

**Technical and Bibliographic Notes / Notes techniques et bibliographiques**

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

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

Coloured covers/  
Couverture de couleur

Coloured pages/  
Pages de couleur

Covers damaged/  
Couverture endommagée

Pages damaged/  
Pages endommagées

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

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

Cover title missing/  
Le titre de couverture manque

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

Coloured maps/  
Cartes géographiques en couleur

Pages detached/  
Pages détachées

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

Showthrough/  
Transparence

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

Quality of print varies/  
Qualité inégale de l'impression

Bound with other material/  
Relié avec d'autres documents

Continuous pagination/  
Pagination continue

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

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

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

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

Title page of issue/  
Page de titre de la livraison

Caption of issue/  
Titre de départ de la livraison

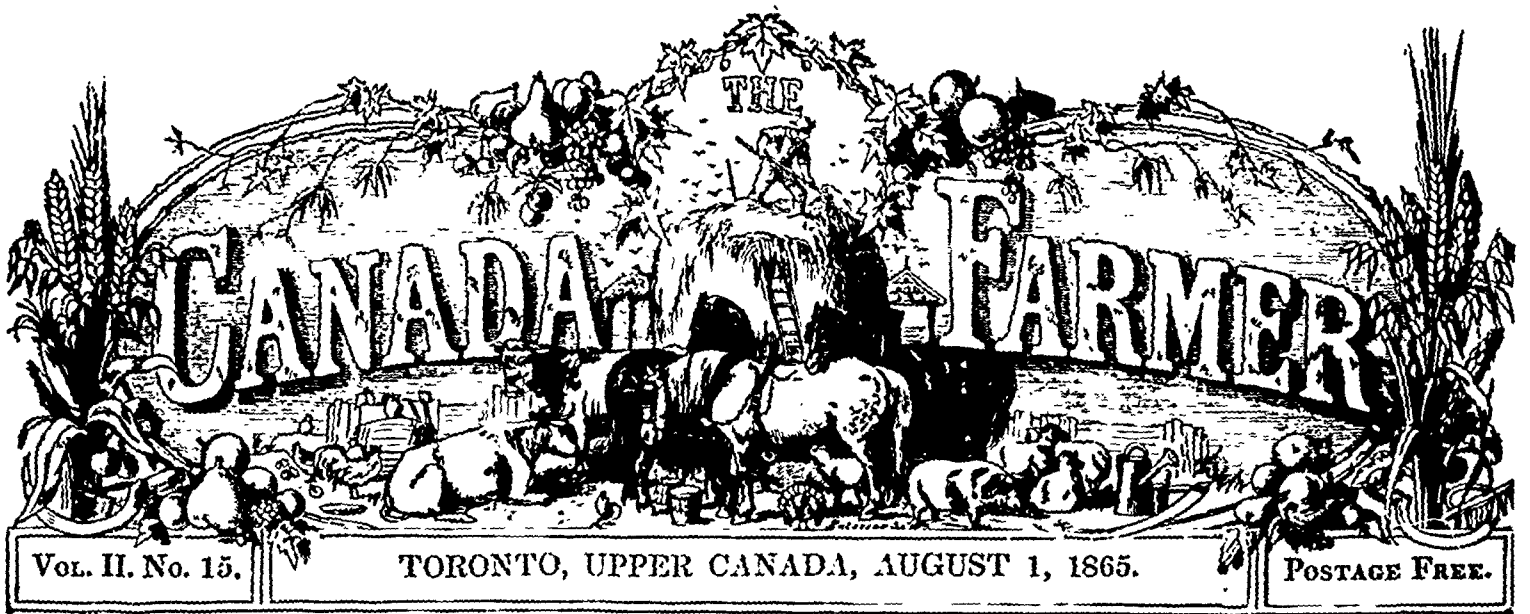
Masthead/  
Générique (périodiques) de la livraison

Additional comments:/  
Commentaires supplémentaires:

Wrinkled pages may film slightly out of focus.

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

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
										✓	



Vol. II. No. 15.

TORONTO, UPPER CANADA, AUGUST 1, 1865.

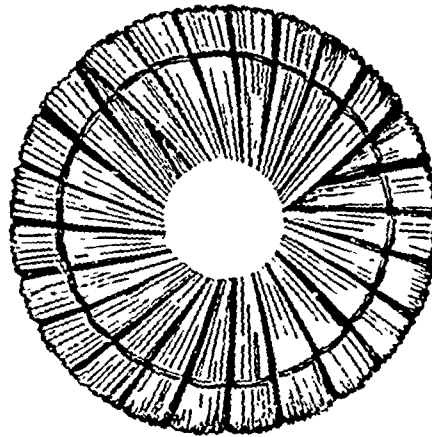
POSTAGE FREE.

**The Field.**

**Grain Stacking.**

"That farmer is a sloven," is an observation frequently called forth in Britain, by the spectacle of a farm homestead disgraced by the presence of badly-constructed, half-covered grain stacks. As the stack-yard in the old country, at the end of autumn, generally represents the greater portion of the labour of men and horses for a twelve month, the sweeping verdict, in the majority of cases, is pretty well merited. A man who acts on the "through-by-the-near-est" principle with the results can hardly be expected to be over careful and pains-taking with the means which lead to them. It is often amusing to observe the bungling attempts at deception, in respect to the stackyard, with which the slovenly farmer endeavours to deceive the public, and gain, if possible, a better character for his management than it deserves. If the steading is situated near a highway the following ruse is repeated—with a perseverance worthy a better object—year after year. A row of pretty well built stacks, finished off with a studied pretension to neatness and tidiness, occupies the side next to the public road, and a number of wretchedly-made stacks bring up the rear. Generally the good looking stacks are built pretty closely together, and are some-

what taller than their unkempt, tatterderailed companions behind them, which they are designed to conceal. The trick is invariably a failure, for the gaunt, illshapen heaps refuse to be hidden. In spite of every precaution, they most provokingly peep



through the front rank or "dress circle," and exhibit their shaggy sides, slovenly head-dress, and ungainly proportions, to every observer.

Careless farmers who are in the habit of rearing uncouth mis-shapen stacks, liable to be upset by a

puff of wind, or thoroughly drenched by a day's rain, should remember that the little extra labour necessary to produce a well-proportioned and secure stack, is more than repaid by the superiority of the fodder, resulting from its being protected from the weather. By the aid of some illustrations we hope to show that the proper construction of a grain-stack is an easy task, and within the compass of any person who has a pair of willing hands, and a moderate share of intelligence to guide them.

On most well-managed farms grain is stacked on a stand or frame work supported by pillars. This serves the threefold purpose of preserving the stack from the depredations of rats and mice, of protecting it from the moisture of the ground, and of admitting the air from below to circulate through its body, and to maintain it in sweet and sound condition. Various materials may be employed for its construction. In many districts in England, the frame and pillars are composed entirely of iron. In others the frame work is of wood, and the pillars are stone; while in some, frame and pillars are constructed wholly of timber. Of course the last-named method could be most easily adopted in this country. The process of stack-building, whether a stand is used or a site formed on the ground, is precisely the same. A couple of sheaves are set up against each other in the middle of the stack, and other two against their sides. Sheaves are then piled regularly round this nucleus with a grain-



C. F. DUMOREAU

dual slope downwards and outwards till the circumference is reached, and the first layer completed. This outside or foundation row should then be carefully examined, and if necessary, adjusted. If any sheaves are pressing too closely together they should be relieved, and a sheaf ought to be introduced where any slackness is discovered. On the regularity and uniformity of the foundation the success of the structure is greatly dependent. Too much care, therefore, cannot be observed in securing a good beginning. "Well begun is half done."

Several methods of construction and arrangement of the sheaves are in use among professional stackers. The method indicated in our small illustration showing a section of the leg of a stack without the centre-filling—is in our opinion the most artistic and satisfactory. It is known as the "right and left" process; which simply signifies that each row of sheaves is laid in an opposite direction. If the first row, for example, is laid "sun-way round," the third, fifth, and so forth, would be laid in the same direction; while the second, fourth, &c., would be stacked in an opposite manner, or contrary to the sun. The but-ends of the sheaves, which acquire a certain uniform bevel by standing in the field, are very favourable to this system, and when they are arranged somewhat obliquely, with the long side placed in front, and the beveled side touching the last laid sheaf, a very handsome structure may be reared. When a couple of outside rows have been thus laid, an inside one is formed. The but-ends of this course should rest on the outside sheaves a little within the band. This serves to secure the sheaves forming the circumference in their places, and keeps the heart or centre of the stack rather higher than its circumference. This precaution is of the first importance, as the inclined position of the outside sheaves prevents the rain finding a passage along the straw into the heart of the stack, which it would otherwise be sure to do. It will be obvious that the number of rows required to fill the body of a stack depends on the length of the straw and the diameter of the stathel. For sheaves not longer than five feet, a diameter of fifteen feet is well adapted. With these dimensions, a stack will be sufficiently filled with one inside row and a few sheaves crossing each other in the centre. When the grain is longer than this, the diameter of the stack should be at least eighteen feet. The same method of procedure is repeated—outside and inside alternately—till the leg is of sufficient height and the eave-row is reached. This row is laid so as to project two or three inches beyond that immediately under it—the object being to carry the rain-drip from the top clear to the ground. In building the top, each successive row of outside sheaves is placed further in than that preceding, so as to give the slope an inclination similar to the pitch of a house-roof. The long bevel of the sheaf from the eave row to the top is invariably laid undermost, and its slanting form is very favourable for the gradual contraction. When the top is thus drawn in to a diameter of four feet the stacker quits the kneeling posture in which he has hitherto worked, and places one sheaf upright in the centre of the small platform, filling the whole of that space with upright sheaves set around the centre one, and leaning a little towards it. The top sheaves are then secured by a rope, and the stack is ready for thatching.

It is almost unnecessary to say that when the stack has reached a height somewhat above the head of the teamster it is impossible for him to pitch the sheaves so as to be convenient for the stacker. A boy should be employed to hand them, as the stacker cannot rise from his knees to take them without a considerable loss of time, and at the risk of making bad work.

There are several recognized methods of thatching, as well as a variety of ways of arranging the ropes to secure the covering. We will content ourselves by describing what we deem the most secure and workmanlike process—merely adding that except in the case of an arrant sloven well drawn wheat straw

is invariably used for the purpose. The thatcher, standing on a ladder long enough to reach to the top of the stack, with a supply of drawn straw beside him, commences operations at the eaves. He takes a large handful of straw and gathering one end of it into a neck or wisp thrusts it into the but-end of a sheaf, and spreads the lower end like a fan overhanging the eaves. In this position he covers as far round the circumference as he can reach at arm's length. He then works upwards, causing each successive handful to over-lap that immediately below. He thus covers the roof by triangular portions till he has gone round the whole backwards, in order that he may avoid treading on his work. Our illustration exhibits two methods of arranging the ropes to secure the thatch; but if preferred the plan shown on the round haystack, at page 177 of this Volume, may be adopted. For ourselves, we prefer the diamond or lozenge arrangement shown in the completed stack on the left of the large cut illustrating this article. A glance at the detail thus shown will render any further instruction superfluous. We will therefore only add that the projecting straw of the thatching should be cut evenly off, and that in every instance a stout rope should be securely tied round the stack immediately below the eaves. To this eave or waist rope, all the other ropes are attached.

### Work for August.

By the beginning of this month, if the weather has been propitious, and the farmer has used proper energy in pushing on his work, the greater portion of the hay and grain crops will have been secured. Where harvesting has yet to be done, last month's directions will still be applicable. Oats in many places remain to be cut. This ought to be done before the grain is quite ripe, to enhance the value of the straw, and prevent the grain from shelling out. Root crops will now have got beyond the need of further hoeing. It is not, however, too late to sow white turnips where the Swedes have failed, or where there is a patch of ground that from any cause is vacant. Sown the first week in August, a fair crop may be expected if the land is in tolerable condition. It is too late to sow any grains now, except millet and buckwheat, and it is only now and then in very favourable seasons that these will do any good. The millet has scarcely time to come to any size for profitable fodder, and early frosts are likely to kill the buckwheat before it matures. Those whom the midge has not frightened out of growing fall wheat, will improve all their spare time in preparing the land for that crop. We recommend a trial of the "midge-proof" wheat. It is well to harrow stubble ground, that the seeds of weeds may germinate, and the next ploughing turn them under as green manure. Harvest tools when done with, should be thoroughly cleaned, well greased and carefully housed. This is the season when weeds ripen and scatter their seeds. Any destruction that can be visited upon them is a tenfold gain in view of their speedy increase. August is a good month for mearuring grass lands with fine well-rotted manure. During this month the sheep gad-fly,—the cause of grub in the head,—is troublesome. An occasional smearing of the sheeps' noses with tar is recommended,—also that they have access to ploughed ground. The garden and orchard will now begin to yield their increase, and but little needs to be done except to gather in the returns as they become ready. Insects may still be watched for, especially the borer which lays its eggs about this time. The grub soon hatches and works into the tree. Probe him out. A smearing of soft soap round the base of the tree is recommended. Give the bees ample room to store their sweet treasures, by providing surplus boxes where needed.

A cubic yard of farm-yard dung weighs one ton on the average if made in cattle boxes; if in the yard, it weighs a fourth less.

### Modification of the Drainage Prize Scheme.

To the Editor of THE CANADA FARMER.

Sir,—I have read attentively the letter of W. Wilkinson, in your issue of 1st July, and observe the suggestion he makes in reference to the "drainage prize fund." Before deciding to comply with it, I thought it might be well to write to Mr. Johnston, of Geneva, who has had great experience in draining, and get his views of the matter. I have done so, and received from Mr. J. a letter of great interest, which at a future time I may send you for the benefit of your readers. In the meantime let it suffice to say that he confirms the statement of Mr. Wilkinson, that tiles of 2 to 2½ inch bore, are large enough for all lateral drains, but as for mains, it is of great importance to have them large enough. Mr. J. has tiles in his mains as large as 9 inches, semicircular, but laid face to face, so as to make a pipe 9 inches in diameter. Another of his leading mains consists of two 4 inch tiles, placed 8 inches apart, and over and resting on them, a 9 inch half round. It may be laid down as a rule, that wherever two laterals meet they should empty themselves into a 3 inch, and wherever two or more 3 inch drains meet or discharge, it should be into a capacious main.

It should be remembered in constructing this main, that it has to discharge an enormous quantity of water. A fall of rain amounting to three inches, is equal to about one thousand hogsheads per acre. I beg, therefore, to modify my proposal for the premium referred to in the issue for the 1st of June, as follows:—

The premium to be paid to the person putting in the greatest number of rods of drains, laid either with tile or stone, two-inch tile to be the standard. Those laid with tiles 3 to 5 inch, and laterals laid with stone, to count as 1½. Mains laid with tiles over 5 inch, or stone, to count as 2. Thus:—

100 Rods 2 inch.....	100
40 " 3 " .....	60
40 " stone laterals.....	60
50 " main 8 inch.....	100

320 rods.

The drains to be not less than 30 inches deep—for occasionally persons have committed suicide for the sake of the insurance! I include stone because I think it makes as good drains as tiles, and my object is not primarily to promote the manufacture of tile, but the improvement of the land, and the prosperity of the farmer. J. B. OSBORNE.

Beamsville, July 11, 1865.

### About Binding Grain.

THERE is considerable diversity among farmers in the mode of binding their grain after the cradle or reaper has performed its office. It is difficult, without grain to aid in the illustration, to explain any system of binding,—hence what follows may prove too obscure to be instructive or beneficial.

There are substantially but two methods of grain binding, to wit, *under the hand*, and *over the thumb*. The first does its work well, but is *slow*; the last does it equally well and is *fast*, and hence the preferable one. This only will be considered, and if possible explained. Let the binder, on approaching the gavel, take material for the band from the top, and not pull it from the centre, as is often done to the derangement of the balance; hold it up in front in the left hand, clasped directly around under the heads of the grain; with the right hand part the mass in the centre as nearly as may be; pass the right hand quickly under and over the left till the two sections of the band are secured together between the fingers and thumb in form resembling the last character in the alphabet. Change the band, now completed, to the right hand, passing one end of it quickly under the gavel to the left, letting the end project upwards between the thumb and fingers; give a smart upward pull with the right hand, letting the band run in the hollow formed by the thumb and forefinger; with the right give the band one swing or twist, and with the thumb or whole hand pass the twisted end under the band, and the work is done. This explanation may not be very lucid, but a few trials will render the operation as easy as its practice will be expeditious and satisfactory. Take two men of equal physical ability and practice in grain binding; let one bind under the hand and the other over the thumb, and the latter will perform one-third, if not one-half more work than the former.—*Rural New Yorker*.

## Crop Prospects around Derby.

To the Editor of THE CANADA FARMER :

SIR,—The weather, since the middle of June has rather assumed the character of wet, and the consequence is that there is the promise of the heaviest crop of straw of all kinds that we have seen for many years. Hay on the whole is a very heavy crop, and in some cases really prodigious. I hear of timothy nearly six feet in length. I measured some stalks of clover in one of my fields that measured 3 ft. 10 in. Haying commenced a fortnight ago, but, owing to the wet weather, it is not very general yet. Next week will be the busiest hay week of the season should the weather prove favorable. Fall wheat is generally very good, and will be ready to cut in from a week to a fortnight. There is no appearance of the midge or any other insect pest this year. A little rust has made its appearance on the straw within the last few days, but not enough to do any injury in the advanced state of the crop. Spring wheat and oats are to be seen in all stages of growth, from the short blade to the well formed ear in full bloom. The quantity of straw will equal any crop this county has ever seen, and should the yield of grain be proportionately large, the quantity of grain to go to market in this county will be really immense. Barley, too, promises to be an unusually heavy crop, and I think there is a greater breadth sown than has been usual here. The light crops of wheat of the last two or three years, and the high price of barley, for the same time, has led to this. Should barley reach the price of the last two years next fall, our farmers will realize a large sum from this crop. It is much to be desired that some other kind of grain could be found to pay as well, or better than wheat, as I am of opinion that we sow far too much of it, for the good of our farms. I know one of my neighbours who has the fourth crop of spring wheat in succession, on the same field, this year: he says, this one promises to be the best of the four! It is quite a common occurrence here to see two or three crops of the same grain in succession. Another of my neighbours told me the other day, that he intended to turn over his fall wheat stubble, and sow fall wheat on it again, as the land, he said, was good and strong, and could bear it. Now, such a system of farming must eventually exhaust the soil and render even an ordinary amount of wheat cultivation unprofitable, and should this unwise system of cultivation be the means of generating insect pests, those who have paid proper attention to rotation of crops, will suffer as well as those who have not.

Should the present scale of prices continue, there are three things that would eventually pay much better than an over-cultivation of wheat. These are barley, wool, and flax. I am glad to see that the whole of them are receiving increased attention.

A CANADIAN FARMER.

Derby, July 14, 1865.

## Prospects of the Hop Crop.

The *New-York World*, which devotes considerable attention to this subject, in its issue of the 28th June, remarks:

The increase of vermin has been considerable during the past week; both fly and lice being much more numerous. This condition of things strengthens the impression that the crop of this year is to be affected in the same way as were those of 1863 and '64. In other respects the vines have continued to grow rapidly, and, owing to the absence of cold and windy weather, have adhered to the poles with unusual tenacity. In some sections the leaves have been observed to turn red and shrivel, this appearance first manifesting itself in those leaves lowest on the stalk. The indications resemble those attributed to "fire-blast," in England. The disease there has been referred to a deficiency of nourishment in the root to supply the exaction of the growing vine, so that the leaves are deprived of the nutriment essential for their preservation in a condition of health. The principal cause which has been assigned for this defective circulation, is the use of a longer pole than the vigour of the plant will warrant; and as the yards this season abound in feeble plants, the "fire-blast" will be likely to exhibit itself extensively. However, so little has hitherto been known of any such affection in this country, that no opportunity has been afforded of verifying the theory named,

which is based entirely upon foreign authority. It must be remembered that the blight, arising from vermin, is quite new on this side of the ocean, and while American growers have acquired a rapid and very costly education in all the mysteries of the foreign "black-blight," they will probably also acquire an experimental knowledge of the several other diseases which have long existed in Europe, and which, in their origin, may be more or less closely connected with the devastations of the aphides that have occasioned the blight of the last two seasons. Some vines from foreign roots have been observed to be particularly infested with lice already, and, besides, give indications of being afflicted by the blight.

