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THE CANADA FARMER

VOL. IV. No. 11. | TORONTO, UPPER CANADA, JUNE 1, 1867. | POSTAGE FREE.

The Field.

Wheat Growing.

To the Editor of THE CANADA FARMER:

SIR,—The staple crop of this country, it is needless to say, is wheat. The soil best adapted to the growth of wheat is clay; but it must be either naturally or artificially drained. Then follow the rich loams, alluvial soils, sand, &c., &c. Arable land cannot give a full return without a crop of fall wheat enter into its rotation. How often it should occur in that rotation must be determined by our own experience of particular soils and climate. It should be, and I imagine is, at least the professed aim of every farmer to ensure the maximum yield of whatever crop he may be growing; and yet how many slovenly men do we see, who seem to think that their land still retains the extraordinary and intrinsic plant-growing properties of that virgin soil which, as Douglas Gerold so aptly expressed it, "has but to be tickled with a hoe to laugh into a crop." To ensure a good return, the land must be cultivated to the best known advantage, and seed must be adapted to the particular soil and climate with the most minute precision both as to quality and quantity.

Fall wheat, unlike barley or oats, or even its cousin the spring wheat, *does not require* a finely pulverised soil; but it is essential that it have a good solid seed bed, thus giving it a hard and sound foundation. The methods of seeding are much discussed amongst the best agriculturalists. The universal ways are divided between drilling or dibbling, and sowing broadcast or by hand. The Scotch, who in the old country at one time took very generally to the drill, are, I understand, returning to the old-fashioned broadcast. I think that the chief reason they give in favour of this method—and I do not, for the reason that we have not space to enter upon it now, consider it a very strong one—is, that that method is more in accordance with the laws of nature. Drilling, undoubtedly, buries the seed at a more uniform depth, more evenly, and also covers it better—the latter is, I think, of great advantage in our climate, where we expect to have heavy rains both in the fall and spring. Let us remember that ten, twenty, and in many cases fifty per cent. of wheat seed does not germinate.

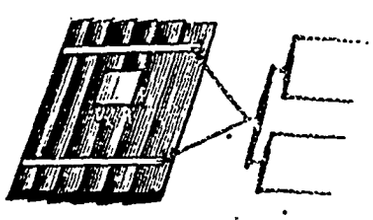
An important operation in the process of wheat sowing is too often neglected—I allude to the pickling of seed. First, it points out to us the bad grains, which may thus be removed, reducing the percentage of lost seed; and econdly, it strikes at the root of smut and other fungi; for it is these very imperfectly formed grains that are chiefly attacked by such parasites. Now smut is found in the imperfect grains, and in such small quantities (as botanists tell us), that it is absorbed in the root of the young plant, and bursting out a short time after the earing, throws upon it fungi, in the dark rusty form with which we are but too familiar. If we simply steep our wheat in water, the light grains which, though too heavy to be blown out by the fanning mill, are imperfect, will rise to the surface, and may be removed. If to this water we add lime, we shall kill all traces of smut, &c., &c., which may have clung to the otherwise sound seed by contagion with the infected grains. But let us remember, above all, that the most certain prescription for the securing of good crops, is a change of seed;—get your seed from a different variety of soil.

AN OLD COUNTRY MAN.

PARIS, C. W., May 15th, 1867.

Clod Crusher.

WE illustrate a very cheap, simple, but efficient implement—first made and used, we believe, in England—for breaking lumps of earth on ploughed fields, and leaving the surface smooth and finely pulverized. It is a very good substitute for the roller to smooth the surface of the field and cover grass seed sown after spring grains. It is made in this wise:—Lay



two oak scantling, three by three inches square and three and a half feet long, parallel on the shop floor, three feet apart. Then spike a strip, two by two and five feet long, across two ends of the scantling; then four two-inch planks, eight inches wide and five feet long, spiking them on like clap-boarding, and finish with a plank fourteen inches wide for the front. Turn your crusher over, affix a stool for the driver, and the chains to the cross-pieces for the team to draw by, and the implement is completed.—*Rural New Yorker.*

Familiar Talks on Agricultural Principles.

MORE ABOUT FORESTS AND CLIMATE.

IN proof and illustration of the statements made in our last issue on the above subjects, we will quote from an able and valuable paper, published in the yearly Report of the Maine Board of Agriculture for 1865, a few striking examples of the climatic influence of woods in various portions of the globe.

M. Blanqui, in his travels in Bulgaria, informs us that at Malta rain had become so rare, since the woods were cleared to make room for the growth of cotton, that at the time of his visit, in October, 1841, not a drop of rain had fallen for three years. The terrible drought which desolated the Cape Verd Islands must also be attributed to the destruction of the forests. In the island of St. Helena, where the wooded surface has considerably extended within a few years, it has been observed that the rain has increased in the same proportion. It is now in quantity double what it was during the residence of Napoleon. In Egypt, recent plantations have caused rains, which hitherto were almost unknown.

Coultar thus argues:—The ocean, winds, and woods may be regarded as the several parts of a grand distillatory apparatus. The sea is the boiler, in which vapor is raised by the solar heat; the winds are the guiding tubes, which carry the vapor with them to the forests, where a lower temperature prevails. This naturally condenses the vapor, and showers of rain are thus distilled from the cloud masses which float in the atmosphere, by the woods beneath them. The wood is, further, like the mountain, a mechanical obstruction to the motion of rain clouds, and, as it checks them in their course, it gives them occasion to deposit their water.

Asbjornsen, after adducing the familiar theoretical arguments on this point, adds:—The rainless territories in Peru and North Africa establish this conclusion, and numerous other examples show that woods exert an influence in producing rain, and that rain fails where they are wanting: for many countries have, by the destruction of the forests, been deprived of rain, moisture, springs and watercourses. The narratives of travellers show the deplorable consequences of felling the woods in the islands of Trinidad, Martinique, San Domingo, and indeed in almost the entire West Indian group. In Palestine, and many other parts of Asia and Northern Africa, which in ancient times were the granaries of Europe, fertile and populous, similar consequences have been experienced. These lands are now deserts, and it is the destruction of the forests alone which has produced this desolation. In Southern France, many districts have, from the same cause, become barren wastes of stone, and the cultivation of the vine and the olive has suffered severely since the baring of the neighbouring mountains. Since the extensive clearings between the Spree and Oder, the inhabitants complain that the clover crop is much less productive than before. On the other hand, examples of the beneficial influence of planting and restoring the woods are not wanting. In Scotland, where many square miles have been planted with trees, this effect has been manifest, and similar observations have been made in several places in Southern France. In Lower Egypt, both at Cairo and near Alexandria, rain rarely fell in considerable quantity; for example, during the French occupation of Egypt, about 1798, it did not rain for sixteen months. But since Mehemet Ali and Ibrahim Pacha executed their vast plantations, (the former alone

having planted more than twenty millions of olive and fig-trees, cotton-wood, oranges, acacias, planes, &c.,) there now falls a good deal of rain, especially along the coast, in the months of November, December, and January, and even at Cairo it rains both oftener and more abundantly, so that real showers are no rarity.

Such are some of the effects of forests on the condition of the atmosphere. Their influence on the moisture of the soil and the flow of springs is equally well established. As the forests are destroyed, the springs which flowed from the woods, and consequently the greater watercourses fed by them, diminish both in number and volume. This fact is so familiar throughout the American States and the British Provinces, that there are few old residents of the interior of those districts who are not able to testify to its truth as a matter of personal observation.

The utility of woods in winter is also of vast importance, not only as a screen against the violence of storms, but as a mechanical means of retaining the snow, which is so effectual a protection for the soil against the excessive rigor of the winter temperature. The general effect of the forest in cold climates is to assimilate the winter state of the *ground to that of wooded regions under softer skies*, and it is a circumstance well worth noting, that in Southern Europe, where nature has denied to the earth a warm winter garment of flocculent snow, she has, by one of those compensations in which her empire is so rich, clothed the hill-sides with umbrella pines, ilexes, cork oaks, and other trees of persistent foliage, whose ever green leaves afford to the soil a protection analogous to that which it derives from snow in more northern climates.

To the general results which follow the destruction of forests there are some exceptions, even in countries of excessive climates. Some of these are due to favorable conditions of surface, of geological structure, and of the distribution of rain; in many others, the evil consequences of man's improvidence have not yet been experienced, only because a sufficient time has not elapsed since the felling of the forest to allow them to develop themselves. But the vengeance of nature for the disturbance of her harmonies, though slow, is sure, and the gradual deterioration of soil and climate in such exceptional regions, is as certain to result from the destruction of the woods as is any natural effect to follow its cause.

The Cultivation of Hops.

PICKING.—Hops usually ripen in Canada much about the same time they do in England, and taking the average of seasons, the beginning of September may be regarded as the commencement of the hop harvest. Both as regards weight and quality, much depends on the gathering of hops at the right time, that is, when they are in the fullest state of perfection. If gathered too soon they are light and weak, and if allowed to stand too long they also lose both in quantity and quality. Where a person has a considerable plantation, eight or ten acres, it would be found advantageous to cultivate an earlier and later variety, so as to secure the whole in the highest average condition. The *Goldings and Jones's* will usually ripen several days earlier, under the same conditions, than the Grapes (white cluster) and Colgates.

As the gathering of hops at the time for securing the maximum amount of lupuline, or the bitter principle, is a matter of the highest importance, we may add a few words by way of aiding our readers in coming to a correct conclusion. Hops, when ripe, become changed from a light silvery-green colour to a deep primrose yellow, feel firmer in the hand, the petals adhering more closely together, have a stronger smell, and the seeds become changed from a green to a purple colour. A good practical test of ripeness is when, by rubbing a hop in the hand, it emits a strong aroma, with an unctuous, clammy feeling and bitter taste; qualities which, though varying considerably in different varieties of hops, are readily appreciable in all, when fully matured. It is with difficulty that hops can be thoroughly dried before they are ripe, and much loss is incurred thereby. Nevertheless, it is important to observe that not a day should be lost in commencing picking at as early a date as possible, particularly when there is much to do, and the number of hands and means of curing are restricted. Hops, when allowed to get over ripe, and subjected to wet and boisterous weather, as is sometimes the case late in the season, lose greatly both in weight and quality, and may even become, for commercial purposes, almost or quite worthless. In our somewhat forcing climate the period for gathering should be included within two weeks, and in no case exceed three.

The work of harvesting involves matters of the utmost importance. However good and expensive may have been the cultivation, and promising the crop, if the gathering and curing be attended by serious defects, what otherwise might prove a handsome profit would be surely turned into a heavy loss. *Clean picking* is the great desideratum: by this term we mean freedom from bunches, and all but the very smallest leaves. The most valuable kinds of hops in England, such as the Goldings and Canterburys, are gathered singly, and those that are brown or damaged put into separate baskets; the result being an article of the highest practicable quality, commanding a corresponding price. Such refinements, it is true, cannot well be introduced here; but the higher we can raise our standard, both in cultivation, gathering, and curing the crop, *the more profitable* will hop growing become. We have not unfrequently seen hops in Canada, well grown and of good quality, so roughly picked and badly dried as to render them wholly unfit for exportation, worthless in the British market, and but of little value in our own.

On this side the Atlantic wooden boxes are mostly used for picking hops in, and when made sufficiently large answer the purpose very well. Two compartments, instead, as is usual, four, would, in our opinion, be much better, allowing more room to both the picker and the hops. Two bins having four pickers could manage a square containing 144 hills, the poles of which should be afterwards put into one stack for preservation after being stripped of the bines. In this way the stacks will be placed in straight rows at a uniform distance throughout the garden. Both cattle and sheep will readily eat the hop bine, either in a green or dried state. If labour can be afforded, it is best and more economical to strip the poles as they are picked, and when the bines are sufficiently dried, they can be bound into bundles and stacked, securing the roof against wet; some valuable winter provender will be thereby provided. In fine seasons this can readily be done; but a few showers in the course of haying would spoil the bines for the purpose of cattle food, and in that case they should either be burnt in the field, or, which is better, taken to the cattle yards and trodden down with straw for manure.

The number of pickers must be regulated by the size of the plantation and the facilities for drying. The sooner the crop can be gathered after becoming ripe the better; a sufficient number of hands should be procured to keep the drying process in operation both day and night. As green hops, when gathered, especially if wet, soon become discoloured, and ferment when kept in large quantities only a few hours, it is best to put them lightly into their bags, with large interstices, to prevent heating, and get them spread as soon as possible on the drying kiln. As several hours must generally elapse before this can be done, care should be taken that the bags are not placed on each other, and that they be kept loose and perfectly free from any kind of pressure.

DRYING.—This is a most important process, demanding the greatest attention and care. From the careless and imperfect manner in which this indispensable operation is sometimes performed, the hopes of a season become blasted, and serious losses are incurred. Great improvements have been made of late years in curing hops, especially in England, where the subject in all its bearings has received more attention from scientific and practical men than in any other country. By improved structures more hops can be better dried in the same space, with less fuel, and with almost certain results. We cannot in this country, at present, afford the outlay necessary for such erections as may now be seen on most of the great plantations in England, nor indeed is this necessary, since if we understand and carry into practice the *true principle*, on a humbler scale, similar results may be obtained.

The object of drying hops is to evaporate the water they contain, so as to prevent them when packed from running into fermentation, and thus impart to them keeping qualities. A hop house should be so constructed as to admit of the vapour, caused by the artificial heat applied, to get off the hops into the outer air as quickly as possible. It is this vapour or "reek," not finding a quick exit, remaining too long in and on the hops, that retards the work of drying, and causes more or less discoloration. Hops should be dried not by coming in contact with heat directly from radiated surfaces, but by currents of heated air passing rapidly through them. The ground floor therefore, where the stoves are placed, should be well supplied with cold air, and the distance between it and the floor above, where the hops are spread, should be not less than fourteen or sixteen feet, thus affording a large space for hot air. The space above the hops to the roof should also be capacious, surmounted by a large moveable cowl, for allowing a ready exit to the vapour or "reek." Hops are dried in a manner similar to the making of malt, and the same kiln is sometimes used for both purposes. A coarse cloth (such as is used in England is made of horse hair) is generally preferred to perforated tiles. Great care should be taken, when wood or bituminous coal is used, that no smoke or other exhalations escape and reach the hops, thereby injuring both their colour and flavor. The precautions chiefly to be observed in drying are,—not to have the hops spread too thickly on the cloth, especially when in a wet state; to begin with a slow fire, gradually increasing, but somewhat diminishing during the latter portion of the process, and allowing as much time as is practicable, say eleven or twelve hours. In this manner hops picked in the fore part of the day are put on the kiln at noon; those of the afternoon at midnight. If sulphur is used, it is best to apply it at first in small quantity, and a little more may after an hour or two be given; —it imparts a bright yellowish colour to the hops, facilitates their drying; but on the whole, perhaps its utility is questionable, and with bright, sound hops, its application is, to say the least, doubtful. If used in large quantities, there is some ground to fear that it may interfere with the fermentation of the brewer's wort, though some of the representations made to that effect are evidently exaggerated. It is important to observe that, as soon as the "reek" is off the hops, they should be turned and thoroughly intermixed before drying them off, which should be done by a slow fire. When they are done enough can readily be determined by experienced observation; but few tough hops are to be found, and the strig, when rubbed by the fingers, has lost its softness. Good care should be observed in this matter. If hops are underdried they will not keep, but become mouldy and useless; if overdried their quality is injuriously affected, as regards flavour and their influence in preserving the quality of beer.

Persons intending to raise a hop plantation, but having no experience in the modes of picking, drying, &c., we would strongly recommend to visit and inspect a few of the best hop-houses within their reach, and spend a season in observing the practice of drying, before they commence operations themselves.

PACKING.—A large room is required for putting hops in after they are dried, to cool, preparatory to packing. The old system of sifting and breaking the hops is now all but universally exploded in all countries; and so is the equally old practice of treading the hops into bags by men. Mechanical science has come to the help of the hop grower with great advantage, and machines of different construction are now generally employed for this purpose. A useful machine, similar to some we have seen in the State of New York, is now made by Jacob Brickem, of Waterloo, C. W.; it has the double lever action, and packs rapidly and uniformly with the assistance of two men.

Corn for Soiling.

Corn sowed broadcast or in drills is admirably adapted for producing the requisite food for summer soiling milch cows. It is nutritious and succulent, and promotes a flow of milk, if not quite equal at least second only to clover. It is a profitable crop to raise, because an immense quantity can be grown per acre. There need be no loss in growing the crop, since if any part is not wanted for soiling it may be cut and cured and used for winter.

No one who keeps a dairy should neglect to grow a patch of sowed corn to meet the probable wants of his herd during the latter part of August and September. If the season proves to be dry, his stock will need it, and by this means he will be able to keep his cows in condition and obtain full returns, while those who have made no provision for extra food must suffer a considerable loss. During the season of 1864, in some sections, stock could not have been carried through had it not been for patches of sowed corn which came in play about the time that pastures began to fail. Many who did not put in this crop were forced to feed from meadows, and, as a consequence, were cut short of winter fodder, and obliged to reduce their herds in the fall.

Sowed corn may be put in from the first to the fifteenth of June. The land should be heavily manured and put in good tilth. Old land that has not been fall-ploughed should be ploughed twice, and the manure thoroughly mingled with the soil. The usual practice is to sow broadcast and harrow in the seed; but we prefer drilling in the seed with a machine, making the rows about two feet apart. This will permit of a cultivator or horse hoe between the rows, which keeps down the weeds and stirs the soil, giving a better crop.

