn that any are made in the Province, though some farmers have imported them. They should be made by our implement manufacturers. There were several reaping and mowing machines, but this class was not as well filled as we usually find it at our large shows.

"The show of fruit surprised all the visitors from this side by its extent and excellence. The show of roots was the largest that I have seen on this side of the Atlantic. The seed department was also well filled. Indeed, I did not expect to see such good samples of wheat and barley, after such a season of heavy and continuous rains. There was a large show of cheese, including the monstrosity of several tons weight, which was shown at the late New York State Exhibition. A fine article of Stilton cheese is made in Canada, specimens of which were shown from several dairies. Numerous samples of butter were on exhibition, which appeared well. The mechanical and manufacturing departments of the exhibition appeared to be well and creditably filled, and in that of fine arts there was no lack. The arrangement of all the in-door classes was highly creditable to the judgment and taste of the managers. The entire Exhibition was of a decidedly practical character, not degraded by private clap-trap shows, "trials of speed," or "female equestrianism." Yet the people attended in large numbers. It is no compliment to our people to say that exhibitions of utilitarian character would not be attended by them. Permit me to say, in conclusion, that a more frequent interchange of visits with our Canadian neighbours at agricultural exhibitions, would be productive of much good. In a practical view, we might, with advantage, resort to their herds and flocks for stock to improve our own; but the duty of 20 per cent. now levied amounts nearly to a prohibition. I cannot see why the same rule should not prevail in regard to the introduction of stock from Canada for the improvement of breeds, that has been observed in reference to European countries; that is, it should be admitted free of duty. Will not our leading agriculturists see that this matter is set right at the next session of Congress?"

### What Women Can Do.

Among the strangers in Philadelphia at this moment are two ladies from Martinsburg, West Virginia. Yesterday they were purchasing a seed drill, a mowing machine, and other agricultural implements, whose cost in the aggregate was about 800 dollars. Their home was very close to the theatre of the late war between the two contending armies—their houses and barns were burned, their horses and cattle driven off, their only brother conscripted into the rebel army, and themselves left utterly destitute and homeless. Any one

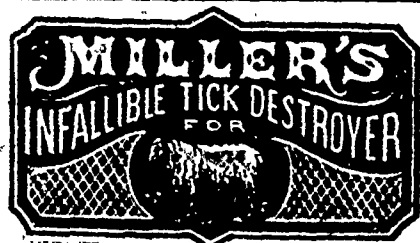
who, seeing a young lady such as we saw yesterday, had been told that she had personally ploughed and planted many acres of land, would have laughed to scorn the party so informing him. Such, however, is literally the case. We learned the facts from a gentleman residing in the vicinity. The smoking ruins of the farm upon which these young people resided had scarcely cooled when the neighbours clubbed together, built them a log house, and extemporized a sort of barn. Horses were loaned to them, and the girls with their own hands ploughed the ground and seeded it with corn. The crop grew apace, and with their own hands they harvested it. They sold it to good advantage. They had owned forty-seven negro slaves. Some of these went into the Union army, others deserted the locality. The girls were left alone to battle with the vicissitudes of the war. Our informant, whose respectability is beyond a question, says that these girls produced by their works in the field more decided and productive results than were accomplished by the entire gang of slaves. They toiled for three years, and now have a comfortable house and most substantial barns upon their property, while improvements have been made upon it to an extent that makes it of considerable more value than before the torch of conflicting armies reduced its buildings to ashes. One of the young ladies has since married, but the others still do duty as their own "overseers," and they themselves purchased yesterday, and directed the shipment of the agricultural implements to which have above referred. The wonder to the dealer, was that a lady, delicately-gloved and attired as though she had never overstepped the bounds of the boudoir, should descend experimentally and intelligently upon the respective merits of the different reaping machines, and upon the comparative values of the different patents for threshing out the cereals. These young ladies were educated in Philadelphia, and are well known to many of our best people.—*Philadelphia North American.*

### The Poetry of Farming.

Agriculture has a field of poetry as well as practical culture. The "pastoral landscape" is here—all that the ancients have said about it—the harvest field sung about and beloved by everybody; the "tanned haycock;" the scent of new-made hay at evening; the fields with their garniture of green, embracing the whole practical world of nature, the great source of the poet's inspiration. There are the fruits: ripe, golden apples, blushing and fragrant; peaches, pears, plums; the strawberry; and the seedy glistening blackberry; with their fields of poetry! And then the maize—in the field, in the barn, yellow and glistening on mild October days, when the sun also is yellow, and earth is teeming like a wine press with plenty and good cheer. What hope! what prospect in store for the bright winter evenings! The vineyard itself is one of the greatest of poems. How the ancients deoted upon it, and sang its praise! and now it is flowing in streams, and hanging its purple clusters in bursting profusion.

THE ANT TRAP.—As the season is at hand for those pests, the ants, housewives and others who are troubled with them may probably use the following trap to advantage: Procure a large sponge, wash it well and press it dry, which will leave the cells quite open; then sprinkle over it some fine white sugar, and place it near where the ants are most troublesome. They will soon collect upon the sponge, and take up their abode in the cells. It is then only necessary to dip the sponge in scalding water, which will wash them dead out by tens of thousands. Put on more sugar and set the trap for a new haul. This process will soon rid the house of every ant, uncle and progeny.