Dealers are beginning to manifest a good deal of anxiety about the condition of the growing crop, and good hops, of which there are very few of last year's growth, are held with much firmness.

## Remedy for Sorrel.

A CORRESPONDENT of the New York Farmers' Club, writing from Wisconsin, asks:—What is the best method of ridding the soil of sour-grass, vinegar-plant, or sorrel, as it is called by these names,—there are many farmers troubled with it, and a great many plants have been tried.

To which Solon Robinson replies:—Have you tried dressing the land with caustic lime, at the rate of 30 bushels of the powdered lime, freshly slaked, to the acre, spread upon the surface with wheat seed, and harrowed in at the same time? Have you tried wood ashes, a pint upon each hill of corn or potatoes? Have you tried deep fall ploughing, so as to turn up some of the strong clay of the subsoil, and letting that pulverize in winter, and then seeding it to timothy and clover in the spring? Afterward, top-dress the grass every autumn with manure free from sorrel seed, or dress it with lime, ashes, or finely powdered clay—the debris of an old brickyard is good—and if some of these remedies won't cure your land, you may as well emigrate.

## Draining Machine.

To the Editor of THE CANADA FARMER :

SIR, The expense of draining is the great stumbling block, and I do not think any large extent of Canada will be drained unless some ingenious person will invent a machine to dig drains. Mr. Chase, of Brooklin, invented a machine for this purpose some three years ago, and obtained for it two prizes of \$60 each. Since that time I have heard no more about it. Could you, or some of your correspondents, give me any information about it, or whether there is any other machine to be had that will dig drains in gravelly or clayey soils, its capabilities and cost; also where it is to be had? I was very glad when the judges awarded a prize to Mr. Chase, as it showed they understood the benefit and desirability of such a machine. The Society were prepared to pay him, or any other person, a further prize of \$60 at Hamilton, for a machine to dig drains, lay the tile, and cover them up. It appears to me an absurd idea to attempt to lay the tile on the principle of Mr. Chase's machine, which is to place the tiles in a spout and slide them into their place as the horses draw the machine up and down the drain. To prove the truth of this, let any person take a load of caps for fences and drive down by the fence, and drop one at every corner as the horses are going, and he will find it as much as he can do. How, then, can any one drop tiles, that require careful handling, on every foot or two feet? Two might be employed in dropping, but any more than two would be in each other's way. Let the Society award a large prize for a drain-digging machine, even supposing it will not throw out the dirt, as there certainly is nothing requiring more fostering and encouragement than under-draining." EDWIN BROWN.

Trafalgar, July 18, 1865.

A young farmer asked an old Scotchman for advice in his pursuit. He told him what had been the secret of his own success in farming, and concluded with the following warning:—"Never, Sandy, never—above all things, never get in debt; but if you do, let it be for manure."

GREASE THE IMPLEMENTS.—A correspondent of the *Prarie Farmer* truly says that the application of grease (unsalted) to ploughs, cultivators, hoes, spades, &c., would save much labour in scouring. Whenever any implement is to remain unused for a short time, let the grease rag be used at once.

DEATH TO WEEDS.—The *Boston Cultivator* says: "Let it be a rule of every thrifty farmer that no weed shall be allowed to bloom on his cultivated grounds." The same rule should also be extended to the uncultivated ground—to the corners of fences, stone heaps and other waste places, where weeds delight to grow and where they are too frequently allowed to go to seed.

MIDGE ITEM.—A correspondent of the *Country Gentleman*, who recently visited the farm of John Johnston, says that his whole estate is underdrained with tile drain, 30 feet apart; that he has 24 acres of wheat earlier by several days than any upon undrained land; and, he significantly adds, "the difference of three days often saves the whole crop from the midge."

BEECH NUTS.—The *Goderich Signal* says:—"We have not seen such a heavy crop of beech nuts for the past ten years as there is this season. The trees are literally brown with them. Judging from appearances, it will be an easy matter to 'keep hogs over' this winter, and buyers will have to look out for beech nut pork."

COU-STOCK'S "ROTARY SPADER."—This American instrument has lately been tested in Essex, England, and the *London Field* gives an account of the trial with an engraving of the machine. The following is a part of the notice, which is highly complimentary: "The land here is rather stiff, but very well worked, the ground being used chiefly for the cultivation of vegetables for the London markets. A rotary spader of five tines, and three feet wide, was brought out, and four horses attached. The machine was set in motion, and by the lever the tines were thrown into working gear. On inspecting the soil after the operation, it was found broken up to a depth of 8 inches good—the length of the tines. From the nature of the ground it was worked a second time. The clods were now thoroughly broken up, and with a light harrow passed over to collect the weeds, which the action of the tines partially throws to the surface, the ground would have been perfectly prepared as a seed-bed. The machine worked admirably well in all its parts, and is a complete specimen of good mechanism. There were no stoppages, no mistakes were made, no breakage of any kind; and, considering that this was the first trial in this country, the inventor deserves credit both for the construction of the machine and for the principle of its construction. On light land, but one operation would be required; and it is evident that even on wet land it will work well, as the tines are self-cleansing."

SUB-SOIL DRAINAGE "MOLE."—A correspondent of the *Scottish Farmer*, finding that, even with the ordinary number of deep drains on his land, the water is not carried off soon enough to allow agricultural work to proceed in due season, has invented a new sub-soil sock, to facilitate the drainage. Its construction, and the advantages to be derived from its operation are thus described:—"Agriculturists must admit that all the bottom of naturally dry land is a drain, or acts as a drain, to carry off the water that sinks through the soil. Now, in draining land, it would never pay to follow nature altogether, and put in a new bottom; but we must approximate as near as possible to nature, and do artificially, and at a remunerative rate, what nature has done permanently for good land. This I have effected by the following plan: I took one of Bentall's subsoil ploughs with four wheels, and caused the blacksmith to make an instrument something of the shape (in the horizontal part, or the sock that enters the ground to form the drain) of a soda water bottle, but with a strong steel point. I started in the autumn, and put two common ploughs to work, to plough two fields of about 35 acres each, causing the two ploughs to go as deep as possible in a line transverse to the line of the tile drains, which had been put in four feet deep and 30 feet apart. I then put three horses yoked with a set of compensating whippetrees, to Bentall's subsoil plough, with the instrument before described, and which I call a mole; and with this I followed the two common ploughs, to a depth of from 18 to 20 inches, but bringing up no subsoil, only making a small drain every alternate furrow, to facilitate the passage of the water to the tile drain, and making the land artificially to have an open bottom, something approaching to the bottom of naturally dry land. These lateral drains are made at such a depth that the tread of the horses cannot injure them, and by there being only one in every alternate furrow, the walls, as I may call them, or sides of the drains made by the mole, are kept stronger, and consequently more permanent. I may mention that the mole presents so little resistance that the three horses can go much deeper in clay subsoils than most farmers would believe. This experiment was made on the two fields before mentioned, and although they have a strong retentive subsoil, they have kept quite dry during the winter, and are now mostly put under turnip crop in good order, earlier, and with less work than any land of the same kind in the district."

## Sheep Husbandry.

### The Merino Sheep.

This celebrated breed of sheep is a native of Spain, a country whose climate and physical conformation are admirably adapted to its habits and the rearing of extensive flocks. The interior consists of elevated plains, bounded and traversed by long ranges of mountains, the summits of which sometimes rise almost to the region of perpetual congelation. These elevations give rise to great varieties of climate and vegetation, and to many noble rivers, forming valleys of surpassing beauty and richness. Numerous varieties of sheep occupy the plains and mountainous country. Some produce a long wool, deficient in the property of felting, but fitted for the manufacture of the looser fabrics, as carpets and flannels, as well as serges and the lighter tissues. These long woolled sheep are found in the lower and more cultivated countries; the short woolled inhabiting for the most part, the sandy downs, and the mountains and elevated plains of the interior, where a finer herbage prevails. They are altogether distinct from the larger sheep of the richer plains, although both have been largely mingled in blood together, and have produced a mixed progeny, which is very numerous. The civil and political distractions of this naturally fine country have for long periods seriously operated against the advancement of agriculture, and the industrial arts. During the Roman dominion, which lasted nearly five centuries, commencing about the birth of our Saviour Spain made rapid strides in commercial progress. The Roman writers, in their casual notices of the productions of this important province, speak of its wool as being greatly esteemed for its fineness. Its woollen tissues were then the finest in the world, and not only supplied the demands of luxury at home, but were carried to other parts of Europe, to Africa, and all the countries of the Levant. It has been supposed by some that the short woolled sheep of Spain, designated Merinos, are indebted for their improvement, if not for their origin, to imported animals from England. Snow, in his *Chronicles*, informs us that "this year (namely, 1161), King Edward the 4th gave a license to pass over certain Cotswold sheep into Spain;" and Baker says, "King Edward the 4th enters into a league with King John of Arragon, to whom he sent over a score of Coastal ewes, and four rams, a small present in show, but great in the events, for it proved of more benefit to Spain, and more detrimental to England, than could at first have been imagined." It is in the smallest degree probable, however, that these British importations exercised any very marked improvement in the native fine woolled sheep of Spain, for which quality that country had so long been celebrated. Upon the whole, although authentic documents on

the subject are wanting, there is a presumption that the sheep of Africa were employed to perfect the sheep of Spain, with respect to the production of wool. The Merinos exhibit certain characters, which seem to show them to have been derived from some country warmer than that in which they were naturalised, and it was during the dominion of the African possessor of the country, that the wool of Spain arrived at its greatest excellence.

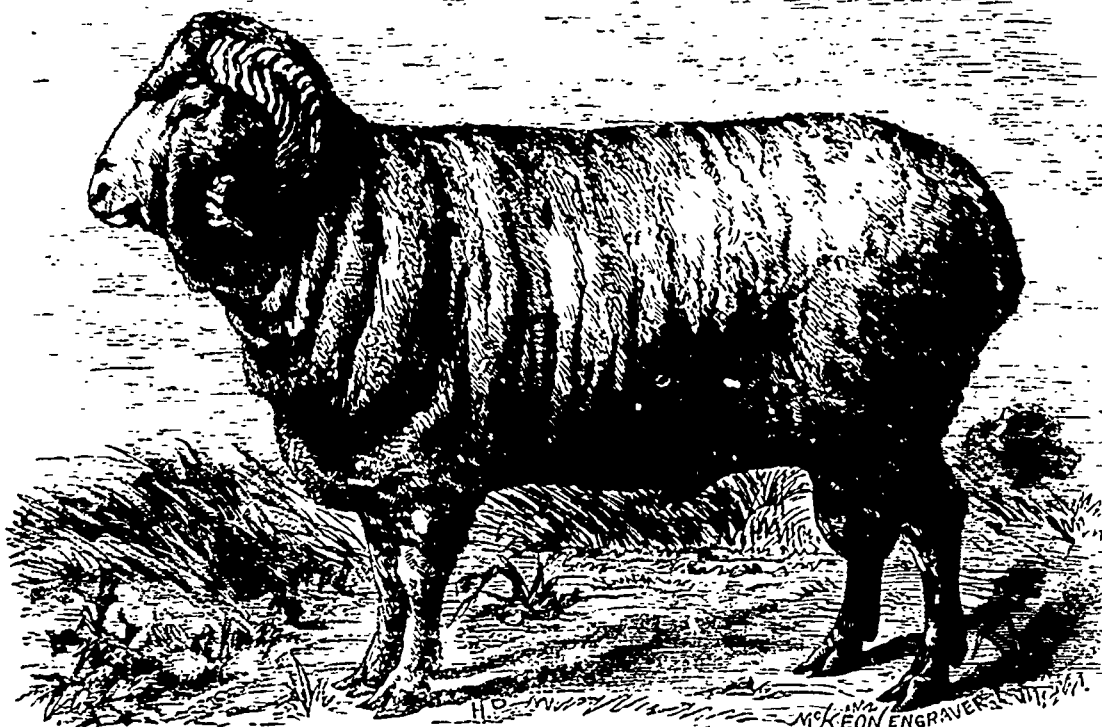
The Spanish Merino sheep are of small size. The skin is of a reddish fleshy colour, and the wool is white, although black or dun sometimes appears on the legs, faces, and ears. The forehead is covered with a tuft of coarse wool, and coarse wool likewise appears on the cheeks. The males have large spiral horns; but the females are usually destitute of horns. Both sexes have a certain looseness of skin under the throat, which is valued by the Spanish shepherds as indicative of a productive fleece. The legs are long, the sides are flat, and the chest is narrow. The fleece is altogether peculiar; it is close, short, and unctuous, weighing from these causes, more in proportion to its bulk, than the fleece of any other known race of sheep. From its closeness, it feels hard when com-

pressed, but, on examination, the filaments are seen to be of extreme tenacity, and no wool has been found comparable to it for the property of felting. It is not annually renewed, but will continue to grow for several years." The Elector of Saxony, in 1765, took the initiation in this great work, and with judgment and care it was soon found that the imported Spanish animals and their progeny improved in this new locality, both in fleece and carcass. Schools for imparting instruction in this new branch of rural industry, were established in different places, and the Saxon sheep-masters bestowed the most enlightened care in the breeding and management of their flocks, which in time justly acquired a wide spread reputation. Prussia and Austria soon followed the same course, and with similar success. Subsequent efforts were made in this direction by surrounding states, so that the Merino race was carried to Denmark and Norway, to Poland and Switzerland, and to the dominions of Russia, especially in the Black Sea, where a climate exists calculated to bring every natural production to excellence. "The Merino race has thus been naturalised over the greater part of Europe, from Scandinavia to the Crimea; and Spain can never more possess the monopoly of a production which had descended to her as an

district during the year are termed "Estantes," or stationary. These latter are reared in districts that afford natural pasture all the year round; a state of things far more conducive to the thrift of the animals than the old practice of the migratory flocks, which are driven several hundreds of miles every year, so that three or four months out of the twelve are spent in going and returning from these distant pastures. Good sheep farming in Spain indicates the tendency to raise, by natural or artificial means, a sufficiency of food for stationary flocks; although the migratory system still continues in force, and has what is considered of so much importance in agricultural matters, the sanction of antiquity and extensive practice.

It is not a little extraordinary that France made no effort to introduce this renowned breed of sheep till about the middle of the last century, although only separated from Spain by the chain of the Pyrenees, and possessing a soil and climate well adapted to the culture of fine-woolled sheep. The illustrious Colbert brought across the mountains a number of fine specimens of the Merino, to cross with the native sheep of France, but, from the prejudices of the farmers, and other unfavorable influences, the enterprise entirely failed. Afterwards the French Government, in 1796, renewed the attempt, with somewhat better success, and by subsequent efforts, particularly under the reign of the first Napoleon, much greater advances were made in this important direction so that France ultimately became possessed of a valuable breed of the Merino. The minute division of land and the habits of the peasantry, have, however continued to obstruct in many districts this, as well as other rural improvements.

In various states of Germany, the introduction and improvement of the Merino race have been far more suc-



THE FRENCH MERINO RAM, "WRINKLEY."

cessful. The Elector of Saxony, in 1765, took the initiation in this great work, and with judgment and care it was soon found that the imported Spanish animals and their progeny improved in this new locality, both in fleece and carcass. Schools for imparting instruction in this new branch of rural industry, were established in different places, and the Saxon sheep-masters bestowed the most enlightened care in the breeding and management of their flocks, which in time justly acquired a wide spread reputation. Prussia and Austria soon followed the same course, and with similar success. Subsequent efforts were made in this direction by surrounding states, so that the Merino race was carried to Denmark and Norway, to Poland and Switzerland, and to the dominions of Russia, especially in the Black Sea, where a climate exists calculated to bring every natural production to excellence. "The Merino race has thus been naturalised over the greater part of Europe, from Scandinavia to the Crimea; and Spain can never more possess the monopoly of a production which had descended to her as an

pressed, but, on examination, the filaments are seen to be of extreme tenacity, and no wool has been found comparable to it for the property of felting. It is not annually renewed, but will continue to grow for several years."

The Spaniards, who by degrees subdued the Moorish kingdoms, neglected tillage, and attended chiefly to their flocks and herds; and then it was that those immense sheep walks seem to have been formed, which cover so great a part of the country. Writers of the middle ages speak of the large flocks possessed by individuals, amounting to thirty or forty thousand each. Whether it was found that the continued heat of the southern parts of Spain was less favorable to the fineness of the fleece, or, whether convenience or necessity led to a change of pasture during the summer months, a practice was early established of driving the flocks of sheep to the cooler countries of the north in summer, and back to the southern pastures on the approach of winter. These migratory flocks are by some termed "Transhumantes," while the sheep that remain in the same

cessful. The Elector of Saxony, in 1765, took the initiation in this great work, and with judgment and care it was soon found that the imported Spanish animals and their progeny improved in this new locality, both in fleece and carcass. Schools for imparting instruction in this new branch of rural industry, were established in different places, and the Saxon sheep-masters bestowed the most enlightened care in the breeding and management of their flocks, which in time justly acquired a wide spread reputation. Prussia and Austria soon followed the same course, and with similar success. Subsequent efforts were made in this direction by surrounding states, so that the Merino race was carried to Denmark and Norway, to Poland and Switzerland, and to the dominions of Russia, especially in the Black Sea, where a climate exists calculated to bring every natural production to excellence. "The Merino race has thus been naturalised over the greater part of Europe, from Scandinavia to the Crimea; and Spain can never more possess the monopoly of a production which had descended to her as an

inheritance for so many ages. The experiments show that a certain class of characters having been imprinted on a breed of animals, these characters can be preserved under very varying conditions of soil and temperature, by artificial treatment suited to the ends proposed, and by selecting, for the continuance of the race, the animals in which the properties required are sufficiently developed."

In 1791, His Majesty King George the 3rd, had selected from the Negretti flocks, a number of very choice Merinos, which were placed on the Royal farms at Windsor. At first the sheep suffered much from the dampness of the climate, and both foot and liver rot became fearfully prevalent. By judicious changing of pasture, and a drier season succeeding, both the imported animals and their progeny became by degrees naturalised, and enjoyed a state of health apparently equal to the native breeds in Spain, while the quality of the wool seemed to retain its original fineness. Crosses of the Merino were made with South-downs, and other English breeds with very indifferent success. It was found by a more extended experience that the Merinos are capable of becoming by degrees, adapted to the climate in which they are reared, yet they were never likely to attain to the hardihood of constitution that characterises the Welch, Cheviot, and Black-faced Heath breeds, and which adapts them to their damp and exposed elevations. The Merinos after a fair trial in England, became almost literally abandoned, not so much on account of the difficulty of naturalising the breed, as the ascertained fact that in that country it was less profitable than the native breeds. "Did the British farmer," observes Professor Low, "like the Saxon, derive his principal profit from the fleece, and little from the carcass, then he might cultivate the production of the one in preference to the other; but this is not the case under the present circumstances of this country, and the British farmer's interest is therefore different. He cannot afford to shut the animals in houses for half a year, for the purpose of protecting them from the inclemency of the weather, in order that the wool may be fine; nor to feed them on hay and corn, in preference to the abundant roots, herbage, and forage plants, with which the agriculture of the country enables him to supply his animals. If individual interest does not admit of the cultivation of fine wool in preference to abundant mutton, and the adoption of a breed of inferior hardiness, early maturity, and fattening powers, so neither does it seem that the natural interest requires it. Spain, and other countries of Europe where the fleece is more valuable than the carcass, are employed in producing fine wool, and the extended commercial relations of England enable her to obtain it, in the quantity which her manufactures consume, from all these countries. Even her own colonies are now enabled to supply it in increasing abundance. Is it not better, then, that we should trust to commerce for the supplies of a commodity which can be raised more cheaply than at home, and devote our sheep especially to the production of that food, with which no other country can supply us, contenting ourselves with a kind of wool which, though less fine than that produced elsewhere, is all required and consumed by the manufactures of the country?"