The Western, or Dent corn, gives the largest amount of fodder. Some use three and others four bushels of seed per acre when sowed broadcast. When sod ground is to be employed for sowing the crop, it pays well to subsoil. We have grown immense crops by manuring on the sod, turning under, and subsoiling the land. In curing the crop for winter fodder we cut, tie in bundles and shock up. This is the safest course, since if the weather is bad there will be difficulty in curing it if left spread out on the ground to dry.

There is an occasional season, it is true, when, with an abundance of rain that keeps grass fresh and in vigorous growth, corn for soiling purposes is not needed. But such seasons are the exceptions, and it is poor economy to base operations upon chance. It will be better to make proper provisions for stock, since, if it happens not to be needed, the crop is not lost, but will pay largely as winter fodder. The extent of ground needed for growing fodder will depend, of course, upon the manner in which the crop is put in and cultivated, as well as the season. It should not be less than an acre for every ten cows, and it will be no bad management if a larger area than the proportion named be cultivated.—*X. A. Willard.*

Preventive against the Turnip Fly.

We quote from the *North British Agriculturist* the following recommendations respecting the methods of preventing or mitigating the risk of damage by the Turnip Fly:

"Various methods have been suggested to prevent the attacks of the turnip fly when the plants are newly brairded. Steeping the seed in oil, and afterwards dusting the seed with sulphur preparatory to sowing, has been found to be of considerable service. There is, however, a still more certain method of prevention. Newly-slacked lime, strewn thinly along the rut made by the seed-coulter of the sowing-machine at the time of the brairding the plants, proves a protection. We have also found a mixture of lime and soot very effectual in protecting the young plants as they put out the first leaves. When a small quantity of white turnip seed is sown in the hollows of the drills, the insects resort to the white turnip plants, preferring them to the Swede. This method of protecting the latter is more expensive than top-dressing the seed rows with lime previous to the brairding of the plants. After the rough leaves are formed, little damage is caused by the turnip fly, but other insects feed on the leaves, the black beetle being the most common. The most effectual means to combat all insects is to push forward the growth of the plants by manures applied at the time the seed is sown, and after the plants come up to stir the surface frequently, but without injury to the turnip plants."

Artistic Treatment of Small Farms.

It will never do for us to sanction the divorce of landscape from our humbler rural intentions; else the great bulk of our wayside will be left without law of improvement. Not only those broad and striking effects which belong to a great range of field and wood or to bold scenery come within the domain of landscape art, but those lesser and orderly graces that may be compassed within stone's throw of a man's door. We do not measure an artist by the width of his canvas. The panoramas that take in mountains are well, if the life and mists of the mountains are in them; but they do not blind us to the merit of a cabinet gem. I question very much if that subtle apprehension of the finer beauties which may be made to appear about a given locality does not express itself more pointedly and winningly in the management of a three or five acre lawn, than upon such reach of meadow and upland as bounds the view. The watchful care for a single hoary boulder that lifts its scared and lichened bulk out of a sweet level of greensward; the audacious protection of some wild vine flinging its tendrils carelessly over a bit of wall, girt with a savage hedge-growth; these are indications of an artist feeling that will be riotous of its wealth upon a bare acre of ground. Nay, I do not know but I have seen about a labourer's cottage of Devonshire such a droit adjustment of a few flowering plants upon a window-shelf, and such tender and judicious care for the little mallet of turf around which the gravel path swept to his door, as showed as keen an artistic sense of the beauties of nature, and of the way in which they may be enchained for human gratification, as could be set forth in a park of a thousand acres.—*Hours at Home.*

Exhaustive System of Agriculture.

Johnstone, in his "Chemistry of Common Life," gives the following graphic description of the system of farming commonly adopted by the first settlers on this continent:—

Man exercises an influence on the soil, which is worthy of attentive study. He lands in a new country, and fertility everywhere surrounds him. The herbage waves thick and high, and the massive trees lay their proud stems loftily towards the sky. He clears a farm from the wilderness, and ample returns of corn pay him yearly for his simple labors. He ploughs, he sows, he reaps, and from her seemingly exhaustless bosom the earth gives back abundant harvests. But at length a change appears, creeping slowly over and gradually dimming the smiling landscape. The corn is first less beautiful, then less abundant, and at last it appears to die altogether beneath the resistless scourge of an unknown insect or a parasitic fungus. He forsakes, therefore, his long-cultivated farm, and hews out another from the native forest. But the same early plenty is followed by the same vexatious disasters. His neighbors partake of the same experience. They advance like a devouring tide against the verdant woods, they trample them beneath their advancing culture, the axe levels its yearly prey, and generation after generation proceeds in the same direction—a wall of green forests on the horizon before them, a half-desert and naked region behind. Such is the history of colonial culture in our own epoch; such is the vegetable history of the march of European cultivation over the entire continent of America. No matter what the geological origin of the soil may be, or what its chemical composition; no matter how warmth and moisture may favor it, or what the staple crop it has patiently yielded from year to year, the same inevitable fate overtakes it. The influence of long-continued human action overcomes the tendencies of all natural causes. But the influence of man upon the productions of the soil is exhibited in other and more satisfactory results. The improver takes the place of the exhauster, and follows his footsteps on these same altered lands. Over the sandy forsaken tracts of Virginia and the Carolinas, he spreads large applications of shelly marl, and herbage soon covers it again, and profitable crops; or he strews on it a thinner sowing of gypsum, and, as if by magic, the yield of previous years is doubled or quadrupled; or he gathers the droppings of his cattle and the fermented produce of his farm-yard, and lays it upon his fields, when lo! the wheat comes up luxuriantly again, and the midge and the rust and the yellows all disappear from his wheat, his cotton, and his peach-trees. But the renovator marches much slower than the exhauster. His materials are collected at the expense of both time and money, and barrenness ensues from the easy labors of the one, far more rapidly than green herbage can be made to cover it again by the most skilful, zealous, and assiduous labors of the other."

Land Jobbery.

To the Editor of The Canada Farmer:

Sir,—Agriculturists generally are much in need of a caution in the purchase of land, and I trust a caution of this kind comes within the province of your paper. Whilst the authorities of this country have granted charters to certain money-lending institutions, by which handsome profits are realized, the farmers receive no protection in return. A number of petty jobbers and brokers are allowed to step in between chartered companies and themselves. Thus—suppose one of those companies has foreclosed on a piece of desirable and valuable land, a jobber, having the favor of this company, undertakes the sale of this land privately, and, perhaps, realizes fifteen or twenty dollars an acre more than the company's claim. The balance, after satisfying some official, goes into his pocket. So the farmer must not only pay the heavy percentage of chartered companies, but must also support their favorite jobbers. But this is not all. These companies take special care not to trust the jobbers so far as to sell or to give a deed in their name; yet they place a farmer in such a position that he must trust them, or do without the land. The company's answer to all inquiries about a certain piece of land would be, that *Mr. A. (a jobber) has made arrangements to assume this land, and application must be made to him.* Consequently, the farmer must buy at an exorbitant rate, and pay down, on no other security than the jobber's bond, as much as half or two-thirds of the purchase money; and should the jobber have a round sum of this kind of money in his hands, he would in all probability be away across the waters, leaving his credulous bond-holders behind. It is but a short time since that two individuals of this stamp left Port Hope, taking years of hard-earned savings from some in this neighborhood.

The agriculturists of this country have only to unite their strength to compel these drones to leave their hive. W. P.

Port Hope, May 9, 1867.

☞ It has been asked, when the rain falls does it ever get up again? Of course it does, in *due* time.

Pennsylvania Farming.—A Cumberland county, Penn., farmer writes to the New York Farmers' Club as follows: "I plough clover sod in autumn or March, and lime 50 bushels to the acre, and plant with corn. This I harvest by cutting close to the ground, putting in shocks to cure. It is husked at the shocks, the stalks tied in bundles, hauled near the barn and stacked. In the spring the corn stubble is ploughed for oats. The oat stubble is dressed with barnyard manure, ploughed and harrowed, and left until it is time to sow wheat: then go over with a large cultivator, and afterwards drill in the wheat. If intending to make the field into mowing-land, I sow three pecks of timothy seed (per ten acres) with the wheat, and in the spring one bushel of clover seed. Our farms in Cumberland county are generally so divided that we have two parts for corn, two for oats, two for wheat, two for mowing, and one for pasture. This is our regular rotation. Our grass crops are heavy, and generally 40 to 50 bushels of corn to the acre, 40 to 50 bushels of oats, and 15 to 25 bushels of wheat."

Clover.—Clover differs entirely from the cereal plants in this respect; that it sends its main roots perpendicularly downwards, when no obstacles stand in the way, to a depth which the fine fibrous roots of wheat and barley fail to reach; the principal roots of clover branch off into creeping shoots, which again send forth fresh roots downwards. Thus clover, like the pea plant, derives its principal food from layers below the arable surface soil: and the difference between the two consists mainly in this—that the clover, from its larger and more extensive root surface, can still find a sufficiency of food in fields where peas will no longer thrive; the natural consequence is that the subsoil is left proportionately much poorer by clover than by the pea. Clover seed, on account of its small size, can furnish from its own mass but few formative elements for the young plant, and requires a rich arable surface for its development; but the plant takes comparatively but little food from the surface soil. When the roots have pierced through this, the upper parts are soon covered with a corky coating, and only the fine root fibres ramifying through the subsoil convey food to the plant.—*Liebig.*

Canadian Natural History.

Canadian Thrushes.

Now that the woods are once more assuming their summer foliage, and vocal with the sweet melody of singing birds, we know of no subject in the department of Natural History more in harmony with the season, or more appropriate to the "leafy month of June," than a brief account of some of our principal feathered songsters, a group of which our artist has very faithfully delineated in the accompanying illustration. The present time also affords a fitting opportunity for saying a word in favour of these charming choristers of the woods, and deprecating the wanton slaughter to which so many of them are doomed, in revenge of their inroads on our orchards and fruit gardens, their destroyers forgetting the ample compensation they make by the destruction of myriads of insects that, unless thus thinned out and checked in the early stages of their development, would increase to a fearful extent, and defeat the labours and hopes of the agriculturist by ravages far more extensive and serious than the depredations which his feathered friends make on the orchard or garden. In some of the continental countries, where, in consequence of the unrestricted slaughter of former years, the number of small birds has very greatly diminished, the effects of this suicidal policy have become so manifest and serious, in the alarming increase of destructive insects, that it has been found necessary to enact stringent laws for the continued preservation of these formerly denounced and persecuted members of the feathered race. Every encouragement is now given to their increase, and in many parts very striking results have followed, giving conclusive evidence of their utility, and indeed of the indispensable function they perform in the economy of nature. In Australia, too, efforts are being made with encouraging success to introduce from Europe, and acclimatize in that thriving colony, a number of these true friends of man, that reward his protection not only by their happy and grateful songs, but by the unconscious services of a more substantial kind which they render to the husbandman.

In this favoured region we already possess a great variety of native birds, some distinguished by their beautiful and brilliant plumage, and others by the sweetness of their song. The extensive natural order to which nearly all singing birds belong, the most numerous indeed of all the orders, and which may be considered the typical order of the class, namely, the Perchers (INSESSORES), comprehends all those birds that live habitually among trees, with the exception of the Rapacious birds, on the one hand, from which they may easily be distinguished, by the absence of all the peculiar characteristics, in beak and claw, and general configuration of birds of prey, and on the other hand, from the Climbers (SCANSORES), by the peculiar disposition of the toes, which, in all true Perchers, are three in front and one behind; while in Climbers two only are directed forward, and two are placed at the back. In Perchers, also, the hind toe is on the same level with the fore toes, an arrangement which peculiarly fits them for clinging to the small twigs and branches of trees, and which constitutes a distinctive mark between them and walking birds and waders. The subdivision to which the group in the illustration belongs is further characterized by a slight notch on the upper mandible, most strongly marked in the bill of the so-called butcher bird, and which assists in capturing its insect prey. This peculiarity gives the name to the sub-order DENTIROSTRES, or *tooth-billed*. Other points of resemblance constitute the closer likeness that unites the family of Thrushes—such as the arched and compressed bills, with less strongly marked notches; wings long and pointed; and their legs rather long and stout. Their flight is moderately rapid; and their advance on the ground is by a succession of leaps. This family is very generally distributed over the globe; its several species being adapted to almost every variety of climate. Their food consists of berries in part, but very largely of worms, grubs and insects. They generally frequent the pastures and fields in search of food; but they nestle in thickets and woods. Many species are distinguished and almost unrivalled in the power and variety of their song, comparing not unfavorably in this respect with the closely allied family of warblers, of which the far-famed Nightingale is head and chief. In proof of the claims of this family to a reputation for excellence of song, we have only to refer to the English Thrush, and Blackbird, of the old world, and to the American Mocking Bird, of the new, the last of which has, perhaps, no compeer in the variety and sweetness of his imitative performances; whilst among Canadian Thrushes, two at least, the Song Thrush and the Wood Thrush, are no mean songsters, and the notes of most of the others are very pleasing and agreeable.

In the accompanying group the artist has represented six species of Thrush, all of them summer visitors, and most of them very well known in this country. The largest of these is, (1) the Song Thrush (*Mimus rufus*), called also sometimes the Brown Thrasher. This bird is about eleven inches long. The upper part of its body is of a bright reddish brown colour; the wings are barred with two streaks of white, relieved with black; the tips and inner vanes of the wings are dusky; the tail is very long, and rounded at the end, and of the same reddish brown colour as the back. The whole of the under parts are yellowish white; and the breast and sides under the wings are beautifully marked with long pointed spots of black, running in chains. The bill is long and stout, and beset with strong bristles at the base; black above and whitish below; the legs are very strong, and of a dusky clay colour. The iris of the eye is of a brilliant yellow. The female is distinguished by the peculiar markings of the species being slighter and less defined. In other respects the plumage is nearly alike. The eggs of this species, commonly five in number, are "thickly sprinkled with ferruginous grains on a pale blueish ground." The Song Thrush inhabits North America, from Canada to the point of Florida, and is a general favourite on account of the sweetness of its song. It is easily reared, and becomes very tame when kept in cages. Its food is similar to that of the rest of the family, and it is very usefully destructive among worms, caterpillars, and coleopterous insects. He has been accused of stealing seed corn, but, says Wilson, "for every grain of maize he pilfers I am persuaded he destroys five hundred insects."

The bird next in size (No. 2) is the well-known American Robin (*Turdus migratorius*), so called from the colour of its breast, reminding us in this respect of a much smaller and very different bird, the English Robin, with which every old countryman is so familiar. The Robin of this country is a true Thrush, and is about nine and a half inches in length. Its bill is yellow; the head, back of neck and tail are black, and the back ash colour. The wings are black, edged with lighter ash; the inner tips of the two external tail feathers are white. Three small spots of white border the eye; the throat and upper part of the breast are black, the former streaked with white; while the rest of the breast as far as the thighs is of a dark orange hue. The belly and vent are white, slightly waved with dusky ash.

This sprightly summer visitor usually builds its nest, a large one, not far from human dwellings, often in our orchards. The nest is plastered on the inside with mud; the hen lays five beautiful sea-green eggs. The food of this bird consists, like that of all the Thrushes, in large proportion of worms and caterpillars. He is one of our earliest songsters in spring. His song has some resemblance to the notes of the Song Thrush just mentioned, and if deficient in point of execution, possesses more simplicity. "The notes of the Robin in spring," observes Wilson, "are universally known and universally beloved. They are, as it were, the prelude to the grand general concert that is about to burst upon us from woods, fields and thickets, whitened with blossoms and breathing fragrance. By the usual association of ideas we therefore listen with more pleasure to this cheerful bird than to many others possessed of far superior powers and much greater variety."

The next figure in the group, No. 3, will be easily recognized as the pert and familiar Cat-bird (*Mimus Carolinensis*), with which every Canadian is so well acquainted, and whose singular imitations are so strange and startling, that it is sometimes difficult to disabuse the uninitiated of the idea that some stray kitten is in the neighbourhood. It is unnecessary to give any detailed description of this well-known bird. It is about nine inches long, and to a spectator at a short distance appears nearly black; but on closer inspection the prevailing colour is found a deep slate above, and of a lighter shade of the same below, except the under tail coverts, which are very dark red. The tail, however, and the upper part of the head, as well as the legs and bill, are black. The female is scarcely to be distinguished from the male. She lays four or five eggs, which are of a greenish blue colour, without spots; and will rear two, and sometimes three, broods in a season.

The Cat-bird is one of the earliest morning songsters, beginning generally before break of day, and hovering from bush to bush with great sprightliness, when there is scarce light sufficient to distinguish him. His notes are more remarkable for singularity than for melody. They consist of short imitations of other birds and other sounds; but his pipe being rather deficient in clearness and strength of tone, his imitations fail where these are requisite. He is not easily discouraged, however, and perseveres in his efforts with praiseworthy diligence, seemingly undismayed by failure, and unabashed by the presence of a spectator even within a few yards of him. Wilson says of his vocal powers, that on attentively listening to him one can perceive considerable variety in his performance, in which he seems to introduce all the odd sounds and quaint passages he has been able to collect. Upon the whole, though we cannot rank him with the grand leaders of our vernal choristers, he well merits a place among the most agreeable general performers. This bird is, withal, a most affectionate parent and brave in defence of its young, whom it has been known to protect successfully against the attack of snakes.

Higher up in the group is (No. 4) one of the sweetest singers amongst them all, the Wood Thrush (*T. mustelinus*), a somewhat smaller bird than those already described, being about eight inches in length. The whole upper part of its body is of a brown or fulvous colour, brightening into reddish on the head, and inclining to olive towards the tail. The throat and breast are white, tinged with light buff colour, and marked with dark spots running in chains from the sides of the mouth downwards. The eggs, four or five in a nest, are of a uniform light blue, without spots.