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Markham, P. O.

Markham, September 8, 1866.

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Toronto Markets.

"CANADA FARMER" Office, Oct. 31, 1866.

THE general aspect of the produce market remains without material change. Barley, owing to the heavy condition of the country roads had not been coming in so freely, prices have advanced, the best samples now bringing 63c.

Flour—Market lower. Holders asking \$8 60 to \$8 85 for No. 1 superfine; buyers offer from \$8 75 to \$8 80; sales, 700 bbls No. 1 at \$8 75, 100 bbls No. 2 sold at Normal at \$5 00.

Wheat—Only one lot of inferior spring offering at \$1 40. Fall wheat in demand at from \$1 66 to \$1 73; sales, 360 bushels at \$1 56; 360 bushels at \$1 65; 260 bushels at \$1 66; 1,600 bushels at \$1 67; 360 bushels at \$1 68; 193 bags at \$1 73; 500 bushels at \$1 65 in store.

Oats—In demand at 30c; sales of 500 bushels at that price. Barley Sales 2,000 bushels at 60c; 1 car at 61c on track; 14 cars at 62c, 2 cars at 61 1/2c. Receipts on street to-day computed at from 2,000 to 4,000 bushels, from 60c to 62c, freely paid.

Peas—In demand; sales 1,600 bushels at 75c f.o.b.; from 75c to 77c paid on the street.

Provisions.—The market is dull; transactions being very limited and confined to retail lots. Butter dull at from 14c to 15c for shipping lots, and 16c to 17 1/2c for dairy, and 18c for rolls on market. A still further decline in shipping lots is anticipated.

Montreal Markets, Oct. 30—Laudais, Middleton & Co., report—Four—Receipts, 2,000 bbls; market about nominal. Wet weather interferes with operations. Small sales of superfine at \$7 10 to \$7 25. Oatmeal at \$4 90 to \$5. Wheat—\$1 45 to \$1 50 for U. C. spring. Peas—92 1/2c to 95c, per 46 lbs. Ashes nominal. Butter dull. Pork—Nothing doing.

Galt Markets.—F. W. flour per 100 lbs, \$4 00. Spring Wheat flour do \$3 50. Fall Wheat, per bushel \$1 40 to \$1 65. Amber Wheat per bush \$1 10 to \$1 40. Spring do per bush \$1 20 to \$1 40. Barley, 1/2, 40c to 52c. Oats per bushel, 25c to 27c. Butter, per lb, 15c to 16c. Eggs per doz, 10c to 12 1/2c.

Guelph Markets.—Fall Wheat, per bushel, \$1 40 to \$1 65. Spring Wheat, do, \$1 25 to \$1 42. Oats, 28c to 29c. Peas, 60c to 65c. Barley, 45c to 53c. Eggs per dozen, 15c to 16c. Butter, per lb, 15c to 16c.

London Markets.—Fall Wheat, per bushel, superior, \$1 60 to \$1 80, do inferior, \$1 25 to \$1 60. Spring Wheat, \$1 35 to \$1 40. Barley, 45c to 60c. Oats, 25c. Flour, per 100 lbs., \$3 75 to \$4 25. Hay, per ton, \$8 to \$10. Dressed Hogs, per 100 lbs., \$6 50 to \$7. Butter, fresh, per lb, 16c to 18c; keg, do, 15c to 16c. Eggs, per doz, 12 1/2c to 15c.

Hamilton Markets.—Spring Wheat, \$1 25 to \$1 40, white winter none, red, \$1 25 to \$1 45, amber \$1 25 to \$1 65. Barley, No. 1, 65c to 50c. No. 2, 50c to 62c. Peas, common, 65c to 75c. Oats, 27c to 28c. Timothy Seed, \$2 50. Eggs, per dozen, 15c. Butter, fresh, per lb, 15c to 20c; Irkin, 15c. Potatoes, 35c to 40c.

Owego Markets.—Oct. 29—Flour, market unchanged at \$12 25 for brands from No. 1 spring, \$13 75 from red winter, \$14 75 from white, and at \$15 60 to \$15 75 for double extra from prime white wheat. Grain—Wheat firm but quiet. No. 2 Chicago spring to arrive at \$2 50. Corn higher and unsettled, with out sales. Barley firm but dull; Bay of Quinte at \$1 20 1/2; choice up-lake at \$1 05 in bond; shore at \$1 23, and Bay of Quinte at \$1 04 in bond. Rye scarce and quiet.

Milwaukee, Oct. 20, noon.—Wheat—Receipts—114,000 bushels, No. 1 f.o.b. firm, and buoyant at \$2 10 to \$2 17, No. 2 f.o.b., at \$2 to \$2 02. Flour, equal to No. 1, Montreal inspection, \$10 50 to \$10 75.

Chicago, Oct. 30, noon.—Wheat—Receipts 81,000 bushels, No. 1 f.o.b. quiet at \$2 21, No. 2 f.o.b. at \$1 99 to \$2. Corn quiet at 99c; Receipts 95,000 bushels.

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