The colonisation of the vast continental island of New Holland, Tasmania, and more recently of New Zealand, has opened an immense field for sheep husbandry, and the climate and other physical conditions of these rising provinces, especially that of Australia proper, are peculiarly favourable to short and fine woolled sheep. Wool growing in Australia has attained to gigantic dimensions, within the last quarter of a century, and these colonies of England will in a few years be able to supply the finer descriptions of wools required by the constantly increasing manufactures of the mother country. Merinos from Spain and Saxony, of the purest blood, are being yearly imported at an immense expense, by the Australian flock-masters and the wool.—with the

above exception of the Saxon itself.—is unquestionably the finest in the world. When labour can be as readily obtained in Australia as it is in Saxony, and ample means of washing and preparing the wool for market are at hand, that country for the quantity and quality of its produce will be absolutely unsurpassed. As things now are, the value of the Australian sheep consists almost exclusively in its fleece, although of late the carcass, by being boiled down into tallow, is beginning to assume some importance.

The Merino sheep, under various modifications, are extensively cultivated throughout the more advanced portions of the United States. Among the first importers of this breed, Chancellor Livingston occupies a conspicuous position, and he foresaw the immense advantage the movement would be to the country. In his "Essay on Sheep," published in 1809, he says: "I shall not envy the glory of the Argonauts if I can successfully plant the Merinos of Spain in my native land." Col. Humphry a short time after procured a small number of very superior animals, direct from Spain, which did good service in the State of Vermont, a state that early took the lead in this description of live stock. But the farmers of Vermont were more deeply indebted at this early day to the Hon. Wm. Jarvis, than to any other individual, for his valuable and extensive importations; and it is this strain of blood that constitutes the most important family of Merinos on this side the Atlantic. They are the result of a mixture of the several Leonese varieties, and have a loose, thick skin, with few corrugations, little external gum, and thence comparatively light colour; a fine even fleece, with a brilliancy and style almost equalling the Saxon, and a strong likeness to the Spanish Escorial, but with a heavier fleece.

"The American Infantados were bred from Humphrey's importation, by Stephen Atwood, of Connecticut. They are of large size, short necked, short hipped, broad shouldered, round and symmetrical. Their skins are loose and mellow, and of a deep rose colour, the wool short, very yolky, with a black external gum. The wool is scarcely surpassed for quality, style, and evenness. Dr. Spencer, of De Ruyter, New York, who has a fine flock of this family, averaged in 1861 a fraction over seven pounds of wool from each sheep, the ewes weighing about ninety-five pounds, and averaging within a fraction of twenty four inches in height." Mr. Hammond, of Vermont, sheared two hundred sheep in 1861, whose average fleece was nearly ten pounds. His best rams yielded about twenty-five pounds each.

A variety exists in the New England States called Paulars, or Rich Merinos, having been purchased by Hon. Charles Rich, in 1823, their Spanish progeny being of undoubted authenticity. They have a heavy thick fleece, which has been greatly improved of late years, with less of fineness and evenness than the Attwoods or Infantados, and less of yolk and external gum. These sheep are very hardy, and have been much exposed to storms and other atmospheric changes, without suffering apparently any material deterioration. Of French and Silesian Merinos there are now considerable quantities dispersed in the United States. The former are generally considered inferior to the latter, or to the pure Spanish Merino, although there are not a few breeders of sheep that are ready to advocate their peculiar merits. For full particulars of American Merinos, or other breeds of sheep, the reader is referred to an excellent treatise recently published by Mr. Moore, of Rochester, N. Y., entitled "*Randall's Practical Shepherd*."

The Merino sheep is as yet but little known in Canada, our farmers preferring the heavier long woolled races, common to the mother country. These being much heavier both in fleece and carcass than any variety of the Merino, are considered more profitable and better suited to the wants of the country. Hitherto the difference in price between coarse and fine wools has not been so great as to induce our farmers to pay much attention to the latter. Within

the past three or four years, however, more attention here and there has been given to the Merino, but the quantity as yet is very small. That they can be acclimatised so far north experience has fully proved, and the experiment is deserving a more extensive trial. The winter in many parts of Upper Canada is neither so long nor severe as in the New England States, where this race of sheep is universally kept, and has reached to a high degree of perfection, and is considered exceedingly profitable. Apart from climate, much depends upon proper care and feeding, for due attention to which the Merino will amply repay. Our Provincial Association has introduced the Merino into its prize list, and offers liberal premiums in three separate classes, including the Spanish Merino, the French Merino, and the Saxon and Silesian Merinos; in each of which it is hoped a spirited competition will spring up at the Annual Exhibitions.

Our illustration represents the French Merino ram "Wrinkley," the property of Mr. Alexander Young, of Ryckman's Corner. He is the winner of three first prizes, viz: at Toronto as a lamb, at the Provincial Exhibition in 1862; as a yearling at Kingston in 1863; and as a two-year-old at Hamilton in 1864.

## The Breeder and Grazier.

### Experiments in Cattle Feeding.

The following interesting particulars of the relative expense and feeding properties of turnips and potatoes in rearing and fattening cattle are supplied by the *North British Agriculturist*. The experimenter in the case was Mr. A. Smith, of Stevenson Mains, near Haddington; a gentleman who, it appears, has given much attention to stock feeding. The article says: "Last spring, Mr. Smith having a pretty large quantity of potatoes on hand about the time when he was beginning to feed off his cattle, thought of trying how they would thrive on a potato diet, with the usual quantity of oil-cake. The cattle were accordingly fed off with the potatoes, and threw so well on them that he resolved on testing the qualities of the root still further this season, by feeding from first to last entirely on potatoes. He at the same time, for his own guidance in carrying out the pulping system to which he is a convert, made a separate experiment to test its value as against feeding in the ordinary way with sliced turnips. A lot of cross-bred Short-horn stirks, rising two years old, were last autumn divided as equally as possible with regard to condition, size, and so forth, among three courts. The lot numbered twenty, six of which were to be fed on potatoes, seven on pulped turnips, and seven on sliced turnips, with the usual allowance of straw in each case—the pulped fed cattle getting theirs chopped. From the moment they entered the courts, up to the month of March, when the whole of them for the first time, and in the same proportion, got oil-cake and barley-meal to finish off, the cattle were kept exclusively to their own kind of diet. A very short time served to show which was the most nutritive article of food. Almost from the first the potato fed cattle took the start of their neighbours, and, to use a racing phrase, were never headed, but came in at the finish a good way in advance of the others. They took to the potatoes with the greatest relish, and never gave the slightest indication of "hoven" all the time they were being fed on them. In fact, no beasts could have given less trouble or anxiety from the day they were put into the close till they were taken out in the early part of May—a period of about seven months. While the experiment was thus satisfactory with regard to what we may call the No. 1 court, it was not less so as respects No. 2 court—the court containing the cattle fed on pulped turnips. These also, almost from the beginning, evinced a superiority over their neighbours fed on the sliced turnips. They were decided-

ly in better condition, and brought more money perhaps the best test of all that they had been better fed. The cattle, as we have said, when they went into the courts, were placed as nearly as possible on an equality, and their difference of condition at the end of the experiment was solely due to the difference of feeding. The average price obtained for the lot was £17 6s. each. They were sold privately, the value put on them by the purchaser—a dealer of judgment—being as follows: No. 1 court, £17 15s. each; No. 2 court, £17 6s.; and No. 3 court, £16 15s. In other words, the potato-fed cattle brought 10s. a head more than those fed in the ordinary way. The value of the experiment consists of course in the expense of raising the different lots, because if No. 3 were fed off cheaper than No. 1, no inducement is offered to make any change from turnips to potatoes. This point can be satisfactorily answered. Each of the courts was supplied with a daily allowance of turnips carefully weighed or measured, and it was found that while in the case of the No. 3 court the seven cattle consumed 11 cwt. of turnips per day, those in No. 2 court were well and better fed with 9 cwt., or 2 cwt. per day less. This was a direct saving in the cost of the turnips, but it also saved—a matter of some consequence—the expense of cutting the extra quantity from the fields, which could be much more easily and profitably eaten off by sheep as they lay in their drills. As a set off against this, there is, no doubt, to be placed the cost of the pulping, but this is not a very serious matter. Mr. Smith does not employ steam for the purpose at Stevenson Mans, but has a one-horse power machine, which he finds answers extremely well. The amount of work it gets through is large, amounting to about three tons per hour—amply sufficient for the wants of a pretty large number of cattle, we should fancy. There is also the wages of the girl who attends the pulping machine, when it is in motion; but making every allowance for these items of expenditure, Mr. Smith is quite convinced, from his experience of the system, that it is, when properly conducted, in every way more profitable to pulp than to give cattle the turnips simply sliced. His experiment this year seems to prove that not only can they be fed on a less quantity of turnips, but that they bring a better price when fat than the others. Taking the value of a ton of turnips at 10s.—the average weekly cost of feeding, the No. 2 cattle amounted as nearly as possible to 4s 6d per head, while the No. 3 cost about 1s per head more. The calculation can easily be made, and will be found as stated. But the potato-fed cattle show a considerably greater saving. The courts were put under the charge of a careful and experienced cattleman, whose instructions were to note down exactly the amounts consumed in each case. From the book which he kept, we find that the six cattle in the No. 1 close only consumed a weekly average of about 15 cwt. of potatoes, which, at 2s per ton, gives us 1 1/2d as the expense per week of feeding each beast, and feeding it £1 per head better than with food that cost 2s 4 1/2d more money weekly. It is also to be remarked that the potatoes used were unmarketable, in so far that the firsts and seconds had been selected from them, and were only available for the starch mill, or for feeding purposes. So satisfied is Mr. Smith with the result of his carefully-conducted experiment in potato feeding, that he intends continuing it next year on a larger scale. He has no doubt as to its being the most profitable as it is undoubtedly one of the easiest modes of fattening lean cattle for the market.

### Horns on Cattle.

A CORRESPONDENT of the *Country Gentleman* raises the question, "why should cattle be bred with horns?" and goes on to reason very forcibly against them. He contends that while useful for self-defence in the case of cattle when in a wild state, they are of no utility in a domesticated condition, but are objectionable on the following among other grounds:

1. They are dangerous to man and beast. Few farmers have escaped the loss of a sheep, horse or colt, from the use by cattle of their horns; less have escaped injury to some animals by their use. We hear every month of injury by them or loss of life to the human race.

2. They are of no considerable value for any purpose; they are mere useless excrescences—mere burdensome offal.

3. The growing and wearing of them and supplying their natural waste are a draft upon the system, which either enfeebles the animal or requires additional food to keep his condition up to the proper standard.

4. They are an impediment to safe and convenient transportation to market in railroad cars.

5. Horned cattle require more yard and stable room than hornless ones. Hornless cattle herd and cat together fearlessly and familiarly like sheep.

6. The carrying about of the horns is a tax upon the energies of the animal equal to the same weight bound upon the head of a hornless animal. Weight can neither be lifted nor carried without expense; weight upon the heads of cattle is carried at the greatest possible expense.

As to the case with which cattle may be bred without horns, he thus reasons:

We may easily have our hornless Durhams, Devons, Alderneys, Ayrshires or Herefords, without depreciation from the original standard. A single dip from any of these improved breeds into any of the hornless families of England or France, is sufficient to lay the foundation of a hornless variety of any of these improved breeds. One family of the Durhams is the product of a cross between the Durhams and the Galloways, and this family is not inferior to others. Unfortunately absence of horns was not one of the characteristics sought by the breeder to be carried into the product of his cross. The well-bred polled cattle of England and France are but little, if any, inferior to what we regard as the most improved and valuable breeds. They are exhibited at all their fairs and cattle shows. Those who have attempted to work off the horns from any of the breeds of cattle have been astonished at the facility with which it has been accomplished. An acquaintance of the writer of this article, who keeps but few cows, has endeavoured to obtain hornless Durhams by using Durham bulls to a single hornless cow and her hornless descendants. She has now hornless cattle lacking only 1-16th and 1-32d of being full blood Durhams, and in appearance they are in no respect inferior to the full bloods. With hornless cows that have but a single line of hornless ancestry bred to Durham bulls, full two-thirds of the calves are raised without horns. A hornless bull from his stock has been used to horned cows for three successive years, to his full capacity, and of his get, amounting to hundreds, but a single one has had horns. This seems to be in opposition to the generally received opinion as to the natural result of crossing between animals of opposite peculiarities. A suggestion as to the causes of this result may not be amiss. Hornless cattle generally possess a more vigorous constitution than horned cattle, and the most vigorous of the parents is most likely to impress the progeny with his or her peculiar characteristics. Domestic cattle generally make but little use of their horns, and as a consequence they are not supported by the system in any great vigour or strength. As to the horns, the progeny is therefore most likely to follow the hornless side."

An analyzing dame reports that "she had heard of but one old woman who kissed her cow, but she knows of many thousands of young ones who have kissed very great calves."

COCKNEY ZOOLOGY.—Precocious young lady: "Law ma, here's a heagle." Mamma (reproachfully): "A heagle! Oh, you ignorant girl! Vy, its an howl." Keeper of the menagerie (respectfully): "Axes parding mum, 'tis an awk."—*Punch*.

A PIG WITH A WOODEN LEG.—The *Edinburgh Courier* says: "A tailor in Coupar Angus, who had a pig which got one of its legs broken, has replaced the injured limb with a wooden one. It is curious to see the animal hobbling about, but it is thriving as well as before the accident."

GOOD STOCK.—There is much less profit in keeping a large number of poor, scrubby cattle, than a less number of first-class animals. Get rid, say we, of your scrawny stock. Raise your likely, well formed calves. Sell your poorer to the butcher. It costs little more to keep well built, well favoured, clean limbed animals, than it does to keep an inferior kind; while the former are worth double the money, and afford ten times the pleasure to the farmer than the latter do. It would be for the interest of the farmer to look less to the quantity, and more to the quality of his stock.—*Kansas Farmer*.

SPECTACLES FOR A HORSE.—The *U. S. Gazette* relates the following.—A gentleman had an old and valued horse whose sight was defective. For some time past he evinced a tendency to stumble, and to strain his sight at objects close to him in a manner that set the owner to devising a remedy. He judged that with a pair of glasses the horse would do as well as in prime. An optician ground to order a pair of pebble spectacles, about the size of the object glasses of a large lorgnette (opera-glass.) They were fixed in a frame over the horse's eyes, and no elderly gentleman ever showed a greater appreciation of the convenience. When put in the stable the spectacles are removed.—*Boston Cultivator*.

## The Dairy.

### The Oxford Cheese Factories.

THE South Riding of Oxford, long famous for its dairy products, can now boast of four cheese factories in successful operation. Having spent some time recently in a tour of inspection among them, we propose to lay before our readers a few notes and observations in reference to them, and the factory system of cheese making in general.

The "Ingersoll Cheese Factory" carried on by James Harris & Co., was the first visited by us. It is located within a mile of the village of Ingersoll, and is therefore close to a railroad depot, which is a convenience for sending the cheese to market. Mr. Harris keeps from 60 to 70 cows, and receives the milk of about 400 more, owned by forty-three farmers in the adjacent country. The milk is brought morning and evening, and cheese is made twice in the twenty-four hours. Parties who supply milk have their option of receiving a fixed price for it, or they can have within so much of what the cheese brings when marketed. Six cents for ten pounds of milk is the fixed price. The sales of cheese thus far the present season have been at ten cents per pound. Ten pounds of milk are rather more than sufficient to make a pound of cheese, so that thus far it is more profitable to receive in proportion to the price got for the cheese. In starting the Ingersoll Cheese Factory, no pledges beforehand were taken from the farmers to supply milk, and no one is bound to furnish it longer than he thinks it for his interest to do so. The experiment has worked well so far. The patrons of the factory are satisfied with their profits. They think it pays them, though some of them send from a distance of eight miles. Harris's factory is managed by a Board of Directors chosen by the farmers who supply the milk. Offers for the purchase of cheese are submitted to this Board, and accepted or rejected as they think expedient. They also decide any questions that arise in the practical working of the system. This plan has thus far given complete satisfaction to all concerned. Parties furnishing milk can if they choose have it manufactured into cheese, at a charge of two cents per pound, the factory furnishing rennet, bandages, annotta,—in fact everything but the boxes in which the cheeses are sent to market. This factory has cost for buildings, vats, and apparatus, about \$2,000. Another building and some additional conveniences are needed. These would cost \$1,000 more. With this further outlay, the milk from 1,000 cows could be manufactured, and that number would make the business much more profitable. Five hands are employed now. Eight hands would be sufficient to attend to the work, if the milk from the number of cows just mentioned were supplied. Of course the interest on outlay is the same whether 500 or 1,000 cows be attended to. The working expenses now are about \$6 per day, including interest on capital. The extra number of hands would add about \$2 per day to the running expenses. It will therefore be perceived that the more milk is furnished, the cheaper the cheese can be made. At present about 900 lbs. of cheese are made per day. With 1,000 cows about a ton per day could be made. The factory is built beside a small creek, and has also the flow of a cool spring brought from some distance in pipes. On being received and weighed, the milk flows into large vats. Round these there is a vacant space for a supply of cold or hot water. A stream of cold water is first directed round the vats to abstract the animal heat from the milk, which is then brought to a temperature of 80° when the rennet is applied. The vat used in this factory is "The Union Dairyman," made by O'Neill & Co., of Utica, N.Y. These vats cost by the time they are put down about \$160 each, inclusive of duty, freight, &c. The cheeses made at this factory are of uniform size, being 18 inches across and 10 inches thick. Their shape and size are determined

by a plaster cast sent from England at the instance of the dairymen of Herkimer and Oneida Counties, New York, who wishing to supply the British market, made appearance as well as quality their study. The presses used are frames of oak timber, in which powerful screws are fixed, somewhat similar to the jack screws used for lifting houses, locomotives, &c. They are very powerful. Their cost is about \$5 each. They are made by a firm in Beachville. Each press complete costs about \$10. The whey of this establishment is fed to a lot of hogs which are penned at some distance from the factory. About 90 are kept. Whey is their exclusive food at present, but late in the season when the supply lessens, they will receive some grain to fatten them for the market. The rents needed are supplied partly by those who send milk to the factory, and partly by purchase from the United States. They cost from 12½ to 20 cents each. Cotton bandage costing 14 cents per yard is used to encase the cheeses. The English Carbonized Extract of Annotta furnishes the colouring material, and gives the cheeses a rich yellow appearance. Mr. F. H. Elford, the manager of this factory, has commenced the manufacture of this extract, and is prepared to supply Canadian dairies with it. We refer our readers to his advertisement in another column. When taken from the presses, the cheeses are placed on scantling bars called "setters," on which they turn easily, and where they are kept till cured. About 25 tons of cheese have already been sold from the Ingersoll Cheese Factory the present season, all at \$10 per cwt. All that can be made for a month to come is bespoken at the same figure. These sales have been made almost wholly to Montreal houses for the English market.