This sweet and solitary songster inhabits the whole of North America from Hudson's Bay to the Peninsula of Florida. On his arrival in our northern regions, with the first return of warmer weather, he soon announces his presence in the woods, beginning his clear and musical notes with the earliest dawn of morning. Even in dark, wet and gloomy weather, when scarce a single chirp is heard from any other bird, the sweet notes of the Wood Thrush thrill through the dripping woods from morning to night; and it is scarcely fancy to say that the sadder the day the sweeter is his song. The favourite haunts of the Wood Thrush are low shaded hollows, through which a small brook or rill meanders, overhung with bushes or mantled with wild vine. He appears always singly or in pairs, and in disposition is shy, retired, and unobtrusive. With the modesty of true merit, he charms you with his song, but is content,

and even solicitous, to be concealed. A fit companion for the poet, he delights to trace the irregular windings of the brook, where by the luxuriance of foliage the sun is completely shut out, or only plays in few and interrupted beams on the surface of the water.

Just above, and partly concealed by the Wood Thrush, is a similar looking bird, (No. 5,) the Tawny Thrush (*Turdus fuscescens*) called also sometimes Wilson's Thrush after the celebrated ornithologist who first

distinguished and described this species. This is a smaller bird than the preceding, being about seven inches in length. Its general colour is brown on the upper part of its body, and on the lower parts white, the breast being marked with irregular dusky spots. The eggs are like those of the Cat-bird, only smaller, and it constructs its nest on the ground. It is an extremely shy and timid bird, and is consequently not often visible. Its song resembles that of the Wood Thrush, but is less powerful and less varied.

The two remaining birds (No. 6) are the male and female Golden-crowned Thrush (*Seiurus aurocapillus*). These pretty creatures are the smallest of the group, the whole length not exceeding six inches. The upper parts of the body are a rich yellow olive: the tips of the wings and inner vanes of the quills are dusky brown. From the nostrils a black stripe passes to the back of the head on each side; and between these stripes lies a bed of brownish orange, which gives the name to the species—golden-crowned. The lower parts are white, except the breast, which is handsomely marked with pointed spots of black. This bird constructs its nest on the ground, arching it over so as to leave only a small opening for entrance. The female lays four or five eggs, which are white, irregularly spotted, chiefly towards the larger end, with reddish brown. When alarmed by a passer by, it endeavours to draw the intruder away from its nest by feigning lameness, fluttering along the ground and tempting pursuit by the apparent ease of capturing it. In its ordinary gait it runs along the ground and the horizontal branches of trees somewhat after the manner of the lark, at the same time frequently moving its tail like the wag-tail. This Thrush has no song, its vocal performance being confined to a shrill, energetic twitter

We cannot do justice in this cursory notice, brief in its details, though extended somewhat beyond the usual limits, either to the interesting subject or to the artist's beautiful illustration. We wish to draw attention from time to time to this most pleasing department of study, and hope to see amongst our rural population an increasing love of Nature and a growing appreciation of her inexhaustible wealth of interest, of wonder, and of beauty.

Stock Department.

Live Stock on a Model English Farm.

To the Editor of THE CANADA FARMER.

SIR.—It has already been stated that the average number of cattle kept on the farm is 150, of sheep 800, and of pigs 80 or 90, besides 16 cart horses.

Great attention is paid to breed and character in each of these divisions The cattle are of the short-horn breed, and nearly all pedigree animals; the sheep are southdowns, and the pigs of a small white variety, of very excellent qualities.

Both among cattle, sheep, and pigs, animals are annually selected and prepared for exhibition at the Royal Agricultural, the Smithfield, and other local shows, and never a year passes without some prizes being gained.

The consumption of food is, of course, very considerable, especially during winter. In the year 1861 were consumed of cotton cake nine tons; of oil-cake fourteen tons, of beans 532 bushels, of peas 140 bushels, of oats 2,288 bushels, of barley 716 bushels; of tail wheat 308 bushels.

Not much poultry is kept—a few fowls and ducks

Cattle—Taking the average number of the herd to be 150, its proportions would be about as follows:—

Bulls	2	
Bull calves	2	4
Cows above 4 years	40	
Heifers " 3 "	15	
" " 2 "	15	
" " 1 "	20	90
Heifer calves	24	24
Steers above 2 "	4	
" " 1 "	8	12
Steer calves	20	20
		150

All these, with the exception of about eighteen cross-bred cows (which are kept chiefly for their milk and whose calves are usually made into veal), are pedigree animals of good blood. Two bulls are now in use, one a descendant of "Julius Cæsar" (1143 Coate's herd book) and got by "Sir James" of the famous Warlaby herd, the other descended from the famous "Comet" (155). Among the dairy are cows from the respective herds of Mr. Sanday, Mr. Booth, Earl Spencer, and other well-known short-horn breeders. Every pedigree calf is marked, when a few days old, with holes and notches in its ears, and its number, name, date of birth, and pedigree noted down in a book kept for the purpose. Every week the herdsman sends in his return of the herd, printed forms being kept for this purpose. All the cattle, with the exception of the bulls, young calves, and beasts fattening for show, are at grass during the summer months—that is, from the middle of April till the end of November; but during the winter every beast is housed, either in the cattle-boxes or yards. At this time of the year a man and two boys, besides the herdsman, are constantly employed among them, the feeding and cleaning beside cutting fodder taking up all their time; but in summer, when the greater part of the herd are at grass, and but little hay is required to be cut, the herdsman with one boy does all the work, except just at feeding and milking time.

From forty to fifty cows are usually in milk at the same time. The milking operation begins in the morning at five, and in the afternoon at four. The average yield of milk per cow is about seven quarts per day, though some of the best yielders, when in full milk, will give from sixteen to eighteen quarts each. Dairy operations are carried on throughout the winter as well as summer, the cows being allowed to calve at all times of the year; this makes the consumption of fodder during winter very considerable. Hay is supplied liberally, straw being seldom resorted to as food, except perchance after a bad hay season, when it becomes necessary to economize, and some of the dry cows are put on barley or oat straw, with perhaps a little cotton-cake, but this is seldom necessary.

The dairy is managed by a woman and girl, who do all the work except churning, which is done by one of the farm men, twice a week. Butter and cheese are both made; of the former about thirty-six pounds per week, of the latter about five ton per annum. "Troll" and "thin Wiltshire" are the cheeses usually made; the latter are round and flat, and weigh about eight to the cwt. Skim milk, when not made into cheese, is either sold to the poor at one penny per quart, or else given to the pigs.

The average number of calves on the list at one time has been given at between forty and fifty; rather more than this number are calved annually—about sixty on an average. The cows, when about to calve, are placed in the boxes in the dairy house, and their young when produced are left with them for a week or ten days, after which they are put into pens by themselves, and their dams, if it be summer, turned out to grass. A cleansing drench is administered to the cow after calving, and the calf generally has a dose of rhubarb, magnesia, and castor oil, mixed in milk, as a preservative against scour, which is sometimes very prevalent amongst them.

The calves, when separated from their dams, are brought up by hand. At first they will take about five pints of new milk per day; this is gradually increased until they are about a month old, when it is changed for skim; this is given them until they are three months old. From three weeks old and upwards they receive also a little bean or oat meal and oil-cake, with a bunch or two of sweet hay; at three months old they are weaned, and if summer, allowed to run out in a paddock during the day. When nine or ten months old they join the rest of the herd at grass.

Cross-bred calves, for veal, are fatted entirely on milk from their own dams; they are killed at six or seven weeks old, and weigh from 110 to 150 lbs.

The herd at grass is separated into three divisions, each of which occupies one or more pasture fields at a time; that is, the dairy and heifers in calf, the graziers, and the calves. The graziers consist of steers and heifers varying in age from one to three years, and a few old cows fattening for the butcher; they have the run of the pastures from April to November, after which time all are taken in for the winter. No very regular system is followed in feeding beasts for market; if a cow is old or not doing well, she is at once put up to feed or turned out with the graizers; and so with the steers; as soon as they have arrived at a proper age, if not wanted for exhibition, they are fed up at once and sold. Perhaps ten cows may on an average be sold fat annually, and six steers; the latter, after stall feeding, run about forty score dead weight at two and a half years old. A few days before the beasts are brought in for the winter, the young things are generally drenched, bled, and setoned, about two quarts of blood being taken from each and a seton put in the dew-lap; this is intended to prepare them for the change of quarters and diet by purifying the blood and lessening the danger of disease. During their winter confinement they are fed on hay and roots, about sixteen pounds of the former each per day, and ten pounds of the latter.

Beasts intended for show are kept in a warm, quiet part of the buildings, separate from the rest of the cattle, and have each a roomy, loose box, well littered down with straw, and water always at hand. If for the old classes, they usually take up their quarters in this place when about eighteen months or two years old. A heifer to be shown in the "under four year old class" at the Smithfield show would be treated about as follows:—For the first year after she has been weaned, she would be kept within doors, and allowed from one to two pecks of bean and oat-meal per week, and perhaps a little cake with hay and swedes; this treatment would continue with but little variation till she were nearly two years old, when her allowance would be increased to perhaps three pecks per week of meal, and cake in proportion; when her last year set in she would be consuming about five pecks of meal (barley, bean, and oat), forty-two pounds of oil-cake, one cwt. of hay, and one and a quarter cwt of swedes per week A steer would take rather more than this. Bulls, when about to be shown, are allowed one bushel of grain and twenty-one pounds of oil-cake per week, for about six months previous to exhibition; at other times they are kept entirely on hay and water.

LONDON. E. F. W.

THE SUCKING A COW. This morning my cowman informed me that one of my sows often sucked the Guernsey cow. I could not believe it. The man said the sow sucked as naturally as a child sucks its mother, and that the cow seemed to like it Of course piggy will shortly be converted into bacon.—E. E. C.—*The Field.*

Fast Trotters Again.

To the Editor of THE CANADA FARMER:

SIR,—Your correspondent "X," writing in THE CANADA FARMER of May 15th, seems to have strange notions respecting trotting horses. However, he says his only object is to elicit the opinions of others, &c.

Everybody knows (that knows anything about horses) that we require different points in a draught and trotting horse, or roadster; but to say that a trotter should have "slack loins, weak hocks, or short, drooping quarters," or that a horse "who for some reason or other finds it difficult to raise a gallop" contains the stuff for a trotter, is surely a mistake. Do the Blackhawk and Morgan horses, justly celebrated as trotters, possess those qualities which, in the opinion of "X," are requisite to trotters? Are the French Canadian horses, also extraordinary good trotters, deficient in muscular development or general good action? If a stallion of sufficient size can trot a mile in three minutes and is sound, you may feel pretty well assured that he is not a bad horse to breed agricultural horses from. He may have a coarse head, a bad neck, or a flat side, but that he is not lacking in muscle or elasticity you may feel pretty certain. His legs and feet being sound is an evidence they are good, or they would have given way under the training necessary to make a horse *trot a mile in three minutes. The fact is, such a* horse has been tested, and proved to possess desirable qualities. I don't wish to be understood to say that it is absolutely necessary that a horse should perform some great trotting feat to be a good horse for farmers to patronize; but I do mean to say, all other things being equal, it is a great recommendation in his favor. In the selection of stallions to breed from, farmers should certainly have an eye to their trotting qualities. Even in a Clydesdale, the horse that has free use of his limbs, and trots square and lofty, is for breeding purposes double the worth of your hobbler that breaks into a clumsy gallop as soon as he is urged.

"X" says "every *well shaped* horse, when urged to go fast, is inclined to break into a gallop."

He might have left out "well shaped," and the assertion would still have been true; but "X" seems to have a wrong idea as to the cause of some horses going faster than others before they break into a gallop. According to his theory, they trot because they can't gallop; according to mine, it is because they have more use of their limbs and a better gait or method of using them. It is well known those qualities are transmitted by the stallion to his progeny. I should be very sorry to see the CANADA FARMER made use of to discourage stock raisers from breeding good trotting horses. Y. Z.

Another correspondent writes on the same subject as follows;—"A writer in THE CANADA FARMER gives it as his opinion that fast trotters are not the best *for the farmer. I believe and know from experience* that a well built, fast trotting, or blood horse, is the most suitable, not for the farm alone, but for such work as the farmer has to do. I think that a fast trotting horse is capable of doing any farm work, and is better for going to market or on a journey."

Sheep Shearing.

THE operation is one requiring much patience and care; the shearer being obliged to content himself, when commencing, with clipping a small amount of wool, and if he set himself properly to the work, he will find no necessity for an exhibition of strength or violence. The threshing floor of the barn is the place usually selected in this country for the process. It should always receive a liberal littering of clean straw, from which all dust, chaff, and small broken straws should be shaken, for, were these allowed to remain, they would adhere to the sheep, and not only retard the shearer, but also give the wool an unprofitable appearance. The floor itself should have received a thorough cleaning with broom, or, still better, with brush and water.

Much practice will be required to become a skilful shearer, and it is almost impossible, when there are so many different modes practised, to give instructions suitable for the guidance of beginners. The following directions, furnished by Jennings, are perhaps as plain as can be made: The shearer may place the sheep on that part of the floor assigned to him, resting on its rump, and himself in a position with his right knee on a cushion, and the back of the animal resting against his left thigh; he grasps the

shears about half way from the point to the bow, resting his thumb along the blade, which gives him better command of the points. He may then commence cutting the wool at the brisket, and proceeding down yard, all upon the sides of the belly to the extremity of the ribs, the external sides of both sides to the edge of the flanks, then back to the brisket, and thence upward, shearing the wool from the breast, front, and both sides of the neck, but not yet the back of it, and also the poll, or forehead, and top of the head. Then "the jacket is opened" of the sheep, and its position, as well as that of the shearer, is changed by the animal being turned flat upon its side, one knee of the shearer resting on the cushion, and the other gently pressing the fore-quarter of the animal, to prevent any struggling. He then resumes cutting upon the flank and rump, and thence onward to the head. Thus, one side is complete. The sheep is then turned on the other side, in doing which great care is requisite to prevent the fleeces being torn, and the shearer proceeds as upon the other—which finishes. He must then take the sheep near to the door through which it is to pass out, and neatly trim the legs, leaving not a solitary lock anywhere, as a lodging place for ticks.

By adopting this plan, which I think a very good one, almost any careful person may soon become proficient in handling the shears, without experiencing many of the usual annoyances of the operation of shearing. After shearing, the sheep should be marked. Every sheep-owner should be provided with a marking instrument with his initials on it, or some peculiar device, that will stamp the animal at a single stroke. The practice of doing this as they are sheared is not a very commendable one, as more time is consumed in the operation than would be were it made a special job; especially is this the case where a hot pigment is used. Pigments are made of various compositions, oil and turpentine boiled being the most desirable. The rump I consider the proper place for the brand, for besides being more conspicuous, the wool there grown, on account of its inferiority, can be better exposed to disfigurement.—*Cor. American Stock Journal*

Josh Billings's Essa Onto Swine.

Hogs generally are quadriped.

The extreme length ov their antiquity has never been fully discovered; they existed a long time before the flood, and hev existed a long time since.

There iz a great deal ov internal revenew in a hog; thare ain't much more waste in them than thare iz in an oyster.

Even their tails can be worked up into whissels.

Hogs are good, quiet boarders; they always eat what is set before them, and don't ask any foolish questions.

They never have eny diseaze but the meazles, and they never have that but once; once seems to satisfy them.

There is a grate menny breeds amongs them.

Some are a close corporation breed, and some are bilt more apart, like a hemlock slab.

They used to hev a breed in New England, a few years ago, which they called the striped-hog breed. This breed was in high repute among the landlords; almost every tavern keeper had one, which he used to show to travellers and brag on him.

Some are full in the face, like a town clock, and some are as long and lean as a cow-catcher, with a steel-pinted noze on them.

They kan awl rute well; a hog that kan't rute well haz been made in vain.

They are a short-lived animal, and generally die as soon as they git fatt.

The hog can be larnt a grate many cunning things, such as histing the front gate off from the hinges, tipping over the swill barrels, and finding a hole in the fence tew get into a corn-field, but there ain't enny length to their memory; it iz awful hard work for them to find the same hole to get out at, especially if yu are at all anxious they should.

Hogs are very contrary, and seldom drive well the same way yu are going; they drive most the other way. This haz never bin fully explained, but speaks volumes for the hog.

DO OXEN SWEAT?—So queries a correspondent, adding:—"Animals that *loll* never sweat. The reason is, the opening of the mouth and protruding the tongue prevent perspiration." We *guess* our correspondent has never driven oxen when the mercury was up among the "nineties." He would have seen them sweat. He can easily test the theory that "the opening of the mouth and protrusion of the tongue prevent perspiration. Try it next July, and if the exercise be as ardent as the desire for knowledge there will be some "sweating."—*Rural New Yorker.*

The Dairy.

Canadian Butter.

ADVICE TO FARMERS AND STORE KEEPERS.

To the Editor of THE CANADA FARMER.

SIR,—The season for new butter having arrived, it is worth while for the parties most interested in this article to consider what course will entail the least trouble and be the most profitable. Perhaps it is worth while, in the first place, to consider whether the system hitherto in vogue in the Province of Ontario has been profitable or the reverse. If the former, of course we cannot do better than let well alone; but if the latter, as the writer thinks has been the case, then it is well to consider if an improvement can be made on the present plan. Before speaking of the remedy we will seek to show that one is needed. During the past season the bulk of our butter has gone to England, a portion on direct order, a further quantity at the risk of speculators, and the balance has been shipped by country merchants, these last hoping by this course to obtain the price which they were foolish enough to pay, say 15cts. to 20cts., in the face of very large production, a prohibitory duty in the United States, and prices in England much lower than in former years. The result is well known; sales in Liverpool and other ports have netted the shipper, say from 7cts. to 12cts, and the reclamations made are very heavy.