Our next visit was to the "West Oxford Union Cheese Factory," owned by Messrs. Galloway & Co., and situated within two miles of the Ingersoll Factory. This establishment is owned by four partners who manage the business without any Board of Direction. Mr. George Galloway is the cheese manufacturer. He keeps 31 cows himself, and buys in the milk of 200 more. He gives within 2 cents per 10 lbs. of milk, what he obtains per lb. for the cheese. Payments are made from time to time to patrons on account, and a settlement in full is to be had at the close of the dairy season. The partners allow Mr. Galloway \$1 per 100 for making the cheese. The other expenses will be about 25 cents per 100. After payment of these items, the profits are equally divided among the partners. This factory is managed on the same general plan as the one already described, but the details vary somewhat. Thus in the absence of a cool spring to send around the vats, a well is used. There is a good-sized creek on the premises, having a small fall. Advantage is taken of this to obtain a water-power by which a pump is driven. A tank in the upper story of the manufacturing house forms a reservoir from which the water is easily conducted by pipes to the vats as required. The whole water arrangement is very simple and yet ingenious. Many locations admit of a similar arrangement, and it would be very useful for other purposes besides cheesemaking. Mr. Galloway's vats were made in Ingersoll, after the pattern of "Ralph's Oneida Vat." They cost \$105 each, and are of the same capacity as those in Harris's factory, viz: 500 gallons. Mr. Galloway finds that they answer his purpose extremely well. The presses in this establishment are similar to those already described. About 50 hogs are kept at this factory, and besides feeding them, whey is teamed by each of the four partners to supply the hogs kept on their farms. This establishment has been in operation about two months. During that period eleven tons of cheese have been made. Mr. Galloway expects to make thirty tons before the season ends. We counted 178 cheeses in the drying-room. They were apparently in excellent order. Their size is 8 by 20 inches, and they will average about 100 lbs. each. Only 1360 lbs. have as yet been sold from this factory. For this quantity \$10 per cwt. was obtained, and Mr. Galloway expects to get a like price for what he has on hand, and for all he will make this season.

Our next visit was paid to the factory of Messrs. A. Smith & Sons, about five miles due west from the village of Norwichville. This is the pioneer cheese factory of Canada, a fact which will be deemed no mean honour some day. The Messrs. Smith keep 120 cows, but work up the milk of between 500 and 600. They buy at 6 cents per 10 lbs., and send their own teams to gather it up. Most of their patrons have a little box upon the road-side, raised at a convenient height from the ground for loading into a waggon, and ascended by a slight of steps. In this box is a platform scale, with a milk-can standing upon it. The milk is poured into the can, the scale adjusted to show the weight, and an entry made by the owner of the milk in a memorandum book kept for the purpose. When the factory teamster makes his rounds, he inspects the scale register, enters the proper figure in his book to the credit of the party, and draws off the contents of the can, into a sort of tank on wheels, made for the purpose of collecting these milk supplies. This plan has some obvious advantages, but the road-side boxes are by no means ornamental. The Messrs. Smith consider the plan of allowing the cheese-factor two cents per lb. the preferable one, but at present the farmers are uncertain and dubious as to the factory system, and prefer to receive a fixed price of 6 cents per 10 lbs. for their milk. This factory differs in some details from both the others described. Cold water is pumped from a well into a reservoir by a small steam-engine, and the vats are supplied with the requisite heat by means of steam pipes. The vats used were made by Mr. L. F. Bungay, of Norwichville, and although on the general principle of "Ralph's Oneida Vat," vary from it somewhat, in consequence of the steam-heating arrangement. The steam-engine not only supplies water and heat, but drives a small portable grist-mill, and does the churning. About \$1,000 worth of cheese have been sold from this establishment the present season, at \$10 per 100 lbs. There are about 500 cheeses on hand in the drying-house, weighing from 100 to 120 lbs. each. At the time of our visit, there was a mammoth cheese in a press constructed for its especial accommodation, which is intended to eclipse all the cheeses ever manufactured either in the old world or the new. It is upwards of five feet in diameter,—nearly three feet high, and is estimated to weigh about 4,000 lbs. It is of course intended for the Provincial Exhibition at London, and we notify our readers in due season to look out for the monster cheese. Our friend Ranney will we fear lose his laurels, unless he is quietly at work making a cheese a little bigger than the one just described. It is a debated point among the dairy folks in Norwich whether so large a cheese will hold together, and much wonder is expressed as to how it will be got to London. Friend Smith is however prepared on these points. He has a galvanized iron band ready to encase the cheese when it comes out of the press. He will keep this about it until it reaches the Exhibition ground, and when removed, he feels confident it will be as firm as any cheese of smaller dimensions. He has a waggon capable of bearing the huge load, and will have it drawn to London by a four-horse team. He has already been bid \$500 for this monster cheese, but says \$600 will not buy it from him. Ryan of Montreal, a noted cheese dealer, proposes that it be sold by auction, at the close of the Exhibition.—Smith's factory is doing the largest business of any yet started in Canada. It is evidently being carried on with considerable vigour and energy. If we may venture a criticism or two, we should say that a little more neatness and particularity as to details would not be amiss, and especially a better system of hog-keeping. They are too near the factory, too much confined in point of space, and as a consequence, too dirty. Milk is so susceptible to ill-odours, that we should be afraid of the effect of a huge pig-sty in such close proximity. Besides, pig-keeping is almost all clear profit on the factory plan, and large, clean, comfortable quarters ought to be provided in every instance for these animals.

Our last visit was paid to a neatly-kept, and admirably managed little factory, within a couple of miles of Norwichville, carried on by Mr. Harvey Farrington, an experienced dairyman, from Herkimer, Herkimer County, New York, the birthplace of the cheese-factory system. Believing that the dairy business could be made to pay well in Canada, Mr. Farrington came over last season and leased a farm of 100 acres, for ten years, in order to try the experiment. He keeps 28 cows, and makes up the milk of 275 cows in all. He pays his patrons within two cents per 10 lbs. for their milk, what he gets per pound for his cheese, keeping a running account with them, and deferring settlement in full to the end of the season. He is well satisfied with his trial thus far of Canada as a field of operations, and thinks the factory system has a great future before it in this country. Last season he made ten tons, which he sold chiefly at \$9 per cwt. He has made 16 tons the present season so far, one ton of which he has sold at

\$10 per cwt., and he expects to get a like price for the 15 tons he has on hand, as well as for the remainder of this season's make. The location of this factory is excellent. A stream of water and a fine cool spring are at command. The surrounding region is one of the best for dairy farming. Mr. Farrington's vats were made by Mr. L. F. Bungay, of Norwichville, and are fac-similes of "Ralph's Oneida Vat." They are of various sizes, and are very creditable to the manufacturer. We met with Mr. Bungay, and were glad to find that he had been doing a large business this year in dairy requisites. He has made up \$2,000 worth of tin-work for the dairy business of Norwich alone. He states that there has been a great impulse given of late to dairying, in the townships of Norwich and Dereham, so much so that he has found it to his interest to make the manufacture of vats, cans, agitators, &c., a prominent feature in his business. Having visited the factory region of New York, he has provided himself with the most approved patterns for all these requisites. Many of the farmers in his neighborhood are obtaining Ralph's vats and other conveniences for their own private dairies. Vats holding from 115 to 150 gallons, and costing from \$10 to \$50, have been in great demand the present season. These requisites made in Canada can be furnished at the New York price, and a saving of duty and freight effected.

We found in Mr. Farrington the most scientific and intelligent dairyman with whom it has ever been our lot to meet. He thoroughly understands the factory system, and judging of his explanations of it given to us, he would be a valuable man to stump Canada on behalf of this new branch of productive industry. Some further particulars and observations on this interesting subject must be deferred for a future issue.

## Entomology.

### Currant Bush Caterpillars.

DURING the present and previous summer the currant and gooseberry bushes in this neighbourhood, and throughout almost every section of the country, have been stripped of their leaves by an infinite multitude of greenish caterpillars. To such an extent have their ravages been carried on that in many places there will be no red or white currants (the black variety being unmolested on account of the strong odour of its leaves) or gooseberries this year; in a large number of cases, too, the bushes themselves have been destroyed. Nor have their depredations been confined to this country only, for in the neighbouring States, during many years past, they have proved equally injurious to these popular fruits. Some account, then, of the insect itself, and suggestions as to the best mode of lessening its ravages, cannot but be of general interest at the present time.

In the garden in which our observations were made, they were first observed on a gooseberry bush early in June, only a few being noticed on that occasion, all of which were carefully picked off and crushed under foot. Two or three days after, however, on taking another round, almost every red and white currant, as well as gooseberry bush, in the garden (upwards of a hundred in number) was found to be completely covered with these destroyers, and soon many of them were entirely stripped of their leaves, and are now as bare as in midwinter. But let us select one of these noxious little insects and trace it through all its stages of growth; we shall then be better enabled to apply some means of checking, if not putting a stop to its ravages.

Early in the season, and again towards the end of June, if we carefully watch our currant bushes, we may observe some curious-looking flies with yellowish bodies and a black spot on the wings very busily engaged hovering about and laying eggs on the underside of the leaves, generally along the veins. These eggs are pearly white, long in proportion to their breadth, and finely rounded at each end; from each of them, after some days, emerges a tiny little worm or caterpillar (or rather false caterpillar, the name of caterpillar being usually restricted to the larvae of Lepidopterous insects.) At first this caterpillar (as we may call it, for convenience) is very small, but it immediately begins to eat away at the



edge of the leaf on which it was born, and soon very perceptibly increases in size. Its outer skin—or clothing—does not, however, grow with the increase of its body; it is therefore obliged, after a little while, to get a new suit of more comfortable fit, which will bear a little stretching, as its wearer increases in size. Fortunately, no external assistance is required for this; the little fellow fastens his fore-feet to the edge of the leaf, swells himself out, gives a few jerks and convulsive movements, and then, lo and behold! his skin cracks about the head, and he crawls out in his bran-new garments. This operation he usually performs four times in his caterpillar-life. For the first three times he comes out in the same style of suit as his earliest, but on the fourth he assumes quite a different appearance. And now let us see what he is like just before his last moult, when he has attained about his full size: He is then nearly three-quarters of an inch long, of an apple-green colour above, except on the segment next the head, and the third from the tail, where he is pale yellow, beneath he is also pale yellowish; the head and tail are black; on each segment there are a number of shining black dots and humps regularly arranged, and each terminating in a tiny black bristle. For purposes of locomotion, he is provided with twenty legs, arranged in pairs (true caterpillars never have more, though often less, than sixteen); the first three pair are long and black, and end in a strong claw; the next six are short and thick, of a paler colour, and duly adapted for supporting the body, not for moving it; the three segments of the body next to the tail are unprovided with these prop-legs, and are generally partially coiled up and turned to one side; the tenth pair of legs are at the tail. After his last moult (as we have observed) his appearance is very much changed, and hence he is taken by many to be quite a different insect. With his old skin he leaves off all the little black warts and dots, and comes out quite smooth, the general colour of his body being a delicate green, varied towards the head and tail by bands of pale yellow; there is also a fine, slightly darker line down the whole length of his back. In this state he does not continue long, but very soon forms for himself a thick oval cocoon, not much more than half the length of his body; this is fastened among leaves on the ground, and there he remains patiently awaiting his last and greatest change. In the case of the first brood, the winged insect comes out of its cocoon in about a fortnight, and speedily lays its eggs for a second brood; but the members of the latter, although they turn in July or August, remain at rest in their cocoons through the winter, and do not come out till the following spring.

The perfect insect belongs to the order Hymenoptera—of which bees and wasps are also members—and the family Tenthredinidæ; it is called a saw-fly, from the very curious little saw-like instruments with which the female is provided for the purpose of making slits for the reception of her eggs. [We regret that our space will not admit of a detailed account of these interesting organs.] The currant bush saw-fly (*Nematus ribesii*—Stephens\*) is a thick, heavy-flying insect, with a broad, black head cut rather squarely in front; the antennæ are thread-like, nine jointed, black; thorax yellowish, with four shiny-black longitudinal protuberances; abdomen reddish-yellow; legs pale yellow; wings—which are four in number, not two, as in ordinary flies—are opalescent, slightly smoked, with a net-work of black veins; the fore wings with a thick, oval, black spot on the anterior edge, at a distance of two-thirds of its length from the body.

And now with regard to the all-important question of how are we to keep under or get rid of these pests. Many and various are the remedies suggested in different quarters, all of some use, but none infallible or perfect. One or two of those published by contemporaries have already appeared in these columns. Our own remedy, though perhaps a little troublesome, is, we believe, the cheapest and most efficacious.

It is simply this: When these caterpillars appear upon your bushes (for it is obvious that we can only hope to destroy them in their larval stage), pick off at once every one you can see into a vessel, carry them away and either burn them or crush them under foot; repeat this operation every day till you see no more, and in a very short space of time you will be no more troubled; persuade your neighbours to adopt the same method, and the remedy will be still more efficacious, for then you will not have a repetition of the plague the next year. If you have any young children, they can pick them off quite as well and more easily than you can yourself; by all means set them to work at it. A neighbour of ours with three little boys has adopted this plan, and is rewarded by having now the most healthy-looking bushes and best fruit in the place. "Example is better than precept;" go and do likewise.

For those who prefer a less troublesome remedy, we mention the following method, which has been employed with advantage by many: Procure a quarter of pound of hellebore powdered fine, and a pound of alum; dissolve the alum in a bucket of water and syringe the infected bushes with the solution; then, while the leaves and caterpillars are wet, dust them well over with the hellebore. Repeat the operation when a fresh brood make their appearance. This quantity will suffice for a considerable number of bushes.

Another plan recommended by some is to dust slacked lime over the bushes, and strew it also on the ground all around them, to ensure the destruction of any that may have fallen. English gardeners—as we observed last year in Yorkshire, where the same kind of caterpillar was similarly destructive—employ with advantage a solution of soap and water with which to wash the bushes; a pound of common hard soap dissolved in five or six gallons of soft water appeared amply strong enough to accomplish the desired end.

The insect above described is the most destructive, and, apparently in this country, the most widely distributed foe to our currant and gooseberry bushes. There is, however, another caterpillar very similar to the preceding, but belonging to a totally different order of insect, which also preys upon them. Nearly twenty years ago it was observed in the State of New York, and at intervals since it has proved exceedingly injurious to the currant bushes both there and here; this year we have noticed a good many in the garden above referred to.

The caterpillar usually appears about the middle of June. When full-grown it is nearly an inch long, bright yellow, varied on each side with white. Like the foregoing, it is also covered with numerous black dots and warts regularly arranged, each one emitting a tiny black bristle; it has, however, only ten legs, the first three pair claw-like, and near the head, the other two attached to the caudal segments. It is called a Geometer, or measurer, or span-worm, because owing to the absence of feet beneath the middle of the body, it is obliged when crawling, to bring the hind feet close up to the front ones, thus doubling the body into somewhat the shape of an inverted U. When fully grown, the caterpillar descends into the earth, and changes into a chrysalis, without forming any cocoon; the moth comes out early in July.

This insect belongs to the order Lepidoptera, which comprises butterflies and moths, and the family Geometridæ. It is called the American Currant Moth, *Eltopia (Abraxas) ribearia*, Fitch. In its perfect form it is a pale nankin yellow moth, with one or two faint dusky spots near the middle of the wings in the male, and with an irregular dusky band across both pairs in the female. The wings expand about an inch and a half.

The remedies mentioned above for the destruction of the larvæ of the currant-bush saw-fly, may also be applied to check the ravages of this almost equally injurious pest.



### Loan Societies.

To the Editor of THE CANADA FARMER:

SIR,—Referring to "J. L.'s" letter, in your last issue, on "Building Society Reform," allow me to inform you that "The Hand-in-Hand Investment Loan and Savings Society," Hamilton, C. W., guarantees to borrowers all the advantages therein suggested. For instance, the preliminary expenses, which are according to a fixed scale, are much less than these ordinarily charged. Then, the loan is made without any deduction, except for the law costs, &c, if these have not been previously paid, but no payment is required in advance, on account of either principal or interest. The rate of interest is 10 per cent, but it is only charged upon the amount of principal actually owing at the beginning of each half year of the term. This may seem to be a high rate when compared with 6 and 7 per cent., but it has already been shown in your columns that these rates really average 12 and 13 per cent. Our mortgage deed secures to the borrower the privilege of paying his indebtedness, in such periodical instalments, spread over a term of years, as may be agreed upon; it also gives him the right to redeem his property at the end of any half year of the term (upon giving three months' notice,) by paying the balance of the principal then owing; and, as the amount necessary for redemption is clearly stated in the deed, no advantage can be taken of the borrower in this matter, while he is thereby assured that the interest will only be charged for the actual time that the loan (or so much of it as may be owing) is enjoyed. There are no fees, while the fines for non-payment can never exceed one per cent. per month, and on good cause shown, the time for re-payment can be extended without any disadvantage to the borrower. There are some minor facilities afforded to borrowers by this Society, which, as well as the many and great advantages offered to investors and depositors, I cannot further trespass on your space to enumerate, but if any of your readers desire further information on these matters, and they will kindly address me their enquiries, by letter, pre-paid, I will be pleased to reply to them. AMOS FAYRAM.

Hamilton, July 25th, 1865.

### Summer-Cured Pork.

To the Editor of THE CANADA FARMER:

SIR,—I judge it may be interesting to many of your subscribers to learn that the Ontario Pork-Packing House here, which was burnt down on the 26th January, is being re-built for slaughtering hogs and curing bacon for the English market, and will be ready for commencing operations again early next month. I am the manager for Mr. Davies in this undertaking, and have just returned from England, where I saw satisfactory proof that year by year Canadian bacon is more appreciated there. The uniform cry was, "Your quality is good, give us the weights we want, and we won't grumble at price." If we are to satisfy English buyers, farmers must supply live hogs well fatted, weighing 200 to 280 lbs. Hogs ready for the knife in the summer months always sell at highest prices, as bacon cured in the summer with ice is always in good demand. Winter-cured bacon at the present time is hard to sell in Liverpool at 50s.; while new ice-cured bacon is bought as it arrives at 60s. I hope these facts may induce farmers to keep over in future years some peas for summer feeding, which I think could not fail to prove profitable. I have now to look to Chicago for my summer supply of hogs, but hope there will be no necessity for this much longer, and that our own farmers will be able to produce sufficient numbers, and aid in developing the productive resources of this Province. I feel persuaded a large pork trade would tend to do this quite as much as any other branch of industry.

ISAAC ATKINSON.

Hamilton, July 16th, 1865.

**TO INCREASE THE QUANTITY OF BUTTER IN CHURNING.**—“Ellis McMichael,” of Waterford, supplies the following information “for the benefit of our dairy-women”: “Pour the cream into the churn, and churn until it is broken, then add butter six or eight months old, equal to the amount you think the cream will produce. The quantity will be increased one third, not including the amount added.”

**FARM BOOK-KEEPING.**—The system of “Farm Accounts” submitted by an “Old Country Man,” does not reach our estimate of a simple, thorough, and practical method. We will have something to say on the subject before long, when we may very possibly borrow an idea from our correspondent’s communication.

**A CORRECTION.**—“R. E. B.,” of Asphodel, writes as follows:—“In one of the first numbers of THE CANADA FARMER, it is inadvertently stated that Rice Lake is ‘back of Peterboro.’ Rice Lake is about twelve miles from Lake Ontario, at Cobourg, and therefore tolerably close to the front—at all events much more so than Peterboro.”

**THOMAS’S PATENT BEE-HIVE.**—“John Crichton,” of Valley Field, C. E., writes us a long letter in which he states: “Having carefully read the communications which, from time to time, have appeared in your journal in reference to the self-protecting beehives of Messrs. J. H. Thomas & Bros., of Brooklin, I was induced to purchase one of them, in the early part of June last. I am very much pleased with it in every way, and am anxious to recommend it to every bee-keeper in Canada.”

**A GOOD WORD FOR CROWS.**—“Merrimac,” writes from Hope, as follows:—“In your issue of July 15th, there appears a communication in favour of sparing the crows. That they are the farmers’ best friend was clearly demonstrated, at least to my own satisfaction a few days since. On rising one morning last week and looking towards my orchard, I discovered four or five crows in a favourite cherry tree. Seizing a gun I sallied forth to wreak vengeance on the black rascals. On drawing near to the tree, however, I discovered to my astonishment that the crows were really doing me a kindness, for instead of feasting on the cherries, they were making a glorious meal off the slugs, with which the tree was covered. Ashamed and crest fallen, I immediately executed a ‘masterly retreat’ to the house, a ‘wiser if not a better man.’”

**PRICE OF FLAX SEED.**—“J. N.,” of North Bruce, writes as follows:—“Will you be kind enough to inform me through THE FARMER, what the current price of flax-seed was last spring. I got a small quantity from a neighbour to sow, and he charged me at the rate of (\$3) six dollars per bushel for it. The ground upon which the seed was sown, is rich clean ground, in fine tilth. The crop is now fully two-thirds weeds. If flax-seed can be sold at the rate of six dollars per bushel, I think it will prove to be the most profitable crop a farmer can cultivate.”

**ANS.**—Our correspondent has evidently been imposed on by “a neighbour.” The price of the ordinary quality of flax-seed in the spring, was \$1.50 per bushel; while fine clean samples, suitable for sowing, brought \$2.00. If your “neighbour” knowingly supplied you with seed of which more than half was weeds, and at the same time charged you at the exorbitant rate of six dollars a bushel, we do not envy you your proximity to him.

**AN EXPLANATION.**—“Jno. Hamilton,” of Dereham, writes as follows:—“In articles on agricultural questions in Canadian newspapers, surprise is frequently expressed that our farmers do not raise more corn (Indian) than they do. I think I can give you a reason for it, and it is this: Not over one in ten of our farmers, knows or cares how to cure it. Being a miller, I speak with considerable knowledge of the subject, and I think the above estimate is not far from being correct. There cannot be a more healthy and nutritious or appetizing dish placed on the table, than good fresh Indian meal, whether as bread or ‘mush.’ I find, however, that if I save all my toll in one box, and grind it into meal, it is scarcely ‘fit for the hogs,’ as the saying goes; and of course no one will buy stuff that, when put upon his table, only

creates nausea. Yet the farmers blame the market, when it is themselves that destroy the market by the inferior grain they bring to it. There are large quantities of corn shipped annually from the West, to supply our market, at prices which would amply reward the farmer to raise it in Canada. In fact, our own corn is preferred by customers, but we can scarcely get a bushel fit for grinding purposes.”

**CROPS AROUND HOPE.**—“Merrimac” reports on this subject as follows:—“Hay is about all secured in very good condition, and was an extraordinary good crop. Fall wheat is about ready for the reaper. I have not heard of any complaint of either the ‘midge,’ ‘weevil,’ or ‘rust’ in this neighbourhood. On the contrary it will be far above an average yield. Barley promises well, and the early sown is fit to reap. Spring wheat will be fully an average crop—the straw is short, but it is well headed. Peas and oats may be expected to yield exceedingly well. Corn and potatoes look well. Turnips are growing finely; those sown before the 20th of June were almost all destroyed by the fly, but those sown after that date have grown amazingly. There has been a large breadth of turnips sown this season, nearly double the quantity ever sown before in one year in this township. This is a pleasing indication of the progress our rural friends are making in the right direction. It is evidently a sign of wisdom on the part of the farmers, to lay in an abundant supply of succulent food for their stock, during our long and severe winter. Flax is raised in this district to a very limited extent,—and grown for the seed alone, as there is no market for the fibre in this vicinity.”

## The Canada Farmer.

TORONTO, UPPER CANADA, AUGUST 1, 1865.

### The Harvest.

The accounts received from our correspondents, and the local notices culled from our exchanges, induce us to think that in our anxiety not to over-colour the harvest prospects, we have hardly done them justice in recent editorials respecting the season and crops. The midge visitation has been limited in extent, and we are inclined to think, less devastating where it has prevailed, than was feared. Grain crops of all kinds are bountiful, and the root crops promise well. In some localities, want of rain has been felt somewhat severely, but the recent showers have been pretty general, and abundant. A tour through portions of the counties of Wellington, Waterloo, Brant, Oxford and Middlesex, just taken, has greatly raised our estimate of the harvest, and furnished proof that, so far as these localities are concerned, the present will be a year of plenty. We believe that this is the state of things generally throughout the province. Some few exceptions there are doubtless, but the season of 1865 marks a turn in the wheel of our agricultural fortunes, and we hope, heralds a succession of good harvests that will fill all hearts with contentment and thanksgiving, and bring our land more than a return of past prosperity.

### The Coming Provincial Fair.

We have received a copy of the Prize List for the Twentieth Annual Exhibition of the Upper Canada Agricultural Association, to be held in London during the week, commencing Monday, 18th September; and shall note a few of the points of most interest to intending exhibitors and the public generally. The usual liberality is shown in the amount of prizes offered for competition; reaching in the aggregate \$12,000, which exceeds, we believe, the amount offered by any similar institution in the world, with the single exception of the Royal Agricultural Society of England. Entries of stock intended for exhibition must be made on or before Saturday,

August 12th, five weeks preceding the Show. Grain, field roots, and other farm products, agricultural implements, machinery, and manufactures, must be entered by Saturday, August 26th. Entries of horticultural products, ladies’ work, the fine arts, &c., may be made up to Saturday, September 9th. All agricultural and horticultural products must be the growth of the present year. Manufactured articles, or works of art which have been awarded prizes at more than one Provincial Exhibition, cannot receive prizes, but may be awarded diplomas. All articles for exhibition must be on the ground on Monday, September 18th, except live stock, which must be there not later than nine o’clock on the morning of Tuesday, the 19th. We are glad to see that the Directors have guarded the Society this year against a long-standing source of imposition and fraud. There are now no permanent admission tickets to be issued. Members subscribing a dollar will be furnished with four separate tickets, one to be given up at the gate on each admission. If a member goes in to the ground more than four times, he will have to procure a single ticket for each additional admission, in the same manner as non-members. The former practice of issuing badges or tickets at a dollar, available for the show week, has been attended every year by extensive impositions and frauds. One of these tickets or badges has done duty not only for the purchaser thereof, for whom alone it was of course intended, but also for a number of others, without any payment whatever. We have heard of people doing this mean and dishonest thing, not so much for the sake of saving a paltry quarter of a dollar, as for the very questionable gratification of performing what they consider a clever trick. There is good reason for believing that the Society’s funds have suffered every year, more or less extensively, by such nefarious proceedings, and every true friend of the Association will rejoice that an effectual stop is about being put to them. As the Society mainly depends on the proceeds of admission for the payment of its premiums and other expenses, that source of income should be sedulously guarded against imposition. The judges will commence their duties on Tuesday, the 19th, and visitors will be admitted to the grounds only. The Exhibition building will be open to visitors on Wednesday morning. The ploughing match will take place in the neighbourhood of London, on Tuesday. In the men’s class, the first prize will be a clover machine, offered by the late Mr. Joseph Hall, of Oshawa, and valued at \$300; and besides this there will be other six prizes of an aggregate value of nearly \$250. In the boys’ class, the first prize will be \$100, subscribed by the citizens of London and the farmers of Middlesex, and there will be other six prizes of an aggregate value of about \$120. The Canada Company will give, as in many former years, a prize of \$100 for the best 25 bushels of fall wheat, the produce of Canada West, being the growth of the year 1865; also, a prize of \$24 for the best 112 lbs. flax, scutched. The Prince of Wales prize of \$60 will be given for the best bull, of any age or breed.

Everything promises well for a most successful exhibition. We deem it hardly worth while to make an exception to this general remark, on account of the little local squabbling there has been between city and country, as to apportioning the burden of raising the necessary local funds; for, when it comes to the pinch, we cannot believe that either the City of London or the County of Middlesex will be found wanting in its duty. The season has been eminently favourable for a splendid show of live stock, and for an exhibition of the finest samples of cereals, roots, and agricultural productions generally. The Exhibition of last year followed a season of drouth, which parched up the pastures, stunted the grain, bore hard upon the fruit, and prevented the roots from attaining their proper growth. But it was a creditable Exhibition after all, in spite of unfavourable circumstances. This year, however, we have

reason to expect an unusually fine display of agricultural productions. The season has been all that any farmer could have desired. The spring opened a good deal earlier than in ordinary years, and all through the season there has been plenty of sunshine and in most localities a sufficiency of moisture—the two elements beyond man's control—which, properly combined, give the industrious farmer a bounteous reward for the labour he expends in the tillage of the soil. The result has been, that from all parts of the country we receive reports, that the crops of 1865 are the best that have been known in Canada for a number of years—almost the only deduction to be made from this gratifying result being the amount of damage which the fall wheat may have received from the midge in certain districts. How much damage has been done by this destructive pest, it is impossible as yet to estimate precisely. We trust, however, it has not been sufficient to detract very materially from the realization of the bright hopes which gladdened the hearts of our agricultural population during the earlier portion of the season. At any rate it will not detract at all from the superiority of the samples of wheat untouched by the insect, as well as of almost every other agricultural product which we may look for at the approaching Exhibition, as a result of the combination this year of the most propitious atmospheric influences.

Our manufacturers and mechanics also, we may hope, will vie with our farmers in the endeavour to make the Exhibition of 1865 an improvement on all its predecessors. Our agricultural implement makers, we are happy to know, scarcely require to be urged to the discharge of their duty in connection with the Exhibition. They have found, by experience, the benefit which accrues to them from bringing the implements they manufacture under the eyes of the farmers, and the ready sale which the *eclat* of a first prize commands for all that they can produce. We trust that at the coming Show, progress and improvement will still have to be chronicled in this department. In fine, let all who have it in their power, contribute cheerfully their respective quotas of aid, to ensure the success of the Exhibition of 1865, so as to prove to the satisfaction of ourselves and the outside world, that so far from stagnating or retrograding, we are every year making very respectable and substantial progress.

Another word and we have done. It must be obvious, on the least reflection, that to work out the details of so complicated and extensive an affair as our Provincial Exhibitions have grown to be, united effort is essential, and every individual connected with the show, whether as serving on committees, as exhibitor, judge, or in any other capacity, should study to be *punctual to his engagements*. Exhibitors should remember that much depends on their getting their articles on the ground in good time, otherwise imperfect arrangement, if not confusion, will be the result. It would greatly facilitate the difficult business of arrangement if exhibitors, except those of live stock, would send their articles to the ground by the end of the week, previous to exhibition. At all events, it is essential that all arrangements should be finally completed on the Monday of the show week, so that the judges may enter on their duties strictly at the time arranged in the regulations. Exhibitors, in whatever capacity, would do well to procure the Premium List, and carefully peruse the rules and regulations appended thereto. It can be procured of the Officers of Agricultural Societies and Mechanics' Institutes, or the Secretaries of the Boards of Agriculture, and of Arts and Manufactures, Toronto.

**EAST DURHAM AGRICULTURAL SOCIETY.**—It has been resolved by the Board of Directors of the above named society, to hold this year's exhibition at the town of Port Hope, on Tuesday and Wednesday, the 3rd and 4th days of October next. We learn that upwards of \$750 will be offered in prizes for competition. The Secretary is D. McLeod, Esq., of Port Hope

### The Agricultural Progress of Canada as Compared with that of the United States.

THE maxim "comparisons are odious" is not always true. Without doubt they may sometimes be very properly instituted. In such cases, they should of course, be conducted with scrupulous fairness. When thus made between parties engaged in honourable competition, and only asking from one another "a fair field and no favour," the results can hardly fail to be of the most encouraging and stimulating character.

These remarks are suggested by a most elaborately-prepared series of articles, which recently appeared in the *Globe* newspaper, in reference to the condition and growth of Canadian agriculture, as compared with that of the United States. The articles in question were designed to correct that spirit of dissatisfaction, and that tendency to depreciate every thing Canadian, which now and then show themselves in some quarters. Taking as the basis of calculation the official volume recently published, which contains the agricultural results of the last census of the United States; and the similar census returns for Canada, referring to nearly the same period; the *Globe* shows conclusively, that Canada, and Upper Canada especially, instead of lagging behind the United States in every element of progress, as some people are constantly telling us, can put the tabular statements of her products and her progress side by side with those of the Great Republic on our borders, and not suffer one whit from the comparison, but that, on the contrary, she is shown to be considerably ahead of the United States in many important indications of a skilled and productive agriculture, and a rapid general advancement.

We regret that the unavoidable length of the articles referred to utterly precludes the transference of them in full to our columns. They are well worthy of preservation for future consultation, and we would hope they may be issued in pamphlet form for greater convenience of reference, as well as for circulation in quarters where they may have a tendency to promote emigration to this country, and otherwise advance the interests of Canada. The Bureau of Agriculture could not do a better thing than embody the facts thus brought together in a tractate for the million. The following is a summary of the results obtained by a comparison of the official statistics above-mentioned. For the actual figures and calculations which verify these results, we must refer our readers to the articles themselves.

First, as regards Lower Canada, which has generally been looked upon as comparatively unprogressive, we find that the following facts are established. That the growth of population in Lower Canada vastly exceeded that in the States of Vermont and Maine, lying along her borders. That, starting at the census before last, with a population less than that of those two States combined, she exceeded them in population at the last census by nearly 200,000. That, as compared with the States which in 1850 had a population as great as her own, the decennial rate of increase in Lower Canada was greater than in any of those States, with one solitary exception—the State of Indiana. That, in nine years to their ten, she lessened by two, the number of States which in 1850 had a population exceeding hers. That the rate of increase of population in Lower Canada in nine years was greater than the rate of increase in ten years in the whole of the United States, excluding the Western and Pacific States and Territories. And that her decennial rate of increase was greater than that of the whole United States, not including the Western States and Territories, but including California and the other States and Territories on the Pacific. That in the interval between the last census and the preceding one, Lower Canada added to the breadth of her cultivated lands at a rate exceeding her growth in population, which equalled within a fraction the

rate in the United States; the addition to the acreage under cultivation in Lower Canada being greater than the increase of population by 8.50 per cent., while in the United States it was 8.72 per cent. That the cash value of lands occupied as farms in Lower Canada per cultivated acre, exceeded, in 1860, the cash value of lands occupied as farms in the United States per cultivated acre; the value in Lower Canada being \$19 04 per acre, while in the United States it was \$16 32 per acre. That the value of farming implements used in Lower Canada was greater in proportion to the amount of land cultivated than in the adjoining States, or in the United States as a whole; the average value of the farming implements used on a farm having 100 cultivated acres, being \$176 in Lower Canada, as against \$122 in Maine, \$130 in Vermont, \$134 in the whole of the New England States, and \$150 in the whole of the United States. That, as regards the great agricultural staples of wheat, corn, rye, barley, oats, buckwheat, pease and beans, and potatoes, Lower Canada increased her annual production of these articles in nine years between 1851 and 1860, from 22½ millions to 45 millions of bushels, or 100 per cent.; while in the United States the increase in the production of those articles in ten years between 1850 and 1860, was only 45 per cent. That in 1860 her production of these articles was 40.54 bushels for each inhabitant, only falling short by less than three bushels of the production of the United States, where it was 43.42 bushels for each inhabitant. That—excluding Indian corn from the list—Lower Canada raised of the remaining articles 40.20 bushels for each inhabitant, against a production in the United States of only 16.74 bushels for each inhabitant, and against a production in the adjoining States of Maine and Vermont of 22.10 bushels for each inhabitant. And that, finally, in proportion to population, Lower Canada owned more horses than the United States, as many cows, and nearly as many sheep; and that during the interval between the last census and the preceding one she increased her production of butter and wool at a rate considerably exceeding the rate of increase maintained in the United States.

As regards the whole of Canada, we find that the following facts are established:—That during the interval between the last census and the preceding one, the decennial rate of increase of population in Canada exceeded that in the United States by nearly 5½ per cent.—Canada adding 40.87 per cent. to her population in ten years, while the United States added only 35.58 per cent. to theirs. That she brought her wild lands into cultivation at a rate, in nine years exceeding the rate of increase of cultivated lands in the United States in ten years, by nearly 6 per cent.—Canada in 1860 having added 50 acres of cultivated land to every 100 acres under cultivation in 1851, while the United States in 1860 had only added 44 acres to every 100 acres under cultivation in 1850. That the value per cultivated acre of the farming lands of Canada in 1860 exceeded the value per cultivated acre of the farming lands of the United States; the average value per cultivated acre in Canada being \$20 87, and in the United States \$16 32. That in Canada a larger capital was invested in agricultural implements, in proportion to the amount of land cultivated, than in the United States—the average value of agricultural implements used on a farm having 100 cultivated acres, being in Canada \$182, and in the United States \$150. That, in proportion to population, Canada in 1860 raised twice as much wheat as the United States; Canada in that year raising 11.02 bushels for each inhabitant, while the United States raised only 5.50 bushels for each inhabitant. That, bulking together eight leading staples of agriculture—wheat, corn, rye, barley, oats, buckwheat, pease and beans, and potatoes—Canada, between 1851 and 1860, increased her production of these articles from 57 millions to 123 millions of bushels—an increase of 113 per cent., while the United States in ten years, from 1850 to

1860, increased their productions of the same articles only 45 per cent. That in 1860 Canada raised, of those articles, 49.12 bushels for each inhabitant, against a production in the United States of 43.42 bushels for each inhabitant. That excluding Indian corn from the list—Canada raised of the remaining articles, 48.07 bushels for each inhabitant, almost three times the rate of production in the United States, which was 16.71 bushels for each inhabitant. And that, as regards live stock and their products, Canada in 1860, in proportion to her population, owned more horses and more cows, made more butter, kept more sheep, and had a greater yield of wool than the United States.

The comparison as regards Upper Canada is, of course, still more favourable. We have seen that in nine years she added 46.65 per cent. to her population, while the United States in ten years added only 35.58 per cent. to theirs. That she maintained a decennial rate of increase greater by one-half than that of the whole United States and territories—more than double that of all the United States, excluding the Western States, and only falling short of the increase in the Western States and territories by 7 per cent.—and that in nine years to their ten, she passed four States of the Union which in 1850 had a population exceeding hers [Indiana, Massachusetts, Tennessee, and Kentucky], leaving at the date of the last census only five States which exceeded her in population. That in nine years she added nearly 66 cultivated acres to every hundred acres in cultivation in 1852, while the United States and Territories in ten years added only a little over 41 acres to every hundred acres under cultivation at the date of the previous census. That she subdued her wild lands more rapidly than even the growth of her population, at a rate almost double that in the United States (the proportion being as 17.10 to 8.72.) That the cash value of her farms in 1860, per head of the population, was greater in Upper Canada than in the United States, being \$211.42 in Upper Canada, and \$211.33 in the United States. That their value per cultivated acre was greater in Upper Canada than in the United States by nearly \$6, being \$22.10 per acre in Upper Canada, and \$16.32 per acre in the United States. That the capital invested in agricultural implements was greater in Upper Canada than in the United States in proportion to the breadth of land cultivated, being \$186 for every hundred acres of cultivated land in Upper Canada, and \$150 for every hundred acres of cultivated land in the United States. That the value of agricultural implements manufactured in Upper Canada did not fall very much behind the value of agricultural implements manufactured in the United States, in proportion to population, being \$9.41 per head of the population in Upper Canada, and \$9.55 per head of the population in the United States. That she grew more wheat in 1860 than any state in the Union. That, in proportion to population, she produced in that year more than three times as much wheat as the United States, raising 17.64 bushels for each inhabitant, while the United States raised only 5.50 bushels for each inhabitant. That she was greatly ahead even of the Western States as a wheat-producing country, the average production of wheat in the whole of the Western States being only 10 bushels for each inhabitant. That, of the eight leading staples of agriculture, common to both countries—wheat, corn, rye, barley, oats, buckwheat, pease and beans, and potatoes—she produced 55.95 bushels for each inhabitant, while of the same articles the United States produced only 43.42 bushels for each inhabitant. That excluding Indian corn from list—she produced of the remaining articles, 51.31 bushels for each inhabitant, against 16.71 bushels for each inhabitant, produced in the United States. That, in proportion to population, she had more capital invested in live-stock than the United States, the value of live-stock owned in Upper Canada being \$38.13 per head of the population, while in the United States it was 31.64 per head of the population. That for every hundred of the population, Upper Canada owned 27 horses, and the United States only 20. That for every hundred inhabitants, Upper Canada owned 32 milch cows, and the United States only 27. That for every hundred inhabitants, Upper Canada owned 81 sheep, and the United States only 71; and that, of live-stock, in the number of pigs only was she exceeded by the United States, in proportion to population. That in 1860 she produced 19.22 pounds of butter for every inhabitant, while the United States produced only 14.62 pounds. That in the same year she produced 2.62 pounds of wool for each inhabitant, while the United States produced only 1.92 pounds. That in the nine years from 1851 to 1860, she increased her annual production of butter by 67 per cent., while in the United States, in ten years from 1850 to 1860, the increase

in the production of butter was only 16½ per cent. And that in nine years she increased her production of wool 40 per cent., while in ten years the United States increased their production of wool only 15 per cent.