From this many may be led to suppose that butter is not wanted there; this is not the case; it is *grease* that is not wanted, except at grease price.

Do the butter makers and country merchants know that half the Upper Canada butter shipped to Britain is used for smearing sheep; that it is considered utterly unfit for the table or cooking purposes? Surely, if they did, they would be incited to redeem the miserable character of our butter.

But some will say that its reputation has suffered from the Americans having branded their inferior butter Canadian. This may or may not have been done, but how will it explain the fact that our *good dairy* butter has been sold in England at from 90s. to 100s., while our poor store butter has been difficult to quit at from 42s. to 55s.? But here let me say, that no matter if you brand your butter, cheese, or bacon, with the best name that ever was shipped, if it does not come up to the standard it will not bring the price; and this is explained by the fact that the provision merchants of England are masters of their business; they are their own inspectors, and their profits are so fine, that they have to be very rigid in their selection. More than this, they have a collection of butter from Ireland, and all the markets on the continent—Denmark, Niel, Mecklenburg, Zealand, Jutland, Normandy, Brittany, Bosch, Groningen, Emden, Ostend, &c.

They are not situated as are the dealers in Toronto or Montreal, who, if they cannot get a good firkin of butter, have to take a middling, and if that grade is not to be had, a worse. Again, they make a very nice distinction in the texture, flavor and saltness of butter. It is not enough that it possesses merely negative properties; the absence of bad qualities does not constitute good butter. It must be full of flavor, to use a term of butter men, it must be a perfect nosegay. Then, to come up to the highest standard, it must be of a bright yellow color, solid and waxy, that is *strong* in the sense in which the word is applied to flour by bakers. But even if it has these qualities, fine flavor and strong texture, yet, if it be over salted, that is enough to condemn it, and take 5 to 10 per cent. from its market value.

Now, there is no market in the world where they are more willing than in England to pay for good butter all that it is worth; but inferior meets with no mercy. As corroborative evidence of the truth of this, we may mention that the American Cheese makers' Association thought that injustice was done to their cheese in England, and they deputed one of their number, X. A. Willard, of Utica, to proceed thither to investigate the subject thoroughly. Moreover, they thought if they had an agent of their own he could obtain the price they considered their cheese was worth. This gentleman, on his return, made a very elaborate and exhaustive report. He had looked into the matter thoroughly, and found that the requirements of the English cheesemongers were not whims and fancies, as was thought to be the case, but that they could give cogent and convincing reasons for desiring a particular shape, weight, color, flavor, &c. He further reported that a price had been obtained for American cheese of unexceptionable quality, equal to if not in excess of English cheese. As a consequence, many of the American dairymen set to work, altered their hoops to the Cheddar shape, changed their system of manufacture, and as the result of the change, are getting 1c. to 2c. per pound more than before.

Now, having established the superiority of our beef pork, flour, &c., in foreign markets, shall we settle down on a do-well-enough policy for our butter? or shall we make a vigorous effort to change the *modus operandi* from beginning to end? Surely there never was a more favorable time to make a change. Country merchants are tired of paying 15c. to 20c., throwing in the package into the bargain, and shipping to Montreal or Britain, getting back 8c. to 12c.; Upper Canada buyers and shippers are tired of hauling it at 16c. to 18c., and realizing no better price than last year; Montreal shippers are tired, inasmuch as they have lost money and some of them ruined themselves. Now as to the practicability of an improvement, we say that it can be done, and that easily. How is it there are some farmers who have only to go to the family grocers and provision merchants in Toronto, to butter buyers in Guelph, London, Brockville, &c., and say, "I have one, three or five, as the case might be, packages of butter," and the price is agreed upon without any examination? Often the price is arranged before the butter is made. Now, what is done by these few is attainable by the majority of our butter makers.

The requisites are, as has been so often pointed out in the CANADA FARMER, (good milk always supposed,) *cleanliness*, order, a little intelligence, and a desire to excel.

Much of the fault lies also at the door of the store keepers, who continue to give the same price for butter, whatever its quality. Good wives are very sensitive, we know, on the score of the produce of their dairy, and readily take offence at the slightest hint that their butter has the shade of a fault; but store keepers are surely not so blind to their own interest as to be afraid of a little plain speaking and straightforward dealing in this matter. When the price of butter comes to be invariably regulated by its quality, depend upon it, the quality will improve. Store keepers should also urge the farmers to pack their butter straight from the churn, it having been first properly worked, which is not always done, as every one well acquainted with the business knows that so much handling and exposure is fatal to the quality, even if good when it goes into the cella of the merchant. It is our opinion, and we are borne out in this view of the matter by many experienced men in the business, that the quality of the bulk of Canadian butter will never be improved till merchants either refuse to take it from their customers in rolls, crocks, or pails, or give such a price only for it in that shape, as will induce the farmer to pack it in firkins or kegs. This being done, when the package of butter is offered for sale, the buyer should first ascertain the quality; and if it leads to a purchase, either strip the butter to get at the net weight, or in some way satisfy himself that he is not paying for salt, pickle or wood. Instruct the farmers to fill the package so that it can be headed up nicely, after spreading over it a new clean piece of calico, from which the stiffening has been well washed, and on which about 4 oz. of fine salt should be shaken. Many farmers in filling their tubs heap it up, not on the principle of giving "good measure heaped up, pressed down, and running over," but in order to save about 5c. to 10c. worth of package. This extra quantity has to be cut off, and consequently the top never looks so well. Uniformity of package is a matter requiring attention. We have them now made in all known geometrical shapes. For local consumption, the small package known as a Tinnet is much liked, but for shipment to England what are known as Welsh tubs, or firkins, are most desirable. The former are only suitable when the weather has become cool. The tares should be branded on by the cooper, and when the package weighs, say 10¼ lbs., mark it 11 lbs., or 13½ lbs. it should be marked 14 lbs. The retailer, having to sell out in small quantities, is entitled to every ad-

vantage. So strongly is this principle recognized in England, that in addition to every allowance that can be claimed on tares, there is about one per cent. beamage allowed also.

In this wide country, and in these free trade times, concerted action cannot be expected; but it behoves every man to "protect" himself in the way sketched out above, or by some plan as good or better. As a proof that the plan is successful, we point to New New York State, the Eastern Townships, and neighborhood of Brockville. The butter made in these districts is a fine quality, neatly packed, and commands a preference over ordinary Upper Canada make to the extent of 1½ cts or more per hundred weight, and of course brings that much more to the producer.

WILLIAM DAVIES.

TORONTO, May 17th, 1867.

Importance of Raising Dairy Stock.

To the Editor of THE CANADA FARMER:

SIR,—The establishment of cheese factories among us is destined to produce a wide-spread revolution in the system of farming heretofore pursued in this country, and I propose to direct the attention of farmers especially in sections remote from them, to some of the lessons they teach, that they may be led clearly to see in what way they are likely to be benefited by them. It is well understood by the patrons of our factories that one of the first lessons taught them was the immense increase in the value of dairy stock and the large increase yielded them in the profits of their farms. Within two years, cows in this country have increased in value over one hundred per cent., and yet it is considered a profitable investment by the patrons of these establishments to buy cows at forty to fifty dollars per head for the purpose of supplying milk to the factory. An instance is known of a farmer in this vicinity, who last year purchased a herd of twenty cows, at an average of thirty-three dollars per head, received at the close of the season thirty-six dollars per head for the milk from them sent to the factory, and sold them again before winter at forty dollars per head; thus making what most farmers would call a very handsome thing by the operation. So profitable, indeed, is the milk found to be, that comparatively few calves are raised in the dairy districts, and the time has already arrived when the cows for supplying factories, wherever they may be established, must be drawn from remote sections; and most dull will be the comprehension of that farmer who does not see it to his interest to turn his attention to raising a good quality of dairy stock to supply the demand so surely to be created. Do not, however, understand me, by dairy stock, to mean any kind of a cow that will give milk, but well-grown, healthy animals, abounding in good milking qualities. These will be eagerly sought for, and will command remunerative prices. The shrewd, calculating farmer, will see in these suggestions the opportunity afforded him to participate in the sure and steady flow of wealth distributed around them wherever these factories are in operation. You may not all be able to sell milk to the factory-man, but you can do what is the next best thing, raise stock for those who do. Much has yet to be learned by our farmers before they will fully realize all the advantages they are likely to derive from the advent of these new institutions among us. There will be, probably, two hundred factories in operation in Canada the present year, and at this rapid rate of increase, the time cannot be long when this vigorous branch of industry will make its healthful influence felt from one end of the country to the other. I have no desire to enlarge on this topic, I leave that to abler hands; but there is one thing more that I would say to farmers; save the rennets of your calves; our factories require them, they are of as ready sale as your wheat, and you can no longer afford to throw them away. A large portion of the rennets now in the market are worthless therefore be careful that you save them properly. To assist you in doing so, I give the method of curing practised by one of the oldest and most successful cheese-makers in the county of Oxford. "The calf should be twelve hours without food before being killed; the rennet, when taken, should be emptied of its contents and cleaned, salted thoroughly inside and out with a large handful of salt, and laid down in a jar to keep." Adhere strictly to this rule and you can rely on a good marketable article, one that will command a ready sale, and one that dealers are prepared to buy in any quantity that may be offered them. Very few have an adequate idea of the enormous consumption of rennets by the factories already in operation; probably not less than one hundred thousand will be consumed by them this season. The present market value of them would be twenty thousand dollars, a large portion of which might be saved to the country by a little care and attention on the part of our farmers.

Ingersoll, May 8, 1867. JAMES NOXON.

Sour Milk for Calves.

To the Editor of THE CANADA FARMER:

SIR,—In publishing my communication on the rearing of calves, I see you object to the feeding of sour milk. Now, I do not wish to be understood as recommending sour milk in preference to sweet; let all those that can feed their calves on sweet milk do so by all means; but the question is, how are they to have sweet milk without sacrificing the cream? If the raising of the calf is the only object in view, then, perhaps, the best plan would be to let it run with the cow, as it would save a great deal of trouble. But where the object is to raise the calf, and make as much butter as possible, I maintain that in such a climate as this it will be absolutely necessary to feed sour milk. Oftentimes during the summer season we find the milk become sour in a few hours, sometimes before the cream has all raised to the surface, thus making it an impossibility to have at all times sweet milk to feed the calves without losing the cream. I undertook to give a method of raising good calves without seriously interfering with making butter, and by following the system laid down, good thrifty vigorous animals can be raised, and all the cream after the first few weeks will be available for other purposes. On my plan the calf gets the full benefit of the cow for the first few weeks, after that, the cream is gradually withdrawn and meal substituted. After they are four or five weeks old, nearly all calves will take it readily by giving a little at a time, (as sudden changes of food should always be avoided), and after having been fed a short time they seem to prefer sour or thick milk to any other, by the fact of their refusing to take sweet milk after having been fed on thick or sour milk a few weeks.

As regards the effects of such feed on calves, I have never observed or heard of any bad consequences resulting from the use of sour milk. That they will do well on it, with the addition of a little meal, experience proves beyond a doubt, and, as far as my observation has extended, I am led to think that, whatever difference of opinion there may be amongst practical farmers on other points, the feeding of sour milk is practised by nearly all who are trying to make a profit of their cows. Of course those who are trying to raise first class stock will feed new milk, as the raising of an extra good calf will be the only object in view.

AN OLD COUNTRY MAN.

BROOKE, May 10th, 1867.

NOTE BY ED. CANADA FARMER.—We willingly give insertion to our correspondent's rejoinder to our slight criticism on his former valuable communication. We admit the difficulty he mentions; but we would suggest that, with proper keeping places, and with the help of ice, of which every farmer might secure a store with but little trouble, the milk might even in this climate be kept from becoming sour for a much longer period than is usually done. We believe, further, that the cream that rises after the milk is once soured is quite unfit for making good butter. After the milk has once become thick, of course no more cream rises, and nothing in the way of cream can possibly be gained by keeping the milk for the calf after this change has taken place, and very little, we think, by the interval between turning sour and becoming thick. A scrupulously clean and cool cellar will obviate much of the dairy trouble, even in this climate, which after all is much oftener cool than hot, and such a cellar or dairy is essential to the production of butter fit either for home consumption or for market. Though we had our doubts on the matter we hinted at, and should still try to feed sweet milk if we were nevertheless obliged to our correspondent for the account he has given us of his own practice and experience.

CORRESPONDENCE

Hints to Farmers' Daughters.

To the Editor of THE CANADA FARMER:

SIR,—Much has been written giving good, sound, practical advice to farmers, and also respecting the education they should receive, &c., in fitting them for farmers; but very little appears in Canadian papers for the benefit of farmers' daughters, in preparing them for the sphere they should occupy, viz: that of farmers' wives. We find that many fair daughters of wealthy Canadian farmers (and who have made themselves such by the healthy, pleasant and independent pursuit of agriculture), after they have been sent to a boarding-school or college for a short time, are ashamed to admit that they are the daughters of farmers, and would not marry a young farmer (or as they are pleased to style him, a "clod-hopper") under any consideration; they look upon him as something uncouth, wanting refinement. They would not marry a farmer, no not they, but some poor third-rate lawyer, doctor, teacher, or some person who dresses well, possesses "manners" just to their fancy, puts on airs," &c. They secure the man of their choice by their "mincing" manner and "accomplishments;" perhaps they "play the piano," or smatter French, gossip, read novels and discuss the latest style of the fashions; but this is the height of their attainments. Don't mention such vulgar things as cooking, dairying, or any general household work, for it is likely they would go into hysterics. "The man of their choice" is found out to be a poor "snoop" when it is too late; was not so rich as was expected: and they discover that the "crowning point" of their existence (matrimony) is not so much to boast of, after all, although the greater fault may be in themselves; but this cannot be seen, or if it is, it would never do to acknowledge it.

Now why should this be so, viz.: that the daughters of farmers grow up so prejudiced against farm life, and if afterwards they wish to become a farmer's wife, they are unfit for the place, because they are not educated for it? Wherein does the fault lie? Perhaps in the parents, or brothers, or themselves. But wherever it is, no doubt it is a lamentable fact, and is on the increase, and should be remedied immediately. These facts may be rather offensive to some farmers' daughters, but are true, nevertheless.

I have heard several farmers' daughters say that they did not like THE CANADA FARMER because there was no "light" reading matter, (which is a credit to it), as there is in some American papers, and now they will hardly look at THE CANADA FARMER. I would suggest a "Ladies' Department," where matters pertaining chiefly to household duties might be discussed. To farmers' daughters I would say, that if you are properly educated for farmers' wives you are fit to be the wife of any professional gentleman, and you are all the better for it. P.Q.

BACHELOR'S HALL.

NOTE BY ED.C.F.—There is, no doubt, some truth—indeed, too much—about the remarks of our correspondent, though he writes in a strain and hails from a locality which suggests a surmise whether he may not, to use a common phrase, have "got the mitten" from some lovely country damsel, who preferred a lawyer to himself. It must not be forgotten that there is another side to this question, and that many of our young farmers, and old ones too, *are* "clod-hoppers" in want of education, refinement and good manners. The farmer's calling is a noble one, but it is greatly dishonoured, like every other calling, by many who pursue it and who neglect those requisites which alone can give it the stamp of true respectability. There is no reason why a young man should be rough, clownish, and boorish in his manners, or ignorant and uneducated, because he works on a farm. The manners of good society are as ornamental in a farm-house as anywhere else, and should be assiduously cultivated there. One way to cut out the city gents is, for young farmers to prove themselves their equals and superiors in all that goes to make a true manhood. We are inclined to think there are not many farmers' daughters who find fault with this journal for the reason assigned by our correspondent, because it must be evident that we have not the space to publish long stories, and also because there is much in THE CANADA FARMER that cannot fail to interest, please, and be useful to the fairer portion of creation.

Clearing Swamp Lands.

A SUBSCRIBER sends us the following communication from Windham :—

"I have a large swamp that I wish to clear up; the soil is a black muck, from two to four feet deep; subsoil, a coarse gray sand; timber, small tamarack and willow bushes. I wish to know, if this land was ditched and cleared, would it be good land for grass, oats, or barley? The swamp grass that springs up spontaneously at present is a rank, coarse grass, upon which cattle feed very early in spring, but which they do not appear to like so well in summer."

Swamps similar to hat which our correspondent describes generally make excellent land when drained and cleared. They are admirably fitted for hay and pasturage, roots, and most cereals except wheat, which is liable to rust in such situations, particularly when the soil is deficient in the phosphate of lime. If our correspondent's subsoil had been a calcareous clay instead of coarse gray sand, the case would have been most fortunate, as we have frequently seen the admixture of such clay with the light organic surface produce a soil of enduring richness, and well adapted to general purposes. We recommend him, after clearing and burning, to make suitable open drains, three or four feet deep, with the sides well sloping. A dressing of lime in the caustic state, say from sixty to eighty bushels an acre, would facilitate much the decomposition of the organic matter, and with the draining wonderfully sweeten the land, and prepare it either for grass, roots, or cereal crops. The ears of the latter on such soils often fail to fill, in consequence of stagnant water on the surface or in the subsoil, and the absence of lime.

BOAR PIGS WANTED.—Any parties having young boar pigs of the Yorkshire and Suffolk breeds to dispose of are requested to communicate with Mr. J. D. Naylor, Secretary of the Fenton Branch Agricultural Society, Fenton Falls P. O., Victoria County.