These facts need no comment. They speak for themselves. Exhibiting as they do a most gratifying progress in Canada, both absolutely, and relatively as compared with the United States, they ought to shut the mouths of croakers, and give fresh encouragement to the hardy workers, who, with the help of Providence, have made Canada what it is, to go on availing themselves to the utmost of the advantages of their position, for the improvement of their own fortunes, and the advancement and prosperity of the country at large.

### Toronto Horticultural Show.

The summer Exhibition of the city of Toronto Electoral Division Society was held in the Horticultural Gardens in this city, on the 20th ult. A more charming and suitable locality for the purpose could hardly have been selected. The grounds themselves, with their brilliant flower-beds and variety of luxuriant foliage, are well worthy of a visit; and with the additional attractions of Flora and Pomona displayed in the Society's tent—and a merely nominal entrance fee of ten cents—we were somewhat surprised that the exhibition was not more extensively patronized by the public.

The internal arrangements of the show reflected great credit on the management. A fine collection of cut flowers first invited the attention of the visitor. Next came the vegetables, all very creditable productions, but in somewhat meagre quantity. The remaining portion of the outside table was occupied by a very choice display of fruits. The currants and goose-berrys were especially fine, and the cherries looked very tempting. The entire table was thickly studded with a beautiful collection of stove and green-house plants, and comprised some rare and valuable specimens in a fine state of cultivation. Altogether the productions shown were very choice, and we bespeak for the future exhibitions of the Society a more generous co-operation, both on the part of competitors and the public.

### Agricultural Intelligence.

#### Programme of the Provincial Exhibition.

AN extra of the *Journal of the Board of Agriculture* gives the following official programme of the proceedings during the week of the Provincial Exhibition, which is to be held in London next month:

1. Monday, Sept. 18th, will be devoted to the final receiving of articles for exhibition, and their proper arrangement. None but officers and members of the Association, judges, exhibitors, and necessary attendants will be admitted.

2. Tuesday, 19th.—The judges will meet in the Committee Room at 9 a.m., and will commence their duties forthwith. On receiving their class books, they will be also furnished with the blank prize tickets, which they shall fill up and affix in each section so soon as they shall have finally determined their award. The first prize tickets will be red; the second blue; the third yellow; the fourth white; extras, green. On completing the class, the judges will report to the Secretary of the proper department. The main Exhibition building will be closed all this day for the purpose of affording the judges an opportunity for discharging their duties properly. Non-members admitted to the grounds this day on payment of 5 cents each time. The ploughing match will take place this day within as convenient a distance of the Exhibition grounds as possible.

3. Wednesday, 20th.—The judges of the various classes will complete their awards as early in the day as possible. All the buildings and grounds will be open to visitors. Admission this day the same as yesterday. A public meeting will be held this evening in the Mechanics' Hall at 7 p.m., at which farmers generally and others interested in the progress of the Association are invited to attend.

4. Thursday, 21st.—Admission this day the same as yesterday. In the evening a meeting of delegates will be held in the Mechanics' Hall, at 7 p.m., preliminary to the Annual Meeting, for the discussion of subjects relating to the management of the Association, and for the nomination of Candidates for the offices of the Association.

5. Friday, 22.—The regular Annual Meeting of the Directors of the Association, for the purpose of electing officers, deciding upon the place of holding the next Exhibition, and other business, will take place at 10 a.m., in the Committee Room. The President will deliver the Annual Address at 2 p.m., after which the Exhibition will be considered officially closed, and exhibitors may commence to take away their property. Admission to-day the same as yesterday.

6. Saturday, 23.—The treasurer will commence paying the premiums at 9 a.m. Exhibitors will remove all their property from the grounds and building. The gates will be kept closed as long as necessary, and none will be admitted except those who can show that they have business to attend to."

### Little Falls Farmers' Club.

This club had a good meeting May 21, and from its discussions, as reported in the *Utica Herald*, we call a few extracts:

*Soiling Milch Cows on Green Corn.*—With regard to feeding milch cows green corn fodder or grass for soiling purposes, it was better to have it wilted before feeding. It should be cut in the morning and lay in the sun till afternoon, and then fed. In this way some of the external moisture will be got rid of, and the food will be preferred by animals, and produce better results. The food is very succulent and juicy, and does not need to be still further diluted by feeding when dew and water is adhering to it. Better reduce the watery portions by wilting and partially drying. Drilling in the seed for corn fodder was preferable to broadcast sowing, it yielded more, and was easier cut. The drills should be about three feet apart.

*Feeding Calves.*—In feeding oil meal and whey to calves, dip off the whey from the vat when sweet, bring it to a boiling point and turn upon the meal, let the mixture stand till night and then feed. It is better not to feed calves all the whey they will drink at one time. A large feed of whey toys the appetite and deranges health. A half pail of whey at first, is enough for a feed, which may be increased to three-fourths of a pail as the calf increases in age. Two meals a day if it runs to pasture is sufficient.

Mr. Lewis, of Schuyler, uses a pint of oil meal per day for five calves. Mr. Brown, of Fairfield, did not exceed one-half pint per calf. He advised mixing shippings with the oil meal, it keeps the meal from packing. The calves ought not to be weaned until they can get a good bite of after-feed. It is important to keep them in a growing, thrifty condition with no check. When weaned earlier, their growth is often checked by reason of short, dry or innutritious feed in pastures.

*Plaster.*—Mr. Lewis thought it a good time to sow plaster immediately after haying, there was more leisure then, and it gave a good coat of grass in the fall. He wanted his milch cows in high condition to commence the winter. When plaster is to be sowed in spring, would prefer to have it on the late sows, but plaster could be sown at any time during the growing season with good effect. As to the quantity of plaster per acre, more depended upon even distribution than large quantities unevenly put on. About 100 pounds to the acre if properly applied annually would be about right. Plaster used to be sold by measure, 29 bushels being considered a ton.

*Grass Seed.*—Many people, it was believed, make a mistake in sowing too small a quantity of grass seed in seeding meadows. A half bushel per acre is little enough. When only a peck per acre is used there are vacant spaces and it takes long to get a good sod. It is bad economy to waste the use of land in this way. Better pay a little more for seed in the first instance and be prepared to get full crops, right along.

**CROP PROSPECTS IN THE UNITED STATES.**—We clip the following from *Colman's Rural World* of July 1st: "On a trip just taken from New York to St. Louis, we were surprised, constantly, to see the wretched condition of the corn. In New York, Pennsylvania, Ohio, Indiana and Illinois, there will not be half a crop, unless the change is immediately for the better. It is the long-continued rains, which have pervaded the whole country, that did the evil. Most of the corn seems to be just out of the ground, having necessarily been planted late, and is uniformly pale and sickly. As the Mississippi is approached there is an improvement; and in the vicinity of St. Louis there is fair corn; but corn on the whole, stands a chance to be a great failure. Wheat, through the whole course, beginning with the Genesee valley, is most promising; so is grass; and the same may be said of the spring grains. In the vicinity of St. Louis the crops all promise abundantly."



Growing Cranberries.

We have heard much and printed much in the Telegraph, relative to the growing of cranberries. An effort has been made to show that cranberries can be profitably grown on uplands that is, without the assistance of water, swamps, or overflowing; and though several instances were given of success, we still hesitate to believe that they could be cultivated on such land with sufficient profit to make it an object. But where there is water to overflow at proper times, or even the ground be naturally moist throughout the season, there is little doubt but that the cranberry can be made one of the most profitable crops grown. Thousands of acres in every State of the Union, now lying worse than idle, could be transformed into the cultivation of this fruit, which would add more to the common exchequer of the farmer, than four times the amount of his best ground in the ordinary crops. The following instance of the reclamation of a worthless swamp, in Franklin, Massachusetts, will open the eyes of some of our readers:

Something like ten years since, this swamp was covered over with a growth of alders, dogwood, white maples, and other swamp shrubs, which covered the ground; they were cleared off, and a ditch cut through the swamp for the brook, which before ran through a very crooked channel. Ditches were then opened from the uplands on each side, which are gravelly and sandy, leading into the main ditch. A dam was constructed across the swamp, which serves the purpose of flowing it, and also that of a road to pass across it. In the winter the swamp was usually flowed, and gravel, this being better than sand, was drawn on to the ice and spread. Afterwards it was planted to cranberry cuttings, in drills about eighteen inches apart, this, from experience, proving to be a suitable distance apart. How many coverings of gravel have been put on, was not learned; but several, judging from the excavations whence removed.

About twelve or fourteen acres of this swamp have been planted; and so favourably is it situated, that it can be covered with water in a little more than an hour's time. The brook is of such capacity, with the aid of a reservoir above the cultivated ground that the plants can be protected from frost at any season when there is any danger.

The crop of the past season was about 1 100 barrels of very nice fruit, and of remarkable size. I brought away a couple of berries that measured nearly three inches in circumference. The crop was all picked by hand, at a cost of nearly \$2 00. At one time two hundred persons might have been seen in that swamp picking cranberries. It was a lively scene. After they were gathered, they were taken to the house, where they were sorted, that is to say, the soft berries after winnowing them, were called out by women and girls, preparatory to barrelling.

The fruit has generally been sold so far as it is marketed, at the current price, though some of it was sold for \$15 a barrel. Call the average price \$10 a barrel, and 1,100 will bring the snug little sum of \$11,000. This beats tobacco raising out of sight, as the saying is.

One of the peculiar advantages possessed by this over most of swamp lands, is, the facility with which it can be flowed at all seasons of the year, thus guarding the growing crop from both late spring frosts and early autumn frosts; and besides, gives the power to destroy insects that sometimes infest the vines. Swamp lands that can be quickly flowed and quickly drained, cannot be used more profitably than by growing cranberries, as it would seem by this experience. It is also easily gravelled in the winter by flowing it.—Germantown Telegraph.

Asters.

The many varieties of this graceful and showy annual are particularly well adapted for cultivation in this country. A little care and attention are all that is necessary, and these are well rewarded by the splendid appearance of the flower when it is in bloom. The aster has been known in Europe for upwards of a century and a quarter; but it has been an object of assiduous culture among the florists of the Celestial Empire from a very early date. In the

able ornament of the parterre. The cost of the seed is a mere trifle, and, in a tastefully ordered flower-plot, its fine rich bloom excites much admiration and yields a large share of gratification.

The seed of the aster may be sown either in a frame or in the open border. In this country, where winter is long in relaxing his stern grip, it is of course desirable to have flowers in bloom as early in the summer as possible. To accomplish this end a frame covered with glass is requisite. A few boards and an old window-sash suffice for its construction, on a small

DWARF POMPON ASTER.



(One-tenth natural size)



(Half natural size.)

year 1730 a small package of seeds was sent to Paris from China, and sown there. Since then, this flower has been introduced into all civilized countries, and won for itself favour wherever it has been cultivated. When first imported to Paris the aster was single, and of only two colours, red and white; but the Germans,

scale, and therefore no amateur florist need be without it. With a shelter of this kind, the seed may be sown in April, and transplanted to the open border or bed, as the case may be, in the end of May or the early part of June. If sown in the open air the middle of May is as early as the operation can safely

IMPROVED ASTER



(One-tenth natural size)



(Half natural size.)

with whom this flower is an especial favourite,— have used great diligence in improving it, and, at the present time, the better sorts are usually designated German Asters. Although, like other annuals, it has only a brief existence, and requires careful raising from the seed each spring, it is nevertheless, a valu-

be undertaken. A warm and sheltered position should be selected for the purpose. If possible, it should be situated on the south side of a fence. Care must be taken to arrange the seed bed so that water will not stand upon it. The ground intended for its formation should be deeply dug and well pulverized.

DWARF ASTER



(One-tenth natural size.)



(Half natural size.)

If not rich, well rotted manure should be dug in. If it is clayey, and liable to become hard by the beating of the rain and the baking sun, some light mould from the woods, or some sandy loam, or mould from an old pasture, should be added. There are few neighbourhoods but what furnish some or all of these requisites. A little caution is necessary in sowing the seed lest it fall too thickly. Beginners are very liable to this mistake in seeding most of our annuals. A light covering of soil should be strewn over the newly-sown seed, and all weeds should be carefully removed from the bed as they appear. When sufficiently advanced, the young plants should be set out at regular distances of a foot apart, along borders or in beds as convenient. A showery or damp day should be selected for this purpose, and the

#### POEONY GLOBE ASTER.

illustrated four choice specimens described in the catalogue of Mr. J. A. Simmers, of this city.

The variety represented in our first illustrations is extremely pretty. It attains a height of about a foot, and forms a compact bush closely studded with beautiful globular flowers of a variety of colours.

The improved aster shown in our next cut reaches larger proportions. It is, as may be observed, of a very graceful habit, and its flowers are large and finely imbricated. "This class," we quote from the catalogue above referred to, "represents the greatest perfection of pyramidal asters with recurved petals, and fine regular form of flowers, double to the centre even in the last stage of flowering." The large-flowered robust class figured in our third cut is an improvement on the old dwarf asters, and is remarkable



(One-tenth natural size.)



(Half natural size.)

plants should be taken up carefully. The roots should be disturbed as little as possible, and a ball of earth should, if practicable, be allowed to remain attached to each. After this process, they will generally require little farther care, except to keep the weeds destroyed and the ground in a mellow condition.

In order that our lady florists,—to whom we would especially recommend the care and superintendence of the flower patch,—may be posted in the desirable varieties, to select against another season, we have

for a vigorous and handsome foliage. The flowers are large and beautifully imbricated, and all the varieties are brilliant in colour and very durable.

The Paeony-flowered globe class shown in our last illustration, "are remarkable for their large double flowers, the centre petals being incurved and the outer petals recurved. They are extremely showy; beautiful in habit, and free blooming." The above, and several other fine varieties, may be obtained of Mr. Simmers, or of Fleming & Co., of this city.

**CHINESE GARDENING.**—The Chinese display much skill and intelligence in the choice of their garden ground, both as regards the character of the soil and the nature of the situation. The first consideration with them is the supply of water, and they therefore choose a site on the banks of a creek in which they may obtain water in the driest season. Failing this, they must have wells dug in their gardens, from which they can get a constant supply of pure water. The gardens are models of neatness, and they all exactly resemble each other. They are thoroughly clear of weeds, and all the vegetation is so fresh and verdant in appearance, that they are most refreshing to the eye, especially in a warm season like the present, when all around is dry and scorched. The ground is prepared by being trenched to a depth of from 2½ to 3 feet. The garden is divided by a number of narrow walks into beds or plots, which are of such a width that the gardener, sitting, or rather crouching by the side of it, as the Chinese do, can easily stretch half-way across, so that he can weed without having to step upon it. The beds are raised to a height of about 8 inches above the level of the walks. The soil is always beautifully pulverized, and it may be presumed that it would be sufficient to drive a Chinese gardener frantic if any one were to leave a footprint on his plots. If a person would wish to see how a Mongolian can run, and how thoroughly his habitual equanimity can be disturbed, he must have an opportunity of seeing a goat break through the fence and get into the garden. They have a pride in their gardens, and respect for them amounting almost to reverence, and will take off their shoes before walking through them.—*Scottish Farmer.*

**INFLUENCE OF IRON ON VEGETATION.**—A curious discovery was lately made regarding the influence of iron on vegetables. On the chalky shores of France and England, where there is an absence of iron, vegetation has a sere and blanched appearance. This is entirely removed, it is said, by the application of a solution of sulphate of iron. Haricot beans watered with this substance acquired an additional weight of 60 per cent. Mulberries, peaches, pears, vines, and wheat, derive advantages from the same treatment. In the cultivation of clover wonderful advantages have been also gained by the application of sulphate of iron on soils in which that ingredient is wanting, and in cases where it is desired to produce an early crop. The material is of course cheap and the quantity small. All the scales falling around the blacksmith's anvil should be saved for the land—they are worth five cents a quart to the gardeners. No fruit is so much benefited by iron rust in soils as the pear.—*Maine Farmer.*

**MARKING WALL-FRUIT.**—I lately came across a curious idea in the matter of wall-fruit. It may be advisable in some cases to mark any particularly choice peaches, nectarines, &c., and the simplest and most lasting method appears to be as follows: Cut out in paper some very small letters, the initials of your own name, or the whole of your name as may be desired, and just before the fruit begins to colour, stick these letters on the side usually exposed to the sun with a little weak gum water. The covered portion will remain green, and when the fruit is ripe and the paper taken off, the name or initials of the grower will be found indelibly marked. It is both a simple and a harmless plan.—*JAGER, in London Field.*

#### Barren Fruit Trees.

To the Editor of THE CANADA FARMER:

Sir,—I presume that you and many of your readers will have noticed fruit trees blooming in the proper season, and giving a fair promise for a large yield of fruit, yet in the end turning out entirely barren. I have three pear trees of this description in my orchard, which, after receiving every attention within my knowledge for the last four years, remain yet unfruitful. They grow fast, appear sound and healthy, and exhibit fully as much bloom as my best bearing trees, which circumstance has from year to year induced me to preserve them, thinking that an abundant yield of fruit would eventually reward my labour, but so far I have been disappointed. Now what I wish to know, is this barrenness in fruit trees but the legitimate result of some defect in the natural organization of the plant, or is it caused by external influences? If the former can be clearly shown to be the cause, the sooner such trees are cut down and removed, the better. If, however, the cause of their barrenness is owing to external influences, removable by suitable applications, it would be well if those appliances were more generally known. I have frequently heard of certain persons having the power to instil the principles of fecundity into a barren tree, but whether such a thing has any foundation in fact or is but one of the many humbugs of the day I could never satisfactorily determine. Information on the question of barren trees would, I think, prove both interesting and useful to a majority of Canadian farmers. Hoping that these remarks may invite attention to the subject.

OSCAR.

Malvern, July 15th, 1865.

**NOVEL WAY OF PRODUCING EARLY POTATOES.**—The *Irish Farmers' Gazette* says:—"A sample of very fine kidney potatoes (Mona's Pride), 4 and 5 inches long, has been shown in this office, grown in the demesne of Andrew M'Cullagh, Esq., St. Brendon's, Coolock, on a peculiar system. His gardener, Mr. Byrne, has found out a mode (which he preserves as a strict secret) of growing potatoes in the open air, without permitting the sets to produce tops; the new crop coming direct from the eyes of the old potatoes, and to which they are attached, and it seems that this crop has taken but six weeks to come to perfection, and that from the same piece of land he has had two crops in twelve weeks, commencing about the 5th March last. The advantages of this system are, that there is no forcing, no manure, and that the surface can be occupied by other small garden crops that require both light and air to bring them to perfection. We have seen many years ago new potatoes repeatedly produced during the winter season by packing the whole potatoes in layers in a mixture of earth and coal ashes on hurdles in a dry out-house, but how Mr. Byrne at this season (when all nature puts on her holiday garb in green and gorgeous tinting) prevents the potatoes from putting forth their green stems and leaves, and yet produces new potatoes, is to us a mystery.

**HOW I CULTIVATE THE DAHLIA.**—In the first place, I keep my dahlias in boxes, in a dry cellar, open and exposed to the air. In this way they never mould. They will dry some, but this will not injure them. I bring them out the first of April and start them in the wet sand. As soon as they sprout I divide them, either pot or put them in boxes, keeping them in moist sand until I set them out, which I do the first of June. In its cultivation for the past five or six years, I have given special attention to various soils, and have proved to my satisfaction that a rather poor and somewhat sandy soil, moderately enriched with well decomposed vegetable compost, is best suited to the dahlia. I make use of leaves, turf, dahlia tops, and any light litter from the garden. It is a good plan to gather these things into a heap. In one year's time it will make a nice compost to mix with the soil. For both tubers and potted plants, I dig holes, and put into each about a quart of muck, enough to thoroughly line them. Inside of this I put a portion of clean sand, with which I entirely encircle the root or tuber. The muck will keep them moist. The little rootlets or feelers will penetrate through all this, and draw what nutrition the plant requires for blooming, and at the same time be prevented from too rank a growth of stalk and leaves. New roots grown in this way will keep much better through the winter, and flower better the ensuing season. I have tried various other methods with partial or imperfect success. In this I am always sure of the most satisfactory results.—*Mrs. E. G. HAWLEY, in Country Gentleman.*

## British Cleanings.

### Weather Prophets.

Mr. W. H. WINTK, the recognised weather "medium" of the *Mark Lane Express*, in his forecasts some six months since, predicted that the present season would be a productive one. On the other hand, Mr. Thos. Du Boulay, another weather clerk, who occasionally enlightens the same paper with his "predictions," expressed a directly contrary opinion. "Two of a trade cannot agree" is an old and somewhat truthful adage, and as if to furnish another verification of it, those two glibbed weather seers appear likely to get to "eggheads" in attempting to decide who has been right. Aspersion is the usual exchange current among quacks, and of this there seems to be no lack in the debate between these parties. In a recent number of the *Express*, Mr. Du Boulay hints rather plainly that the dryness of the season has "preternaturally excited" the feelings of his rival, and that in consequence he has been caught napping. For ourselves we confess to little faith in weather predictions vented any great length of time beforehand. A careful observation of the weather, direction and force of the wind, and the registered indications of the barometer and thermometer furnished from a variety of points, may enable philosophers like Mr. Glasher, or the late Admiral Fitzroy, to calculate with some accuracy the probable weather at a given place a few days previously, but the six months' predictions that are sometimes ventured, are in our opinion, mere guesses, wholly unworthy of reliance.

**AN EXTRAORDINARY EGG.**—A British exchange states that "a hen belonging to Mr. G. Jameson, Cowpen North Pit, near Newcastle-on-Tyne, recently dropped an egg weighing 3½ ounces, and measuring in length 7½ inches, and in circumference 6½ inches."

**BRUTAL CHIMNEY SWEEPING.**—A British exchange states that a man was recently sent to prison at Leeds for attempting to brush his chimney by pushing a dog and eat down it from the top. The dog remained in the chimney for four hours.

**SHEEP SHEARING EXTRAORDINARY.**—The *Irish Farmer's Gazette* reports that two active shepherds have lately been displaying their surprising powers. At Killoughram they shored for Messrs. Purdon the large number of 225 sheep in 15 hours, each sheep turning off an average of over 7 lbs. to the fleece. This feat, we believe, has never been surpassed.

**EAGLES DESTROYING LAMBS.**—We learn from the *North British Agriculturist* that the sheep-farmers in Skye are complaining very much this season of the depredations committed by eagles amongst their young lambs. At Glenbrittle, ten lambs were carried away in three days to one nest. The nest was reluctantly destroyed as it was that of the first golden eagle known to breed there for many years.

**MANURE—PITS AND TANKS.**—Professor Voelcker recommends that "the sides and bottoms of manure pits should be rendered impermeable to water, either by clay-pudding or hydraulic cement; that the bottom of the manure-pit should be in a slightly-inclined position, so as to carry the liquid manure and drainings into a manure-tank, which should be close by. The tank should be provided with a pump, so as to return the liquid matter to the heap in dry weather. The heap should likewise be well trodden."

**SWARM OF BEES IN A THUNDER STORM.**—An English paper has the following:—The unusual sight of a swarm of bees in a thunder storm, was lately witnessed at Pevensy. Between three and four in the afternoon an inhabitant observed a flash of lightning, which was followed by a heavy peal of thunder, and on looking out of the window he saw a swarm of bees on the wing. By this time the rain descended in torrents, to the great discomfiture of the bees; however, when the tempest had abated they had all cleared off."

**A POPULATION COLUMN.** The *Fortnightly Review* has a curious calculation which may be interesting to those who discuss the subjects of population, war, pestilence and famine. It states that "the number of human beings living at the end of the hundredth generation, commencing from a single pair, doubling at each generation (say 30 years), and allowing for each man, woman and child an average space of four feet in height and one foot square, would form a vertical column having for its base the whole surface of the earth and sea spread out into a plane, and for its height 3,674 times the sun's distance from the earth. The number of human statura thus piled one on the other would amount to 160,790,000,000."

**CULTIVATION OF DARTMOOR.**—The English papers report that a large portion of Dartmoor will shortly be brought under cultivation, a company with a large capital being in progress of formation. Mr. John Lee, a gentleman of London, has taken upwards of 20,000 acres of the north quarter of the moor, from the Duchy of Cornwall, and has already sub-let it at a profit. The crops on the moor are reported to be very healthy, and are likely to be very prolific this season. At Bratton Clovelly, near the moor, the cultivation of the silkworm is being carried on extensively, and with success. The trees on which the worms feed are imported from Japan, and flourish vigorously on the moorland soil.

**THE BIRMINGHAM POULTRY SHOW.**—We learn from an English Exchange that the prize list of this show, which will be held at Birmingham in November next, includes the astonishing number of 129 classes, 96 being for poultry and 33 for pigeons. The prizes are liberal and numerous, ranging from £5 to £1, and in addition there are a large number of silver cups and special prizes offered by amateurs and patrons. We cannot reprint the prize list, suffice it to say that premiums are offered for old birds, young birds, hens, pullets and single cocks, of almost every variety, and in fact for almost every colour of every variety. In pigeons, the birds compete in pairs, except in the case of Pouters and Carriers, which are to be shown singly.

**FLAX PROSPECTS IN EUROPE.**—A Dundee trade report contains the subjoined remarks on the flax trade:—The reports of the flax crop in France and Belgium are very discouraging, the drought having been most injurious to the growing plant. The dry weather will make the straw rather short in Ireland; but it is expected the crop will be an average one. There are conflicting accounts regarding the appearance of the plant in Russia; but from the most reliable source, it does not appear that the crop will be a bad one. Viewing the present state of the flax trade in all its aspects, the most experienced people think that the recent very considerable advance in prices in Russia and here is not fully warranted, and that speculation abroad has much to do with the rise. It is very possible that present prices may be maintained; but it would be most injurious to the trade were they to go much higher, as it will keep back orders, and probably land the holders in large stocks of dear goods. Great caution is therefore necessary in all operations at such a time."

**AGRICULTURAL CO-OPERATIVE STORES.**—The *Englishman's Magazine* has an article showing the benefits of the co-operative system to the agricultural population with some examples of its application. We select the two following, believing that what has been done in these cases may be carried out in others:—  
"At Clipston, in Northamptonshire, there has been a society in existence for three years and a quarter; during their last quarter they have sold goods to the amount of £506, being an advance of £100 on any previous quarter. After paying the expenses of management and interest at 5 per cent. on all paid up shares, they were able to give a dividend of 1s 10d in the pound on the purchases by members, several of whom have cleared from 10s to £17 in the three years and a quarter of the society's existence. One member was in debt £3 when he joined the society; he has now paid off every farthing he owed, and has £11 in the society at the present time. This man has a wife and six children to support out of his scanty wages, and he declares that if he had not joined the Co-operative Society he could not have struggled on. Clipston is a village of 800 inhabitants. Secondly, Whitfield is a village in Northumberland, with a population under 400, fourteen miles from Hexham, the nearest market town of any size, and eight miles from a railway station. Upon the incoming of a new rector in 1860, the idea of co-operation was started, and such was the effect produced by the discussion of the subject, that the whole parish—squire, farmers, and labourers—determined to become

co-operators, and raised a capital of £274 in £1 shares; at the end of the first year the capital increased to £296. The sales amounted to £1,884; 5 per cent. increase was paid on the capital, and a dividend of 1s in the pound on members' purchases. At the end of the second year the capital had increased to nearly £395. The sales amounted to £2,118; the interest on the capital remained as before, and two dividends were paid of 1s and 2s on members' purchases; the stock, £500 in value, carried up to £20 to depreciation, and £10 as the beginning of a reserve fund."

**BEES IN LONDON.**—We learn from the *London Times* that not a little excitement and astonishment was caused in New Burlington Street by the circumstance of a swarm of bees alighting on a cab which had just drawn up at a restaurant. A man having procured a hive set to work, and with assistance succeeded in securing the whole of the unexpected visitors, and took them away. The *Gardener's Chronicle* accounts for the circumstance as follows:—"We have heard from Messrs. Neighbour, of Regent Street, the real facts of this case. Having a swarm of bees on its way into the country, they temporarily placed the hive on the leads of their house, giving the bees their liberty. From some reason best known to the bees, they suddenly issued from the hive, and after flying about for a few minutes the swarm collected on a cab standing in the neighbourhood, much to the astonishment and dismay of the driver and his fare. A man in the employ of Messrs. Neighbour was fortunately able to secure the bees in a hive, and consign them to a place of safety. The cab driver was appeased by being liberally compensated for the loss of his fare."

**ANOTHER OUTBREAK OF SMALL POX AMONG SHEEP.**—We learn from the *Mark Lane Express* of July 10th, that at the last meeting of the Royal Agricultural Society, a letter was read from Professor Simonds—the Society's veterinary inspector—reporting that another outbreak of small pox had taken place among a large flock of sheep on the Sussex Downs. Professor Simonds says:—"The flock consists of about six hundred ewes and lambs; and up to the time of my visit, 17 animals were known to be affected, and it was hoped that my examination would not materially increase this number. Such, however, did not prove to be the case, for no less than 48 were found by me to be diseased to a greater or less extent, thus bringing up the number of infected animals to 65."

As the greater portion of the Downs is unenclosed, there is every probability that the disease will spread; although every effort and precaution will be promptly used to arrest its progress. The *London Gazette* publishes the following notification:—"In pursuance of powers contained in the Acts to prevent the spreading of contagious or infectious disorders among sheep, cattle, and other animals, the Lords of the Privy Council have issued an order regulating the removal of sheep or lambs to or from the parish of Southase, near Newhaven, Sussex, where the sheep-pox, or variola ovina, now prevails."

**FAILURE OF THE APPLE CROP.**—The *Scottish Farmer* devotes an editorial to the discussion of this question. Our contemporary states in substance that throughout the entire extent of Great Britain the crop will be an almost total failure. The cause is attributed to the destruction of the blossoms and young leaves by caterpillars, and more especially by those of that most ruinous insect to fruit trees—the winter apple-moth. The following are among the remedies suggested by the writer: Dusting hot lime thickly over the trees as the young caterpillars come into existence. Syringing about the same period, and occasionally for a week or two after, with soap suds or weak tobacco water. Shaking the tree suddenly to make them fall off, when they may be destroyed by spreading a sheet for their reception. On special favorite trees by repeated watching for and pinching them in the rolled up leaves. In the *pupa* state by deep hoeing and digging. In the *fly* state by applying round the stems collars of wood, or other soft material, saturated or smeared with bird-lime, tar, turpentine, oil or other substance not injurious to the tree, and over which the moths cannot pass. "As the females commence their ascent immediately after night fall, advantage has been taken of this to destroy them, going round with lanterns and examining the stems; this must be repeated as long as insects are found, and the search continued from an hour to an hour and a half each night. Burning grass roots, weeds, and rubbish, under and to windward of the trees, so as to annoy both the moths and the larvæ with the smoke, has also been found a good preventive." The moth is stated by our contemporary to be the *Geometra crumata* of Linnaeus, or the *Chimrobittia crumata* of Stenhen.

## Poultry Yard.

### Chickens and their Characteristics.

ONE OF GAIL HAMILTON'S most pleasant articles appears in the Atlantic Monthly for June, from which we make the following extract:

Little chickens, tender and winsome as they are, early discover the same disposition. When one of them comes into possession of the fore-quarter of a fly, he does not share it with his brother. He does not even quietly swallow it himself. He clutches it in his bill and flies around in circles and irregular polygons, like one distracted, trying to find a corner where he can gormandize alone. It is no matter that not a single chicken is in pursuit, nor that there is enough and to spare for all. He hears a voice we cannot hear, telling him that the Philistines be upon him. And every chicken snatches his morsel and radiates from every other as fast as his little legs can carry him. His selfishness overpowers his sense, which is, indeed, not a very signal victory, for his selfishness is very strong and his sense is very weak. It is no wonder that Hopful was well-nigh moved to anger, and queried, "Why art thou so tart, my brother?" when Christian said to him, "Thou talkest like one upon whose head is the shell to this very day." To be compared to a chicken is disparaging enough; but to be compared to a chicken so very young that he has not yet quite divested himself of his shell must be, as Pet Marjorie would say, "what Nature itself can't endure." A little chicken's greedy crop blinds his eyes to every consideration except that of the insect squirming in his bill. He is beautiful and round and full of cunning ways, but he has no resources for an emergency. He will lose his reckoning and be quite out at sea, though only ten steps from home. He never knows enough to turn a corner. All his intelligence is like light, moving only in straight lines. He is impetuous and timid, and has not the smallest presence of mind or sagacity to discern between friend and foe. He has no confidence in any earthly power that does not reside in an old hen. Her cluck will he follow to the last ditch, and to nothing else will he give heed. I am afraid that the Interpreter was putting almost too fine a point upon it, when he had Christiana and her children "into another room, where was a hen and chickens, and bid them observe a while. So one of the chickens went to the trough to drink, and every time she drank she lift up her head and her eyes towards heaven. 'See,' said he, 'what this little chick doth, and learn of her to acknowledge whence your mercies come, by receiving them with looking up.'" Doubtless the chick lift her eyes towards heaven, but a close acquaintance with the race would put anything but acknowledgment in the act. A gratitude that thanks Heaven for favours received and then runs into a hole to prevent any other person from sharing the benefit of those favours is a very questionable kind of gratitude, and certainly should be confined to the bipeds that wear feathers.

Yet, if you take away selfishness from a chicken's moral make-up, and fatuity from his intellectual, you have a very charming little creature left. For, apart from their excessive greed, chickens seem to be affectionate. They have sweet social ways. They huddle together with fond, caressing chatter, and chirp soft lullabies. Their toilet performances are full of interest. They trim each other's bills with great thoroughness and dexterity, much better indeed than they dress their own heads,—for their bungling, awkward little claws make sad work of it. It is as much as they can do to stand on two feet, and they naturally make several revolutions when they attempt to stand on one. Nothing can be more ludicrous than their early efforts to walk. They do not really walk. They sight their object, waver, balance, decide, and then tumble forward, stopping all in a heap as soon as the original impetus is lost, generally some way ahead of the place to which they wished to go. It is delightful to watch them as drowsiness films their round, bright black eyes, and the dear old mother croons them under her ample wings, and they nestle in perfect harmony. How they manage to bestow themselves with such limited accommodations, or how they manage to breathe in a room so close, it is difficult to imagine. They certainly deal a staggering blow to our preconceived notions of the necessity of oxygen and ventilation, but they make it easy to see whence the Germans derived their fashion of sleeping under feather-beds. But breathe and bestow themselves they do. The deep mother-heart and the broad mother-wings take them all in. They penetrate her feathers, and open for themselves unseen little doors into the mysterious, brooding, beckoning darkness. But it is long before they can arrange themselves satisfactorily. They chirp, and stir, and snuggle, trying to find the warmest and softest nook. Now an uneasy head is thrust out, and now a whole

tiny body, but it soon re-enters in another quarter, and at length the stir and chirp grow still. You only see a collection of little legs, as if the hen were a banyan-tree, and presently even they disappear, she settles down comfortably, and all are wrapped in slumberous silence. And as I sit by the hour, watching their winning ways, and see all the steps of this sleepy subsidence, I can but remember that outburst of love and sorrow from the lips of Him who, though He came to earth from a dwelling-place of ineffable glory, called nothing unclean because it was common, found no homely detail too trivial or too homely to illustrate the Father's love, but from the birds of the air, the fish of the sea, the lilies of the field, the stones in the street, the foxes in their holes, the patch on a coat, the oxen in the furrow, the sheep in the pit, the camel under his burden, drew lessons of divine pity and patience, of heavenly duty and delight. Standing in the presence of the great congregation, seeing as neverman saw, the hypocrisy and the iniquity gathered before Him,—seeing too, alas! the calamities and the woe that awaited this doomed people, a god-like pity overbears His righteous indignation, and cries out in passionate appeal, "O Jerusalem, Jerusalem, thou that killest the prophets, and stonest them which are sent unto thee, how often would I have gathered thy children together, even as a hen gathereth her chickens under her wings, and ye would not!"

A little girl about four years old, and a little boy about six, had been cautioned not to take away the nest-egg; but one morning, when they went for the eggs, the little girl took it, and started for the house. Her disappointed brother followed, crying: "Mother! mother! Susy's been and got the egg the old hen measured by!"

## The Apiary.

THE BEE AS A PHYSICIAN.—In Marktstett, Lower Franconia, Bavaria, in the autumn of 1861, a bee is declared to have become an M.D.! Its owner, who was deaf, was stung by it in the eye-lid near the temple. He applied earth and water to the wound without effect, but at last fell sound asleep. When he awoke the church clock struck. He listened with surprise and counted the strokes. All right! The clock struck, and the bee-sting had given him back his hearing, which he had lost two years previously from the effects of a severe cold.—(*Rejensburg Gazette.*)

CURE OF BEE STINGS.—From the *Prairie Farmer* we learn, on the authority of Dr. Bush, Chester Co., Pa., that one drop of strong spirits of hartshorn will in an instant remove the pain caused by the sting of a bee, wasp, or hornet. It should be at hand in every family where there are children. Smiles of gratitude, shining through the tears of distress, will often repay the thoughtful mind that provides and the quick hand that applies the remedy. He recommends the same article also for the removing of grease spots.