ANOTHER GOOD SAMPLE OF SPRING WHEAT.—"M. S." sends us from Oswell a small sample of fine looking wheat, with the accompanying remarks :—"I have a kind of spring wheat that I raised last year, which resembles Wellington Boulter's wheat very much. I received some of his wheat by mail. If you need some of the growing wheat to determine what kind it is, I will send you some of both. Mine grows tall and rank, with large, compact, bearded heads." ANS. —The very small quantity that we received is scarcely sufficient for a fair comparison. Side by side the grains look very much like those previously sent by Mr. Boulter, both in size and shape. Specimens of the growing heads of each would, no doubt, determine the question of their identity.

HARD MILKER.—A subscriber sends us the following account of a not uncommon trouble :—"I have a cow, the best in my yard for milk and butter, but as soon as I sit down to milk, and grasp the teats, she steps away two or three steps; I move after and re-commence milking, she repeats the same thing till my patience is exhausted. She milks, besides, rather hard, and I find the necessary operation of stripping very cramping to the hands. During this last part of the process she stands as quiet as a lamb, chews her cud, and is in perfect good humor. Now, if you or any of your numerous readers can inform me of a remedy, I shall feel greatly obliged."

NOTE BY ED. C. F. From the above account we should judge that the cow is not tied during milking, and yet this expedient is almost too simple to suppose it should be overlooked. The bag is doubtless distended with milk, and somewhat tender. A little gentle hand rubbing previous to milking might prove of service.

THE CANKER WORM.—"J. H. Thomas," of Brooklin, writes: "I notice in the last issue of the C. F. that the canker worm is spoken of as never before appearing in Canada. Such, however, is a mistake. For the last two years it has been in many parts very destructive to currant bushes, especially the black currant. Many have supposed that the application of white hellebore was a failure in destroying worms on currant bushes, and have even said to me 'it is of no use whatever.' The cause of failure was probably owing to the fact that it was the canker worm instead of the larva of the Saw fly (I think I am right in the name) that devoured their currant bushes. The hellebore has no effect on them whatever."

NOTE BY ED. C. F.—It is, of course, very possible that the canker worm has been observed in Canada long before this; we merely remarked that "this is the first time, *so far as we are aware*, that it has been found" here. We are inclined to think, however, that in this case Mr. Thomas has made "a mistake;" for it is extremely unlikely that a worm whose usual food consists of the leaves of the apple, plum, cherry, and kindred fruit-trees, and of elm and bass-wood trees, should desert its ordinary food where it is to be had in abundance, and feed upon the very dissimilar strong-smelling leaves of the black currant, which so few insects will ever touch. There is a caterpillar, belonging to the geometers, which feeds upon the leaves of the currant and gooseberry (for a description of its appearance and habits see Vol. ii. 231), and which might readily be mistaken by a non-entomologist for a canker worm: we have never seen it, however, on the black currant. Should Mr. Thomas find any of these worms upon his bushes this year, we should be very much obliged to him if he would send us some specimens, and then we shall be able to determine the point with certainty. It should be mentioned that two other insects of the same genus as the canker-worm have been taken in Canada; one, the *Anisopteryx pomaltria*, Harris, feeds, as its name indicates, on the apple; the other, *A. restituens*, Walker, was taken by Mr. D'Urban in Lower Canada, and probably infests forest trees.

A SUGGESTION.—A subscriber sends us the following :—"Having seen several articles in the columns of the CANADA FARMER about hedging with various kinds of material, such as white willow, white cedar, &c., I thought I would write a few lines of inquiry as to what kind of a hedge tame poplar would make. My plan would be to dig a trench two feet wide, and one foot deep, and fill it with very fine manure, with a slight coat of earth on the top of the manure; then cut the slips about a foot long, of the last year's growth, and set them about six inches in the manure, and about six inches apart in the row. Then, in the fall, cut them off about ten inches from the ground, so as to cause them to thicken in the bottom, and keep clipping the top each year till it is thick enough.

NOTE BY ED. C. F.—We are not quite sure what our correspondent means by tame poplar, but suppose it is the Lombardy poplar. We do not think any of the poplar family could be made to form a hedge, and if they could, they are so exhaustive to the soil, and so prone to throw up suckers in all directions, that they would soon become a nuisance.

The Canada Farmer.

TORONTO, UPPER CANADA, JUNE 1, 1867.

The Weather and Crops.

CHILLY and even uncomfortable weather has for the most part prevailed since our last issue, and the season continues to maintain its character as one of the most backward that has been known for many years past. In some parts of the country we learn that there have been excessive rains, by reason of which it has been difficult, if not impossible, to get on the land with teams and to work it to advantage. Where this has been the farmer's experience, there has been additional proof given of the importance of underdraining. A well-drained soil soon dries off, and admits of being cultivated, even when the season proves a rainy one. In most localities, however, so far as we have been able to ascertain, wet weather has not prevailed so as to interfere materially with farm work, and taking the country at large, we are inclined to think a more than average breadth of seeding has been done. Though the season has thus far proved cold and backward, it has not been unpropitious for crops in general. We have good accounts from all quarters of fall wheat and the grasses. A high degree of heat is not desirable in the early part of the spring. It has a tendency to stimulate growth too rapidly, while the sudden change from winter to summer makes work somewhat galling and severe for men and teams. We have heard it remarked by old farmers that they have seldom got through their spring work so comfortably to themselves and their teams as this year, in consequence of the weather being such that labour was not so exhaustive as usual. Of course there is, as usual, much complaining. Let the weather be what it may, some will find fault with it. Not even the Almighty can please everybody. It becomes us to receive gratefully and cheerfully what heaven sees fit to send, and we can always find enough to be thankful for if we are so disposed. Addison was right when enumerating in his well-known and beautiful hymn of thanksgiving the varied and numberless gifts of Providence, he put in this sentiment :

"Nor is the least a cheerful heart,
That tastes those gifts with joy."

We believe that the prospects are highly favourable for a good season. Uncertainty always haunts the pursuits of the husbandman, and renders trust in a Higher wisdom and power essential to contentment and peace, and present appearances may give place to others of a less encouraging character, but so far we have no cause to find fault with the season, or to augur unfavourably respecting it. Fruit prospects are still exceedingly good. There is a profusion of blossom on the trees, and from the backwardness of the season, there is ground to hope for immunity from late spring frost. Of course all garden work is behindhand. Early sown seeds have had but little chance to grow, and from the backwardness of the season many operations have been postponed, waiting for suitable weather. Nurserymen have had a good time removing and packing trees. We incline to think planting will prove pretty successful the present year. When sudden heat follows the removal of trees, it is of course trying to their vital energies, and such weather as has prevailed of late gives an opportunity for them to recuperate, and re-establish themselves. The season has thus far been rather unfavourable for bees, but the abundance of bloom on the fruit trees is in their favour, and clover flowers will soon be abundant.

Cheap Railways.

THERE can be no question in regard to the immense advantage which any country derives from the construction of railways and the consequent increased facilities afforded for transit and communication throughout its length and breadth. Railways have doubtless done more than any other enterprise in opening up the fertile territories of the adjacent States, and forwarding the rapid march of their marvellous progress. Happily for those States, these enterprises have been carried out under very favourable circumstances, with a favouring legislature, and in accordance with sound principles of commercial economy. The result has been a vast increase of the population westward, a rapid and permanent improvement in the value of lands, a wonderful augmentation both of the amount and the price of agricultural produce, and an immense addition to the wealth of the country. Take Illinois alone for example, and we have no hesitation in saying that, without railways, all the advantages of soil and climate could not have made this productive State what it now is within the present century, to say the very least. Our own country has also, in spite of many adverse circumstances, derived incalculable benefit from this modern method of travel and transport. But from causes which we will not here discuss, it cannot be denied that these advantages have been gained at an enormous expense; so much so, that considerable prejudice has sprung up in many minds against Canadian railways especially, and they are prepared to oppose almost any scheme for their extension, believing that a new railway in Canada is a synonym for extravagant expenditure, heavy debt, and burdensome taxation. Indeed, it is probable that considerable opposition would now be offered to the construction of any railway after the old plan, however much the importance of the new line of communication might be felt

and admitted. It is well, therefore, for the interests of this country that a class of railways constructed on a much more economical method is feasible, has been successfully carried out in other countries, and is now proposed to be introduced into this Province. The diminution in expense is gained in great measure by employing a narrow gauge, three feet six inches instead of five feet six inches, and with this change is combined the employment of lighter rails, lighter and less costly engines, plainer and less expensive carriages, and other items of economy which altogether reduce the cost of construction by not less than one-half. The narrow gauge, besides seeming other advantages, admits of sharper curves, and so allows a closer adaptation to the natural lay of the ground, and thus saves a considerable amount of labour in excavations, embankments, &c., which the requirements of a straighter course would render unavoidable. A somewhat slower speed, and a reduction in the weight to be carried at one time, has to be accepted as a condition of this diminished cost; but the speed and capacity are still sufficient, in the present requirements of the country, for all practical purposes; and it is to be hoped that the projected lines already contemplated will be carried out, and others will assuredly at no distant period be constructed, that will prove a great benefit to many sections of the country now suffering all the inconveniences of distance from market and inadequate means of communication with the great lines and centres of commerce. These cheap railways have already been in successful operation in Norway Sweeden, India, and Queensland; and the actual experience of their working in these countries corroborates the emphatic testimony in their favor which is given by the highest engineering authorities. Should similar lines be constructed in this country, there is no class of men who will derive greater benefit from their introduction than farmers; and on this account it seemed incumbent on us to say these few words on a subject which is receiving a large share of attention from other journals throughout the Provinces.

Land Improvement Companies.

A CORRESPONDENT asks our opinion with regard to pecuniary assistance being rendered to farmers in Canada to enable them to effect costly and permanent improvements on their farms, and draws our attention to the fact that in the old country there are loan companies in existence whose especial business it is to advance funds to farmers and others for the improvement of their estates. He also observes that "Lower Canada has talked of a 'crédit foncier,' and adds, in regard to Upper Canada, 'could not our Government induce some English company to extend its operations to the new Dominion? They have an unlimited amount of money, and its investment here would prove as profitable, if not more so, than in Britain."

There can be no doubt that the profits of farming might be greatly increased by means of drainage, manuring, the use of the best description of implements, &c., and there can be as little doubt that it would pay to secure these by procuring loans of money, provided the rate of interest were moderate and the terms of repayment easy. There is a very natural and strong desire on the part of many farmers to keep their homesteads unencumbered, which it is impossible not to admire, but which at the same time may be carried too far. On the other hand, we have a class of farmers whose habits are indolent, reckless, and improvident, who are always ready in case of any money strait, to mortgage their farms. If facilities were afforded for borrowing money on long credit, there are many industrious, thrifty farmers, whose caution would lead them to shun the temptation thus presented, while the other class would be in danger of jumping at the chance of getting money, which might or might not be expended in improvements. For our own part, we much prefer that our farmers should gradually push forward the improvement of their lands by a judicious and energetic use of their own resources, and we believe that far more may be done in this way than many imagine. At the same time, inasmuch as money judiciously laid out in the direction indicated would be sure to bring a large return in the increased value of the crops grown, there can, we think, be no objection to borrowing for such a purpose. If this be done, the Land Improvement Companies' plan would certainly be the preferable mode of accomplishing the thing. We see many and grave objections against any Government scheme of the kind, such as we believe the "*crédit foncier*" of Lower Canada was to have been had it ripened into actuality. Drainage is the improvement at once most required and most costly, and every season serves but to increase the proof of its necessity on a large scale. Government could do not a little to promote this by means of some arrangement by which main sluices should be opened along the highways, and proper outlets provided. Many farmers could gradually drain their lands, if the work were done when their own farm was ditched, but perhaps, after that, there must be a long outlet made to render the work of use, and this operates as a great discouragement, if not in some instances an insuperable difficulty. Beyond this we would scarcely desire or need Government aid; private enterprise might, we think, accomplish the rest. For the information of our readers who may not be acquainted with the nature of the companies above referred to as in operation in Britain, we publish the following account of one of them, embodied in the shape of an advertisement, and extracts from the "*Border Advertiser*," a newspaper published in Galashiels, Scotland:—

"The Land Improvement Company, incorporated by Act of Parliament.

To Land Owners, the Clergy, Solicitors, Estate Agents, Surveyors, &c.

The Company advance money, unlimited in amount, for the following Works of Agricultural Improvement, the whole outlay and expenses in all cases being liquidated by a rent charge for a term varying from fourteen to twenty-five years, according to the desire of the applicant:—

1. The drainage of land, and the improvement of the drains, streams, and watercourses of any land.

2. The fencing and enclosing of land.

3. The erection of farm-houses, labourers' cottages and other buildings required for farm purposes, and the improvement of the same.

4 The irrigation, embanking, clearing, reclamation and planting of land—engines or machinery for drainage, and other agricultural purposes.

5. Farm roads, tramways, and railroads for agricultural purposes.

6 Jetties or landing places on the sea coast, or on the banks of navigable rivers or lakes.

The rent charge for twenty-five years to repay capital and interest is £6 14s per cent. per annum.

Under the Company's Acts, heirs of entail, liferenters, trustees, bodies corporate, and other landowners with limited powers, as well as feesimple proprietors, can charge their estates, and clergymen their glebes, with the whole cost of the above improvements.

For further information, and for forms of application apply to Francis B. Maule, Esquire, Secretary, No. 3 Parliament Street, London, S. W.; or Messrs. Hunter Blair, and Cowan, W. S., No. 7 York Place, Edinburgh the Company's agents for Scotland."

Grain-drying and Kiln-dried Flour.

WE understand that Mr. James Brown, Jr., of this city, a gentleman of great experience in the produce trade of Canada, has recently been engaged in making enquiry as to the best method of preparing grain or flour to ensure their keeping in warm weather, and after examining many machines in the United States, invented for this purpose, and which have proved more or less efficient, he informs us that he has discovered, in the patent of Mr. R. T. Sutton, the most simple and effective machine yet invented, and at the same time the least costly, applicable equally to mills as an attachment for drying wheat or oats, prior to grinding, and to warehouses and elevators for drying grain preparatory to shipment.

The model of Mr. Sutton's invention, shown to us by Mr Brown, represents a round tower of brick. Through the centre of the tower is a revolving perpendicular shaft, which moves a series of arms with blades or conveyors over the different perforated floors of the tower. The grain is introduced from a hopper at the top of the tower, from which it falls to the floor of the upper chamber. On this floor it is moved to the centre, where, from an opening around the shaft, it falls to the second floor. On this floor it is moved to the outer edge, and dropped to the floor below, where it is taker to the centre again, and so on, to the bottom of the tower, where it comes out perfectly cool and ready for shipment. While the grain is thus being moved along, and turned over, a current of hot air is passing over and through it, the degree of heat required being controlled by registers set against each floor. Directly opposite the hot air registers are other registers or dampers, opening into the exhaust chamber, at the top of which is a fan or blower, which is intended to draw off completely from each floor all the vapour and dampness arising from the grain.

The patentee has recently erected one of these machines at Port Hope, for Messrs. E. Peplow & Son, who speak in the highest terms of its efficiency. He is at present in this city, endeavouring to form a company to secure the patent right for Upper Canada, with the view of introducing these machines into general use among the millers. Every one in any way connected with the flour or grain trade will appreciate the great importance of the object which would be served by the general introduction of a successful grain-dryer.

☞ Two Agricultural Societies and the Board of Agriculture in the Colony of Victoria, New South Wales, have each offered a premium of £100 str. for the invention of a combined machine for reaping and binding grain, a desideratum which, although several attempts have been made in the United States, has not yet been anywhere successfully accomplished.

WEST BRANT FALL AGRICULTURAL EXHIBITION.—We learn from the Secretary of the West Brant Agricultural Society, that the Annual Show of this Society will take place on their grounds in Brantford, on Tuesday and Wednesday, the 17th and 18th days of September next.

FREE IMPORTATION OF STOCK BY AGRICULTURAL SOCIETIES.—It has been decided by Order in Council, that horses, horned cattle, sheep, pigs, and other animals, poultry and fancy birds, when imported from the United States by Agricultural Societies for the improvement of stock, may be admitted into Canada free of duty.

BEE EXHIBITION.—We are requested to state that Mr. A. C. Attwood intends having an exhibition of bees at his residence, Lot twenty, Ninth concession of Lobo, on the 4th instant., when the habits of bees will be explained, and the advantages of keeping them in moveable-comb hives demonstrated. Mr. Attwood is agent for the sale of Thomas's hives in the county of Middlesex. His address is Dunerief P. O.

COLLARD'S HORSE-HOE AND PEA-HARVESTER.—In reply to some enquiries as to the price of these implements, illustrated in our last issue, we may state that the price of the Horse-hoe is twenty dollars, freight prepaid as far as carried on the Grand Trunk Railway, and that of the Pea-harvester two dollars each, or twenty dollars per dozen. In relation to the latter implement, Mr. Collard wishes us to modify the statement made by us that one man will do as much with it as four men will with scythes, and to say that this applies only to *short* peas, because in very long peas a man will cut nearly as much with a scythe The shorter the peas, and the rougher the ground, the greater will be the advantage of the Pea-harvester.

BOARD OF AGRICULTURE.—A meeting of a committee of the Board of Agriculture for Upper Canada was held in this city on Wednesday, May 22nd., to arrange respecting the selection of judges for the approaching exhibition at Kingston. The committee decided, after a full discussion of all the modes of choosing judges open to them, to select two-thirds of the judges in the more important classes of horses, cattle, &c., from abroad; and in the remaining classes, that no more than one judge in the same department should be taken from one county. The appointment of judges has sometimes been a cause of complaint, on the ground of alleged favouritism; and the Board are using their efforts to remove all cause for such complaint. With this object, they will also avoid the selecting of judges for any classes of animals or articles from sections where the breeding or manufacture of these are known to predominate. This will avoid the charges of local favouritism. The Exhibition at Kingston this year, the President anticipates, will be a good one; both the city and county are working harmoniously to have it pass off successfully.

Agricultural Intelligence.

Compton Cheese Factory.

The following communication to the *Sherbrooke Gazette* has been sent to us for publication in this journal.

I intended long ago to have given you some account of the working of the Compton Cheese Factory last year, but have waited till it is past the time to begin another year; however, I hope it is not too late to give your readers a few ideas about it now.

We were delayed about a month in getting our vats, &c., all ready, and began to make cheese on the 7th of June. Started with the milk of about 200 cows; but the average number for the season has been, say 250 Made cheese until the 7th of November, - five months; made 986 cheeses, the average weight about 60 lbs. each. We were successful in making a first-rate quality of cheese. Sold principally for consumption in Canada and the Lower Provinces. Sent one hundred boxes to London, England, which gave a good return, and first-rate satisfaction.

The average price for the season was 13 cts. a pound, delivered free on board at Compton. The quantity of milk for a pound of cured cheese was 9¼ lbs.

On paying over the avails to each patron, they all expressed themselves well satisfied with the returns from their cows, and as the market has turned out for butter, they are, no doubt, quite as well satisfied to-day. The cows averaged a net return of from $35 to $42 each for the season of five months, besides, every man received his proportion of whey for his hogs, which was worth at least two dollars per cow.

The factory started this year about the first of May, and we have every reason to expect an increased number of cows, and hope to be quite as successful in making a good quality of cheese.

I would suggest to those intending to send their milk to a Cheese Factory, the importance of keeping their pans and pails perfectly clean and sweet, as nothing has such a detrimental effect upon cheese as dirty or diseased milk. It is of the greatest importance that milking be done cleanly, as one of the greatest objections in the English market, to the American, as well as Canadian cheese, is a rank flavor which often arises from impure or diseased milk. The only course to be taken by the Factory in such cases is to send the milk back to the patron, and not run the risk of a can of dirty milk spoiling a half ton of cheese; and it should always be borne in mind that every patron (no matter how small) is interested in the quality of cheese made, and the price obtained.

As soon as the cans come back from the Factory, they should be rinsed out with cold water, and as soon as possible after, have them thoroughly scalded, and placed in the sun or open air. Twice a week, at least, cans should be scoured out thoroughly with coarse dry salt, and see that none of the milk is dried into the seams of the can, and, if so, *dig it out.*

Every man should have a canvas or cotton cover for the milk cans, to keep out the dirt, dust, or rain, whilst driving to the factory.

Persons saving rennets should save only such as come from good healthy calves, three or four weeks old, and never wash or rinse them, merely shake out the curd, and if any dirt is left on them, wipe it away with a cloth, rub them well with salt, and hang in a cool dry place out of the sun. A very good way practised by many is to put them down in salt or pickle. Either I believe will answer well.

I take it for granted that everybody will keep their milk pails clean, and I hope they will, if possible, have tin ones, as they are much more easily kept in good order; a strainer across the cans, upon two cross pieces, is preferable to strainer pails.

I am, yours respectfully,

S. G SMITH.

April 13th, 1867.

Michigan Sheep Fair.

We extract from the *Western Rural* the following report of the Sheep Fair held recently in Jackson, Michigan :—

The first exhibition by the Michigan State Wool Growers and Sheep Breeders' Association was held at Jackson, May 7 9. The number of entries of sheep and wool was 126. There were perhaps 300 sheep and lambs on the ground, and as these represented many of the best flocks in Michigan, the show may be said to have been a very good one. As a sheep-shearing the exhibition was not so successful. The Association had no authority to require exhibitors to have their sheep shorn, and, as the weather was quite cool, few felt disposed to run the risk of shearing. The attendance was quite small, but was composed of first class men, a very large proportion of those present being practical sheep men.

At a meeting of the Association a resolution was adopted, without opposition, requesting exhibitors, who were all members of the Association, to donate the premiums they might receive to the Association and receive instead a diploma. This does not apply to the special premiums, or to premiums for shearers.

The Association need not be discouraged with the result of the first exhibition. Some modifications may be necessary in the arrangements. It may be best to fix the time of future shows later in the season, and offer no premiums except to sheep and fleeces shorn on the grounds. But, even with the disadvantages of a first exhibition, and of cold weather, the show of sheep was very creditable in numbers and very superior in quality. All expected a fine show of Merinos, and none were disappointed, but probably none expected to see so large a number of really fine long-wooled sheep. It is to be regretted that the South Downs were represented by but a single pen.

A New Scourge—Whole Fields of Grain Destroyed by Pigeons.

The *Dubuque Herald*, May 12, has the following :—"We learn from reliable sources that the farmers of many of the western counties are much troubled with pigeons. In fact, these birds have become a perfect scourge. Vast flocks have made their appearance, their in many places being literally darkened ; and having migrated a long distance from the South, they are very voracious. These flocks alight upon the fields of new-sown grain, and rolling over and over like the waves of the sea, pick up every kernel of grain in sight. It is impossible to drive them away. They are unmindful of the firing of guns, shouting of men or barking of dogs, and it is an easy task to kill any number of them with a pole. One farmer residing two miles east of Independence, had sown three acres of wheat and was preparing to harrow it in, when the pigeons made their appearance and gobbled up every grain before he could get it covered. Some fields containing forty acres were absolutely covered with pigeons, and although the sportsmen waged an incessant warfare against them, and killed great numbers, their places were soon supplied with others. Hunting pigeons has lost the charm of novelty, and the main question is how to save the grain. With the present high prices of seed wheat, and its scarcity, this becomes a question of serious consideration. A great number of fields will have to be sown a second time, and we hear of some farmers who are doing it for the third time. From all accounts, the main depredations of the feathered scourge appear to be confined to the region of country bordering the Wapsipinicon, as but comparatively little damage is reported along the Cedar river."

Hamilton Sheep and Shearing Exhibition.

This exhibition took place in the Crystal Palace grounds, on Friday, the 24th May. The "muttons were favourable representatives of their respective breeds. We should have liked to have seen more exhibitors; because we considerably appreciate this utilitarian novelty, that forms part of the Hamiltonian celebration of our great annual holiday. The shearing was well and expertly done. A cut or two was visible, but that, perhaps, was inevitable under the circumstances.

The following is the prize list; the Judges being Messrs. Kirkwood, H. T. Lawry, and Kirby ;

Class 1—Best ram of any age or breed, J. T. Nottle, 2d, F. Snider; 3d, T. Blanchard.

Class 2—Best aged Leicester ram. F. Snider; 2d, J. T. Nottle. Best yearling ram. T. Blanchard; 2d, J. T. Nottle.

Class 3 Best aged Cotswold ram, T. Blanchard; 2d. J. T. Nottle; 3d, J L. Horning. Best yearling Cotswold, J. T. Nottle.

Class 4—Best aged Southdown ram, A. Telfer; 2d, R. Shepherd, 3d, John Renton. Best yearling, do. do., John Renton.

Class 5—Best aged Merino ram, T. Shaw; 2d, John Long. Best yearling, Wm. Horning; 2d, John Long,

Best shearer, aged sheep. 1st, Nicholas Ford; 2d. R, Bowring; 3d, Thos. Powell; 4th. Edward Lavis; 5th. J. D. Wass.

Best shearer, yearlings. 1st. F. W Scott; 2d, R. Bowring; 3d, James Ford, 4th. Thomas Powell; 5th, Edward Lavis.

Best fleece, according to value, J. T. Nottle.

The shearer who made the neatest fleece, T. Shaw.

☞ The *Rural New Yorker* says the season has not been favourable for lambs in New York. Large numbers have died in the flocks of good breeders.

☞ Information has reached us from Paris that the jury has placed Messrs. J. & F Howard first upon the list of awards for agricultural machinery; Messrs. Fowler are placed second on the list ; and to Messrs. Clayton & Shuttleworth and Messrs. Ransome & Sims gold medals are to be awarded.—*Farmer* (Scottish.)

Sheep Wintering in Ohio.—A letter dated April 9th, from a leading sheep breeder in Lake county, (Western Reserve) Ohio, says :- "Sheep have wintered badly. Fodder was never so scarce, or used up so closely as now."

Michigan State Fair.—The Executive Committee of the Michigan State Agricultural Society have accepted the proposition of the citizens of Detroit,—who very liberally subscribed about $10,500 to secure the location of the Fair,—and announce that the Fair will be held at Detroit, September 10-13. The arrangements for the Fair will be on a much more extensive scale than at any former time, and there is good reason to expect a very successful Fair.—*Western Rural.*

Dairy Cows.—The Galt *Reporter* states that a number of Americans were in that neighbourhood during the week, purchasing cows for New York State dairies. They secured about a car load, but the high prices asked for animals throughout the country compelled them to relinquish their efforts before they had succeeded in getting anything like the number they wished. It is said that every cow they bought in this neighbourhood would cost them nearly $100 in greenbacks before they got them to their destination. It is likely that the prices of cattle have now reached their highest point.

New Cheese Factory in Co. Perth,—A correspondent sends us the following notice :—"The first factory cheese in the county of Perth was made at the Cromarty cheese factory on the 13th of May. The factory is now in full working order, with the prospect of doing a fine business for the season, having the promise of nearly 300 cows' milk ; and as the arrangement of the buildings and the apparatus for making are all of the best style, with a first class cheese maker, purchasers may expect to find an article equal to anything made in the county of Oxford amongst the old factories.

New York Trial of Implements.—The great trial of ploughs and like farm implements, which was arranged to come off at Utica, under directions of the N. Y. Agricultural Society, early in May, came to grief in consequence of the storm. A dispatch to the *Tribune* says : The Farm Implement Trial which was to have taken place in this city, commencing on Tuesday last, has been postponed until two weeks previous to the State Fair, and at such place as the State Fair shall be held. This action was decided upon at a well-attended meeting of the judges at Bagg's Hotel, J. Stanton Gould, of Hudson, in the chair. Those having the trial in charge are impelled to this step by circumstances beyond their control. The storm that has swept over the country for more than a week, has not spared Utica. There have been upward of sixty entries made, most of them being ploughs. Among the exhibitors was ex-Gov. Holbrook, of Vermont.

Cedar Grove Cheese Factory.—We have received from a correspondent the following account of this new establishment : "The above cheese factory (the first opened, I believe, in the County of York) is now in full operation, having commenced manufacturing on Monday, May 6th, 1867. It was erected by Samuel Reesor, Esq., and is conducted by his son-in-law, Mr. John N. Raymond. To assist him in manufacturing, Mr. Raymond has engaged Miss Lucinda Larabie, of Watertown, N. Y., who has had a number of years' experience in cheese making. The factory is thirty-six feet long by twenty-six feet wide, and is a story and a half high. The part of the building above the upper floor is at present used as a drying room ; but they intend to erect, the present season, a drying house fifty feet long by twenty-four feet wide. Up to this date they have made thirty cheeses, from sixty to seventy pounds each. They are now taking in between 2,000 pounds and 3,000 pounds of milk daily, and they expect that the daily supply will soon reach 4,000 lbs. or 5,000 lbs. The manufacturers say that they are determined to make first-class cheese ; and if the taste and keeping qualities of their cheeses prove equal to the appearance, there is certainly a good prospect of their determination being carried into effect."

Horticultural Exhibition of the Toronto Electoral Division Society.

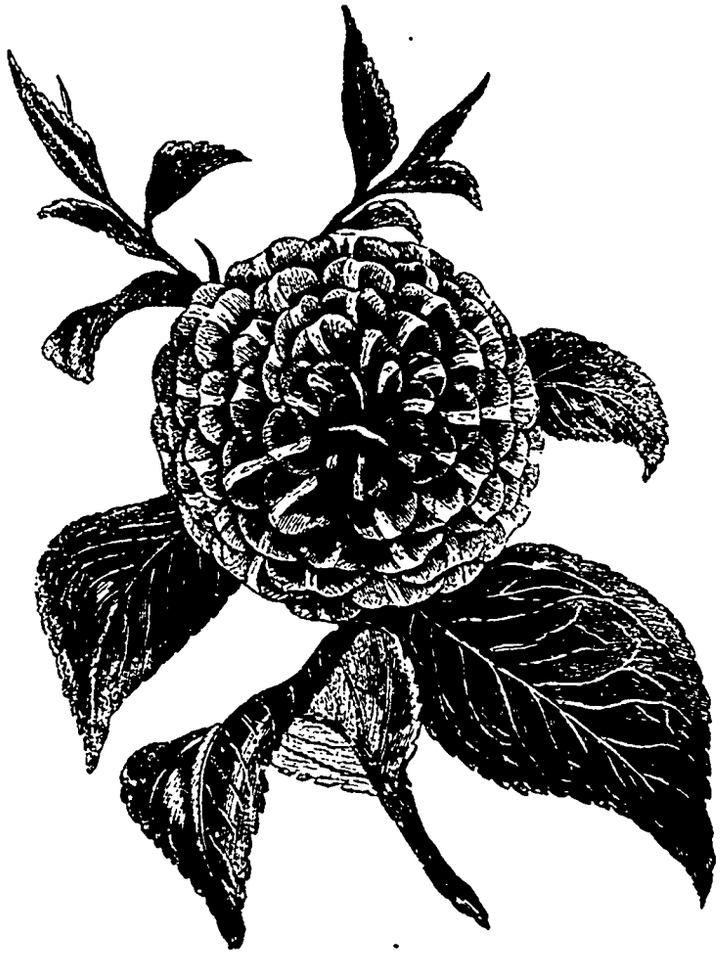
THE Toronto Electoral Division Society held its Spring Exhibition in the Music Hall, in this city, on Wednesday, May 22. The extremely unfavourable day no doubt somewhat diminished the attendance of visitors, and the backwardness of the present season may have had an unfavourable influence on the display of out-door produce. Notwithstanding these drawbacks, there was a very beautiful and creditable collection of vegetables, fruit and flowers.

Beginning with vegetables and fruits, we noticed some good specimens when viewed as products of the present spring. Most of them have been raised by artificial means, certainly; but even then, the collection of vegetables to which the first prize was awarded bore unmistakeable evidence of careful and judicious culture. Mr. Higgins, gardener to the Hon. G. W. Allan, exhibited thirteen varieties of apples in splendid preservation. This was an important department, in which Mr. P. Armstrong, Mr. Grainger, and others, competed, and the condition of the fruit bore strong evidence not only of the capabilities of our climate for fruit-producing, but also that, with ordinary care, the fruit may be perfectly preserved through our somewhat long and severe winters. An apple orchard, it appears to us, under judicious management, must prove one of the most profitable sources of husbandry in this dominion. Amongst the flowers there was a large proportion of delicate tinted as well as more showy azalias, some fine calceolarias, a variety of geraniums, and a few very beautiful roses in full bloom, besides other flowers, too numerous to particularize. There were a number of tasteful hand bouquets, and an elegant basket of flowers, exhibited by Mr. Guthrey, of the Asylum. Of native wild flowers, Mrs. Coxwell showed one bouquet, in which the variety of species was necessarily very limited, on account of the season, the Trilium forming the most conspicuous and most numerous objects in the group, which was, notwithstanding the disadvantage of a limited choice of material, very tastefully arranged. Some of the Fuschias, especially amongst those exhibited by Mr. McPherson, were splendid specimens of their class.

The competition in the stove and greenhouse plants was confined to three exhibitors—Judge Harrison, Mr Gzowski and Mr. McPherson. We may just notice a few plants in their respective collections that attracted our attention as being new to Canada. Judge Harrison included in his collection a beautiful specimen of the *Clerodendron Thompsonæ*, one of the most beautiful varieties of its class, and originally propagated, we believe, by Mr. Thompson, the able conductor of the Dalkieth Palace gardens, in Scotland.

The Hon. D. L. Macpherson included in his fine collection a splendid specimen of the *Nidularia Fulgens*, a beautiful and rare variety of the pine-apple family; a fine plant of the *Ligularia Kœmpferi*, a Japan production; a singularly graceful specimen, *Theophrasta Imperialis*, and a beautiful little specimen of the *Aphelandra Zebrina*, an attractive foliage plant which receives its name from the resemblance that the marking of its leaves bear to the zebra.

We did not observe more than three specimens of orchids. These, consisting of fine healthy plants of the following varieties—*Cypripedium barbatum*, *Oncidium flexuosum*, and *Barkeria spectabilis*—were exhibited by Judge Harrison, and deservedly obtained a premium. We regret that there are not more amateur competitors in this Society. The interests of horticulture can only be sustained by the vigorous support and competition of all classes in the community, whether they possess a green-house or cultivate a patch of ten square yards.



The Judges were Messrs. Freed and D. Murray, of Hamilton; and we believe that their awards gave general satisfaction.

The New Camellia "Polar Star."