CONTRIVANCE FOR HIVING BEES.—Mr. Amos Taber, of Albion, has left at our office an apparatus for hiving bees, contrived and used by himself for several years with unvaried success. It consists of a board a foot wide and twelve feet long, elevated at an angle of about forty-five degrees, the upper end of which is perforated with holes about two inches apart, into which long corn cobs are inserted projecting downward. Bees when swarming readily alight upon the cobs, as they afford an excellent opportunity for them to hold on upon, from which they can be hived without difficulty or danger, as the board can readily be placed immediately under the hive. A sample of the contrivance can be seen at this office, and we regard it as a simple and practical affair—one which every bee-keeper can make and use himself with little or no trouble.—*Maine Farmer.*

BEES IN THE WALLS OF A HOUSE.—This is the produce of two hives of bees, which have had undisturbed possession of a part of my house for about seven years, viz., 224 pounds of honeycomb and bee-bread, as cut from five compartments between the "studs" of a lath and plaster house, and of which 224 pounds have been reserved for table: honeycomb, best, 43 pounds; second best, 9 pounds; honey, best, 60 pounds; No. 2, 24 pounds; No. 3, 9 pounds; wax, good, 4½ pounds; inferior, 1½ pounds; and bee-bread, (which contained a good deal of honey, and could not be drained off,) 73 pounds, which made about 8 gallons of excellent mead. About eight years since nearly 60 pounds of honey were taken from one hive; the second hive made its appearance two years ago.—*Rowland T. Cornold, in London Field.*

## The Household.

### The Game of Croquet.

WE have received from Messrs. Lash & Co., of this city, a sample of the above-named popular game, with explanations and instructions for playing it. In common with many of our readers, we had observed advertisements with the word "Croquet" figuring conspicuously in them, but beyond that, knew nothing about the matter. On examination, however, we are pleased to find that it is a very simple but interesting game,—such as we have no hesitation in recommending to the numerous households to which THE CANADA FARMER is a visitant. It is especially suited to rural households. Indeed there are few families in towns and cities that have the requisite space for it, as it is an out-door game, and requires a piece of smooth lawn about thirty yards in length to accommodate the players. It occupies far less room than cricket or base ball, is not so fatiguing as those games, and while not over exciting, has just enough interest about it to quicken the circulation and create a pleasant glow. Recreation is one of the demands of human nature. When wisely chosen and indulged within proper bounds, it adds to the charms of home, and helps to attach young people to it. "Croquet" meets the main conditions of a desirable recreation. It is a social game, engaging six, eight, or ten players at once. It is pursued in the open air. It is not rough, and, requiring but little exertion, is just the thing for the summer time. It is easily learned, but affords room for the exercise of considerable skill. At the same time it does not impose much tax upon the mind, but leaves it free to enjoy the scenery and the pleasant chat of friends. For the holiday time, for social gatherings, for pic-nics, and the like, it is excellent. Our space does not admit of a full description of the play, or a statement of the rules. These are furnished among the requisites for the game. "Croquet" sets may be made on a very plain and cheap scale, or they may be got up very tastefully. Messrs. Lash & Co. supply them at from \$5 to \$10 the set, including the book of directions. Being boxed, they can be sent to any part of the country quite safely, and so may be ordered by letter. We learn that a large number of sets have been sold the present season, and that the demand for the game increases as it becomes more widely known.

CHARACTER doesn't depend on diet. The ac-eats thistles and nettles, the sharpest of food, and is the dullest of animals.

Women love to find in men a difficult combination—a gentleness which will almost invariably yield, with a force that will invariably protect.

AN able physiologist has written that one-fifth of the human body is composed of phosphorus. *Punch* remarks that this most likely accounts for the number of matches made.

TESTING EGGS.—Put them in water. If good, they rest upon the side. If one floats end up, you may be sure of a bad egg.

HOW TO GET RID OF MOSQUITOES.—The *Maine Farmer* says: "Mosquitoes love beef-blood better than they do any that flows in the veins of human kind. Just put a couple of generous pieces of beef on plates near your bed at night, and you will sleep untroubled by those pests. In the morning you will find them full and stupid with beef-blood, and the meat sucked as dry as a cork."

A SURE REMEDY FOR A FELON.—The following remedy is vouched for by the *Buffalo Advocate*, as a certain thing from its own knowledge: "Take a pint of common soft soap and stir in air-slacked lime till it is of the consistency of glazier's putty. Make a leather thimble, fill it with this composition, and insert the finger therein, and a cure is certain." This is a domestic application that every housekeeper can apply promptly.



Miscellaneous.

A COMMON ORNAMENT.—"Ah, Charley," said one little fellow to another. "We are going to have a cupola on our house." "Pooh! that's nothin'," rejoined the other, "papa's going to get a mortgage on ours."

A NICE TASK FOR A PAINTER.—"Represent me in my portrait," said a romantic lady to a painter. "With a book in my hand, and reading aloud. Paint my servant also in a corner where he cannot be seen, but in such a manner that he may hear me when I call him."

EARLY IMPRESSIONS.

A pebble, in the streamlet scant,  
Has turned the course of many a river;  
A dew-drop on the infant plant,  
Has warped the giant oak forever.

GOOD ADVICE BRIEFLY GIVEN.—As far as possible have the plan of each day's work laid out before hand. Treat hired help kindly, and thus secure their good will. Things do not move as expected, don't fret. It will not mend matters. Be careful of your health. Do not overwork yourself. Never be so busy that you cannot take time to eat leisurely. Keep your feet well clad, and avoid biters and all quack medicines. Be social with your friends, but waste no time in loafing. Keep a careful account of all expenditures, and note down the time and mode in which all farm work is done.—Western Rural.

Markets.

Toronto Markets.

"CANADA FARMER" Office, July 30, 1865.

The weather for the past fortnight has been all that could be desired for the ingathering of the hay crop and the commencement of the wheat harvest. With the exception of the very heavy rain storm on Tuesday last, we have had no wet season to mar the operations of husbandry, but that fall was no less welcome for other reasons, although it came at a time when a large quantity of grain was lying out of doors. Our markets, both on the street and wholesale, have been very dull for the past two weeks. This is to be expected at this season of the year, just between the old crop and the new, while farmers are busy, and but little grain to move. The reports of abundant crops in all sections of the country still come in, and a few weeks more will settle all speculations as to the injury done to grain by the midge and other insects.

Flour—market dull with few transactions, fresh ground from Canada wheat, held at \$4 35 to \$4 75, extra do at \$5, superior extra at \$5 70 to \$5 85.

Fall Wheat in fair demand and steady, at \$1 to \$1 05 on the street.

Spring Wheat—quiet, selling on street, at 95c to \$1 00, and higher.

Barley nominal, at 50c to 55c per bushel.

Pease steady, at 60c to 59c.

Oats dull at 42c to 45c.

Corn unchanged.

Provisions—improving; Butter good supply at 7 1/4c to 16c per lb. for rolls wholesale; dairy, in tubs, 12 1/2c to 14 1/2c per lb.

Cheese—more plentiful; whealsal. 10 1/2c to 11 1/2c per lb, retail 14c to 15c per lb.

Eggs—market steady, with fair supply; fresh 15c per dozen on the street.

Butter—Scarce, but of excellent quality, with fair demand wholesale, 70c, retail, 80c. New potatoes plentiful at \$1 to \$1 20 per bushel.

Beef—in demand, but lower; prime cuts 8c to 10c per lb., stew and corn pieces 6c to 8c per lb.

Mutton—Fair supply and in less demand, at 12c to 15c per lb.; hind quarters 12c per lb.; fore quarters 8c per lb.

Livestock—dressed weight, 1st class \$5 to \$5 50; 2nd class \$4 to \$4 50; inferior, \$3 to \$3 50; calves fair plentiful, \$4 to \$7 each, fair quality; the market, sheep, \$5 50 to \$4 00 each for car load, do. yearlings, \$3 to \$3 50, lambs, \$2 to \$3.

Hay—in good supply at from \$7 to \$8 per ton for new, in scarce and higher.

Hamilton Markets, July 25.—Flour, No. 1. superfine, \$4 50, extra, \$5, double extra, \$5 50. Fall Wheat, 1 1/2c to \$1. Spring, 50c to 60c. Pease at 50c to 55c. Oats, at 40c to 45c.

Barley, 50c. Potatoes, 1 1/4c, 70c to 75c, new, 75c to \$1. Provisions—Fresh Butter, 12c to 15c. Eggs, 13c to 15c. Cheese at 11c to 12 1/2c. Pork is scarce; mutton, \$13 50 to \$19, prime mutton, \$15 to \$16. Hay, per ton, \$6 to \$7. Wood—there is no one offering on the street. There is an active demand for round lots of combing, and the price is firm at 44c to 45c. Broken clothing and wool is worth about 40c to 41c. Nearly all the lots have been picked up, and the quantity held by buyers is much less than usual at this season.—Spectator.

London Markets, July 25th.—Fall Wheat, \$1 to \$1 05. Spring Wheat, 95c to \$1. Oats, 30c to 35c. Pease, 50c. Barley, 42c to 44c. Butter, fresh, 12c to 14c. Flour, \$2 50 to \$3. Dressed Hogs, \$6 to \$7. Beef, \$3 50 to \$4 25. Pease, 50c. Corn, 50c to 60c. Hay, old, \$7 to \$10.—Prototype.

Guelph Markets, July 25.—Fall Wheat, \$1 12 1/2 to \$1 15. Spring, do., \$1 03 to \$1 06. Oats, 30c to 35c. Pease, 50c. Barley, 48c to 50c. Hay, \$6 to \$7. Beef, \$5 to \$6. Butter, 14c to 15c. Eggs, 11c to 12 1/2c. Hides, \$3 to \$3 25. Sheepskins, \$1 to \$1 50. Potatoes, 35c to 45c. Wool, 38c to 40c.—Advertiser.

Galt Markets, Wool, per lb., 41c to 42c. Flour, per 100 lbs., \$2 60 to \$5. Fall Wheat, 96c to \$1. Spring Wheat, 90c to 96c. Barley, per bushel, 65c to 65c. Oats, do., 53c to 37 1/2c. Flaxseed, do., \$1 to \$1 25. Butter, per lb., 13c to 14c. Pease, 60c. Beef, per 100 lbs., \$5 to \$7. Pork, do., \$5 50 to \$8 10. Mutton, per lb., 6c to 10c. Cheese, per lb., 6c to 8c. Hides, per 100 lbs., \$2 to \$3. New Potatoes, \$1 to \$1 50. New Hay, \$6 to \$7 50.—Advertiser.

Waterloo Markets, July 26.—Fall Wheat, 95c to \$1, Spring Wheat, 85c to 90c. Pease, 60c. Barley, 60c. Rye, 60c, 60c. Oats, 51c. Flax Seed, \$1 50. Butter, 14c to 16c. Eggs, 11c. Pork, \$5 50 to \$6 20. Wool, per lb., 40c. Best Flour, \$2 25 to \$2 75. Spring Wheat Flour, \$2 62 1/2.—Chronicle.

Goderich Markets, July 26.—Spring Wheat, 90c. Fall Wheat \$1. Oats, 40c to 45c. Flour, \$5 to \$5 50. Barley, 50c to 60c. Pease, 70c. Wool, 55c to 40c. Sheep, \$3 to \$4. Lambs \$2. Hides, green, \$2 75. Potatoes, new, \$1. Wood, \$1 75. Eggs, 10c to 12 1/2c. Hay, new, per ton, \$6 to \$7. Green Pease, 40c to 60c.

Cobourg Markets, July 25.—Flour, per bbl., \$5. Fall Wheat, per bushel, \$1 15 to \$1 20. Spring Wheat, per bushel, \$1 10 to \$1 15. Potatoes, 60c. Barley, per bushel, 6c to 65c. Peas, do., 60c to 75c. Oats, do., 48c to 50c. Hay, per ton, \$6 to \$7. Hides, per cwt., \$2 50. Sheepskins, \$1 to \$1 50. Wool, per lb., 42c. Beef, per cwt., \$4 50. Pork, \$6 50. Eggs, per doz., 10c to 12 1/2c. Butter, per lb., 12 1/2c.—Sun.

Chatham Markets, July 24.—Wool, 40c to 41c. Flour per 100 lbs., \$2 50 to \$2 65. Wheat—No. 1 \$1 to \$1 12. Barley, per 100 lbs., \$1 25 to \$1 50. Oats, 35c to 40c. Beans, 60c to 65c. Potatoes, new, \$9. Apples, per bush, \$1 to \$1 25. Mutton, per lb., 5c to 6c. Beef, per cwt., \$5 50 to \$7. Pork, per hundred, \$6 50 to \$7 75. Butter, per lb., 12c to 13c. Cheese, per lb., 8c to 10c. Hay per ton \$7 to \$8. Tobacco, per 100 lbs., \$5 to \$4. Sheepskins, \$1 50 to \$1 75. Hides, per lb., 3 1/2c. Corn, 50c to 60c.—Plant.

Buffalo Markets, July 26.—Flour firm and in fair demand, amber Illinois at \$7 50, Southern Illinois at \$5 50; N X white Ind. at \$8, extra State at \$6 75, N X choice white at \$9, Southern Ohio at \$9 50; red Mich. at \$6 75; Southern Ind. at \$8 40 to \$9. Wheat—The market firmer and in good demand; No. 1 Milwaukee closing at \$1 33 to \$1 35, No. 1 Chicago spring at \$1 22 to \$1 32, closing firm. Corn—market firmer and active; No. 1 mixed early at 7 1/2c, No. 2 mixed early at 7c. Oats—the market rules firm and in fair demand. Rye nominal; held at 9c. Barley—none in market. Pease, dull and inactive. held at \$1 15. Butter, in moderate demand and firmer; held at 18c to 22c for Canada and Western. Cheese, in moderate demand at 15c for factory and extra cream.—Express.

New York Markets, July 26.—Flour—Receipts, 19,511 bbls.; market 5c to 10c better; sales 9,000 barrels, at \$5 85 to \$6 55 for superfine State; \$6 75 to \$8 85 for extra State; \$1 90 for choice do; \$5 65 to \$6 55 for superfine Western; \$6 80 to \$7 10 for common to medium extra Western, and \$7 05 to \$7 85 for common to good shipping brands extra round hoop Ohio. Canadian flour 5c to 10c better; sales 400 barrels, at \$3 80 to \$7 20 for common and \$7 25 to \$8 55 for good to choice extra. Rye Flour quiet. 11 1/2c. Barley, 28,295 bushels; market 5c to 6c better on spring, at 5c to 10c better on winter; sales 70,000 bushels; \$1 50 for Chicago spring; \$1 75 for winter red western, and \$1 84 to \$2 for amber Michigan. Rye quiet. Barley dull. Corn—Receipts, 10,549 bushels; market quiet, and 1c better; sales, 49,000 bushels at \$6 to \$6 75 for unsound, and 5c to 8c for sound mixed Western. Oats quiet, at 62c to 62 1/2c for Western. Pork firmer; sales 2,500 barrels, at \$4 to \$31 50 for new mess; \$27 50 to \$25 for '63 and '64 do, and \$23 50 to \$24 for prime. Beef quiet.

Advertisements.

PROVINCIAL EXHIBITION OF THE AGRICULTURAL ASSOCIATION OF UPPER CANADA, TO BE HELD AT LONDON, ON 18th to 22nd September, 1865.

PERSONS intending to exhibit will please take notice that the entries of articles in the respective classes must be made with the Secretary at Toronto, on or before the undermentioned dates, viz.:

Horses, Cattle, Sheep, Swine, Poultry, on or before Saturday, August 1st.

Grain, Field Roots, and other Farm Products, Agricultural Implements, Machinery, and Manufactures generally, on or before Saturday, August 26th.

Articulate Products, Ladies Work, the Fine Arts, &c., on or before Saturday, September 9th.

Lists and Blank Forms, for making the entries upon can be obtained of the Secretaries of all Agricultural Societies and Mechanics' Institutes throughout the Province.

HUGH C. THOMSON, Secretary Board of Agriculture. v2-15-3t

NOTICE.

THE next Regular Meeting of the WOOL GROWERS' ASSOCIATION of the County of Brant, will be held in the Townhall of the Town of Brantford, on Friday the 18th of August next, at 10 o'clock A.M.

Subject for discussion, "Can Flax or any other crop be substituted for Wheat with advantage?" THOMAS BALLINGAL, Secretary. v2-15-1t

August 1st, 1865.

MILLER'S.

Celebrated Scab & Tick Destroyer, FOR SHEEP.



THIS preparation is a certain remedy for removing those destructive affections. Every day brings additional testimony of its thorough effectiveness. No flock master could be without it. Prepared only by

HUGH MILLER & CO., Chemists, Toronto.

August 1, 1865.

DAIRY FARM FOR SALE, OR RENT ON LEASE.

400 ACRES, near WOODSTOCK, Co. of Oxford, with extensive improvements, well adapted for a Dairy or Stock Farm. Also, 150 ACRES near CHARLESTON, Co. of Peel, with considerable improvements, having a spring on the lot well adapted to run a Cheese Factory. Also, 100 ACRES near EMBRO, Co. of Oxford, with considerable improvements.

For particulars, apply (post-paid) to JOHN DUNLOP, South Zorra, C. W. v2-15-4t

THOSE ABOUT TO BUILD

GREEN-HOUSES, CONSERVATORIES, OR ORCHARD HOUSES,

ARE offered ROUGH-ROLLED PLATE GLASS, GERMAN GLASS, PAINTS, OIL, VARNISHES, PULLEYS, ROOFS, and other requisites.

Orders per mail or express promptly filled.—Send for prices.

RICE LEWIS & SON.

Toronto, August 1, 1865.

v2-15-1t

MONEY TO LOAN.

On Unusually Advantageous & Equitable Terms, BY

THE HAND-IN-HAND

Investment, Loan and Savings' Society, HAMILTON, C. W.

LOANS made to the extent of ONE-THIRD of the cash value of any Real Estate secured by first Mortgage to the Society, which, with the interest at 10 per cent., will be repaid by the following instalment for each \$100 advanced:—

Table with 5 columns: Mode of Payment, For Two Years, For Four Years, For Six Years, For Eight Years. Rows include Monthly, Quarterly, and Half-Yearly payments.

\* NOTE.—The quarterly and half-yearly instalments include the fees levied by the Rules for not paying monthly.

For further information, see letter as published in this day's CANADA FARMER, or apply to

AMOS FAYRAM, Secretary. Hamilton, C.W., August 1, 1865. v2-15-1t\*

To Cheese Factors and Dairymen.

If you want the best Annotta in use, call at the Ingersoll Cheese Factory, where you can get the English Carbonized Extract, which gives the cheese or butter a beautiful orange colour, not to be produced by any other Annotta.

F. H. ELDRID sole manufacturer for Canada.

All orders addressed to "F. H. Eldred, Ingersoll Cheese Factory," will receive prompt attention. Price \$1.25 per gallon. v2-15-2t

THE CANADA FARMER is printed and published on the 1st and 15th of each month, by GEORGE BROWN, Proprietor, at his Office, No. 26 and 28 King Street East, Toronto, U. C. where all communications for the paper must be addressed.

Subscription Price \$1 per annum, (POSTAGE FREE,) payable in advance. Bound volumes for 1864 may be had for \$1.30. Subscribers may either begin with No. 1, receiving the back Nos. for 1864, or with the first No. for 1865. No subscriptions received for less than a year, and all commence with the first number for the respective years.

Clubs will be furnished at the following rates:—

TEN COPIES for ... NINE DOLLARS. TWENTY COPIES for ... SIXTEEN DOLLARS. FORTY COPIES for ... THIRTY DOLLARS. ONE HUNDRED COPIES for ... SEVENTY DOLLARS.

To Agricultural Societies ordering more than 125 copies, the FARMER will be sent at SIXTY CENTS.

THE CANADA FARMER presents a first-class medium for Agricultural advertisements. Terms of advertising, 20 cents per line of space occupied, each insertion—no inch space being equal to 12 lines. No advertisement charged less than \$2, being ten lines of space.

Communications on Agricultural subjects are invited, addressed to "The Editor of the Canada Farmer," and all orders for the paper are to be sent to GEORGE BROWN, Proprietor and Publisher.