FLORISTS are constantly studying and experimenting with a view to obtain some new and exquisite variety of the flowers in ordinary cultivation, and that well-known greenhouse evergreen shrub, the camellia, of which we have already some very beautiful sorts, appears to be still capable of improvement. The accompanying engraving, taken from *L'Illustration Horticole*, represents a choice novelty of Italian origin, the entire stock of which is as yet in the possession of a single florist, Verschaffelt, it not having been yet put upon the market. The camellia "Polar Star" is thus described in the French journal just named: 'The flower is bright, rosy carmine, each petal striped with rosy white, or rather divided equally into two stripes of carmine and white, presenting the appearance of a star. The engraving shows this new variety to be one of great beauty, and its appearance in the market will be eagerly looked for by all enthusiastic florists, both professional and amateur. We are indebted to the *American Journal of Horticulture*, a new and excellent periodical noticed in our last issue, for the opportunity of presenting our readers with the illustration and description.

Hamilton Horticultural Exhibition.

AMONGST the attractions offered to the public on the occasion of the celebration of the Queen's Birthday in Hamilton, was the Spring Exhibition of the Hamilton Horticultural Society, which was held on the afternoon and evening of that day in the Drill shed, and may be fairly pronounced a success, both in the horticultural display and in the number of visitors. This interesting exhibition was probably—as might be expected from the season—somewhat inferior, as a whole, to the Spring show of last year; still, there is no denying that it was a great success. Flowers of all kinds usually shown at this season were well represented. In geraniums especially the display was superb. There was a fine show of apples and pears—the products of last autumn—in really fine preservation. Vegetables of all kinds were good, and the potatoes especially looked particularly inviting.

ABIES DOUGLASII.—A tree of Douglas Pine at Drum Castle, Aberdeenshire, planted in spring of 1845, at that time eighteen inches high, is now (Nov. 1866) forty-two feet in height; four feet girth at three feet from ground; thirty-five feet spread of branches, and contains about fourteen cubic feet of timber.—*Farmer* (Scottish.)

CHINESE PROPAGATION.—The Chinese, who beat us in these matters, convert one fruit tree into many by this process. Early in the spring they cut out a ring of bark around a limb of a tree an inch or more in diameter. Over this they bind with rags a ball of earth large enough to include two or three buds above the ring. Above this they hang a gourd or other vessel, filled with water, so that it will fall drop by drop, giving the earthen ball constant moisture. The buds throw out roots, and after a few weeks the limb can be sawn off, and be set out as an independent tree. Grape vines are propagated in a similar way by bending down a vine, and burying a portion containing one or two buds which will send out roots. When well-rooted, it may be cut from the parent vine, and transplanted.—*Ex.*

THRIPS.—Will you, Messrs. Editors, inform your readers, on the authority of one whose business, five hours a day, is to teach young ideas how to shoot—in the direction of Greek and Latin—that there is no such word in any language as *thrip*. The Greek word is *thrips* in the singular, and as it would seem pendantic to use the Greek plural, we use the same word in both numbers, just as the English word sheep. This is a little matter—but the use of the word *thrip*, common in horticultural journals, seems so ludicrously absurd, (just as if we were to write shee for sheep) that I venture to correct it. I saw a flaming, full page advertisement somewhere—"a remedy for the thrip," and I could not help thinking that the best remedy would be to add an s to it.—*Cor. Co. Gent.*

Veterinary Department.

Nasal Gleet in Horses.

In a former number we mentioned that one of the causes of Nasal Gleet was neglected or improperly treated catarrh, or cold in the head. This affection may also be the result of injury, directly or indirectly, to either the frontal or maxillary bones; and perhaps the most common indirect cause is disease or injury of the molar or grinding teeth. It often happens that the teeth become uneven on their grinding or table surface, and this uneven motion sets up disease in the roots or fangs, which ultimately extends to the alveolar processes, and the bone becomes carious. When this occurs in the upper jaw, there is a bulging of the frontal or maxillary sinus; this symptom is soon followed by a discharge from the nose of a thick glairy matter, having a very offensive fœtid smell, plainly telling that the bones are diseased. In these cases the horse experiences considerable difficulty in masticating his food, and he soon loses condition. In all such cases the mouth should be carefully examined, when the remote cause will generally be found. We recollect one case, where the second molar in the upper jaw had become diseased, the surrounding bone also became implicated, and finally the tooth wrought its way into the frontal sinus; and when that sinus was opened, therein was found the missing tooth. In all cases of Nasal Gleet, when of long standing, and the sinuses much diseased, a cure cannot be effected without an operation, as those sinuses, owing to their situation, cannot be injected by the nostrils. An opening should be made where the bone is bulging, and this is best done by means of an instrument called a trephine, which removes a piece of bone about the size of a shilling. After opening, inject the sinuses twice a day, with tepid water, and a weak solution of the sulphate of zinc; also feed the horse liberally on boiled oats, barley, and, if in summer, cut green food. Tonics should also be given, as some of the preparations of iron or of copper; and this treatment must be persevered in for some time. When the tooth is diseased, it is also necessary to remove it; and this is most easily accomplished by means of a large tooth key. In mild cases of nasal gleet, when the result of catarrh, a cure may be effected by means of tonics, &c., and a generous diet, together with regular and gentle exercise. In some cases the lymphatic glands under the neck enlarge very much, and occasionally run on to suppuration, and it may be necessary to open them freely. When the enlargement is more of a callous nature, either Iodine, or the Biniodide of Mercury Ointment may be used.

The following is an account of nasal gleet which appeared in the *North British Agriculturist* lately, written by Professor Varnell, of the London Veterinary College:

"The affection is characterized by the discharge of a thin greyish matter, chiefly water (hence the term), from one or both nostrils—very likely only one; the visible mucous membrane of the nasal passages will have a pale, slate-coloured, soddened appearance, and the pulse will, as a rule, be weak and fewer in number than natural. The discharge is usually more copious at one time than another, but it seldom ceases altogether.

"Character of the Discharge.—In these particular cases the discharge from the nostrils will be thin; and, as before stated, it will be of a light greyish colour, and, if not of very long standing, free from fetor. But if, on the other hand, the matter should have been long retained in the sinuses, it may have changed its colour, and also have become offensive to the smell. If there is much discharge coming from the nasal mucous membrane, it will possess a tenacious sticky character, which is not the nature of that issuing from the sinuses only.

"I have previously explained why the matter contained in the sinuses cannot wholly escape, and why, when they are nearly full, the small opening leading to the nasal passage would become still further diminished, or even altogether closed, thus prohibiting its escape, except, perhaps, under some peculiar position of the horse's head.

"Treatment.—The pathology of the disease under consideration suggests the treatment best calculated for its cure. Speaking generally, the management of such cases should consist in improving the health and tone of the system of the horse, and in evacuating the sinuses of their contents.

"To accomplish these objects, the horse should be removed from all depressing influences, and placed in a cool but comfortable stable. For a time at least his food should be soft but nutritious; he should daily take some sulphate of iron and gentian in his food, and his kidneys should be occasionally excited by small doses of nitrate of potash.

"This treatment may be continued for a week, or even longer, before the sinuses of the head are opened; the object being to improve the horse's health before the operation is performed, which is a consideration; after which, and the cavities having been washed out as above suggested, the horse should continue to have a fair allowance of soft nutritious food, and his tonic medicine should be continued. If a tendency exists for the sinuses to refill again, it may be advisable to wash them out again, and to inject them with some astringent lotion, such as weak alum-and-water, or a solution of tannin, or in some instances a weak solution of sulphate of copper."

Treatment of Ringbone.—We have received from a subscriber in Bayfield the following account of a most absurd treatment of so-called ringbone:—"A two year old colt, late last fall, received some injury to the off hind fetlock joint, from which it went a little lame. This spring, a man who professes to cure ringbone pronounced it affected with that disease, and undertook to cure it as follows. He made an incision where the tuft of hair is, above the pastern joint, and took out a small sac or bag, about the size of a hickory nut, and gave me something in a bottle to rub on it. Now, what I want to know is this, if it be ringbone, was the treatment he followed correct or not?"

Ans.—We have often noticed in previous numbers that a useless and barbarous operation is often practised on horses for the cure of ringbone. We have no hesitation in saying that the treatment your colt has received is not only absurd, but highly injurious. Ringbone is a disease of the osseous structure, and should be treated with rest and soothing applications until the acute inflammatory action is somewhat abated, when repeated blisters should be applied. As a general rule, when ringbone is not producing lameness, it is much better to leave it alone than have recourse to any treatment whatever.

Weakness and Trembling in Lambs.—A subscriber writing from Columbus, says:—"A neighbor of mine, this season, had a number of lambs that shook and trembled as if they had the palsy when they were dropped, and they are now a month old and they still continue to shake. Their dams are in tolerably good condition, having been fed on pea straw and turnips. Any information as to the cause or treatment of this affection will oblige the writer."

Ans.—We would recommend the ewes to have a complete change of food; many of the ailments of lambs come from the quality of the mother's milk.

Entomology.

The Squash Bug.

Most persons who cultivate that rather popular vegetable, the squash, have no doubt sometimes observed several of the leaves to be strangely withered, and on looking for the cause, have been greeted with the sight of a number of disgusting blackish bugs, of all sizes, from tiny little baby-bugs to big patriarchs more than half an inch long, all crowded together on the under side of a leaf.

The scientific name of this insect is *Coreus tristis*. De Geer—"the sad squash-bug," so called probably from its dull, sombre colour. The full-grown insects that manage to survive the perils to which their lives are exposed during the summer, retire into winter quarters on the approach of cold weather, and conceal themselves in some chink or hole where they can escape the full rigour of the frost. When warm weather returns in May they issue forth to seek their mates, and as soon as the squash vine has put forth its first few leaves, they take shelter under them and lay the eggs that will produce the future destroyers. This takes place late in June, or even in July if the season is backward, but the eggs are soon hatched, and from them emerge the little bugs, very like their parents, only rounder and shorter, and rather paler in colour. Each is furnished with a long slender beak or sucker, with which it punctures the leaves and draws up the sap, causing the former to shrink up and wither away, to the great injury, of course, of the plant.

True bugs—that is, members of the order *Hemiptera* – like all other insects, have their three grand stages of existence, but, unlike the others, they vary so little at the different periods of their lives that it is difficult at first sight to say when the larval state ends and the imago begins. The young look like walking scales at first, but every now and then they throw off their skins, and assume new ones, making each time a perceptible advance to the winged perfect state. The young squash-bugs are ash-coloured at first, and have large flattish antennæ; by degrees they become darker above and paler beneath, and change from their rounded form to an oblong oval, the head being almost triangular. As the eggs are laid at intervals, fresh broods keep coming out all summer, and thus specimens of all ages and sizes are generally found together on the same vine.

The best mode of preventing their ravages is to pick off and burn the leaves on which they are collected, or shake off the insects and crush them under foot. It is well also to examine carefully the under side of all the leaves of an affected vine, and destroy any eggs that may be found attached to them. Hot water, we should think, might be applied to the bugs with good effect. The use of liquid manure and cultivation in a good rich soil is recommended, for when the plants attain a vigorous growth, the loss of sap occasioned by these insects is not so much felt.

We are not aware that the squash-bug is ever injurious to other plants; we discovered a large specimen the other day, however, crawling over a grape vine that is in leaf under glass. It may have merely been brought out of its winter quarters by the continuous warmth of the vinery, and not have been present with any evil intent; but whatever may have been his motives, innocent or not as far as the grapes were concerned, he had to pay for his intrusion with his life. Should any of our readers have observed this bug on any other plant besides the squash, we shall be glad of some information on the subject.

The Apiary.

More About the Queen Bee.

Generally within five or six days after emerging from the cell, the queen leaves the hive for a meeting with the drone, which takes place on the wing, and usually high in the air. She commonly leaves the hive between the hours of twelve and three o'clock, p.m., when the drones are on the wing. If she does not meet with the drone she returns to the hive, and in a short time goes out again: this she continues to do every day until she mates with a drone and becomes impregnated, when she returns to the hive, to leave it no more until she goes off with a swarm. Having mated with a drone, she becomes impregnated for life, and under favourable circumstances commences to lay within forty-eight hours. In some cases it may be much longer, extending to five, six, or even ten days; such cases, however, are rare. Another peculiar characteristic of the queen is, that if she does not meet with the drone within the first twenty-one days of her existence, she becomes incapable of being impregnated, and hence never makes anything more than a drone-laying queen. We here see the wisdom of the Creator in the provision of so many drones. The chances of the queen to be destroyed are numerous, the time for impregnation short, hence the necessity of her meeting with the drone as soon as possible, that she may retire to the hive, where the chances for her destruction are greatly lessened. An unimpregnated queen may easily be known by her slim, tapering abdomen, shy and rapid move-

ments; the abdomen of the fertile queen being much larger and longer, and her movements more stately and regular. The queen generally lives to the age of four or five years, though she usually ceases to lay eggs that will produce workers after the fourth year in other words, her fertility ceases, and though she may continue to lay eggs, yet they will only produce drones. The consequence is, the stock will soon dwindle away and perish A drone laying queen may easily be known by the way she deposits her eggs they being scattered through the centre of the combs, here and there groups of three or four; and although they are drone eggs, yet they are deposited in worker cells, and the cells are necessarily extended to accommodate the greater length of the drone, which makes the brood comb of a drone laying queen, when capped over, of a very uneven surface, the extended cells projecting far beyond the even surface of the un-capped worker cells, giving a very unseemly appearance This may be readily observed in a moveable-comb hive. Such a queen should be removed and destroyed, and a fertile queen given to the stock; or in case a fertile queen cannot be had, worker eggs should be given to the stock, in order that they may produce for themselves another queen.

Italian and Egyptian Bees.

A CAUTION.

To the Editor of THE CANADA FARMER:

SIR.—It is generally the case that when a truly good thing is brought before the public, and through its own merits gains a reputation that ultimates in a healthy demand, some speculative characters are sure to produce or borrow from a neighbouring State some vile imitation or near resemblance, and taking advantage of the awakened interest, palm off upon an unsuspecting public an inferior, if not altogether worthless, article. Now, a growing interest has been created in bee-keeping in Canada since the introduction of my moveable-comb hive, which finds a steadily increasing sale, and the introduction of Italian bees, first offered for sale by Mr. Holden, of Merrickville, and secondly by myself. Taking advantage of this, certain persons are travelling through the country and offering for sale moveable-comb hives and what they are pleased to call Italian and Egyptian queens. That the public may see it is *impossible* for them to furnish Egyptian queens as they promise to do, and therefore altogether probable that their Italian queens are not pure, or their hives inferior or worthless, I would say that they have not yet been introduced into Canada, the first importation into the United States being as late as last fall. The Egyptian bee, *Apis Fasciata*, was first imported from Egypt to Germany by Herr Vogel, in 1861. Mr. Woodbury, of England, who styles himself a Devonshire bee-keeper, obtained an Egyptian queen from Herr Vogel in 1865. In the fall of 1866, or last year, Mr. Langstroth, of Oxford, Ohio, succeeded in importing an Egyptian queen to the United States, being the first and only person that has imported one, or can have them for sale in America. Neither can he fill any more orders than he has already received, though I have obtained the promise of one some time this fall. Parties, therefore, who are offering for sale the Egyptian queen are deceiving the public, and should be avoided. That the Egyptian bees are superior to our common native bees there is no question, but that they are superior to the Italian is still a matter of doubt. Reports are conflicting as regards their disposition to sting. Mr. Woodbury thinks them easily irritated, but very peacable and good-natured if properly managed. They are said to be smaller than the Italian, but more beautiful. I shall, however, be better prepared to speak of their real merits after having had some experience with them. J. H. THOMAS.

Brooklin, C.W.

☞ Honey is best clarified by means of a hot water bath. This may be readily improved by putting the jar containing it in a saucepan or boiler of water, which should be placed on the fire, and boiled until the honey becomes perfectly clear, all impurities being removed by skimming as they arise. Store it in air tight jars, and keep in a cool place.—*London Journal of Horticulture.*

Poultry Yard.

Report on the First Poultry Exhibition.

HELD BY THE CANADA WEST POULTRY ASSOCIATION, AT THE AGRICULTURAL HALL, TORONTO, ON THE 10TH AND 11TH OF APRIL, 1867.

THE Committee appointed to carry out the Poultry Exhibition have the honor to lay before the members of the Association the result of their labors, and report as follows:

That the Exhibition held on the 10th and 11th ult. may be considered as a success It was inaugurated under many difficulties, and in the minds of its promoters grave doubts existed as to whether it would succeed, which were not allayed when, on the first day of opening, through the wetness of the weather, visitors were much fewer in number than was at one time anticipated. Much inconvenience arose from the non-arrival of the Exhibition Birds from the West at the appointed time; this delay, as the Committee subsequently learned, was wholly attributable to the Great Western Railway Company To meet this emergency, the Judges, at the request of the Committee, postponed their inspection of the birds on exhibition, and consequently their awards, from two o'clock p. m. on the 9th to eight o'clock on the following morning.

The Committee, through their Secretary, became aware that a large number of entries had been made by gentlemen resident in London;—and from a perusal of the Prize List of the last Provincial Exhibition, it was quite apparent to their minds that at least a sharp competition would arise between them and exhibitors from other places; moreover, the Committee having learned that the fowl arriving too late by the railway train were wholly from London, unanimously agreed, as a matter of courtesy to the exhibitors from London, to request the Judges to postpone their awards, (which, as previously mentioned, they agreed to,) until the birds were properly penned. The result proved satisfactory, as several first-class prizes were awarded to the London exhibitors.

In pursuing this course the Committee were wholly actuated by a regard for the interests of the Association. Had they acted otherwise, it might, (notwithstanding the explicit rule to the contrary,) have been said that it was done to secure all the prizes for the Toronto exhibitors.

The Committee wish to call the attention of future exhibitors to the absolute necessity of adhering strictly to the Rules of the Association, published for their guidance, with regard to the labels to be attached to each pen of birds. Had the gentlemen from the West not been particular on this head, their birds, coming at the late hour they did, could not have been penned in the short time they were.

Many exhibitors sent their boxes without labels, and some brought the labels in their hands, whilst others put on wrong labels.

The Committee would also recommend exhibitors to adopt the baskets made by Mr. Linton, King Street West, Toronto, which can be had for fifty cents each, if a large number are ordered. These baskets should be lined with glazed calico or canvas, which prevents the birds hurting their plumage; the birds cannot see out, and fights are prevented. These baskets are more handy than the cumbersome boxes in which the specimens were sent to the recent exhibition; they are only a fourth of the weight, take up less room, and cost less in transport; and the Committee are fully persuaded that exhibitors will find them more convenient and economical than packing cases.

The arrangement of the pens appears to have given satisfaction. A longer time from the closing of the entries to the day of the exhibition should be given, which will enable the pens to be adjusted to the entries. In the present instance, it was necessary to begin putting up the pens before the entries closed; hence, to follow the consecutive order in the catalogue, small birds had to be put into large pens. It is also suggested, that in future exhibitions the wires, in all cases, at the sides of the pens should be closer together, as was done in the game classes, and that the wires be not at any time more than two inches apart. Game birds should, if possible, be on the upper tier, but in practice this will be found difficult to accomplish.

The color of the pens, now that they are quite dry, is good. In future they might be pearly white.

The Pigeon pens, for the large varieties, should be higher, and made with open tops of wire or laths. Should the Society have at a future period to provide their own pens, the Committee consider that portable pens would be found to be more economical and handy.

The condition of nearly all the specimens was most satisfactory as regards health; but all birds sent to exhibitions should have their faces and feet washed; and white birds, if their plumage is soiled, should also be washed some few days before the show.

The lighting proved satisfactory, and was most ably done by Mr. Grantham, and the evening part of the exhibition was in consequence very good, the light being such that the fowls did not creep into the corners of the pens, as is their usual habit at night.

The Committee are glad to find that the general arrangements appeared on the whole satisfactory. Two unfortunate accidents happened by the escape of some game fowls from their pens, giving occasion to two fights. In the first, both birds were rendered useless for exhibition so far as this show was concerned, but as the Judges, it is understood, had made up their minds (prior to this engagement) to which specimens to award the premiums, it is to be hoped the owners did not suffer in this respect.

The second fight, which gave rise to a general action, was caused by birds being packed by their owners insecurely, after the exhibition, and left in the room over-night. At day-break they got out, and one bird was killed, and several severely wounded; a.. unfortunate Cochin having come in for his share of knocks. Some loose Polands came off scathless, whether from not having been seen or not seeing the combatants, on account of their top knots, we are unable to state; but it is certain the male sex of this class suffered nothing. How the females came off we cannot state, but evidently they had not been treated with less respectthan became the weakness of their sex.

The Committee suggest that, in future exhibitions, the Secretary should have a table in the room, to enable visitors to communicate with him, and that in case he is compelled to withdraw, another member should act for him in his absence.

The arrangements for the sale of specimens did not appear to be clearly understood by the public. In future shows it would be better to define them, if possible, more clearly, especially with regard to the owners' claim upon the specimens.

It is impossible for the person who has the sale of tickets to undertake that of the catalogues also. It was found very inconvenient for visitors who did not buy their catalogues in the first instance, to go out of the room for them; *in future shows the catalogues should be sold in the room*, and accounted for in the same manner as the tickets.

It is recommended that a uniform rate of ten cents be charged for admission.

Too much praise cannot be awarded to the gentlemen who acted as Judges, and who awarded the premiums in accordance with the rules laid down for their guidance. In future exhibitions, it is suggested that the standard of excellence issued by the Poultry Club, (G. B.,) and reprinted in the Appendix of the Poultry Book by Tegetmeier, be adopted as the rule by which the Judges will be guided in making their awards.

The Committee are convinced of the necessity of the award of prizes being made the day prior to the opening of the show. It is impossible for the Judges to do their duties, if interfered with by exhibitors; and the Committee strongly advise the system of the numbering of the pens being continued, without the names of the exhibitors being attached, until after the premiums are awarded.

In conclusion, Your Committee would suggest that the thanks of the Association be tendered to the Agricultural Society of Upper Canada, for their great liberality in allowing the use of the room and pens; to the gentlemen of Toronto who kindly came forward to assist by donations of plate and money; to the Judges, for consenting to act in that capacity; and to the public at large, for their liberal support of the exhibition.

Your Committee recommend that this report be printed, and a copy furnished gratis to each member of the Association, donor, exhibitor, and Judge. An abstract of expenses is appended below:

RECEIPTS.

Tickets by private sale	$14 90
Do. at doors	157 20
Donations	70 00
Extra Entries	11 70
Per centage on Sales	4 75
	$258 55

EXPENDITURE.

Food	$3 60
Coops	65 45
Printing and Advertising, &c.	72 80
Attendance	6 70
Lighting	13 30
Postage, &c.	6 00
Prizes	67 00
	234 85
Balance	23 70
	$258 55

The Household.

A Good Washing Receipt.

We have observed, in several of our exchanges, certain directions for washing, headed a "Receipt worth a *thousand dollars*." Our modesty does not permit us to put so high an estimate on anything we can offer; but we think we may fairly venture to say that the following receipt, for the practical value of which we have reliable testimony, is worth, at a very low estimate, the year's subscription for the CANADA FARMER. The materials are cheap, and very little trouble is required in the preparation. The following are the directions for preparing and using the washing ingredients:

Take a quarter of a pound of quick lime, half a pound of washing soda, half a pound of soap, (some persons only use one quarter of a pound of soap). Dissolve each of these ingredients *separately*, in two quarts or more of boiling water. Only a small portion of the lime will be dissolved; the undissolved portion will settle to the bottom, and the clear lime water should be poured off. Boil this strained liquid with the other two solutions of soap and soda, for twenty minutes. Put the clothes to steep in water, over night, without soap. Wring them out, and soap any parts that are much soiled.

Put six gallons of water in the boiler; add the prepared ingredients, and when the mixture comes to the boil, put in the clothes, the finest first. Boil them for half an hour; drain them; then put them into a tub and pour boiling water over them. Give them one good wash; rinse them in soft water, and blue them in hard or spring water.

By using rather more water, the same quantity will do for three lots of clothes.

It will be necessary to place a plate at the bottom of the boiler, to prevent the clothes burning; and the greatest care must be taken to prevent the smallest particle of lime settlings from escaping with the liquid.

Flannels and coloured articles should not be washed in this way. Collars and wristbands of shirts, stockings, &c., should be soaped and slightly rubbed before putting them to soak; but this is all the rubbing they will require.

Where the house is furnished with one copper only, and it is found difficult to secure a supply of boiling water for scalding, it is recommended that clean cold water be used for rinsing, as soon as the clothes are removed from the boiling in the copper. Where scalding is undoubtedly preferred by the laundress, to a mere rinsing in cold water, and the supply of boiling water is limited to one boiler, it will be found convenient to lay the clothes aside, until the several boilings are completed, and after the copper has been emptied and well cleaned, giving them a short boil in clean water, afterwards rinsing and blueing.

Some trouble in preparing the materials may be saved in the following manner:—Instead of preparing each of the articles separately, dissolve the half pound of soda over-night in one gallon of boiling water; pour it on the lime, and let it settle; cut up the soap, and pour the clean water upon it, and in the morning it will be a dissolved mass, fit for use. If prepared in this manner, the twenty minutes boiling of the dissolved lime and soda is entirely dispensed with.

Deodorizers.

The following articles are easily available for the suppression of noxious gases, so fatal to health and life:

Two pounds of sulphate of iron (copperas) dissolved in a pailful of water, and poured into a vault, will prevent the formation of sulphuretted hydrogen gas for some time, and will generally be sufficient to remove all nuisance.

A layer of charcoal dust will prevent the escape of all offensive odor from any decomposing substance.

One pound of nitrate of lead, dissolved in a pailful of water, is excellent for sinks, sink drains, and vaults.

If other things fail, chloride of lime is always effectual, and may be freely used in vaults, and upon other collections of filth.

These substances are not expensive, and will effectually destroy all the offensive smells. The quantity to be used will depend on the quantity of filth to be deodorized, and their permanency of effect upon local conditions in each case.

Miscellaneous.

EVERY MAN HIS OWN MEASURE MAKER.—The following rules, by which every one who can saw and nail boards can make his own measures, we find in an Eastern paper:—

A barrel contains 10,752 cubic inches. A box 24 inches long by 16 inches wide, and 28 inches deep—that is, on the inside—will hold just a barrel.

A half-barrel.—Make a box for this 24 inches by 16, and 14 inches deep. This will contain 5,376 cubic inches, or just half a barrel.

A bushel.—This has 2150 4-10 cubic inches. A bushel box will be 16 inches by 16 8-10 inches square, and 8 inches deep.

A half-bushel.—A box 12 inches long by 11 2-10 inches wide and 8 inches deep, will hold half a bushel.

Peck.—A box 8 inches by 8 4-10 inches square, and 8 inches deep, is a peck.

Half-peck. Is 8 by 8 inches square, and 4 2-10 inches deep, or 268 8-10 cubic inches.

Half-gallon.—This contains 134 4-10 cubic inches. A box 7 by 4 inches and 4 8-10 inches deep, has just that quantity.

Quart.—4 by 4 inches square, and 4 2-10 inches deep.

CURING GREEN HIDES.—A great many butchers, wool dealers, &c., are purchasers of the hides off the beef in the country towns, and we often get from them inquiries as to the proper and most profitable method of curing the hide and preparing it for the market. A great many butchers do not use proper care in this branch, and the consequence is that the hides will not pass city inspection, owing entirely to the ignorance or carelessness of the person who prepared them for the market. The proper way to salt hides is to lay them out flat, flesh side up, and form a nearly square bed, say twelve by fifteen feet, folding in the edges so as to make them as nearly solid as possible. Split the ear in the cords that run up the ear in each one, so as to make them lie out flat. Sprinkle the hide with two or three shovels-full of coarse salt, as the size may require—say for a sixty to eighty pound hide, from ten to fifteen pounds of salt. At any rate cover the hide well, as it need not be wasted; then let them lie in this from fifteen to twenty days, after which take them up, shake the salt out, and use it again.—*Shoe and Leather Reporter.*

Poetry.

Nature's Worship.

BY J. G. WHITTIER.

The harp at Nature's advent strung
Has never ceased to play;
The song the stars of morning sung
Has never died away.

And prayer is made, and praise is given,
By all things near and far;
The ocean looketh up to heaven,
And mirrors every star.

Its waves are kneeling on the strand,
As kneels the human knee,
Their white locks bowing to the sand,
The priesthood of the sea!

They pour their glittering treasures forth,
Their gifts of pearl they bring,
And all the listening hills of earth
Take up the song they sing.

The green earth sends her incense up
From many a mountain shrine;
From folded leaf and dewy cup
She pours her sacred wine.

The mists above the morning rills
Rise white as wings of prayer;
The altar curtains of the hills
Are sunset's purple air.

The winds with hymns of praise are loud
Or low with sobs of pain;
The thunder-organ of the cloud,
The dropping tears of rain.

With drooping head and branches crossed
The twilight forest grieves,
Or speaks with tongues of Pentecost
From all its sunlit leaves.

The blue sky is the temple's arch,
Its transept earth and air,
The music of its starry march
The chorus of a prayer.

So Nature keeps the reverent frame
With which her years began,
And all her signs and voices shame
The prayerless heart of man.

—*From "Tent on the Beach."*

Advertisements.

Markets.

Toronto Markets.

"CANADA FARMER" Office, May 30, 1867.

The produce market since our last report has been dull and tending downwards. In both wheat and flour, considerable concessions from last week's quotations would have to be made to induce sales.

Flour.—There has been very little No. 1 superfine offering during the week, and only a few sales are reported. In the early part of the week, holders were firm at $9, and sales were made at that price. Latterly, however, in sympathy with the Montreal market, prices declined, and the market now closes dull, with a still further tendency downwards, buyers being afraid to take hold, even at the lower rates.

Wheat.—The market during the week has been dull, with no disposition among dealers to buy, except at considerable concessions. Holders, however, remain firm, and but few sales therefore have taken place. Early in the week some sales of Spring were made at $2; buyers, however, now only offer $1 80 for choice. On the street market midge proof and Spring sold at from $1 80 to $1 85. On the street market to day $2 to $2 03 were the ruling prices.

Oats.—The market has been quiet, with very few round lots offering, 4,000 bushels changed hands to-day at 52c; prices on the street ranged from 50c to 52c.

Barley.—The market has been quiet, few or no large transactions taking place. For car lots 70c is asked, buyers offering 68c. The offerings on the street market are light, prices during the week have ranged steadily at from 60c to 66c.

Peas.—The market during the week has been dull, with a downward tendency. Few round lots were offering; holders were asking from 73c to 74c, with buyers offering from 70c to 72c. On the street market, prices ranged from 69c to 70c.

Oatmeal—Scarce. Holders asking $6 40, at which price several days ago a few sales were made. Latterly, $6 was bid for the best quality.

Pork—Mess scarce. Holders are firm at $19. Prime mess, $14 50 to $14 75. No prime mess in the market.

Cut Meats—Bacon in salt, 8c; smoked 10c; hams in salt, city cured, 9½c; smoked, 11c.

Butter—Store packed without enquiry, worth from 9c to 10c; 4lb rolls on the market dull at 11½c.

Lard—City do, 9½c to 10c; country do, 8c to 8½c.

Eggs—In plentiful supply at from 9½c to 10c in shipping lots; from farmers' baskets, 10c to 11c.

Salt—American, $1 75 on the wharf.

Freights—Flour to Montreal, 20c; to Ogdensburg, 20c, U. S. currency, to Prescott, 15c, to Kingston, 12½c. Grain to Montreal, 7c per 60 lbs.

Hay and Straw—Hay selling at from $13 to $18. Straw at from $7 to $7 50.

Potatoes—Prices on the street market have ranged from 55c to 60c.

Coal—Bituminous selling in the yards retail from $6 50 to $7; Lehigh, $9; Scranton, $8.

Wood—Selling at from $6 to $6 50.

Montreal Markets, May 29.—*Wheat*—Canada Fall, none; Spring, $2 00 to $2 05; Western none. *Oats*—Per 32 lbs, 40c to 42c. *Barley*—Per 48 lbs., 70c to 75c. *Butter*—Dairy, 12c to 13c; store packed, 12c to 13c. *Ashes*—Pots, $5 55 to $5 60, pearls, $7 80 to $7 85. *Pork*—Mess, $19 00 to $19 50, Prime Mess, $15 50 to $15 75, Prime, $14 25 to $14 50. Dressed Hogs—None. *Peas*—Per 66 lbs., 82c to 84c. *Rye Flour*—$3 90 to $6 00.

Guelph Markets, May 28.—*Fall Wheat* per bushel $2 00 to $2 12, spring wheat do, $1 80 to $1 90. *Oats*, 45c. *Peas*, do, 66c. *Barley*, do, 55c. *Eggs*, per dozen, 8c to 9c. *Butter* per lb., 10c.

Goderich Markets, May 28.—*Wheat* spring, $1 85 to $1 90; fall do, $2 10 to $2 20. *Oats*, 40c to 50c. *Flour*, $5 to $8 50. *Barley*, 50c to 57c. *Peas*, 55c to 65c.

Seaforth Markets, May 27.—*Wheat*, fall, $2 10 to $2 20, spring, $1 95 to $2. *Flour*, per barrel, $10. *Barley*, 60c to 65c. *Oats*, 45c to 50c. *Peas*, 60c to 62c. *Potatoes*, per bushel, 50c. *Fresh butter*, per lb, 14c. *Eggs*, per dozen, 10c.

Galt Markets.—*Fall Wheat*, per bushel, $1 90 to $2 05, Amber do, per bushel, $1 80 to $1 90, Spring do, per bushel, $1 80 to $1 95. *Barley*, do, 45c to 55c. *Oats*, per bushel, 43c to 45c. *Butter*, per lb, 11c to 12½c. *Eggs*, per dozen, 10c to 12½c.

London Markets.—*Fall Wheat*, $2 06 to $2 26, spring, $1 80 to $1 95. *Barley*, 62c to 63c. *Peas*, 66c to 68c. *Oats*, 45c to 47c. *Rye*, 65c to 70c. *Butter*, prime dairy-packed, 11c; No. 2 9c to 10c per lb; fresh in rolls, by the basket, 10c to 12½c per lb. *Eggs*, 9c to 10c per dozen.

New York Markets.—*Rye Flour*—quiet; sales at $8 to $9 25. *Wheat*—Dull, and nominally 2c to 3c lower. *Rye*—quiet; sales 1 200 bushels western at $1 72 to $1 73. *Barley*—In moderate request, sales, 8,000 bushels western at $1 12. *Corn*—Receipts, 63,360 bushels; market 1c to 2c better; sales, 50,000 bushels at $1 20 to $1 27 for new mixed western, $1 28 for new western yellow, and $1 27 for new white southern. *Oats*—Receipts, 000 bushels, market dull at 87c for western, and 91c for State; 90½ for Pennsylvania.

Contents of this Number.

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, C. C. where all communications for the paper must be addressed.

☞ Subscription Price $1 per annum, (POSTAGE FREE,) payable in advance. Bound volumes for 1864, 1865, and 1866, may be had for $1 50 each. Subscribers may either begin with No. 1 of the present Volume, or with the first No. of any preceding volume. No subscriptions received for less than a year, and all commence with the first number for the respective years.

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